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TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, January 3, 1914 | Number 682

Bright and Breezy

A Black Rooster

A southern farmer thought he heard someone breaking into his chicken house. Going to investigate, he called out:

"Is anyone in there?"

"No, massa," answered a deep, bass voice; "nobody but jus' us chickens!"

Bright Young Man

"I say, Reginald, I've forgotten my card case."

"Nevah mind, deah boy. I'll lend you some of mine."

"But—ah—the names would be different, dontcherknow."

"So they would; what a head you have got, Algy!"

Talented Cow

According to this advertisement in a Connecticut country paper, there is a cow in New England which is possessed of rare accomplishments: "Wanted — A steady, respectable young man to look after a garden and care for a cow who has a good voice and is accustomed to sing in the choir."

Nothing Doing

In a town in western Kansas the dry weather was being discussed by two traveling men.

Little puffs of white clouds were rolling by, and one of the men remarked: "That certainly looks like rain."

"No chance," the other replied; "those are just empties coming back from Iowa."—Everybody's Magazine.

No Connections

A letter addressed "To My Dear God in Heaven," written in a child's handwriting, was recently posted in a Russian townlet. As the address was written in German, the Russian postal authorities forwarded it to the German frontier postoffice at Tilsit. The postmaster of the latter place returned it to its place of origin, with the following superscription: "To be returned. The addressee is in heaven, with which Germany has no communication."

Keeping the Peace

He was a member of the peace society, and he came across two youths in the back street fighting. Accordingly, he pushed through the crowd and persuaded the combatants to desist. "Let me beg of you, my good fellows, to settle your little dispute by arbitration. Each of you choose half a dozen friends to arbitrate." "Hurrah!" yelled the crowd. "Do as the gentleman says, boys!" Having seen the twelve arbitrators selected to the satisfaction of both sides, the man of peace went on his way, rejoicing in the thought of having once again prevailed upon brute force to yield to peaceful argument. Half an hour later he returned that way and was horrified to find the whole street fighting, while in the distance police whistles could be heard blowing and police were rushing to the spot from all quarters. "Good gracious! What is the matter now?" asked the peacemaker of an onlooker. "Sure, sor," was the reply, "the arbitrators are at work!"

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Lessons for Co-operative Organizations

THE wise man profits by avoiding a repetition of his own mistakes and shunning the pitfalls into which others have fallen. About a year ago the agricultural press and co-operative journals were telling their readers of the success of the southern Texas Truck Growers' Association. Today little but the name of the organization remains. The question of dissolution is actually before the board of directors.

The tracing of the rise and fall of that organization carries with it many lessons for every farming community in need of co-operative organization, because the rocks upon which this organization was founded exist in every farming community. Many communities in their territory are about ready, or have already begun, to organize some co-operative enterprise.

In our next issue we will print an article written by Chester T. Crowell, editor of the Southern Texas Truck Growers' Journal, giving a history of the affairs of the truck growers' association. In this article Mr. Crowell tells why this organization failed. Experience is a great teacher, and as a rule is the most expensive part of our education. We often hear the remark, "A child must get its fingers burned before it will quit playing with fire." It is too true that most people do not heed the lessons they might learn from the experience of others.

Prattle of the Youngsters

Like Other Girls

Mother—Don't you think, Mary, that you are too old to play with the boys?

Mary—No, mother; the older I get the better I like them.

A Good Reason

A mother was telling her little boy, aged 5 years, about the habits of animals. "Why do you think a dog hangs his tongue out of his mouth?" she asked him.

"I dess to balance his tail, mamma," the child replied.

His Future

"And so your name is Willie," smilingly remarked the caller. "How old are you?"

"Eight," answered Willie, apparently not appreciating the questioning to any great extent.

"Why, you are quite a little man," was the patronizing rejoinder of the caller. "What are you going to be?"

"Nine on the 10th of October," came the unexpected response of Willie.

Wise Johnnie

Little Johnnie had been naughty all day. At last, to cap the climax, he slapped his small sister.

When father came home from the office the mother told him of his son's misdeeds.

"The next time you tease your sister you go to bed without your dinner," the father said, sternly.

The kiddie sat in silence for a few moments. Then all of a sudden he turned to his father.

"The next time I want to hit sister I'll wait till after dinner," he remarked.

Discovered

A stern old preacher had issued to his people a command against dancing, believing it to be a device of the devil.

A few of the young people disobeyed and attended a dance given at a neighboring town. Finally it reached the ears of the preacher and, meeting one of the culprits on the street one morning, said in a stern voice:

"Good morning, child of 'th devil."

"Good morning, father," smilingly answered the pretty miss.—National Monthly.

How She Carried the News

The little maid stood in the parlor doorway, one hand on the door knob. For a moment she gazed at her father, who was preparing to take his afternoon nap.

"Papa," she said, "do you know what I am going to give you for your birthday when it comes?"

"No, dear," answered the fond father, "but please tell me."

"A nice, new, china shaving mug with gold flowers on it all around," said the little maid.

"But, my dear," explained the parent, "papa has a nice one like that already."

"No, he hasn't," his little daughter answered, thoughtfully, "'cau —'cause I've just dropped it!"—Youth's Companion.

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The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Should Nebraska Board of Agriculture Be Reorganized?

WHEN asked what he had to say regarding the resolutions passed by the Nebraska Farmers' Congress, Secretary W. R. Mellor of the State Board of Agriculture replied:

That is something we have been asking for and inviting for some time, especially since the criticism of the board of managers began. Our books, affairs and everything else we have are open to any committee anybody wants to appoint to look over them.

When the committee gets ready to call on us they will find the door wide open and all the records ready for them to investigate, just as thoroughly as they desire, and they may take just as long to do it as they like, though, of course, we would like to have them get through so that the old board, if it is left in, or the new one when it comes in, will have time to get ready for the next fair, which, by the way, is going to be the best in the history of the organization. The dates are September 7 to 11.

Mr. Mellor is dodging the issue. No one has questioned the accuracy or reliability of the books and records kept in the secretary's office. Nor is this a fight on the state fair. There is a vast difference between a real state board of agriculture and a state fair board. This we hope will be made clear to the farmers of Nebraska before this discussion ends.

Opens Up a Big Question

The program committee of the Farmers' Congress thought this question of enough importance to have a place on their program. T. F. Sturgess, editor of the Twentieth Century Farmer, was asked to open the discussion. At one of the most largely attended meetings of the week the subject was before the congress. After full consideration the congress unanimously passed the following resolution:

> Whereas, The question, "Should the State Board of Agriculture Be Reorganized?" has been presented to this congress; therefore, be it
>
> Resolved, That this congress requests the Nebraska State Board of Agriculture, the State Horticultural Society, the Nebraska Improved Live Stock Breeders' Association, and each of the auxiliary associations incorporated under the Nebraska Improved Live Stock Breeders' Association, to each appoint a representative, who, with a like representative from this congress, shall constitute a committee to consider whether through reorganization of the State Board of Agriculture **it may better serve the agricultural interests of the state; the finding of this joint committee to be reported back to their respective organizations, together with proposed changes and recommendations as to the manner in which the changes may be effected.**

Before giving our readers the reasons and arguments presented to the Farmers' Congress by the editor of this paper, we want to say that it is the friends of the state fair who want to see this board reorganized, so that Nebraska will have a real state board of agriculture instead of one in name only. The organizations named in the resolutions are most vitally concerned in the success of the state fair. They are also most vitally concerned in Nebraska's having a State Board of Agriculture which shall represent their interests in its work for the development of the state.

Law Fifty-Five Years Old

The Nebraska State Board of Agriculture was created under an act of the legislature passed in 1858, which named the original twenty-nine members of the board. In 1867, when Nebraska became a state, this territorial board by special enactment became a State Board of Agriculture. This board was created for the purpose of holding a state fair, but with no other specified duties.

While all other states have repealed the old laws governing their pioneer days and have enacted new laws and adjusted them to fit the present new and advanced conditions of agriculture, the Nebraska State Board of Agriculture is still operating under the laws that were enacted by the first pioneers. There could be no greater tribute of respect paid to the honor and memory of these pioneer fathers than that they possessed the wisdom and foresight to look fifty-five years into the future and plan a law for governing a state board of agriculture that would fit present conditions.

Not a State Institution

Many are under the impression that the Nebraska State Board of Agriculture is a state institution. In a way this is true. In the act creating the board, the names of the charter members are given, and with this concluding sentence:

> S. M. Kirkpatrick, O. P. Mason, etc., be and the same are hereby created a body-corporate, with perpetual succession as hereinafter prescribed under the name and style of "The Nebraska State Board of Agriculture."

This makes it a close corporation working under a charter from the state. It receives annually $2,000 from the state to be used to pay premiums. The printing of the annual report of the board is paid for by the state out of the general printing fund. Since 1901, when the State fair was permanently located at Lincoln, the state has appropriated for the purchase of grounds and the erection of buildings the sum of $241,000. The 123 acres upon which the fair is held belongs to the state. The state has no control over the expenditure of the money received from the receipts of the fair. The board of managers can spend this as it sees fit.

Now as to the organization of the Board of Agriculture. It is composed of twenty-nine members who are the successors of the original charter members of the incorporation. This board has no duties to perform outside the annual meeting which is held once a year, the third week in January, at the state capital. At this meeting the secretary and treasurer make a detailed statement of the expenses of holding the state fair, the income from all sources and the balance of the account, etc.

Alternately, each year, the terms of fourteen or fifteen of these members expire. The twenty-nine members have full power to vote either for their own re-election or for the filling of their places. In addition to these twenty-nine votes the presidents of each county agricultural society, or a duly elected delegate, are ex-officio members of the annual meeting and entitled to vote. At the annual meeting the president selects three members from among the twenty-nine who are to be approved by vote. These three, with the president, first and second vice presidents and secretary, constitute the board of managers.

A Wheel Within a Wheel

The board of managers plans, arranges for and in all respects handles the State fair grounds, its property, its improvements, its expenses and its income. This is done without direction, consultation or advice from its large body of elected members. This plan of organization has proven most effective in the fifty-five years. The elections of the State Board of Agriculture have been so carefully conducted that every discordant, troublesome or aspiring candidate has been quietly sidetracked. It has been so cleverly manipulated by the man at the helm that strife and friction have not been permitted to take root. All that was necessary was to elect the right kind of a president, and he would take care of the rest in the appointment of the board of managers. Some people seem to think it is almost sacriligious to suggest the changing of these old-time political methods and substitute the modern idea of allowing the people to have something to say.

Nebraska's Agricultural Prophet

When the Nebraska State Board of Agriculture had reached the age of forty-two years, at its annual meeting held at Lincoln, January 16, 1900, J. D. Ream of Broken Bow, who is now president of the State Grange, read a paper, which leads us to place Mr. Ream among the prophets of old. In a discussion of the topic, "Should the State Board of Agriculture Be Reorganized," he said:

> Nebraska is almost an absolutely agricultural state. Her resources and possibilities lie buried in her soil. Recent years have fully demonstrated that when our farmers and stock raisers fail our business and professional men cannot succeed. When we take this view of the situation it would seem that the first great concern of the whole people would be the development of the agricultural resources of the state to the fullest possible extent. And we would naturally expect the Nebraska State Board of Agriculture to be the most important factor in this great work.
>
> * * *
>
> But, let me inquire, are the requirements of the present law such as will ena-

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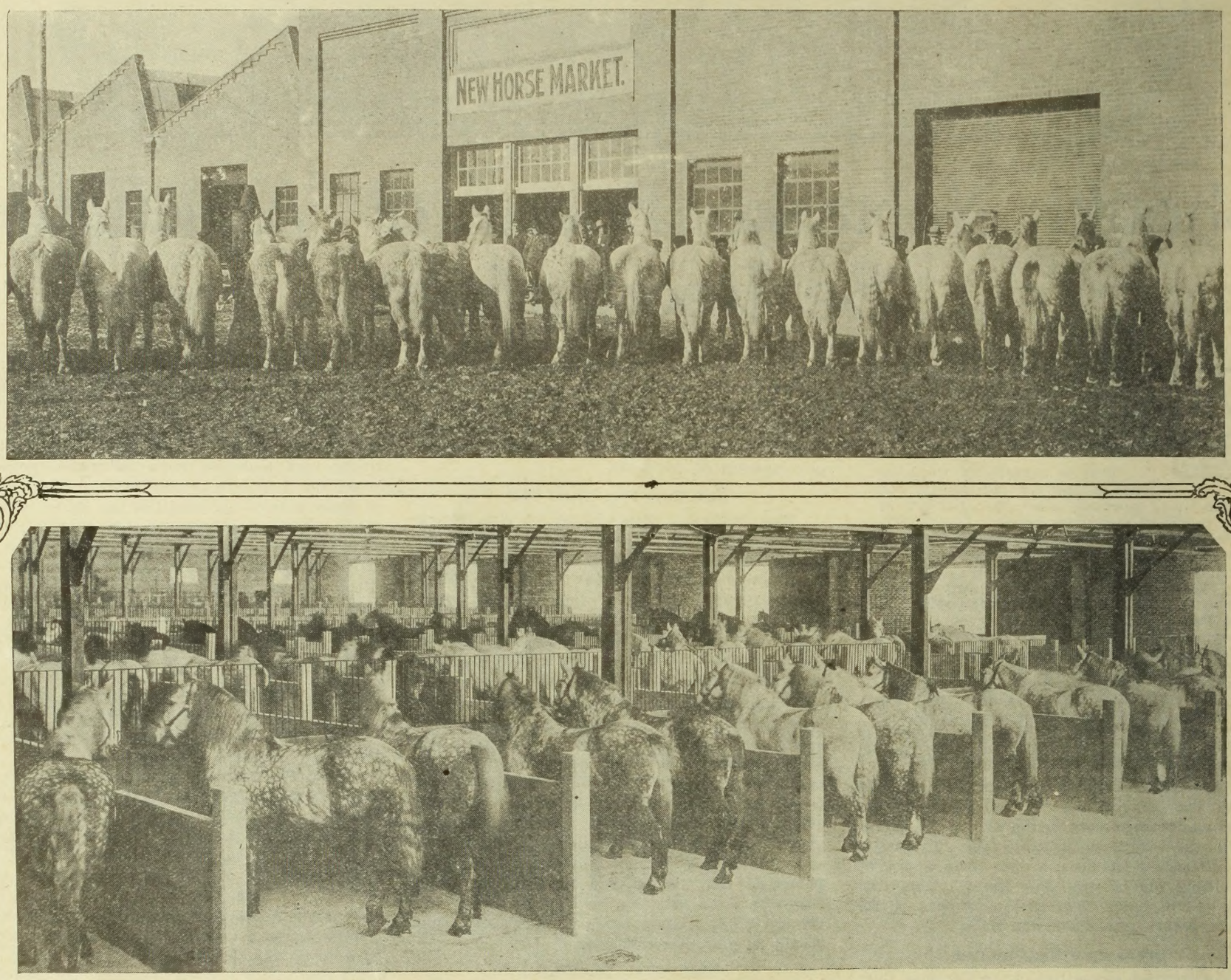
Marketing Horses in the United States

Importance of This Industry Appreciated and Large Horse Barn Constructed at South Omaha



An Inside and Outside View of the New Horse Market Barn at South Omaha

THE HORSE is the important factor in furnishing power for the operation of the producing interests and industries of the soil. The horse, in his business relationship to agriculture, has never been outclassed or superseded in his ability as an economical, safe and all-round general purpose power supply. The horse from the beginning of time, in trade and traffic as well as on the farm, has been the mainstay and support of business transportation facilities. The horse is here to stay. He is the safest, surest, most easily operated and best understood power generator that the common laborer can handle.

Automobiles vs. Horses

The horse industry has been experiencing a depreciating influence for several years in the assertion that the auto would soon take the place of the horse and there would be no longer need of the horse, even in his most humble condition of supplying power for the operation of business. So very impressively was this theory urged upon the minds of many persons that they tried to believe the horse population of the country was scarcely worth enumeration or statistical notice.

But the automobile agitation helped the horse. It took him off the public highway and left him on the farm, in the team, in the pasture or in the stable. The farm horse of today is a better animal than he was before the automobile took his hardest labor from him. Horses are improving in foot, limb and power of endurance since they have been given better care and more freedom from the hard road and exhaustive drives. The farm horse, by better care and better breeding, is gradually becoming a larger, sounder and more serviceable animal and more valuable, either as a horse to keep and use on the farm or to sell in the open markets. Never in the history of horse breeding and horse development has there been more attention paid to the production of good, sound, serviceable horses than at the present time.

Market Centers Necessary

The development of market centers for the distribution of good young horses of the country is just as necessary as are centers for the disposal of other lines of live stock. Horses are today being raised as a business or industry, where dozens of colts are raised on the same farm or ranch each year—yes, hundreds of colts are raised each year on some of the big horse breeding farms of the western states. It is now an industry, and the very best of stallions are kept; high grade and full-blood mares, and the best of attention is paid to their development. These horses are bred and grown to maturity with a view of supplying the farm demand in the eastern and central states, where they think it costs too much to grow a colt to horse age for sale or for team purposes on the farm.

Development of Breeding Business

The development of the horse breeding business in the United States has not been given as much attention by the public press as those features of live stock representing the meat-producing animals. Consequently, the public is not so well informed as to the past and present status of the horse industry. This we will take up in ten-year periods, commencing back with 1870, when the United States Department of Agriculture, bureau of statistics, reported 8,249,000 horses for the entire country, at an average value per head of $67.43; mules, 1,180,000; average value, $90.42.

1880—Horses, 11,202,000, at $54.75; mules, 1,730,000, at $61.26.

1890—Horses, 14,214,000, at $68.84; mules, 2,331,000, at $78.25.

1900—Horses, 13,538,000, at $44.61; mules, 2,086,000, at $53.55.

1910 — Horses, 21,040,000, at $108.19; ules, 4,053,000, at $119.84.

1912—Horses, 20,560,000; mules, 4,386,000.

The above figures do not indicate that there as been any general tendency toward decline horses. On the contrary, there has been a ry healthy development in the horse popula- on. In the forty years from 1870 to 19_0 e horse population incr sed from 8,249,000 ead to 21,040,000 head, an increase of 320,000 r year. In mules, there were 1,180,000 in 70, and in 1910 there were 4,053,000, an crease per year for forty years of 71,825 ead. There has been an increase from 1910 Jaunary 1, 1913, of 333,000 head. This ould seem to be a pretty healthy condition of rse production in the face f the "horseless rriage," the big motor freight trucks on the reets of the cities and the passing of the old- me horse car that seemed, in its day, to be the ly general fixed demand for the common e of the country. P er devices of l nds, for almost all purposes, come and go, d still the horse and mule, that were seem- gly created for man's use and which man has arned to regard as his best friends, remain eadfast and increase as the demands for labor crease. These conditions, which to all in- nts and purposes are a fixed principle in na- re for the benefit of mankind, give promise remaining, and man and the horse will prob- ly go on down together through the ages of vilization just as they have for centuries past.

The states of largest horse population stand the following order, having above 1,000,000,- 00 horses each: Iowa, 1,568,000; Illinois, 482,000; Texas, 1,181,000; Kansas, 1,099,000; issouri, 1,084,000, and Nebraska, 1,027,000.

South Omaha as a Market

The South Omaha Union Stock Yards has veloped a great central horse market for this strict of the United States. It started prac- cally eighteen or twenty years ago with the thering of the range horses, the bronchos of e western plains, and shipping them east in effort to get rid of many worthless animals at were of no value in their wild, untamed ndition, but which found a market with boys d cheap horse owners as soon as distributed st of the Missouri river. South Omaha at at time became a popular distributing center r carload lots of the western broncho and ickly developed into a market for the better ass of range-bred horses suited to army serv- e, and was a great distributing center during e Cuban and South African wars, supplying any thousands of western range horses of perior quality during these periods of horse emand.

The market took on the real attitude of a horse market during these years of clearing up the range of the broncho. It has continued to hold its reputation as one of the very best horse centers for the purchase and sale of a good quality of the equine race. While this market has been able to furnish accommodations for this class of trade, it has never risen to the real dignity of a first class, elegantly equipped horse market until now.

New Horse Barn Constructed

Under the supervision and direction of its manager, Mr. E. Buckingham, there has been constructed on the grounds of the Union Stock Yards company at South Omaha the best all-round convenient horse barn in the United States. This would seem at first thought an extravagant statement. It is no doubt astonishing, but not extravagant; and yet it is neither astonishing nor extravagant when one comes to understand the business methods of this general manager at South Omaha. His wisdom and foresight into the demands of this great business enterprise and institution, over which he has the direction of its buildings, improvements and maintenance, is an object lesson in itself as to whether or not it is wisdom to build for the present or for the future. Business financiers in the operation of large affairs say, "Build for the future if the signs of the times forecast development." This has been the motto adopted by Mr. Buckingham in all his planning and building in connection with the South Omaha Stock Yards, which each year are being extended and remodeled by sections and divisions until they are now one of the most complete, sanitary and satisfactorily equipped stock yards to be found anywhere.

This new horse barn became a necessity through the constantly growing trade in horses at South Omaha. Last year there were handled at this market 32,520 horses. This year's business will be approximately the same. This means 2,710 horses per month or 678 per week.

Eastern Buyer Provided For

One of the main requirements in the construction of this large horse emporium was to accommodate the eastern horse buyer and give him an assurance that he can at all times be accommodated with just such horses as his demands require and from first hands, right from the range and breeding farm. This barn enables horse buyers and dealers to carry many more horses for the trade than formerly. It means making Omaha the greatest horse market on the continent, adjacent to the big producing centers of the best horse country in America.

The new building covers a ground space of 298x343 feet, containing two and a third acres of land. It has stall accommodations for 800 head of horses and room to enlarge for more than 1,000. It is absolutely fireproof, sanitary and of the very best modern style of construction in every particular. In matter of light and ventilation it might be called perfect. It has no cross divisions to obstruct the view, and when one enters it he at once realizes its greatness, its beauty and its magnificence of purpose, its grandeur in panoramic view in horse display. It is a one-story brick and steel structure on concrete masonry foundation, walls and piers. The entire floor is paved with concrete five inches in depth. Stalls, partitions and stall posts are made of reinforced concrete units, which were moulded separately, seasoned and assembled, then set in place as needed.

Feeding and Sanitation

The floor of the stalls has a fall of one and a half inches in nine feet nine and a half inches towards the alleys, which are crowned in the middle, forming a shallow gutter along the rear of the stalls which drains into sewers through iron grates. For feeding purposes each stall is equipped with an iron combination manger and hayrack. The hayrack is placed on top of the manger plate for horses to feed with heads in a natural position, avoiding a waste of hay and leaving a clear open space under the plate. A grated railing two and a half feet high is placed on top of each stall division, which prevents any interference of horses in adjoining stalls.

Ventilation of the barn is provided for through the installation at the ridge of the roof of fifty-four iron ventilators, twenty-four inches in diameter, with sliding-sleeve dampers for the regulation of air currents. In addition thereto, the middle upper sash in each bay of windows can be swung out and open. All windows in the side walls have pivoted sections in the sash which may be held open at any angle for air and ventilation.

Large hay and grain storage rooms are located in convenient parts of the barn, so an ample supply of feed may be stored, greatly facilitating the feeding operations.

Mules Looked After Also

Commodious holding pens are situated adjacent to the north and west sides of the building to accommodate the mule industry, this class of stock showing to better advantage when loose, in pens, rather than tied in stalls.

The barn contains a selling arena 33x123, steam heated, with seating capacity for 150 people, three steam-heated offices of brick, each 18x19; a steam-heated lobby, 19x54; lavatories, wash rooms and other features of interest for the comfort and convenience of the business. All alleys are fifteen feet in width, giving ample room to work without congestion. The alley doorways and those leading into the barn—twenty-six in all—have roller doors of iron hung on inclined guides (excepting seven for the south entrance, which are steel roller lift doors), and are self-closing upon being released.

The necessity for a driveway or try-out track for displaying the merits of horses broken to harness is an essential asset to the modern horse barn at a public market. This has been provided for immediately in front of the barn, a roadway fifty feet wide and 375 feet long, paved with asphaltic concrete, making an ideal track.

The horse feature of the South Omaha Stock Yards has developed into a business that is attracting the attention of horse dealers and horse users from all parts of the country. It has not only become of national significance from the standpoint of a supply market, but international. The western horse or the United States has an established fame for his soundness and endurance that is worldwide. With this basis for the horse dealers and handlers of South Omaha, the Stock Yards company has made it possible by the building of this magnificent barn to put the South Omaha horse market in the front ranks as the available center for the horse supply of the western United States.

Some Things for the Fruit Grower to Do

In young orchards, 2 to 6 years old, pota- es, cabbage, tomatoes and similar crops may grown without injury to the trees. Such ops often bring welcome additions to the rmer's pocketbook while he is waiting for the uit trees to reach the bearing age.

***

The hexagonal system of arranging trees in orchard leaves little waste space between ees and permits cultivation in three direc- ons. Planted thirty feet apart, forty-eight ees occupy an acre, if the square arrangement used. By the hexagonal system fifty-five ees may be grown on the same ground, the pace between them remaining the same.

***

From the nursery stock select for orchard anting trees with well developed, hardy root ystems. Straight young trees, with no large anches, are best. The less top and the more oots on a young tree the better it will stand ansplanting. Always make the hole for the ansplanted tree large enough so that the roots eed not be coiled or bent in order to go into e hole. Any broken roots should be cut eanly so that they will heal promptly. Keep the roots damp and do not expose them to the air longer than is necessary. Plant the tree about two inches deeper than it grew.

***

The north side of a hill is the best location for an orchard, because changes in temperature are not so great as elsewhere. On south slopes the buds start too early in the spring. Cold air descends in hollows and closed valleys and is likely to kill the young buds. An orchard near a lake or large pond is not likely to be injured by frosts, because the water tends to make the temperatures more even.

***

Pack the soil closely around the roots, but leave the surface soil loose to prevent evaporation. Cultivate the space between trees during the spring and early summer for the same reason. Some fruit growers use mulches of weeds, hay or straw to save moisture where sod has been formed. Clover, cow-peas or soy-beans may be planted late in the summer after the trees practically have completed the season's growth. Any of the plants makes an excellent cover crop and can be plowed under in the spring, adding humus and plant food to the soil.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance....$1.50
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75

REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.

CHANGE OF ADDRESS—Both old and new address must be given.

ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING—Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.

COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

The seedsmen are wise in putting so much valuable information in their catalogues. Many of them are real good reading for the winter.

The 1913 apportionment of the state school fund among the several counties of Nebraska totals $325,078; number of children of school age (5 to 21 years), 379,691.

There is a farmer in Tennessee, according to a newspaper published in that state, who, when the hunting season opened, put placards on his cows reading, "I am a cow; don't shoot me!"

An expert estimate of the total value of all crops in Iowa in 1913 foots up $429,443,437. This is the high record of crop values in Iowa, despite the fact that hot weather reduced the corn crop by 92,000,000 bushels.

Cuero, Tex., is the biggest shipping point for dressed turkeys in the world. Texas raises thousands of turkeys each year and they are marched to the two big cold storage plants in Cuero during the holiday purchasing season. About 200,000 birds were taken there this year. These annual "turkey trots" are wonderful spectacles.

England cannot think of disarmament until sure that her daily bread will come to her as regularly without the world's greatest navy as with it. Through Liverpool alone comes 10,000,000 tons a year of cereal foodstuffs, with the greater shippers in this order: Argentina, Russia, India, United States, Canada. This huge quantity would fill more than 2,500 vessels of 1,000 tons burden.

Getting at the Root of Things

Along with the consideration of the question, "Should the Nebraska State Board of Agriculture Be Reorganized," we suggest to our farmer readers the consideration of a bill that might be to their interest to have passed by the next state legislature. Every farmer knows how hard it has been to secure any legislation in his interest. The paid lobbyist who thrives and fattens during sessions of the legislature has no friends. His methods are so well known that it is no longer difficult to locate him. But how about the fellow on the inside? Is he not more dangerous? He is working for his own interests in trying to get appropriations for an institution in which he is directly interested. Would it not be better to have members of the legislature free as possible from obligation to any private or state institution?

To get rid of the "inside lobbyist" many states have passed laws disqualifying members of the legislature from holding any position on any board or as trustee of any institution receiving aid from the state through appropriations.

We believe this subject should receive consideration in the different farmers' organizations at their local meetings. To furnish a text for a discussion of this subject we offer the following tentative draft of a bill, which is copied from a law recently passed by the Ohio legislature:

A BILL

For an act to disqualify any member of the legislature from holding any position on any board, or as trustee of any benevolent, educational, penal or reformatory institution of the state, supplied in whole or in part by the state, during the period for which such member of the legislature was elected, and providing for the vacation of any position so held by such person on his election to the legislature.

BE IT ENACTED by the people of Nebraska:

Section 1. No member of either branch of the legislature shall hereafter be appointed as trustee of any benevolent, educational, penal or reformatory institution of the state, supported in whole or in part by funds drawn from the state treasury. And any trustee of said benevolent, educational, penal or reformatory institution, or any member of the State Board of Agriculture, who hereafter accepts a certificate of election to either branch of the legislature, shall forthwith send his resignation of such office of trustee or member of such board to the proper authority, and in case of his neglect or refusal to do so the office shall be deemed vacated. But the provisions of this act shall not apply to trustees of any of the aforesaid institutions appointed previous to the passage of this act.

The Live Stock Market

There has recently developed a market for stock hogs which promises to be of great advantage to the entire pork supply of the country. Within the last two years stock hogs have been shipped from the south in considerable numbers, coming north into Missouri, Kansas and Iowa and finding a market among the cattle feeders. These hogs have been given the serum treatment before shipment and have been reported satisfactory as an immunized product.

The stock hog trade has been introduced at the South Omaha stock yards recently and is finding a good outlet both among feeders and breeders. The business is taken up by stock hog dealers, who buy the younger and lighter-weight hogs or shoats and have them treated with the cholera serum, dipped, held twenty-one days, then again dipped and released for shipment to any farmer, feeder or breeder outside the quarantine provision of the stock yards.

There is developing a demand for this class of hogs that promises to create competition between the packer and dealer and be the means of sending back into the country thousands of cholera immune hogs to be used as breeders or developed into mature pork producers for the packer trade. There are as fine gilts being sorted out, bought, serum treated and assembled into carload lots and shipped to Colorado, Utah, Wyoming and other western states to start breeding herds as any hog fancier ever saw in any hog country.

The cost of these selected and immunized pigs amounts to about 1½ cents per pound above market price. This makes a cheap investment for any hog raiser to start with. To all appearances they are a splendid imitation of the pure-bred hog, in Duroc, Poland-China, Chester White and Berkshire. Cattle feeders are buying these immunized light-weight hogs or shoats, feeling they are perfectly safe from cholera loss. There are thousands of these fine young prospects for breeding sows that are coming to the stock yards, presumably to escape hog cholera, and the place now to get good bargains is in these immunized shoats and prospective breeding sows.

Paint on the Farm

There is no investment on the farm that will compare with paint. A few dollars invested in paint properly applied to the buildings adds more to the appearance, attractiveness and general desirability of the farm as a place to live, a home to own or as an investment than ten times—yes, often fifty times—this expense in any other line of improvements that can be added to the farm. What are your impressions when you travel through a farming district on railroad or by any other conveyance and your attention is brought to the old weather-beaten barn, the unpainted dwelling and the other buildings of lesser importance, all dingy, weather-worn, dull, unpainted?

There is but one impression and every person who sees these conditions on the farm is similarly impressed. "The home of a careless, shiftless farmer, a man without pride or an ambition to be up t date"; this is the verdict every time

On the other hand, what impres sion is created by the nicely painte buildings, everything on the farm i clean, bright colors—barns, stable sheds, hog houses, wagon sheds, im plement and tool houses—every thing, in fact, brightened up with little paint? It did not cost muc for the material, and nine chance out of ten the farmer painted a these buildings himself, except pe haps the dwelling. Such places ar attractive; they are admired f their clean, homelike appearanc They tell of the good citizenship an character of the owners. Land wit such improvements finds ready sal and a neighborhood peopled wit such a class of farmers is a desirab community to live in. It is th best investment any property own can make, be he a resident of vi lage, town or farm.

Buildings will last almost indef nitely if kept painted, given a co every two or three years. There a many brands of mixed paints th are advertised, guaranteed, wa ranted to wear and not blister an scale off. These paints are put i in gallon cans and are all ready be put on, and can be applied by an one who can spread whitewash. T farmer should have a workshop an be, as the saying goes, "a jack of a trades," and not necessarily the ma ter of any but farming. The farm of today should be able to do repa ing in many lines of work. It folly to run off to town for all t little breaks that are sure to occ on the farm from time to time.

Paint up. Get on the bright si of life and show your colors. Pai everything. Don't leave a gate gatepost that is not brightened freshened up with some good col It adds value to the appearance the farm that means hundreds a often thousands of dollars in its sa

Farm Products Exposition

A new departure in the way of farm products exposition is to tak place at Aberdeen, S. D., the fir part of October, 1914. This fair planned by the Commercial Club Aberdeen and is based upon wh they believe to be practical agric ture. There is to be $1,000 in ca prizes offered to the farmers South Dakota for the best exhib of small grains, corn, alfalfa, le stock—horses, cattle, swine, she and poultry. An additional $1,0 will be devoted to entertainment an in securing competent judges an speakers for the occasion.

It is announced that the excellen of the article exhibited is only on of the minor points in the awardin of prizes. All grain exhibits mu be made from ten-acre plots. Th awards will be made on the basis 50 per cent for yield, 25 per cent f cost of production and 25 per cen for samples shown. It is quite pro able that this farm products exp tion enterprise will get into th hands of some practical fair man gers before October, 1914, and a more thorough classification ar ranged. It is a good idea for tow throughout the agricultural distri to plan fairs and farm products an live stock shows.

New Things in Agriculture

We have learned more about farming in the last generation than in the previous 2,000 years. The sickle and the cradle have given way to the self-binder and the combined harvester. The hoe has resigned its place for the horse cultivator. The gas engine and the automobile and the traction plow and hundreds of other modern appliances make the labor of farming less slavish and more profitable than when father pumped stock water by hand, drove to town with an ox team, tilled the soil with a castiron plow and laboriously did the multitude of odd jobs about the farm.

In the last twenty years we have discovered what good seed will do for a big harvest. We have learned something definite and sure about the soil. We have evolved a positive science of plant and animal breeding. Tradition and the yellow-covered almanac are replaced by the farm paper and special books and bulletins. Today we are farming by facts gathered by thousands of men in many places and carefully recorded and tabulated.

We have not learned all there is to know about the science and art of agriculture. What we do not know is bigger than what we do know by a million diameters.

There is nothing sacred about the present, except opportunity. Tomorrow we will farm better than today. Next year we will grow bigger crops and conserve the soil and live in better houses and have more leisure to study and travel, because we have learned by experience and observation and reading. Johnny is going to make a better citizen than his dad, because the world moves and humankind must move with it.

The slogan of civilized man is "progress." "Forward, march!" is the order. In the great army of humanity, who will be left behind? The savage, the mossback, the incompetent, the degenerate.

It is every person's right to be happy and to get the most out of life, as well as to make some contribution to the world's betterment. To be happy requires a degree of prosperity. To prosper demands that one adapt his industry to circumstances, and this in turn suggests "efficiency."

Look Out for Hessian Fly

Damages to wheat fields by the Hessian fly are again being reported. The plowing up of wheat fields has in some instances already been recommended by state entomologists in the infested areas. Such treatment is recommended as the only thing that can be done now, and this will prevent a larger damage from the flies next year.

A bulletin from the Kansas Agricultural College, just issued, says:

Since the introduction of the Hessian fly into Kansas, forty-one years ago, there have been six serious outbreaks. In 1908 the wheat loss was estimated at 10,000,000 bushels. Five broods appeared that year. Some seasons are more favorable than others for the propagation of this pest. Moist, warm weather is ideal for hatching and developing the fly. There are fewer broods hatched under the unfavorable conditions. Pasturing close with sheep in the fall has been recommended by some, as the sheep is a close grazer, much closer than any other animal, and thus destroys all eggs deposited in the stem above the ground.

The Kansas bulletin refers to what it terms the fly-free sowing dates for sowing winter wheat, dates learned by agricultural college investigators, which is credited as offering some protection where observed. These dates, which vary in different localities, are sufficiently early to insure a good growth of the plant in the fall season.

The bulletin treating of the life history and methods of control of the Hessian fly should be in the possession of every wheat grower, that he may be prepared for defense in case his crop is attacked by this very destructive insect. If permitted to have its own course, the damage is considerable. The very large acreage of winter wheat sown last fall, owing to the corn crop damage and the favorable weather for propagation and development of the fly, suggests that wheat raisers, especially over the southern Missouri valley country, be on the lookout for the Hessian fly, and ready to contribute to checking its advance.

Modern Farm Improvements

There are a great many large, fine appearing homes being built on the farms throughout the western farming country, dwellings that cost from $3,000 to $5,000. This is really the best invested money that any resident land owner can make. A little, cramped-up, stingy appearing residence on a big, otherwise well improved farm is about the most disgusting farm condition that anyone can imagine. This condition is attracting more attention, however, as years roll by. It is attracting so much attention, indeed, that every person who has occasion to pass that way or comes within sight of such a farm notices its out-of-balance condition, its neglect of the boys and girls of the family who call it home, and who would appreciate a big, roomy, comfortable dwelling, that they could enjoy its advantages and homelike appearance.

This neglect of the farm home, of providing the members of the family some of the modern conveniences of living while in the home, has had much to do with driving the boys and girls off the farm to seek employment in the towns and cities. It is natural that the children as they grow up in the farm home either take pride and interest in the home and home surroundings or they are abashed and humiliated at the lack of room and comfort their homes offer to their associates and friends. This same feeling extends to every member of the family; even the farmer himself, the head of the household, who is responsible for these conditions, experiences a twinge of discontent and humiliation when his well-housed neighbors call upon him in a business or social way.

The most important factor on any farm for its successful operation is the well housed, well provided for and properly organized family, and especially is this true where the family consists of several boys and girls. There are just as many ideas and individual conditions of thought, inclinations and purposes of action in these families to provide for as there are boys and girls. There cannot be set up a standard by which all shall be judged, governed and directed. The raising of this family cannot be neglected, and all the effort centered upon building and providing barns, stables, sheds and comforts for the animals kept on the farm. The most valuable individuals in operation and success of farm and home development should be provided for first.

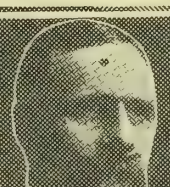
Modern improvements on the farm in the matter of home comforts and conveniences are just as necessary as in the city, and can be had just about as cheaply and be operated at a much less cost. A farmer, recently converted to the belief that he had been doing too much for the comfort of his live stock and not enough for his family, built a twelve-room house, large, airy sleeping rooms, one for each boy and girl; bath, with hot and cold water; furnace heat, laundry, fruit cellar, dairy, etc., all complete, and, with his big automobile, plans to keep the family on the farm if modern conveniences have any influence.

Horticultural Congress

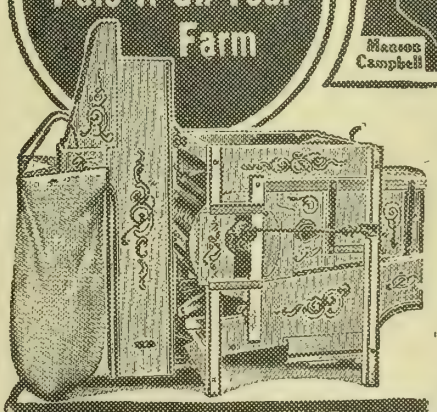
There will be held at Lincoln, Neb., January 20-21, 1914, a convention of horticulturists from the states of Iowa, Kansas and Nebraska for the discussion of horticultural topics and the conducting of a judging contest between the students of the agricultural colleges of these three states. This will be a fruit judging contest and the teams from the above states will participate in this feature of this program. The special prize that has aroused the spirit of contest is a large silver loving cup, offered by the Twentieth Century Farmer of Omaha. This cup is now held by the Iowa team, and the winning of the prize at Lincoln in 1914 wil determine whether or not it will become the permanent property of the Iowa contestants. Iowa has carried off the honors for the last two years, and this year's work will decide whether it continues an object of strife or is peaceably surrendered to Iowa.

Each team shall consist of five members from the junior and senior classes. The teams are all in training, and the contest will be a knowledge of fruit, as there is supposed to be no influence for advantage in the judging permitted, even if the desire existed, of which there is not the slightest probability. The fruit display promises to be as large and as good as last year, which exceeded anything the state ever made.

$1.00 Puts It On Your Farm



For $1.00, I Clean and Grade Your Seed Grain



THE CHATHAM Grain Grader and Cleaner

Handles 70 Kinds of Seed Grain and Grass Seed

From Wheat, it takes Wild Oats, Tame Oats, Cockle, Rye and Smut.
Cleans the dirtiest Flax. Has special knocker and skimmer which prevents clogging. (Other machines choke up.)
Takes Dodder, Barn Yard Grass and Foxtail out of Alfalfa and Millet "slick as a whistle."
Takes Buckhorn from Clover.
Sorts Corn for Drop Planter.
Famous BEAN MILL. Handles all varieties, takes out the SPLITS, Clay, Straw, etc.
Handles Peas as well as any Grain or Grass Seed. Removes foul weed seed and all shrunken, cracked and sickly grain. Takes out all dirt, dust and chaff. It is also a bully chaffer. Handles 60 bushels per hour. Gas power or hand power. Easiest running mill.

You can't afford to plant common Seed and take chances on a poor crop, when I am offering to scientifically clean and grade every bushel of your Seed Grain for this spring's planting for one paltry dollar.

Here's my proposition, and if you are a smart man you will write me before sunrise tomorrow:

Send me one dollar and I will ship you, FREIGHT PAID by MYSELF, this improved 1914 Chatham Grain Grader and Cleaner, with all equipment. Clean your Seed Wheat, Oats, Flax, Barley, Peas, Beans, Corn, Grass Seed, etc. Then PLANT those fine seed. AFTER you have harvested a bumper crop, pay me the balance of my low price. Not one penny need you pay, except the $1, until next October. And by October YOUR CHATHAM WILL HAVE MORE THAN PAID ITS ENTIRE COST IN INCREASED CROPS. Then you'll have it to work FREE for you the rest of your life.

Your Dollar Returned

I only want the dollar as evidence of good faith—to protect myself from mischievous boys. If after 30 days' hard test, you don't want my "Chatham," send it back at my expense and I will return the dollar.

A "Made-to-Order" Machine

Every "Chatham" is practically a *made-to-order* machine, for I send you the exact and proper Screens, Riddles, Hurdles and Sieves to grade and clean every *Grain and Grass Seed grown in your locality.* That's the secret of my success. I would not be the leading maker of Graders and Cleaners if I had tried to make my equipment fit ten million farms. What would you think of a clothing maker whose suits were all one size? Wouldn't it be a *miracle* if he gave you a fit. Yet all makers of Graders and Cleaners, except me, send the same equipment, whether you live in Maine, Ohio or Oregon. They wouldn't do that, if they had my 41 years' experience.

Extra Screens Free

I use, all together, 81 Screens and Sieves. It usually requires 15 to 17 for the average farm. These I select from the 81. After 41 years in the business, I am pretty sure to pick the exact equipment needed on your farm. If I shouldn't, just drop me a line and I'll send you additional requirements. There will be no charge for this.

Samples Graded Free

Maybe you have some Seed Grain that you can't clean or grade or separate. Send me a sample. I will purify it and tell you how you can do it cheaply. No charge for this.

Seed Corn Sorted

My big Corn Sorting Attachment, invented 2 years ago, is a great success. Twelve thousand farmers and many leading Agricultural Colleges are using it. It is the only machine I know of which scientifically sorts seed corn for drop planters.

New Book Ready

Send me no money now—just a Postal, for the finest, most complete Book on Seed Selection I've ever written. After the Book comes, write me what size machine you want and I'll ship it, freight prepaid, on receipt of $1.00. Then clean and grade all your Seed Grain. If you write today, you get my Book by return mail. Address nearest office.

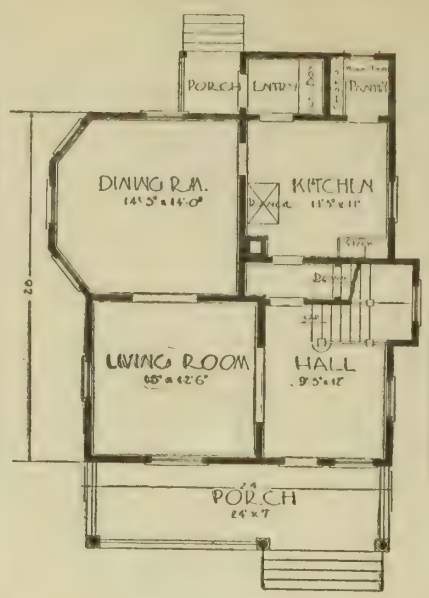
Manson Campbell Company

Dept. 49

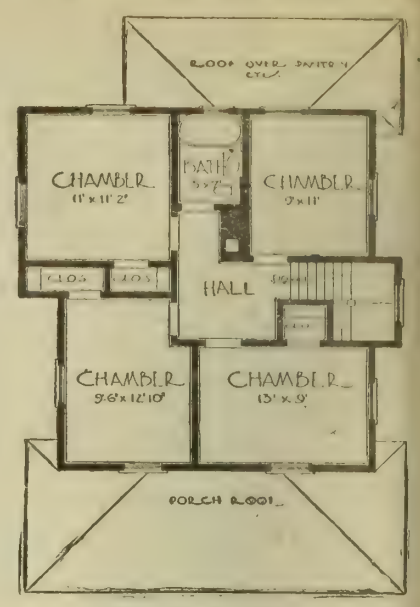
Detroit Kansas City Minneapolis

A Comfortable Farm House

Plans for an Attractive Farm Dwelling



First Floor Plan



Second Floor Plan

EVERY farmer has in mind a day when he can remodel his buildings or replace them with new ones. He dreams of the modern features which he will incorporate in them and how handy they will be when finished. To most good farmers it is the ambition of a lifetime to make their homes beautiful and habitable and to materially increase their incomes by means of modern buildings, modern machinery and modern methods.

Every up-to-date farmer realizes the loss and inconvenience in using old buildings, through the number of unnecessary steps taken and consequent loss of energy wasted. If you are a farmer who contemplates building, it will be money in your pocket to start off with buildings that are thoughtfully planned for the uses to which they will be put.

A plain, well built dwelling, carefully planned and constructed, is far superior to a more showy one in which there has been no consideration given to the needs of the family. The accompanying plan of a house for the farm illustrates this point. It is plain, but attractive, built on square lines, which allow a maximum of room inside, with a minimum of expense. The dormers, porches and extension at the side relieve it from being too plain.

The reception hall has a beautiful open stairway. The center hall gives direct access from the front to the back of the house and also serves as a coat closet. The cellar stairs under the main stairs are provided with a grade entrance. The kitchen has a pantry in connection with an outside window. Upstairs we have four large bed rooms and a bath room. Taken all in all, the arrangement is unusually attractive and convenient.

The basement is excavated under the entire house. It is six feet eight inches high and floored with cement. The first story is nine feet high from floor to ceiling and the second story eight feet seven inches. The outside studdings are eighteen feet long. The house measures 27x33 including bay and rear entrance.

The Lead Pencil with a Point

There is No Farm Implement More Useful

THE writer has found a great deal of solid satisfaction and considerable profit in planning next season's work the year before—not only planning it in mind, but getting it down on paper. He has discovered that this matter of putting things down in black and white is a valuable aid to clear thinking and safe planning. Ideas flow more freely, invention is more active and the whole program takes on more intelligent lines when a picture has been made of it.

Probably there is no farm implement more useful than a lead pencil unless it be what is at the other end of it. Often I have sat down to work out a proposition that was vague and uncertain. After sketching roughly the ideas uppermost in mind, suddenly there would flash out of the void a new thought. The eraser applied where it would do the most good, the improvement was set down, and so the entire scheme grew by evolution until the completed plan was held forth for final inspection and approval. This applies not alone to buildings and other constructive work, but equally well to the laying out of fields and arranging for future crops. Somehow one gets a clearer insight of how best to deal with his special set of problems after he has thus visualized the whole works on paper.

Every fall, often before harvest, I make a map of the farm. I set down the number of acres in each field, and with one eye on what grew thereon the previous year and the other on what will make a particularly happy combination for the next, all with special reference to correct rotation practice, I mark in each space the name of the crop that will best suit the general program. Then I make a table, with the names of the crops at the left, and along the top such heads as the number of acres, plowing, disking, harrowing, seeding, etc. The spaces are filled with dates, amounts and other proper data. If one crop seems to interfere with another in the careful preparation of the soil or the planting of the seed, I switch things around until they fit together harmoniously.

Without taking this too seriously, or puttering wastefully over it, I regard it as a wise forethought to thus map out the next season's work, making a suggestive calendar as far as possible. Such preparation means the saving of numerous false starts and lost motions, which in the course of time may mean the difference between success and failure.

Another way I have of planning work in advance is to set down, in numerical order, a list of things to do. To some it may appear unnecessary to write out the plain and evident tasks ahead. Where these tasks involve a large number of details, particularly where time is of the essence of their accomplishment, and where a man carries in his mind a considerable number of other matters, it will be found helpful, and not at all "school-girlish," to set down the many jobs which make up the season's work. Always there will be some items which need attention promptly at a certain time; others may wait. Those which logically should come first I mark No. 1, the second in importance No. 2, and so on. As I accomplish these tasks I mark them off. When my list begins to look like a last year's bird's nest, I pick out the live ones and start afresh.

The trip to town, with a dozen or more errands to attend to, can be simplified, time and mind strain can be saved, by jotting down on a slip of paper the things to get and to do. Often I classify these so that I can put in a busy day without needless fatigue or the retracing of steps. In brief, I have found during a long and busy life that I can increase my efficiency when I do not try to burden my mind with details or the minutia of any business that can be committed to paper. Such memoranda are in truth a man's assistant brains. They do not interfere with a proper cultivation of the memory, or one's mental grasp of vital problems, but I see no virtue in loading up the memory with small matters or routine when they can be negotiated more effectively by some simple system as indicated above.

H. A. BEREMAN.

Life of Pneumatic Tire

Two factors contribute to the life of a pneumatic automobile tire—the first is a tire well made and of good material; the second is the tire care necessary to secure from this tire the mileage which its maker has already done all he can to make maximum. The tire is purchased by a dollar and cents consideration; tire care needn't be purchased; it is available to every motorist who cares to apply it. And that it pays, and pays big, is what every motorist who has tried it knows.

Many Cattle in Brazil

While there are no reliable statistics of the pastoral industry in Brazil, it is estimated that there are 30,000,000 cattle in the country.

Happy New Year!

Are you acquainted with the sweet, toasty flavor of

Post Toasties

—crisp krinkles of choice Indian Corn—toasted to a delicate golden brown—ready to eat direct from package?

Wholesome, convenient and immensely appetizing

Ask the grocer-man

—anywhere.

National Alfalfa Association

To Create Interest in Growing and Its Use

THE National Alfalfa Growers' Association was organized in Chicago at a meeting where nearly a hundred farmers and agricultural representatives had convened pursuant to a call issued by Charles S. Hatfield, secretary of the bureau of conventions and societies of the Panama-Pacific International Exposition.

The aim of this society, according to the constitution, is "to create a more general interest in the growing and use of alfalfa, encourage its study as a forage crop, and that its great value to farm conditions in the United States may be more fully understood; to determine more economical ways of handling and feeding, and to hold meetings that will encourage and better alfalfa growers."

Plans for perfecting this organization were discussed; also it was urged that an exhibition of alfalfa be collected from each state, under the auspices of this association, to be exhibited at the Panama Exposition as a means of stimulating the growing of this crop more extensively throughout the United States and the world.

The idea of an alfalfa palace, built of baled alfalfa, in which all features of alfalfa products are to be exhibited, seemed to be the most effective method of display, in the opinion of the convention assembled. This will be large enough to comfortably seat at least two or three thousand people, and in this auditorium will be given the addresses and discussions on alfalfa by scientific growers and feeders of the product.

The following officers were elected:

President—A .T. Grout, Winchester, Ill.
Vice President—J. E. Wing, Columbus, O.
Second Vice President—J. E. Chessman, Racine, Wis.

The following were named on the board of directors at large:

Illinois—P. G. Holden, W. R. Goodwin, W. R. Young, H. M. Cottrell, J. B. Lampson, W. G. Edens, A. C. Johnson, Chicago; F. L. Hatch, Spring Grove; A. N. Abbott, Morrison; Prof. Hegnaner, Urbana.

Indiana—Mr. Leo, Notre Dame; C. L. Maberry, Itica; W. H. Pullin, Rensselaer.

Iowa—Henry Wallace, Des Moines; J. M. Parker, Monroe; W. C. Brown, Des Moines; E. H. Webster, Fort Atkinson.

Nebraska—Prof. R. K. Bliss, Lincoln; Prof. E. A. Burnett, Lincoln; G. W. Hervey, Omaha.

Kansas—F. D. Coburn, Topeka; W. M. Jardine, Manhattan.

Wisconsin—H. E. Kreuger, Beaver Dam; J. C. Chessman, Racine; P. C. Schwartz, Waukesha; J. F. Graber, Madison; Prof. R. A. Moore, Madison.

Minnesota—A. B. Lyman, Excelsior; C. C. Lillie, Coopersville; C. C. Clay, Dopelius; T. A. Hooversta, Minneapolis.

Michigan—D. R. Mumford, Lansing.

Ohio—C. H. Allen, Toledo.

New York—F. E. Darley, Fayette; J. D. S. Findley, Salisbury Mills.

South Dakota—W. S. Hill, Mitchell; D. C. Miller, Vermilion.

North Dakota—H. G. Haney, Grand Forks.

Washington—E. E. Foyville, Spokane.

California—E. V. McCormick and T. F. Hunt, San Francisco.

West Virginia—William Hill, Bethany; E. H. Williams, Charleston.

Montana—Mr. McDonnell, Billings.
Colorado—Governor Ammons, Denver.
Idaho—J. G. Carlyle, Moscow.
Kentucky—E. L. Kleinderer, Henderson.
Tennessee—L. Butler, Memphis.
Mississippi—A. F. Flint, Mason.

This association delegated its work to a few members, called an executive committee, who have power to go ahead and plan for a big and successful show of alfalfa at the Panama Exposition.

The next annual meeting will in all probability be held in Chicago during the International show of 1914. In the meantime the progress of the work will receive more or less publicity through the agricultural journals and public presses in general.

Feeding the Farm Horse

The feed for the farm horse should be of as good quality as that given to higher-priced animals used in the cities or on the racetrack. The question of mode of feeding is an important factor in keeping the farm horse healthy. Most of the hay should be fed at night, when the horse has plenty of time to eat. The hay should be of good quality. All mouldy or musty hay should be rejected as unfit for feed. By selecting only good hay, the danger of heaves is avoided. The most natural grain for the horse is oats. The oats should be well matured and not mouldy. Bran has very little nourishment in it, but serves as a bowel regulator. If a quart of bran is fed each animal with the oats, the danger of colic is lessened.

Whenever possible, one should make it a practice to feed the farm horse after it has had thirty minutes or an hour to rest before trying to digest its concentrated food. In other words, let the farm horse eat a little hay while warm, and after it has entirely dried off, water and grain. During a resting period, feed more bran and less oats. Then there will be less danger of azotoria after the horse is put back to work.

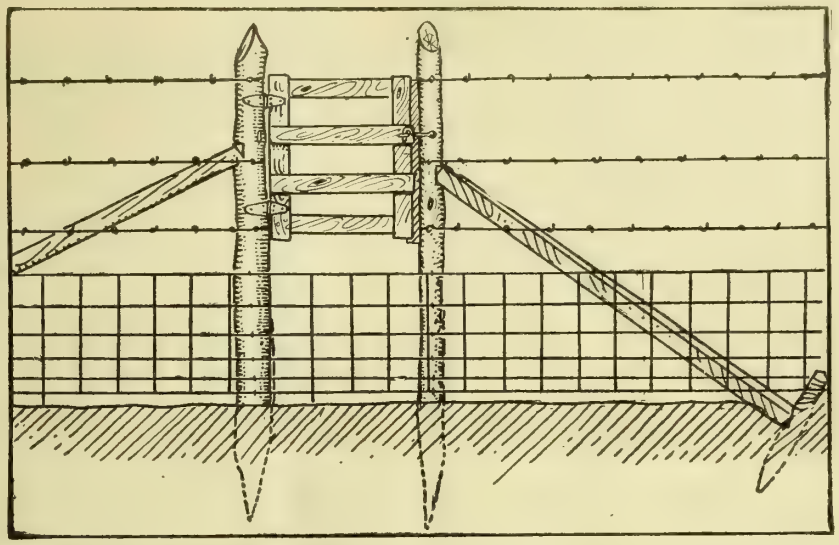
A well regulated barn of modern type is equipped with watering trough in the barn. If possible all horses should have an opportunity of drinking pure water at any time while in the barn, if the horse is not too warm. Some ranchers find it a paying proposition to set a pail of water in for each horse before retiring. This gives the horse an opportunity to have water when it needs it the most, while eating the dry hay.

So many horses have injunction colic from eating large quantities of straw during the winter. The horses keep in the shelter of the strawstacks and will not hunt water during severe weather.

C. L. BARNES.
Colorado Agricultural College.

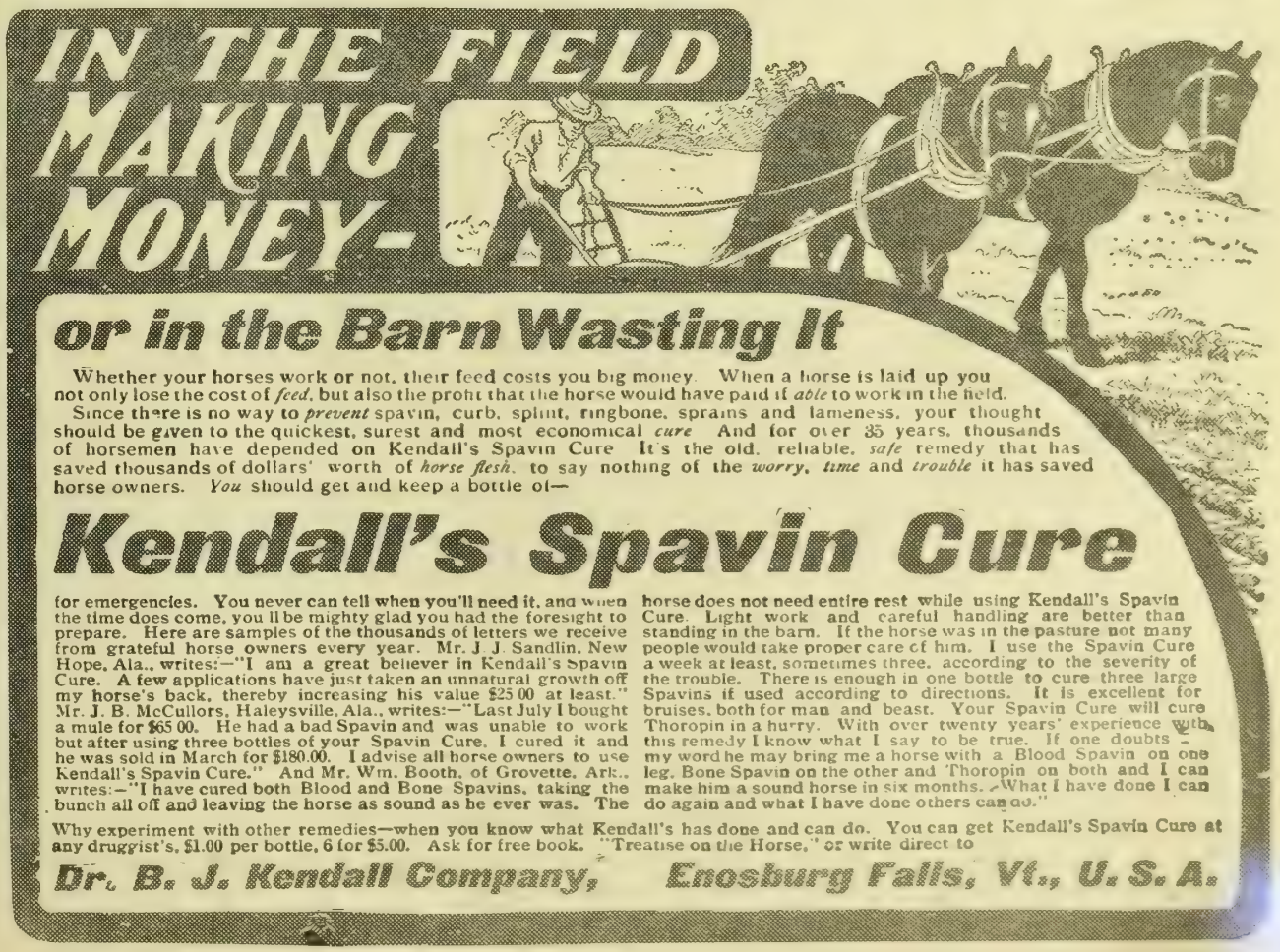
A Handy Farm Gate

M. Coverdell



AT THE point where one is in the habit of crawling through the hog fence the wires become sagged and the woven fence is twisted out of shape, to say nothing of the inconvenience attending this unhandy method of getting through the fence.

Set an extra post in line with the fence at such a point, stapling the wires securely to it. Brace this small post and the one next to it (as shown in the illustration); cut the wires between them; make a small gate to fit this opening in the fence, and hang it, using either iron hinges or strips of leather to support it and allow a free swinging. Attach a hook latch, as indicated, and you will save yourself much inconvenience and repairing of fences.



Suppose You Try Grading Your Seed Grain Under A Guarantee!

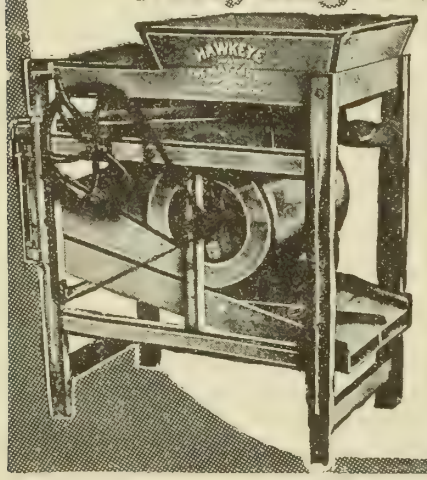
Grade and clean your seed wheat—oats—any grain—with a Maytag HAWKEYE Grader and Cleaner; and if you can tell us, after harvest, that it did not make an increase in your yield—more than enough to pay for the grader—*we'll return your money.*

What we *know* about this money-making machine is summed up in that offer. We couldn't afford to make it if we were not safe in doing so. And as we *are* safe, then you cannot afford to be without this grader.

We can prove to you that men using the Maytag HAWKEYE Grain Grader and Cleaner have made $7.00 more net profit per acre on oats—over $3.00 more net profit per acre on spring wheat—over $6.00 more net profit per acre on winter wheat. Can you beat that for an easy money-making proposition?

In other words, others have paid for this machine with the increased returns from three acres of oats, or a little over three acres of winter wheat, or seven acres of spring wheat. You cannot make anywhere near as much money on any other investment, and we say a HAWKEYE Grain Grader and Cleaner is the most profitable machine you can buy.

Maytag HAWKEYE Grain Grader & Cleaner



is a *completely guaranteed* machine You don't have to keep it, or pay a cent for its use—if it doesn't do all we claim.

The Maytag HAWKEYE Grain Grader and Cleaner grades and cleans corn, all kinds of small grains and grass seeds; separates grain into proper grades for planting; takes out all dirt, trash, etc.; selects good seed from bad—grades perfectly and cleans thoroughly, a grader and fanning mill in one.

Write *now* for the facts. Free printed matter tells how this machine is made—how it operates—what it will do for you—what it has done for others. It will actually be your biggest money-maker. Don't go into another season without learning about it. Ask your dealer, or write us at once for complete information.

The Maytag Company
380 North St. Newton, Ia.

Just a Word With You—

Mr. Homeseeker, you want to benefit your condition.. Can you afford to own or buy high-priced land?

Renter, can you afford to rent high-priced lands? Why put off buying a home of your own? Lands go up in value every year. Look over these and see what opportunities for you:

80 acres, fair improvements, 5 miles to good railroad town, near school. Price, $2,500.
80 acres, small improvements, 4 miles to two good railroad towns. Price, $3,200.

Have you teams, farming tools and from $300 to $600 cash? If so you can handle these. If you are tired of renting and moving around year after year, these lands will double in value with your own labor. If you really want a home of your own, come see these and others. Send for our illustrated booklet. Call on or address,

THE ALLEN COUNTY INVESTMENT CO.
Kelley Hotel Building. Iola, Kansas.

95 cents

5 YEAR GUARANTEE

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To advertise our business, make new friends and introduce our catalogue of Watch bargains we will send this elegant Railroad watch by mail post paid for ONLY 95 CENTS. Gentlemen's size, full nickel silver plated case, locomotive on dial, lever escapement, stem wind and stem set, a perfect timekeeper and fully guaranteed for 5 years. Send this advertisement to us with 95 CENTS and watch will be sent by return mail post paid. Satisfaction guaranteed or money refunded. Send 95c today. Address

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Ried's Yellow Dent—a package free to anyone who writes. Strictly Dakota grown. Matures early—the large shapely ears fill out with deep kernels, sound and hardy. Also free Jones' Seed Book, showing results of 27 years' experience. Write today

O. S. JONES SEED CO., Box 793 N, Sioux Falls, S. D.

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Large assortment at less than half of agents' price. Best Everbearing and other sorts of Strawberries, all strong irrigated plants. Free catalog and coupon. NORTH BEND NURSERIES, Box 502 North Bend, Neb.

When writing to the advertisers on this page

Should Nebraska State Board of Agriculture Be Reorganized?

(CONTINUED FROM PAGE THREE.)

ble the state board to most successfully carry on the work of developing the agricultural resources of the state? We do not believe they are, therefore we urge that the law be so amended that the duties of the State Board of Agriculture shall be commensurate with the title it bears, and be a State Board of Agriculture in fact instead of being simply a state fair association.

* * * * *

But let me ask you, in all candor and kindness, what has the State Board of Agriculture been doing in all these years toward the development of the agricultural resources of the state?

* * * * *

We ask the State Board of Agriculture to take up this agricultural work. First, because its title indicates that this is its proper line of work. Second, because it has, or may have, a county member or representative in each county in the state, and for this reason would be better enabled to carry on this work successfully.

But if the present board shrinks from assuming the responsibility of taking up this educational work, I suggest that you change your title to the more appropriate one of the Nebraska State Fair Association, and leave the field of agriculture clear, and then help us secure a law that will enable us to have a State Board of Agriculture composed of county members whose head shall center in the school of agriculture at the State university.

There is a Difference

This advice was not heeded. It is just as pertinent today as it was in 1900. But conditions have changed. In Iowa, Missouri and Kansas the State Boards of Agriculture are doing just what Mr. Ream suggested. Their largest field of activity is the developing of the agricultural resources of their states. Holding a state fair is only incidental. Two of the states have separate fair managements.

In Nebraska, a so-called Board of Agriculture is managing and conducting the State fair and doing nothing else. Instead of heeding the advice of Mr. Ream and building up a state board of agriculture, the board has devoted its time and energies to the State fair. This work in the main has been well done. Nebraska should have a fair equal to the best. The state should make appropriations for new buildings.

Conditions in Nebraska are different from those in the other states named. Instead of the work suggested by Mr. Ream being done under the supervision and control of the State Board of Agriculture, it is now being done through other agencies. The State Board of Agriculculture, as at present organized, could not take over this work without more or less friction. This is why the question of reorganization should be considered by a committee representing all the agricultural and live stock interests of the state.

The same men have been in control of the State Board of Agriculture since 1901. The following table shows how the "Three-in-one" have held the key to the management of the State Board of Agriculture:

Year.	Mellor.	Rudge.	Youngers.
1901	Chair. Bd.	On Bd.	Chair. Bd.
1902	On Bd.	Chair. Bd.	On Bd.
1903	On Bd.	Chair. Bd.	On Bd.
1904	Pres.	Chair. Bd.	On Bd.
1905	Pres.	Chair. Bd.	On Bd.
1906	Sec'y.	Chair. Bd.	Pres.
1907	Sec'y.	Chair. Bd.	Pres.
1908	Sec'y.	Chair. Bd.	On Bd.
1909	Sec'y	Pres.	On Bd.
1910	Sec'y.	Pres.	On Bd.
1911	Sec'y.	Chair. Bd.	On Bd.
1912	Sec'y.	Chair. Bd.	
1913	Sec'y.	Chair. Bd.	On Bd.

"Three-in-One" Machine

Other men may come and go, but Mellor, Rudge and Youngers seem destined to go on forever. Everyone has come to admit that they are clever politicians and well posted fair men. But who could not be if given the same opportunity? They have all been on the board of managers continuously for thirteen years. Each one in turn has been president, and then in turn has been re-appointed a member of the board of managers by the incoming president—a regular "3 in 1" lubricated machine. From the date Mr. Ream gave his prophetic advice to the present time this "3 in 1" machine has been in control of the State Board of Agriculture, shaped its policy and conducted its business. This fact should fix the responsibility for what has been done as well as for not giving Nebraska a real State Board of Agriculture.

We want our readers to carefully think over what we have said in the foregoing. Next week we will show how the "three-in-one" do their work. We will also offer some suggestions as to changes that should be made.

We would also call attention to the leading editorial in this issue, entitled "Getting at the Root of Things."

Forest Service Notes

In twenty-six states there are state foresters who co-operate with private timberland owners in solving forest problems.

* * *

The forest service maintains nine experiment stations for studies in reforestation and similar subjects.

* * *

The bureau of entomology and the forest service, working together for the control of forest insects, last year covered more than 160,000 acres in their operations.

* * *

A national arboretum is being established in Rock Creek National park, District of Columbia. Eventually it will contain all American tree species which will thrive there.

* * *

The total amount of land purchased in the eastern states for federal forests is nearly 800,000 acres. So far the principal work on these areas has involved their protection against forest fires.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

A Fellow Feeling

I never liked young Tommy Brown,
For Tommy Brown, you see,
Is just the kind my people think
As good as good can be.

They say to me, "Now, Tommy Brown
Would never muss his hair,
Nor stamp his feet when things go wrong,
Nor strew things everywhere."

How tired I grew of Tommy Brown,
He seemed so very good.
The things he should not, never did,
But did the things he should.

Then once I went to Tommy's house,
And heard his mother say:
"Now, Tommy, stop! Why, Teddy White
Would never act that way!

"You never see him leave his shoes
Around the floor like that,
Nor cry when asked to pick them up,
Nor tease the poor old cat."

So when I now meet Tommy Brown
I try to be polite;
I like him better than I did,
For I am Teddy White.

—Harper's Monthly.

The Editor's Corner

Have you ever written a story or verse for which we have announced that you would receive a prize, and and then failed to receive the prize? If you have, please write us a letter, giving us your address in full, as we have had some books returned from the postoffice with the information that the person addressed was not known. These are held here at the office, and will be sent to you again as soon as we learn how to reach you. Be careful, when you send in your stories and verses, to give us a full address so that if you are entitled to a book you may receive it without fail, and if you do not receive it within a reasonable length of time, write us, so that we may make it right.

What is the matter with the boys? Why don't you write stories any more? We have very few from the boys, and we know that when you write you usuallly write good, live stories, just the kind that win prizes. Come on, boys; don't let the girls do all the story work. Tell us some of your last summer's experiences.

THE EDITOR.

(Prize Story)

The Squirrels' Christmas Dinner

By Clara Louise Schick, Aged 12, West Cliffe, Colo.

Three little squirrels lived in a hollow tree. They were Bunny, Bushy and Fuzzy. One morning Bunny said, "Now, Bushy, tomorrow is Christmas, and you must go down cellar and bring some nuts, so Fuzzy and I can bake some pies and cakes for dinner."

"All right," said Bushy, and in a little while there was a baskekt of nuts on the table, and Bushy was busy cracking them and putting them in a bowl. Bunny got out the eggs, milk and flour and was soon busy making a nut pie, while Fuzzy made some nut cakes and cookies.

The next day, just as they were sitting down to dinner, a rap came at the door, and when Bushy called, "Come in," there walked in a poor, lame rabbit with a cane.

"Please may I have some dinner?" he said. "A tree fell on my leg and I can hardly walk."

"Of course you may have some dinner," said Bushy, and Fuzzy pulled another chair up to the table, and Bunny took Mr. Rabbit's cap and cane. Everyone had a good time, and Mr. Rabbit said, "I'm so thankful I found such good friends."

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write with ink, on one side of paper only.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

Additional Stories

Edwin Hoppe, Jansen, Neb.; Mabel Patterson, Springfield, Mo.; Hazel Hill, Harlan, Neb.; Nellie Ortha Storm, Hullett, Wyo.

Something About You

You are a complex and ingenious machine, "fearfully and wonderfully" made. If your age is 15 years or more, you can be figured up to a dot.

You have 160 bones and 500 muscles; your blood weighs twenty-five pounds; your heart is nearly five inches in length and three inches in diameter; it beats seventy times a minute, 4,200 times an hour, 100,800 times a day and 3,722,200 times a year. At each beat a little over two ounces of blood is thrown out of it; each day it receives and discharges about seven tons of that wonderful fluid. It is the most remarkable pump in the world.

Your lungs will contain a gallon of air, and you inhale 24,000 gallons a day. The aggregate surface of the air cells of your lungs, supposing them to be spread out, is 20,000 square inches.

The weight of your brain is three pounds or more. Your nerves exceed 10,000,000. Your skin is composed of three layers and varies from one-eighth to one-fourth of an inch in thickness. The area of your skin is about 1,700 square inches, and you are subjected to an atmospheric pressure of fifteen pounds to the square inch, a total of 127 tons.

Each square inch of your skin contains 3,500 sweating tubes, or perspiratory pores, each of which may be likened to a little drain tile one-fourth of an inch long, making an aggregate length in the entire surface of your body of 201,166 feet, or a tile ditch for draining the body almost forty miles long.

In the future have more respect for your body and see that it is well taken care of—not only while you are awake, but while you are sleeping.—Boys' Life.

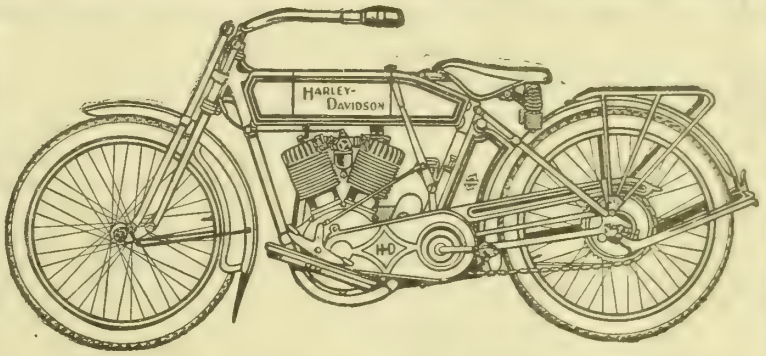
Ginger

How would you like to own a mule like Ginger? This picture was taken when he was a month old. He belongs to Wallace White, one of our Kansas boys, who is eviently very proud of him. He says they have seven mules on their place, and that Ginger is the youngest and

smartest of them all, and that he lives up to his name. When they were plowing last summer the other mules would get in front of the plow, and they would have to stop and drive them away, but Ginger never did this. He had sense enough to keep out of the way.

Picture Contest No. 9

Write a verse of four lines about this picture. Each of the two children writing the best verse about this picture will receive a book as a prize. Make your verse bright and original. Put yourself in the children's places and think what you would say and do if you were there. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all given consideration, as well as the quality of the verse, in awarding the prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than January 24.



Startling, Exclusive Improvements Mark the 1914 Harley-Davidson

Step Starter Starts Machine With Rider in the Saddle and Both Wheels on the Ground

In case the rider accidentally stalls the motor in crowded traffic or on a steep hill it is no longer necessary to dismount, perhaps in the mud and find a level place to set the machine upon the stand in order to start the motor. Instead a downward push on either pedal—the step-starter does its work, and the motor begins again to throb.

Selective Type of Two-Speed

The Harley-Davidson two-speed gear (another patented feature) is located inside the rear hub, thus avoiding dust, dirt or damage. Its speeds are selective and the rider can shift from low to high, or high to low, or to neutral, at any time, whether the machine is standing still or in motion.

Ful-Floteing Seat

For the third successive year the Ful-Floteing Seat is standard. This patented device floats the weight of the rider between two concealed springs, assimilating all jars and vibration due to rough roads.

Double Clutch Control

The patented Harley-Davidson clutch can now be operated either by a foot lever on the left foot board or by a hand lever. The foot lever does away with the necessity of taking either hand off the handle bars, a great convenience when riding through sand or mud.

Double Brake Control

The new Harley-Davidson Band Brake (patented) can be operated either by a foot lever or by back pedaling on either pedal.

Folding Foot Boards

All models are equipped with Folding Foot Boards in addition to the regular pedals.

We will gladly send you on request our complete 1914 catalog giving full details of these and forty other improvements

Harley-Davidson Motor Co., 846 A Street, Milwaukee, Wis.

Producers of High-Grade Motorcycles for More Than Twelve Years

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add interest and zest to your winter evenings.

Make the most of the fun of flash-light work and the fascination of developing and printing.

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WE SHIP ON APPROVAL *without a cent deposit*, prepay the freight and allow **10 DAYS FREE TRIAL.** **IT ONLY COSTS** one cent to learn our *unheard of prices* and *marvelous offer* on highest grade 1914 model bicycles. **FACTORY PRICES** *Do not buy* a bicycle or a pair of tires from *anyone* at *any price* until you write for our large **Art Catalog** and learn our *wonderful proposition* on first sample bicycle going to your town. **RIDER AGENTS** everywhere are making big money exhibiting and selling our bicycles. **We Sell** cheaper than any other factory. **TIRES, Coaster-Brake rear wheels,** lamps, repairs and all sundries at *half usual prices.* **Do Not Wait;** write *today* for our *special offer.* **MEAD CYCLE CO., Dept. P186, CHICAGO**

Make Home Cosy

AN AMERICAN PARLOR LAMP will add to the comfort and enjoyment of long winter evenings. 400 candle power! No wicks to trim, no chimneys to clean. No smoke, smell or dirt. Cheaper than ker sene, better than gas or electricity. Write for circulars.

American Gas Machine Co.,
339 Clark St., Albert Lea, Minn.

DORSCH ICE PLOW

One man and a horse can cut more ice in a day with it than he will use! Guaranteed to beat 20 men with saws! Cuts *double row*; cakes uniform, any size and thickness. Two days' cutting for others pays for your plow. In 3 sizes—$15.33 and up. Write for catalog and our *surprise* offer.

JOHN DORSCH & SONS
252 Wells St., Milwaukee, Wis.

Beats 20 Men With Saws

35 BUSHELS PER ACRE was the yield of WHEAT

160 ACRE FARMS IN WESTERN CANADA FREE

on many farms in Western Canada in 1913, some yields being reported as high as 50 bushels per acre. As high as 100 bushels were recorded in some districts for oats, 50 bushels for barley and from 10 to 20 bushels for flax. J. Keys arrived in the country 5 years ago from Denmark, with very little means. He homesteaded, worked hard, is now the owner of 320 acres of land, in 1913 had a crop of 200 acres, which will realize him about $4,000. His wheat weighed 68 lbs. to the bushel and averaged over 35 bushels to the acre.

Thousands of similar instances might be related of the homesteaders in Manitoba, Saskatchewan and Alberta.

The crop of 1913 was an abundant one everywhere in Western Canada.

Ask for descriptive literature and reduced railway rates. Apply to Supt. of Immigration, Ottawa, Canada, or Canadian Gov't Agent.

W. V. Bennett, Room 4,
Bee Building, Omaha, Neb.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Of Interest to Our Women Readers

If You and I

If you would smile a little more
And I would kinder be:
If you would stop to think before
You speak of faults you see;
If I would show more patience, too,
With all with whom I'm hurled,
Then I would help, and so would you,
To make a better world.

If you would cheer your neighbor more
And I'd encourage mine;
If you would linger at his door
To say his work is fine.
And I would stop to help him when
His lips in frowns are curled,
Both you and I'd be helping then
To make a better world.

But just as long as you keep still
And plod your selfish way,
And I rush on and heedless kill
The kind words I could say,
While you and I refuse to smile
And keep our gay flags furled,
Someone will grumble all the while
That it's a gloomy world.

—E. A. Guest.

Our Home Chat

Now that the long winter days are at hand, and the big yield of wheat or something else has possibly made the bank account swell perceptibly, the question of replacing some of the worn furniture and redecorating the house comes up. Elsewhere on this page is an excellent contributed article on the buying of furniture, and a cut showing a simply but comfortably furnished home. It is cheaper to buy the sort of furniture that has a shiny finish and a lot of curly-cues all over it than it is to buy plain things; that is, it is cheaper for the moment. This is because the curly-cues are all out of date, and so is the shiny finish, and therefore these things are selling cheaply. It is also cheaper to buy carpets with gorgeous roses blooming on them than the simpler and quieter conventional designs. The roses are out of style. One does not buy furniture, carpets or anything else that is entirely out of style if he is wise. There are people who want these things, regardless of styles, so they are still made, but they are not the people who want good material, so when they are made they are made poorly and sold for a small price. Any honest furniture man will tell you this.

Then, in decorating the room, the paper is a matter of no small importance. It deserves study. It should be chosen to suit the needs of the room, and the people in it, and to set off the pictures hung on the walls, and should not have a pattern that will confuse the eye. The pictures themselves should be not very numerous and framed in plain frames. Paintings generally look best in gilt frames, but the frame should not be massive and the plainer it is the better. Prints and etchings should be framed in plain frames matching their predominating shade. All pictures should be hung but little above the eye level. The subjects are, of course, to be determined by the taste of the people who will see them. A good picture that appeals to one is a source of continual pleasure. A poor one is a constant eyesore.

THE EDITOR.

An Ideal Home

A house situated on rolling ground, sloping to the south and commanding a view of all parts of the pasture; a stream of water flowing through a meadow about forty rods from the house; the stock quietly grazing through the day and coming to the barns at night for grain and milking—this is a sight worth seeing.

The house is two stories, size 26x34, with porches on two sides. It contains eight rooms, also bath room and five closets; a basement under the entire house, with a furnace which heats every room in the house. In the basement is placed a pressure boiler, which pumps water from two large cisterns and sends it to the second floor, where the bath room is situated. The kitchen has hot-water boiler attached to range and also has a good sink. Other conveniences are placed in kitchen, such as cabinet, cupboard and ice-box.

The barns—for there are two—are each 40x40 feet. One has a basement for hogs and cattle that are being fed for market. It has a long platform through the center for feeding, and a sleeping place for the hogs. The first floor has a granary on one side and a place for machinery on the other, and a wide drive through the center. The bins have spouts leading down to the basement to feed stock or fill wagons, as one wants. The upper story is used for hay and is supplied with a hay fork. The other barn is used for horses and milch cows, with one bin for grain and a hay-mow on the second floor.

Nebraska. MRS. D. C.

Note—This is one subscriber's ideal for a farm home. There would not be many women who would not desire to live in the country if all might have such homes as this.

Grandmother's Pin Money

I have read of several very nice ways for women to earn their pin money, but I have never read one just for the grandma who sits all day in her willow chair wishing for something for her once busy hands to do, so I thought I would write one just for her

Now, how many of you can knit? Very few of you cannot. If the grandmothers were to let it be known that they would knit children's stockings and men's socks, they would surely have all they could possibly do. So many wish for the good, warm, home-made socks like their mothers used to make for them, and many would pay a good price to get them. One good way would be to put a short advertisement in your paper, and another to tell your shoe man, and it would be quickly published. You often hear

(CONTINUED ON PAGE FIFTEEN)

Comfortable Furniture Pays

Solid Comfort for Tired Bones

When we bought our furniture we made up our minds that we were going to have exactly the kind we wanted, if we had to go without some of the pieces. Our main object was to get furniture that was comfortable. When we use our furniture we are usually tired, and we believe that its use is to rest one.

One of the pieces is a big leather davenport. It cost quite a lot, but it has a spring in every spot big enough for a spring, and from the standpoint of comfort it can't be beaten. A big leather rocker matches the davenport, and it, too, is provided with good springs that make it delightful to use.

It may sound strange to some, but we bought mahogany furniture for both parlor and dining room. We bought mahogany, and we bought it to use, not to look at. We have found that it is very little more expensive than oak and just as appropriate for a farm home. We liked the color of the wood, and we have been glad a thousand times that we have mahogany. It gives a tone to the house that pleases you every time you come in and also pleases any visitors that may come. We don't feel any more restrained with mahogany than we would with oak. I don't believe it scratches any easier, and it will last as long as we care to use it.

Some people want a hundred and one knicknacks about the house, but a few pieces of really good furniture make a better home than a lot of cheap articles. Furthermore, rooms fitted entirely with one kind of wood are more attractive and so more useful than those with a combination of oak, mahogany and walnut and perhaps some other type.

JOHN Y. BEATY.

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6381—Ladies' Dress—A charming model, closed in front, which has a drop shoulder and a square front yoke. The neck is trimmed with a small ornamental collar. The sleeves are gathered into a deep cuff at the wrist, but may be shortened if preferred. The skirt can be made with or without a seam in the center of the back. These dresses are made of chiffon cloth, cheviot, serge, cashmere and all soft novelty materials. The pattern No. 6381 is cut in sizes 34 to 42 inches bust measure. Medium size requires 4¼ yards of 44-inch material.

6399—Boys' Russian Suit—While the Russian suit remains the proper dress for little boys, it is now cut on straighter lines. Our model also has a very low, diagonal closing, with the popular vest in front. The sleeves are tucked at the wrist, but may be gathered into a cuff. Little bloomer trousers complete the suit, which may be of wash materials or of light-weight woolens or velveteen. The pattern No. 6399 is cut in sizes 2, 4 and 6 years. Medium size requires 2⅜ yards of 44-inch material.

5083—Ladies' Apron—Linen, gingham or chambray can be used to make this apron. It is just the thing for wearing around the kitchen, as it covers the entire dress. There is a pocket at each side of the front. The pattern 5083 is cut in sizes 32, 36, 40 and 44 inches bust measure. Size 36 requires 4⅞ yards of 36-inch material.

6380—Girls' Dress—Serge, cheviot or broadcloth can be used to make this dress. with the collar and cuffs of contrasting material. The dress closes at the front and can be made with either the long or three-quarters length sleeves. The pattern 6380 is cut in sizes 6, 8, 10 and 12 years. Age 8 years requires 2⅜ yards of 44-inch material and ½ yard of 27 inch contrasting goods.

11-11-54—Apron Design—This apron design may be quickly worked, as there are only a few flowers and leaves in solid embroidery, while the fronds are in a fine featherstitch, or, if preferred, these are pretty in lazy daisy stitch.

4830—Ladies' Apron—This apron is just the thing for wearing around the kitchen, as it covers the entire dress. The apron is cut in one piece and fastens with a single button in the back. Linen, gingham or percale can be used. The pattern 4830 is cut in sizes 32, 36, 40 and 44 inches bust measure. Size 36 requires 3 yards of 36-inch material.

5220—Children's Underwaist and Drawers—Strong muslin, linen or lawn can be used to make this underwaist, and lawn or muslin can be used to make the drawers, with the trimming of edging. The pattern 5220 is cut in sizes 2, 4, 6, 8, 10 and 12 years. Age 8 years requires ¾ yard of 36-inch material for the waist, 1⅛ yards of 36-inch for the drawers and 1¾ yards of edging.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Agrees with "Old Maid"

Dear Editor—I have just read for the second time the letter of "Old Maid" of New Mexico in the issue of November 8. I agree with her and the old Hebrew when he said "A man's best wealth is a good wife," but there are several ways of being good, and one is for the wife to be good to herself. She can do no greater good than to take care of herself as much as she can, so that she may serve her husband and family better and longer. Another thing is not to read trash, which runs the mind down as quickly or quicker than taking patent medicines does the body. If she will read the Bible and farm papers, which she can get cheaper than any love-story novels, in no matter what state she resides, they will do her more good. If she raises chickens and has a garden and takes care of her family, she will have her hands full without trying to put the farm produce on the market. She does a great work with her washing, mending, sewing, cooking, bearing children and looking after their moral and physical welfare, keeping up to the times enough so they will not be ashamed of her in the long run. If she knows as much as her grandmother did about utilizing the meats and vegetables and putting them up for her good man's use, she will not have to sell them and go without and live on "splendid fresh air." Even if she marries a "poor, struggling farmer," she can help him get into the traces in time, or she is not a fit woman to be a farmer's wife. The farmer is not to be pitied, as his struggles should make him strong in character and he should marry a girl who will be a helpmeet, not a drag, who will hold him back from being the noblest citizen on earth—a farmer. MRS. N. H. F.

The Value of a Laugh

"Laugh and grow fat" has physiological truth in it. As laughter, with its accompanying mental cheer and massage to the abdominal organs, increases the digestive power, so the assimilative function of the blood is augmented, and more flesh is made. The quality of the food taken, its preparation in the mouth, and the extent to which the food was needed, determine whether this shall be good, healthy flesh or an accumulation of impurities for disease germs to feed upon.

Laugh and grow fat, and as you grow fat you will laugh still more.

Jolly people are one of the greatest boons to humanity. They are their own excuse for living. Who is more popular, more heartily welcomed everywhere, than a jolly, happy person? What is more delightful and refreshing than reading a really funny book?

So laugh, and the world will laugh with you, and be a much happier, healthier world in consequence.—Good Health.

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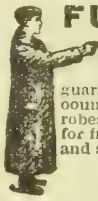

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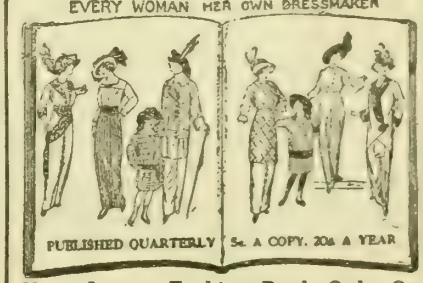

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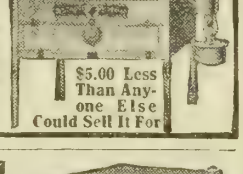

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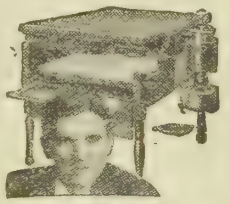

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Timely Items of Interest to Poultry Raisers and Fanciers

IT DOES seem strange that so many women would join a boycott against using cold-storage eggs and pledge themselves to refrain from using any but fresh eggs until the movement nearly—in one instance anyway—takes in a whole state, and, spreading through others, reaches the White House women, the movement having the effect of an order from the attorney general for United States district attorneys to immediately look into this cold storage business, whether there is a combination between cold storage men to gather the eggs when cheap, even then causing a shortage, and holding them until the natural winter shortage sets in on the farms, then unloading them on the short market at exorbitant prices.

The city women must believe it to be a put-up job, hence the boycott. The United States attorneys so far have no explicit information that cold storage parties are gathering foodstuffs and holding them for the express purpose of getting high prices, although it is quite evident that some kind of a combine exists between cold storage men, as the prices are found to be exactly the same in certain cities or over a large scope of territory.

One state food commissioner, if not others, declares against the boycott and for the cold storage. He declares the high prices simply depend upon a shortage of supply; that if eggs are to be cheaper during the naturally short egg season, the farmers, by raising more chickens and supplying more eggs, must break the price. His arguments are well put and forcible, but they do not seem to convince the women in the cities who want eggs at a reasonable price. These women stoutly declare against paying 40 and 45 cents for that which went in at about 19 cents. Just how it will end remains to be seen. The commissioner declares that cold storage levels prices, not increases them. The women declare it does not, especially in eggs, anyway, and judging from the past, when the farmers did not produce one egg where they now produce from ten to twenty, I am inclined to go over to the women's side.

Missouri Egg-Laying Contest

The second laying contest finished lately at Mountain Grove, Mo., is certainly worthy of record. Six hundred hens of many breeds and varieties of breeds did their best to win in this contest, and all told laid an average of 143 eggs in twelve months. Sixty-four of the 600 laid over 200 apiece. One would like to see this number put in flocks to themselves, and have the flock watched for its outcome in egg-laying progeny; of course, each breed kept strictly to its own kind.

Last year Lady Show You, a White Plymouth Rock, led off the contest; this year it is a little White Rose-Comb Leghorn hen, weighing not quite three pounds. She laid twelve times the weight of her body in eggs and laid 260 eggs during the twelve months of record. This little hen humped herself to beat the English record. She belonged to John C. Cross, Maryville, Mo., and seemed determinde to not allow the cup to pass from the greatest egg-laying and poultry-raising state in the union. A little single-comb White Leghorn, belonging to Thomas Barron, Catforth, England, came second with an individual record, one of his first winning pens of ten, laying 258 eggs during the year.

It was too bad for Missouri that Barron must take back first money on a pen of ten English White Leghorns, but he did, this pen laying 2,073 eggs in a year, or an average of 207 3-7 eggs apiece. The next winning pen belongs in Missouri, and were Buff Wyandottes, owned by C. H. Rogers, Bellville, Mo. This pen averaged 188 2-5 eggs apiece.

The average number of winning pens in this contest, of course, did not make the record made by some pens in the Australian world-winning records, but this contest was not made as those contests were made—with specially picked, specially fed and cared for hens. This was, you might call it, a test for the farmer's flock, and to show the farmer how, with the feed he has at hand and the care he could give if he would, and keeping the pure-bred, he can make just such records as these made at Mountain Grove.

Diversified Poultry Raising.

As it is the tendency nowadays to make diversified farming pay, so might diversified poultry raising be made to pay on the farm. "What do you mean by this?" asks someone. By this is meant raising chickens not merely for a general market or two through the year, eggs every week to the huxter, the young chickens in a big bunch at lowered prices in late summer or late fall, the old hens at one or two certain times in the year, but for several special markets through the year. No place so well fitted for this as the farm. Here is food at first selling value, much of which is good but cannot be sold; here is much space for roomy buildings, much range for health and strength to the flock.

Of course egg production the year through must take first place of business value and should not be left to random ages, crosses, breeds, care and feed. With the egg trade comes that of the early broiler trade. To get these large prices the farmer should endeavor to keep the kind of hens that will not only give him winter eggs in plenty, but plenty of early cluckers to help out the early incubator hatches. If he can find the time and a nearby market to allow him the big profits on the dressed early broiler then he is well paid for the early chick. Not only this but from these early chicks come an extra source of profit, either for himself or his neighbor for the sale of the early laying pullets these early flocks will furnish him. Later

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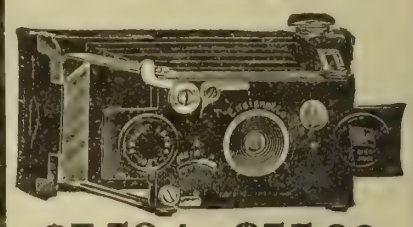

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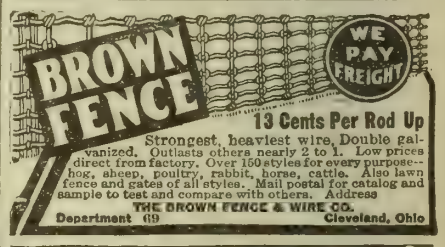

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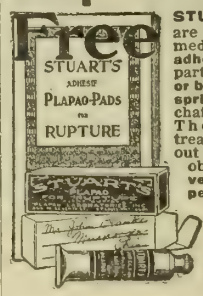

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he furnishes his fat hens that are ready to give up their place in the flock at the advanced prices offered for these at certain times of the late spring, while later can come the sale of soft roasters, to end up with the winter capon. Diversified poultry raising means providing appliances to work with it is true but they pay well on the farm.

Poultry Tips

A handy trough that chickens cannot well step on and keep their balance, is a piece of galvanized iron nailed to the wall and rolled up at the opposite side to form a trough. Put it at least one foot from the floor.

***

A good, dry mixture to feed in a hopper is: One part wheat middlings, one part cornmeal, two parts bran, one part oilmeal and meat scraps, mixed. This also constitutes an excellent mash food.

***

Geese fatten best on cornmeal and beef scraps, ducks the same. Chickens fatten quickest on corn or buckwheat meal and milk. Adding sugar or molasses to the chickens' ration helps hurry matters in this line.

***

The granulated milk that is sold in places as chicken feed is of high value as poultry food casein, the element in milk of which cheese is made.

***

Healthy hens will keep themselves nearly free from lice if the chance is given them to dust, and yet they are often kept the winter through from dusting places. Road dust, in shallow boxes, should be kept at hand in winter time.

***

Canker, pip, bronchitis, pneumonia and contagious catarrh will follow colds taken on by poultry, and they take cold easily. Indigestion is first brought on by it in case of canker and pip.

***

Fat fowls often die suddenly. When you find one dead under the roost some morning it might be well to keep a watchout for an outbreak of sickness, though it is more than likely to be but a death from fatty heart degeneration, a common way for poultry to die.

***

Don't be afraid to house your poultry tight and warm through the stormy days and nights, and don't believe those who tell you this is the surest way to give them colds. The surest way to give them colds and pneumonia is to let them run out all kinds of weather, then let them sleep where the wind searches them out at night.

***

The winter poultry shows are at hand and all the new breeds will be coming out in their new feathers. Some of these will be the Silver-Penciled Plymouth Rocks, the Partridge and the Columbian Rocks. You who are so partial to a Plymouth Rock, go and take a long look at these other beauties.

***

In winter, severe cold will not stop egg laying if the hens are kept well sheltered. It is the sudden changes of temperature that bring about this effect. Let there come warm, mild days, with the feeling of spring in the air, and the egg laying begins to increase; then, let the temperature suddenly fall, as it will often do in the middle states and farther west, say a difference of twenty to more degrees, and as suddenly, nearly every laying hen may quit business. If hens begin laying when it is warm, then the cold weather comes gradually, stays that way a while, then as gradually dips into warmer weather, you will see but little difference in the winter egg yield—that is, if the houses keep out the greater part of the cold and the feed is sufficient to keep the fowls in good flesh with a surplus to spare for eggs.

***

So many people are complaining of a shortage in eggs. The complaint starts with the farmer's wife and ends with the people who cannot buy them because the scarcity at the start makes the price exorbitant at the last selling place, the retailer. I see flocks all about me refusing to lay, though molting is now long over. I know why they cannot lay. They are not fed to lay; poor things! A grain of corn picked up here and there between times of feeding and a few grains of something when feeding time comes, the crop never full at any time in the day, let alone at bed time, when it ought to be crammed. How can you expect eggs unless you feed for eggs? Corn is the favorite food of poultry, and, with some kind of a mash and all the green stuff in the way of clover, alfalfa or vegetables that you can spare, and that must be enough, you will get eggs. It is better to give a variety in the grain, if it be nothing more than oats or bran to change off with the corn, though wheat will produce more eggs than oats. Regularity in the meals, plenty of cool water on moderate days, warmed water on the freezing days, even without meat, should stop the winter egg shortage in great part.

IDA M. SHEPLER.

Of Interest to Our Women

(CONTINUED FROM PAGE TWELVE)

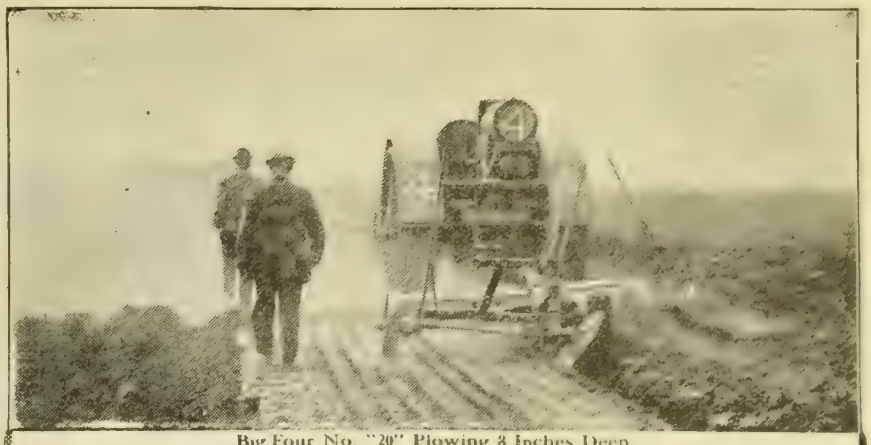
mothers say, "I wish I could knit the children's stockings, but I have never learned how. If I knew someone who could do it I would gladly pay to have it done." So now try this plan, some of you who love to knit. I am sure it would pay you well. MRS S. J. FISHER.

Wyoming

Potato Salad

Boil and mash four medium-sized potatoes; add salt and pepper to taste; one-fourth teaspoonful of paprika, one-half cup of sweet cream, one small onion, thinly sliced; one-half cup of cooked peas. Blend well and set aside to cool. When cold mould into balls the size of a large marble and arrange on lettuce leaves. Fill in spaces with one cup of cold boiled ham or other meat, cut in cubes, and pour over all a boiled salad dressing. Garnish with a few stuffed olives.

DAISY CANNON.



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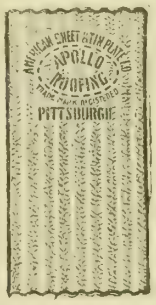

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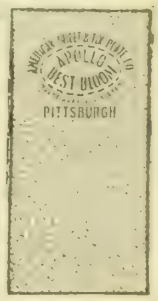

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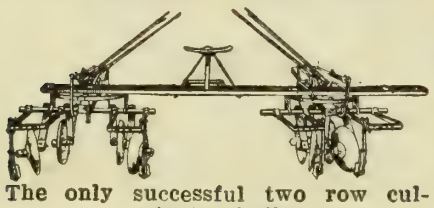

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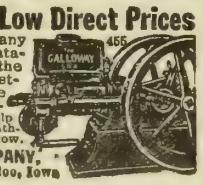

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Omaha, Neb.

High Cost of Living to the Traveling Public

By Frank G. Carpenter

WASHINGTON, D. C., Dec. 28.—This is a kick against the high cost of living. I do not mean at home, where one can figure upon the food in the markets and object if the butcher puts his elbow on the scales when weighing out your steak. It relates to the high cost of living to the traveling public. I have been going up and down this country and others for the last thirty years, and within the last ten or twenty the cost of all things has been steadily rising. I remember when a commercial salesman who had an allowance of $5 a day for his expenses was looked upon as a king, and when if the distance were short, $3 or $4 sufficed. Now a high class drummer does well if he spends less than $10 per day and if he makes long jumps between towns the price runs as high as $15 and upward. During the last two weeks I have been moving rapidly from city to city. I started at New York and went as far north as St. Paul. From St. Paul I jumped to St. Louis and thence to New Orleans and from there to Atlanta, Cincinnati and Washington. I lived at good hotels and took taxis when needed. The cost of the journey was more than $15 a day or almost twice what it would have been twenty-five years ago.

In the Days of Yore

It used to be that the most of our hotels were on the American plan. You paid a fixed sum for room and board and there were no extras to speak of. Outside the large cities $2 was the ordinary day rate and one could get good accommodations in the larger places for as low as three dollars. At that time about the best hotel in the United States was the Fifth Avenue in New York. Its charges were $5 a day and for that one lived like a lord.

Today the American hotels have about disappeared. Nearly every large house is on the European plan. You pay a fixed price for your room and a price for each dish that is served to you in the dining room or the restaurant. The room rates are now equal to the price you formerly paid for both room and board, and often much higher.

Look at 'Em Now

Take the high-class hotels of New York. There are but few where one can get a room for less than $2 or $3, and this often means a room facing a court, and so small that inside it you could not swing the typical cat by the tail. A room with bath costs more, and if one wants really comfortable quarters he must pay $4 or $5 and upward. In Chicago at some of the bigger hotels one can get an inside room with bath for $2.50 or $3, and this is so in Minneapolis, St. Louis and New Orleans. I stopped at a hotel in Chicago which has 1,200 guest rooms, and whose lowest room rate is $2. Suites range from $20 to $30 a day. That hotel is fairly well taken, and its average occupancy the year through must be 800 rooms. These at an average rental of $4 must bring in $3,200 a day, or more than a million dollars a year for room rent alone. I am told that there are several hotels in New York which are clearing more than a million dollars a year, and that the big city hotels everywhere are piling up money.

And, indeed, it is hard to see how they can help it when one thinks of the past. There is first the increased rate on the rooms, and also the extraordinary charges which one now pays for meals. In the good old times one could get a dinner almost anywhere for from 50 cents to $1. As I remember it, the Fifth Avenue hotel charged $1.50, and the Palmer and Grand Pacific of Chicago each charged $1. Now almost any meat dish on the menu costs from 50 cents upward, and a tenderloin steak runs from 75 cents to $2.

Some Samples of Expense

During my two-week journey I have saved some of the hotel restaurant bills and a dozen of them now lie before me. The charges are about the same everywhere. I will give you some of the items. Let us start with the oysters. A half dozen raw cost 30 cents which equals about $5 a quart or $20 a gallon.

The Red-Cap Boy at the Station Expects 25 Cents

Little neck clams cost the same. Do you want a relish? You can have a slice of smoked salmon or a bit of herring for 40 cents, or a dozen olives with cost you a quarter. Soups are filling, but not satisfying. A cup of consomme costs 25 cents, Scotch broth with barley costs 30 and green turtle is higher.

As to the fish, that is one of the cheap things on the menu. A piece of broiled bass costs 50 cents, broiled bluefish the same, and a portion of live lobster broiled is $1.25. Entrees are dear. I can buy a guinea hen almost anywhere in Virginia for half a dollar, but a piece of the fowl cut from the breast costs $1.25, and a half of a spring chicken just the same. When you come to order special dishes the prices go up. For a spring duckling the charge is $2, roast chicken $2, and if you want a Philadelphia capon the price is high. It will take forty minutes to cook a four-dollar capon, and you may know you are paying just 10 cents for each minute you wait. You can get a whole spring turkey for the same sum.

I have just received an offer of 7 cents a pound for some hogs on my farm in Virginia. On these bills of fare Virginia ham costs 60 cents for two slices. Two lamb chops, each as big around as a dollar, are served for 75 cents.

Prices on Fruits

I object also to the prices of vegetables and fruits. I know that apples are scarce this year and that the prices are high. But nevertheless 25 cents is too much for a single baked apple which outside the hotels on the fruit stand could be bought for a nickel. Set aside 5 cents for the cream and the cooking and the hotel gets 20 cents for the apple alone. Its apples are bought by the barrel and at the low estimate of 300 apples to the barrel makes me pay, at the rate of $60 a barrel. This is right high for apples.

It is the same with potatoes. During this whole trip I have had to pay 20 cents and upward for one or two baked in the skin, which must be at the rate of something like $20 per bushel. Spinach is sold at about the same rate, and lima beans and cauliflower bring 35 cents for a good double handful. As to new corn in season, the hotels have been selling that at about 10 cents an ear. The average barrel of field corn will hold 600 ears of twice the size of the green stuff that comes to the table. At 1,000 ears to the barrel, they are now getting about $100 a barrel for their corn. And still it is said there is no money in farming!

Prices for Desserts

It used to be that the price for ice cream was 10 or 15 cents a dish at almost any hotel. Now you pay 30 cents for each portion and the same is true of water ice flavored with lemon, orange or raspberry. The fancy kinds cost more, and, if you are so extravagant as to desire a portion of charlotte russe, as big as you can buy almost anywhere in a confectionery store for a nickel, the charge at the hotel will be 40 cents. A slice of apple pie costs 20 cents, deep-dish peach pie costs 25, and a cup custard often costs you 25 cent per person.

The rates in the dining cars on the railroads are almost as high. I have the bills of fare from which I ordered my meals in the last few days. They come from the leading railroads of the country and I pick out a few items at random.

Meals on Dining Cars

Two lamb chops, 65 cents; scrambled eggs with chopped toast, 60 cents; roast beef with browned potatoes, 70 cents; sphagetti, 25 cents; baby turnips, 25 cents; spring chicken, a whole one, $1.50; a serloin steak costs $1; bacon and eggs, 65 cents, and two boiled eggs, 25 cents. All soups are 25 cents or more, and no orders are taken for less than 25 cents per person. One must pay at least 60 cents before he is allowed to have bread and butter, without charge, on the side.

It was in refreshing contrast to thse a la carte meals that I found on one of the fast trains from Milwaukee to St. Paul, the old-fashioned $1 dinner that we used to have everywhere as we rode over the country. These have been discontinued on must of the lines, and as the fast trains do not stop for meals, one is forced to pay the high-priced a la carte rates or go hungry.

In order to show the difference between the old one-dollar dinner and the meals of the present, I have taken one item from each of the courses on the $1 menu, beginning with blue points and ending with coffee and cheese, and added up the prices of the various dishes as they are on the a la carte list. The total is just $5.64. In other words, the dinner which we used to have for $1 now costs us more than five times as much if our pockets can stand it.

Custom of Tipping

In addition to these, the regular expenses of traveling, is the custom of tipping, which has swept over the United States, north, south, east and west. It is common on the railroads and in almost every hotel, and there are certain hotels where the tipping is farmed out to outsiders. The streets are given over to certain taxicab companies, whose charge is about that of the regular rates, and the cloakroom attendants are supplied out of the fees, which the travelers give them. Tips are commonly expected by the waiters at meals, and the percentage which is commonly paid is higher in our country than anywhere else in the world. The lowest tip possible is 10 cents if the bill runs under $1, and 25 cents if it is $1.25 or more. A fair rate for large bills is considered about 10 per cent of the sum.

The fees begin as soon as one enters the hotel. The porter who takes in your bag expects a fee and you give from 10 cents to a quarter to the boy who shows you to your room. It used to cost from 50 cents to $1 to get from your train to the hotel and back. It now costs more than twice as much. The red-capped boy at the station expects 25 cents to carry your bag to the taxi and the taxicab charges from 50 to 75 cents to the hotel, while the driver looks for an additional fee. Then there is the 10 cents to your room and the 25 cents back to the taxi when you leave. There is a taxi charge to the train and another quarter to get to the cars. In London the initial taxicab rate is 18 cents and you can go a mile or so for a shilling. Tuppence there is equal to a dime here in the way of fees, and fees are now less common than here.

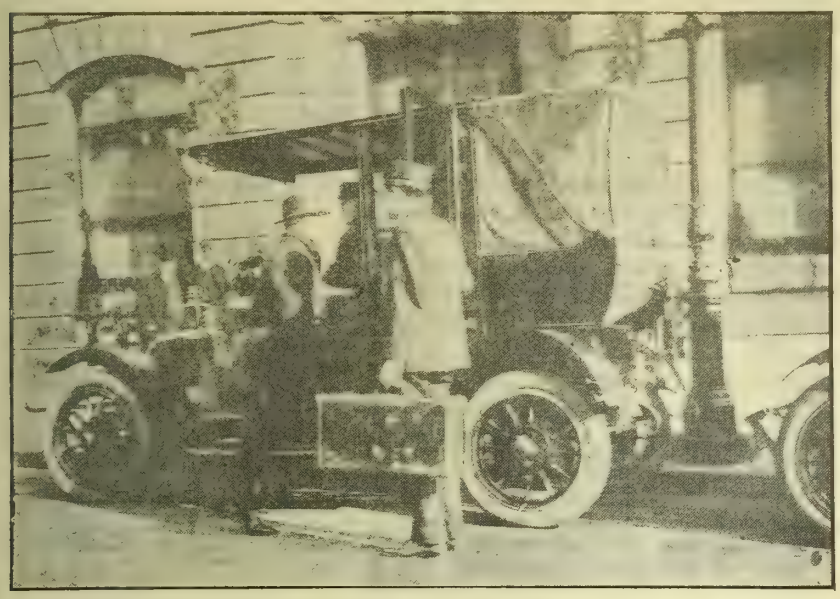
Sleeping Car Extortions

Speaking of the fees on the trains, the sleeping car porters should be so well paid that the passenger will not be expected to give 25 cents or more every day in addition. The company which owns most of the sleeping cars is said to pay low wages on the basis that additional sums will be given by the passen-

gers. That company is now stocked at $120,000,000 and it has been paying dividends of 8 per cent for more than twenty-five years. In 1898 it gave its stockholders a stock dividend of 50 per cent and in 1906 it cut another melon by which they received gratis another stock dividend of 36 per cent. The stock of this company has at times been worth upward of 250 on the market, and, nevertheless, it expects the public to pay for the service of making up the berths for which it charges $2 per night.

News Stand Graft

Another unfair tax upon the traveling public is the extra charges at the newsstands of the hotels and in some cases



The Porter Who Takes Your Bag Expects a Fee

at the railroad stations. In the Union depot in Chicago I picked up a pamphlet guide of that city of the shape and size of similar guides to Boston, Philadelphia and Washington which sell for 25 cents. There was no price mark on the Chicago book, and when I asked the newsman told me the price was 75 cents. I objected, whereupon he said: "I tell you the price is 75 cents. If you don't believe me you can go to the stand at the other end of the station."

"But what does the book cost in the stores downtown?"

He replied: "It costs only 50 cents downtown, and if you don't like this price you had better go there and get it."

Here was a combination between the publisher, who failed to put on the price mark, and the railroad to take a rake-off of 25 cents from the traveling public. Such things are manifestly unfair.

And then there is the extra charge at many hotels for 1 cent additional for every newspaper there sold. There is one hotel in Washington where a daily which sells for 2 cents on the street is sold for 5 cents in the hotel, and it is well known that the New York Sunday papers bring from 7 to 10 cents each outside the city, according to the caprice of the seller. At most of the Atlantic City hotels the price for the Sunday papers is 10 cents, and the same price prevails as to many of the New York papers on railroad trains throughout the south.

Other Items of Robbery

In many hotels staple articles are furnished at exorbitant charges over the ordinary price. There is a certain mineral water from New England which is sold all over the country at the drug stores in two-quart bottles at 35 cents. The water in the case costs 30 cents for two quarts. I ordered some of this water at a well known Philadelphia hotel and had to pay 45 cents for one quart. At the same rate a two-quart bottle would have cost me 90 cents, or just three times as much as the regular charge by the case.

I gave a tip to the waiter who brought in the bottle and another to the boy who brought in pen, ink and paper, and had I asked for anything else the servant of the hotel who brought it would have expected something for himself. Indeed, the tipping now common in the United States is exasperating. It makes one think of the American from the middle west who was taking his first trip to Europe. He had had to pay tips everywhere, and had seen hungry eyes and greedy hands on every side. At last, one day, he entered a washroom where the bowl was hung on a pivot. Above the water was the sign, "Please tip the basin." As he looked he flushed, and then turned and went out, saying:

"I'll be hanged if I will. I'll go dirty first."

That is the way one gets to feel in traveling over the United States these days. The custom of giving tips is so common that our Treasury Department has at last agreed to allow fees in the accounts of government clerks who travel on government business. Such tips, however, are restricted to each employe in the amount of 50 cents a day to the waiters of hotels in certain large cities and 25 cents a night for sleeping car porters. Ten dollars' worth of fees is allowed upon steamers which cross the Atlantic, and the same amount is permitted for voyages to Porto Rico or Panama.

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Produce Cheap Beef-Feeding Silage

That silage, when fed with corn or some other grain that is high in protein, is one of the best, as well as the cheapest, roughage for beef cattle is the opinion of John L. Tormey of the College of Agriculture of the University of Wisconsin. "The high prices of feedstuffs and the necessity for fattening cattle at the lowest possible price have been predominating factors in making silage a popular feed for beef cattle," recently said Mr. Tormey. He has found by experience and experiment that silage is useful for "stocking" cattle over the winter, as well as for fattening purposes.

As men make new discoveries to meet new economic conditions, so, when all kinds of foodstuffs advanced in price, did the stockmen begin to look around for a feed that would lower the cost of feeding cattle for the market. They found the solution of this problem in silage, for after a series of tests made by experiment stations and by the stockmen themselves, it was found that when silage was mixed with a ration that it considerably lowered the cost of gains. Just as silage for a long time has been considered necessary for profitable dairying, so it is now beginning to be considered as a necessity for the economic production of beef both on the farms of the middle west and on the ranches of the west and southwest.

There is no crop which will produce feed so cheaply as corn. It was proven by experiment at the Vermont station that corn fodder reduced to silage is worth 1.26 times as much as when the stalks and the ears were fed separately. The benefit or value that is derived from ensiloing corn more than pays for the additional labor. The losses of feeding material are less when the corn is ensiloed than when it is left in shocks in the field.

"Silage should not be made the sole feed for stock," says Mr. Tormey, "because a balanced ration is needed and something must be fed with the silage that is rich in those substances in which silage is deficient."

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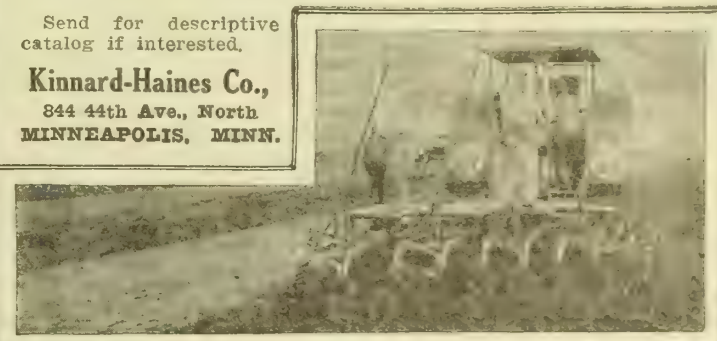

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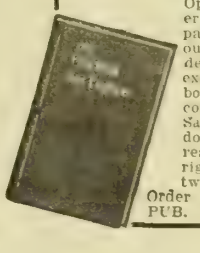

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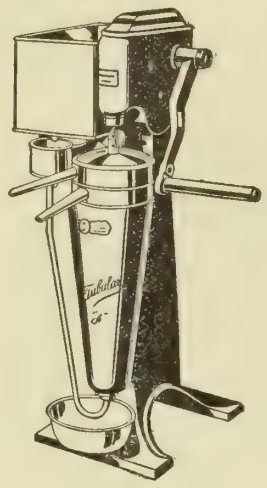

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This department is for the use of our readers. Let us hear from you. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. All communications must be signed, not necessarily for publication, but for the use of the editor.

Landlords and Single Tax

J. H., Mead, Neb.: In your reply to my letter published in the Twentieth Century Farmer of December 6 I notice that you take exception to some of the things I wrote. You say that land could be made to pay an interest on a valuation of $300 per acre, yet I wonder how your farmer could make a living and pay off the principal at the same time. A farmer is expected to improve his farm and live stock, which takes a large outlay of capital, which must be made to return a fair rate of interest. If you would study the figures of the last census you would find that the population of the rich farming districts is continually decreasing, and the farms are not made to support directly as large a number of people as they might. The fact of the matter is, the people have a tendency to get away from high-priced land and move to other parts or else crowd to the cities.

The landlord and tenant problem is the result of a system for which neither is entirely to blame. I do not doubt that there are good as well as bad landlords, but if you will study the history of other countries, you will find that as a whole landlords and tenants have never lived on the best of terms. The landlord has always lived on a higher social level and has maintained his position at the expense of the man who tilled the soil. Such a condition of affairs could hardly last in a country like ours.

There is considerable land in my part of the country farmed by tenants that fails to make a fair return to either party, with the result that the tenant is not a very desirable class of farmer, and I would like to know how you would expect him to improve under such conditions. In most instances the landlord will not improve the farm so it is profitable to conduct live stock operations in a profitable way, and it is hard to blame him, as his returns are not sufficient to justify his doing so. When land was cheaper the proportion of land owners was greater, and more live stock was raised than under present conditions. The farmer who owned land saw what improvements were needed and provided them whenever he could afford to do so.

In farming, as well as other forms of business, there are lean as well as fat years. If the farmer makes a good profit on his crops or stock one year, there is no reason to believe that he will duplicate it the next year. In my letter I stated that land values were too high, and it is foolish speculation that has forced them up, as there are no profits one year with another that will pay interest on such high values. As I have said before, people have a tendency to get away from high-priced land, and one of the problems of the farms is how to keep the young men on them. I do not see how you expect them to stay on the farms unless it is possible for them to buy land at a reasonable price and become a land owner in a reasonable length of time.

Much of the efforts of our agricultural colleges and farm papers is wasted under present conditions, as their ideas will be taken up only by the younger men, who, under present conditions, are unable to put them into practice. Most of the efforts to bring about better conditions on the farm are wasted on the old fellows, as men have a tendency to grow conservative with age.

I still insist that the single tax is the only solution of the matter, and it would not be a tax on the farmer either, as under present conditions there are thousands of tenants or farmers who do not own land. It would force greedy speculators who are holding land for higher prices to sell to someone who would use the land. Land is public property and should be used in a manner that would be for the greatest benefit to all the people, not for a chosen few. Simply because a man has been fortunate in his investments and numbers a few acres of land in his possessions is no reason that his rights should be considered above his fellow men.

Editor's Note—While this letter is longer than we care to print in this department, we print it because the subject is an important one. The true measure of land values is what the land will produce and yield a profit to the man who tills the soil.

Sore on Colt's Leg

G. R., Bennington, Neb.: I have a colt a year old last spring. In the spring he got a little cut about half an inch long just below the knee on the side of his front leg. It was just through the skin, and healed up nicely, but left a little lump that I could barely feel. Toward fall the lump commenced to grow and get sore and about two inches in length and the end was raw and bloody. So I got a veterinarian, and he tied the lump and in a few days it fell off, and he said it was a wart, but now the affected spot is much worse. It is as big as the bud end of a hen's egg and looks raw and bloody sometimes. Could you give me advice to cure the colt of the sore?

Answer—Without an examination it would be impossible to give intelligent advice. The only thing we can suggest is that this be dissected down as closely as possible and then burned with a stick of caustic potash. Spend some little time in burning it down below the surface of the skin. This will have to be repeated several times.

As to State Board of Agriculture

E. H., Syracuse, Neb.: I saw in the daily papers how you attacked the Nebraska State Board of Agriculture at the Farmers' Congress, and I want to say, as a farmer, that I am very glad that there is someone to take that up and I hope that your agitation may result in much needed reform.

Editor's Note—We are urging a change in the Nebraska State Board of Agriculture because we believe it to be in the interest of the farmer. It is our business to fight the battles of the man on the farm.

Shipping Cream Direct

F. J. S., Nebraska: Your article in Our Readers' Exchange on shipping cream direct to the creamery interests me very much and ought to interest every farmer that is selling cream, because it is necessary for the good of all concerned that the producer get all there is coming to him at the present time, as the high price of all feeds necessarily makes it costly to produce cream, and unless the producer sees a profit he is likely to quit trying to produce all he can and say "What's the use?"

Just at present I am debating whether to ship direct or continue taking it to the station. It would appear that there is some desire or design on the part of the leading creameries to induce direct shipping of cream, as I have received cards offering me 31 cents per pound for butter-fat shipped direct to the factory, the company to pay express up to 25 cents per ten-gallon can. At the stations in our town (there are five) they are all paying 26 cents per pound, a difference

FARMERS' FAVORITE GRAIN DRILLS

In proof of the fact that Farmers' Favorite Drills are right in every way, it is only necessary to say that they have been continuously on the market for more than 50 years. They are used by the best farmers in every grain growing country in the world.

There is Made a Farmers' Favorite Drill for Every Need

Disc Drills, Hoe Drills, Shoe Drills, both plain and fertilizer and in every size from one-horse up.

No seed is too large and none too small for the Farmers' Favorite Force Feed to sow.

Even depth of planting is assured when the Farmers' Favorite Drill puts the seed in.

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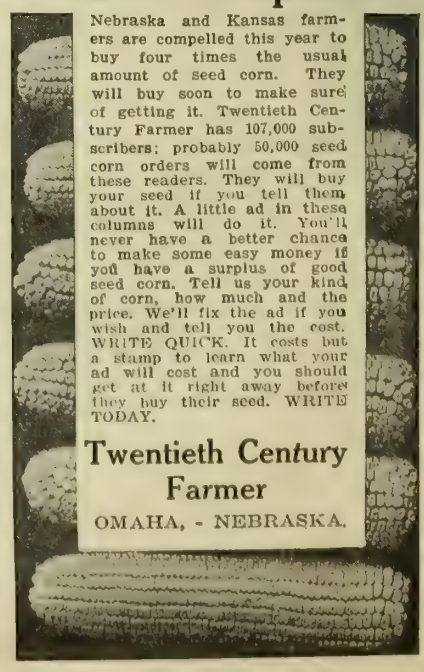
Hundreds of special offers in Surplus stock of seeds and plants at bargain prices. Don't buy until you have seen our beautiful new catalog and bargain list, mailed free if you mention this paper.
IOWA SEED CO. Dept. 51, **Des Moines, Iowa**

CLOVERS. ALFALFA. 450 bushels of Medium Red Clover, 98% pure, recleaned and tested. No foul weeds. Hardy northern grown Alfalfa seed, 99½% pure. Buy now and save money. Write today.
L. C. BROWN, La Grange, Illinois.

How Much Seed Corn Can You Spare?



Nebraska and Kansas farmers are compelled this year to buy four times the usual amount of seed corn. They will buy soon to make sure of getting it. Twentieth Century Farmer has 107,000 subscribers; probably 50,000 seed corn orders will come from these readers. They will buy your seed if you tell them about it. A little ad in these columns will do it. You'll never have a better chance to make some easy money if you have a surplus of good seed corn. Tell us your kind of corn, how much and the price. We'll fix the ad if you wish and tell you the cost. WRITE QUICK. It costs but a stamp to learn what your ad will cost and you should get at it right away before they buy their seed. WRITE TODAY.

Twentieth Century Farmer
OMAHA, - NEBRASKA.

of 5 cents in favor of direct shipment. This looks like quite a large margin to pay for the handling.

I took one of the cards I received to the agent I sell to (he is not the agent for the company I received the card from) and asked him how it was there was so much difference in price, and if he could not induce his company to meet the offer in some way. He tried to, but the company absolutely refused to do anything. It said the expense of keeping the station was so heavy that it could not afford it. The company that sent me the card has a receiving station in our town, and there pays 26 cents, the same as the others.

Evidently the maintaining of five separate receiving stations in a small town of 200 inhabitants is an expensive way of buying cream, as there are five rooms to pay rent for, five men to pay for their time in some way, besides other incidental expenses, to do the work that one man, with one room and tester, could easily do, and not be very busy, except possibly on Saturdays.

The main objection to shipping direct, so far as I can see, is that where a farmer lives from four to eight or ten miles from town he can hardly afford, in the working season, to make a trip to town with his cream at a certain time in the day to get his cream to the train. When taking his cream to the station he can go at any convenient time. Of course, some farmers think they might not get as good a test by shipping direct, except just at first. I have been told by a farmer who tried it for a time that the good tests did not hold out, and he is now selling to the station. I can hardly believe that any cream company that wanted to keep in the business would adopt such a method.

The article taken from the Omaha Trade Exhibit appears to have been written by someone in favor of retaining the small receiving stations, and there are several weak points in his argument, which I will not take the space to point out.

My aim is to get as much for my cream as possible, and I have no desire to injure the local buyer or to hurt the town in any way. I believe the agent I sell to has honestly tried to get us all he could for the cream, as he recognizes that our interests are mutual. Trusting I have not trespassed on your space too much, I am,

ONE OF YOUR SUBSCRIBERS.

Editor's Note — The maintaining of five separate receiving stations is a town of 200 inhabitants is very expensive. The creamery man who said he could not afford to meet the price offered for direct shipment admitted what is a fact. He was more frank and honest than most men would be.

Iowa Beef Producers' Meeting

The annual meeting of the members of the Iowa Beef Producers' Association is to be held at Ames, January 5. In addition to the business meeting, which is called for 2:30 p. m. in agricultural hall at the college, there is to be held an evening meeting, which should be of interest to everyone interested in beef production in Iowa. The evening program will include the following:

"The Trend of the Times in Beef Production," Prof. W. H. Pew.

"Some Methods of Cheapening Beef Making," G. H. Burge.

"The Present Status of the Beef Industry," Dean C. F. Curtiss.

"How to Improve the Beef Cattle of Iowa," C. A. Tow.

"From Producer to Consumer," John Gosling.

Report of the year's work of the association, Rex Beresford.

In addition to these meetings and programs, January 5 is to be beef cattle day at the short course, which will be in session at the college at that time. Beef cattle subjects will be discussed in the class rooms. Two carcass demonstrations will be given by John Gosling during the day. All members of the association and all others interested in beef cattle are urged to attend the meetings.

Nebraska Farmers' Institutes

The extension service of the Nebraska College of Agriculture announces the following towns and dates for extension meetings during the first month of 1914. No meetings will be held during the week of Organized Agriculture, January 19-23. Many questions are being asked at the institute meetings about the short course work, which is the next step after the successful institute. The short course means a school of five days' work, while the institute means a few lectures for one or two days. A good many of the most successful points are demanding the short course instead of the institute for next year. Much interest is being shown in farm demonstration work. There is a desire on the part of most people attending the institutes and short courses to learn just exactly what the demonstration work is and how it can be organized. Several voluntary movements have been started by the farmers in different counties after the institute meetings to organize their counties for a county farm demonstrator.

The institute dates for January follow:

Orchard, Tuesday, 6; Dannebrog, Tuesday, 6; Davey, Tuesday, 6; St. Paul, Tuesday and Wednesday, 6-7; Verdigris, Tuesday and Wednesday, 6-7; Morse Bluff, Wednesday, 7; Aurora, Wednesday and Thursday, 7-8; Spencer, Wednesday and Thursday, 7-8; Waverly, Thursday, 8; McCool Junction, Thursday and Friday, 8-9; Plainview, Thursday and Friday, 8-9; Spring Grove church (near Gretna), Friday, 9; Fairmont, Friday and Saturday, 9-10; Creighton, Friday and Saturday, 9-10; Pierce, Monday and Tuesday, 12-13; Madison, Monday and Tuesday, 12-13; Creston, Tuesday and Wednesday, 13-14; Osmond, Tuesday and Wednesday, 13-14; Howells, Wednesday and Thursday, 14-15; Laurel, Wednesday and Thursday, 14-15; Humphrey, Thursday and Friday, 15-16; Papillion, Thursday and Friday, 15-16; Hartington, Thursday and Friday, 15-16; Elgin, Friday and Saturday, 16-17; Wakefield, Friday and Saturday, 16-17; Elkhorn, Friday and Saturday, 16-17.

Reduced Rates to Denver Shows

The railroads have published reduced rates to Denver for those who will attend the seventeenth annual convention of the American National Live Stock Association, January 20-22. These reduced rates also apply to the annual Western Stock Show held during the week of January 19-24. The basis of fares, dates of sale, final return limit and round-trip rates from representative points in different parts of the west are as follows:

Colorado—One-way fare for the round trip has been granted from all points in Colorado. Dates of sale in eastern Colorado, January 19, 20, 21; from practically all of the rest of the state, January 18, 19, 20; from a few far distant points sales commence January 17. Final return limit is January 26.

New Mexico—From points on the Santa Fe system excursion tickets will be sold for one fare and one-third to Trinidad, added to the one-fare rate applying from Trinidad to Denver.

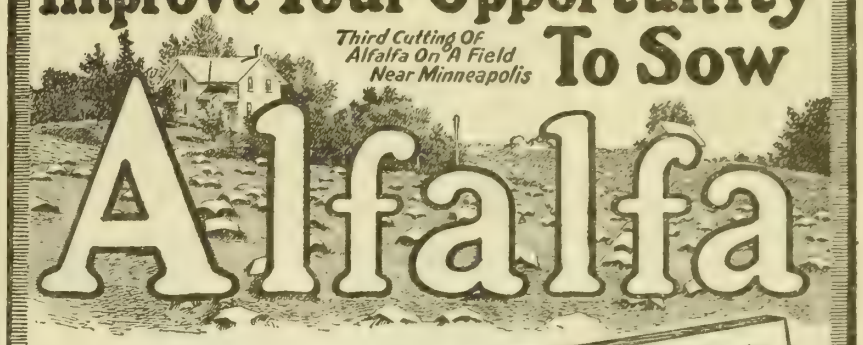
Arizona — Reduced rates have been granted from all Arizona points.

Texas—Rates from all Texas points will be made on the basis of 2 cents per mile in each direction.

Wyoming—A rate of one fare for the

(CONTINUED ON PAGE TWENTY-TWO.)

Improve Your Opportunity To Sow Alfalfa



You should take advantage of the High Quality and Low Price and establish this Wonderful Pasture and Soiling Crop on your land.

FOR years many have hesitated in sowing Alfalfa on account of its cost. We are now able to offer tested seed of high purity and strong germination at very reasonable prices. It will fully comply with all pure seed laws. Only ten to twelve pounds of our Alfalfa seed are required to sow an acre. It will cost only $1.50 to $2.00 per acre to sow our hardy acclimated, tested seed.

Agricultural authorities in all localities recommend growing more Alfalfa. It can be successfully produced in practically every section. Not only does it yield crops of great value but it improves and enriches the soil. Our experience of thirty years is behind the seed we sell.

Back Cover 1914 Catalogue.

Northrup, King & Co.'s. Sterling Alfalfa
Plump, fine color, 99.7% pure, 94% germination, 10 lbs., $1.75; bushel, $9.70; 100 lbs., $16.00.

Dakota Dry Land Alfalfa
Grown without irrigation at a high altitude. Purity and germination marked on every bag. 10 lbs., $2.00; bu., $11.00; 100 lbs., $18.00.

Turkestan Alfalfa
Imported from Asia where it is grown in the mountains. 10 lbs., $1.50; bushel, $8.50; 100 lbs., $14.00.

Orders Filled Promptly. No Charge For Bags. F. O. B. Minneapolis.

All Varieties of Alfalfa

And a full line of Grass, Field, Garden and Flower Seeds Described in

Our 30th Annual Catalogue of STERLING SEEDS

A book of 144 pages of seed truth. Mail a postal or letter request for it today if you are interested in tested seeds of high purity and germination. No charge is made for the catalogue and asking for it incurs no obligation to buy of us. Remember—our seeds comply with the pure seed laws of all states. Every bag of agricultural seed will bear a test tag whether the law requires it or not.

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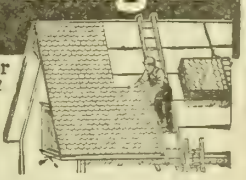
MINNEAPOLIS, - - - MINNESOTA

SEED CORN

DIAMOND JOE'S BIG WHITE—A strictly new variety; thoroughly tested, grown in every state in the union. Was bred for early maturity and Big Bushels; every stalk produces from one to three good ears; is drouth-proof. Our BIG ILLUSTRATED FARM and GARDEN SEED CATALOG IS FREE TO YOU. Write for it today.

Address RATEKIN'S SEED HOUSE,
Box 47 Shenandoah, Iowa.

Special Prices on Edwards STEEL Shingles!



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Edwards *STEEL* Shingles never rot or burn. Made forever rustproof by famous Edwards "Tightcote" Process. Easier put on than common shingles. No extras. No tools. No expert workmen. No paint required. Far outlast wood shingles. Over 125,000 satisfied users. Write. Get prices and Free Book No. 198. Send dimensions of roof if possible. (139)

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Please send Book on your Steel Shingles, together with latest Freight-Paid prices.

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about any section of the country through The Twentieth Century Farmer's Free Land Information Bureau, which is maintained for the benefit of our readers. Climatic conditions, land laws, best lands for any particular crop, best sections for fruit growing, stock raising and general farming—all such facts may be had if you will simply send postage for reply, and address

Land Information Bureau

Twentieth Century Farmer

Omaha, Nebraska.

Over 100,000 farm families read it.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

The Secret of Making Profit out of Stock

GILBERT HESS, Dr. of Veterinary Science Dr. of Medicine

I want all you farmers to get this fact riveted in your mind regarding stock—that the only animals that are paying you a profit are those that are *digesting* their feed—bowels regular every day and absolutely free from worms.

And it is just at this very time of year when stock are not in that condition, because they are cooped up, deprived of exercise and for the last few months have been on dry feed, which does not contain the laxatives and tonics so abundantly supplied by grass.

Dr. Hess Stock Tonic

Aids Digestion Makes Stock Healthy Expels Worms

Being both a Doctor of Medicine and a Doctor of Veterinary Science I formulated Dr. Hess Stock Tonic to aid digestion, make stock healthy and expel worms.

This scientific, 21-year-old preparation contains highly concentrated tonics that improve the appetite and aid digestion, laxatives for regulating the bowels and vermifuges that expel the worms.

Remember, it's the cow in the pink of condition that fills the milk pail, the steer with an appetite that lays on fat, the horse that enjoys its dinner that pulls on the bit, the hog that is healthy and free from worms that gets to be a 200-pounder in six months.

Dr. Hess Stock Tonic will positively put your stock in these conditions. So sure am I that it will, that I have authorized your local dealer to supply you with enough for all your stock and if it does not do as I claim, return the empty packages and get your money back.

Dr. Hess Stock Tonic is never sold by peddlers—only by reliable dealers whom you know. I save you peddler's salary and wagon and team expenses, as these prices prove: 25-lb. pail $1.60; 100-lb. sack $5.00. Smaller packages as low as 50c, except in Canada, the far West and the South.

If not sold by your dealer, write direct to

DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Poultry Pan-a-ce-a

A splendid tonic that tones up the dormant egg organs and keeps the hens scratching and happy and laying all through the winter. Shortens moulting period and promotes rapid feather growth. Nothing better to make chicks strong and healthy. Cheap—a penny's worth is enough to feed 30 fowl per day. Sold only by dealers whom you know. Never sold by peddlers. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West. Guaranteed.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock: Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks or, if kept in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans, 1 lb. 25c, 3 lbs. 60c. Except in Canada and the far West. I guarantee it.

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IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **G. S. BENJAMIN** RFD79 **Portland, Mich.**

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RED POLLS

Bulls and heifers for sale. Prices reasonable. Quality the best. Satisfaction guaranteed. Write your wants or call

W. F. SCHWAB, Clay Center, Neb.

WINELAND FARM JERSEYS

Bulls of serviceable age for sale, sired by Duke Raleigh by Noble of Oakland. Also a number of choice heifers bred to freshen soon. I can suit you in both quality and price.

H. C. YOUNG. Lincoln, Neb.

Don't Read This

If You Are Not a Live Stock Breeder

"We are satisfied with the price you charged for our live stock ad and very well pleased with the number of inquiries it has brought. Have made several sales and those who have bought stock of us write they are well satisfied. Crossdale Farm, Sextonville, Wis., Dec. 8, 1913."

Nearly every one of the live stock advertisers in this paper has written us a similar letter. Here their ad is not buried among a few hundred others. Each of these 107,000 interested readers sees every ad. They are generous buyers. Rates upon request.

TWENTIETH CENTURY FARMER

LIVE STOCK DEPARTMENT,
OMAHA, NEB.

"Monday Morning" Disease Remedy for Kicking Cow

A disease of horses that should be guarded against, especially at this season of the year is azoturia, sometimes called "Monday morning" paralysis, or lumbago. This disease usually follows periods of rest or idleness, especially in cold weather, when horses have been kept on full feed. Horses in good flesh, in the pink of condition, are the ones usually afflicted. Just as milk fever picks out the best cows in the herd, azoturia seems to strike the best horses in the stride.

The symptoms of the disease come on after the horse has left the stable, sometimes before a mile has been traveled. The first thing usually noticed is that the horse limps or favors one hind limb, frequently knuckling over at the fetlock. This rapidly gets worse if the animal is kept going. Perspiration breaks out over the surface of the body. If not brought to a standstill, the horse will travel till the hind limbs become paralyzed and collapse. If stopped when the first symptoms are shown, the horse will bear all of the weight on the unaffected limb, unless both are affected. He is very restless and uneasy. The sweating is profuse and may run off the body in streams, even in very cold weather. The muscles of the croup on the affected part appear very hard and tense, and the skin seems as firm as sole leather. The urine, if passed, is very dark in color, varying from a reddish brown to a brownish black. It frequently has the appearance of coffee and is often quite thick. If both hind legs are affected, the horse usually goes down and makes frequent ineffectual efforts to regain his feet. The breathing is usually labored and the pulse quickened and the temperature may run high or stay at normal.

The proper thing to do under the above conditions is to stop the horse just as soon as anything is noticed wrong. Stop right in the road if necessary and blanket the horse over the hind quarters. Do not try to return home or to reach a neighboring stable unless the latter is within a few yards. More horses are killed by trying to keep them going than in any other way. The disease progresses very rapidly if the horse is kept going, and few horses recover if they go down and are unable to rise. As soon as possible send for a veterinarian to take charge of the case. Do not give the horse any medicine unless directed to do so by a veterinarian.

To prevent azoturia, observe the following rules: If it is necessary for a horse to stand idle for a number of days during cold weather, cut down his feed, especially if he is in good bodily condition. Give a bran mash the evening before starting to work. Give the horse some daily exercise while idle, and see that the bowels are moving freely and regularly. When starting out from the stable start slowly. Active, vigorous horses will want to step along freely after a rest of a few days, and it is in just such cases as this that we meet azoturia, if proper precautions have not been taken to prevent it.

Remedy for Kicking Cow

There are two kinds of kicking cows—cows that kick without kicking at the milker and those that kick to do damage. The latter usually have bad dispositions and have to be handled with extreme care. With kind treatment they can generally be handled without much trouble, but it is better to send them to the block than to fight with them. I would not keep a cow that I could not make friends with. Sometimes a rope tied around the body just in front of the udder and up over the back, behind the hips, will break a cow of kicking. The rope should be tied tightly and it should be put on without giving the cow an idea of punishment.

Don't fight with the cow. A cow that stamps around and gets her foot in the pail, occasionally, or on the milker's toes, is hurt by the miking operation. Her teats are sensible to pain and the milking hurts her. Take plenty of time to milk such a cow, starting in very slowly and never putting on full force. See that the finger nails are cut close. This is very often the cause of a cow kicking. Feeding a kicking cow just before milking will sometimes cause her to stand quietly.

All these methods should be tried out before condemning a cow, if she is a good producer. If none of them, with kindness, will work, sell the cow to the butcher. It doesn't pay to fight with a cow daily, or anything else.

Saws

Saws are manufactured in many different qualities and grades. The grade of a saw is largely determined by the quality and temper of the steel from which it is made. Some saws are made so hard that is is practically impossible to file and set them after they leave the factory. These are intended for the finest and most accurate work, and should be used only by expert mechanics.

At the other extreme are saws made of very soft steel. They are easily filed and set. Such saws will not stand up under hard usage and are fit only for the coarsest kind of work. They are very cheap and are hardly worth the price for which they sell.

Most of the saw makers manufacture a grade of saw for general utility use. These saws are not so hard but they may be filed and set without injury to the saw. Neither are they so soft but they will stand up under hard usage.

Care should be exercised in keeping saws clean and bright. They should never be allowed to rust. Rust not only spoils the side of the saw, but the cutting edges of the teeth are greatly damaged by it. After a saw has been used in damp or wet places, or in green or unseasoned timber, it should be carefully oiled before it is put away.

L. D. CRAIN.
Colorado Agricultural College.

Sale Dates

Hereford Cattle

January 28—Mousel Bros., Cambridge, Neb.

February 19 and 20—Nebraska Hereford Breeders' Association. Sale at Grand Island, Neb., Robert Mousel, Cambridge, Neb., manager.

April 15 and 16, 1914—Breeders' Combination sale at South Omaha, W. N. Rogers, McCook, Neb., manager.

Holstein-Friesian Cattle

February 3 and 4—H. C. Glissman, Station B, Omaha, Neb. Sale at South Omaha.

Aberdeen-Angus Cattle

April 1 and 2, 1914—Charles Escher, Botna, Ia. Sale at South Omaha, Neb.

Hampshire Hogs

March 14, 1914—Roy Fisher, Winside, Neb. Sale at Wayne, Neb.

Duroc-Jerseys

February 2—E. H. Carpenter, Fontanelle, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Robert Leisy, Wisner, Neb.
February 6—Henry Stuthman, Pilger, Neb.
February 9—O. E. Green, Genoa, Neb.
February 18—George W. Schwab, Clay Center, Neb.
February 21—E. E. and N. T. Youngs, Lexington, Neb.
February 26—J. J. Kane, Wisner, Neb.
February 27—Blackburn Bros., Royal, Neb.
February 27—O. G. Smith & Son, Kearney, Neb.
March 2—L. J. Kuzel, Clarkson, Neb.

Poland-Chinas

February 11—D. C. Lonergan, Florence, Neb.
February 20—A. E. Rich, Creighton, Neb.
February 24 Jacob Dietsch, Boone, Neb.
March 6—William Ferguson, Scribner, Neb.

Shorthorns

February 27—J. C. Hardman & Son, Valley, Neb.
March 11—E. H. Cosgrove, Farnam, Neb.
March 25—A. C. Shallenberger, Alma, Neb.

Clydesdale Horses

February 27—J. C. Hardman & Son, Valley, Neb.

Barn of Thomas F. Walker & Son, breeders of big-type Poland-China hogs at Alexandria, Neb. They are offering a splendid lot of bred sows for sale on another page of this paper.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Duroc Bred Sows for Sale

We desire to call the attention of Twentieth Century Farmer readers to the advertisement of Ernest A. Fowlie of Hickman, Neb., in this issue of this paper. Mr. Fowlie was to have held a bred sow sale on February 24, but has decided to dispense with this, and will offer his bred sows at private treaty. These early spring gilts and sows are extra choice and very growthy, weighing around 240 or 300 pounds. They are sired by I Am a Crimson Wonder, Crimson Advancer, C. H.'s Crimson Wonder and Critic Colonel 2d. They are mostly all bred to Crimson Duke, a splendid son of Crimson Wonder Again. Crimson Duke was one of the litter that won the silver cup at the Nebraska State Fair this year. The sows above mentioned, bred to this boar, should attract the attention of anyone wanting something in this line. They represent the most popular blood lines of the breed, and this, together with the general high character of their makeup, should cause them to be eagerly sought after. Besides these sows, Mr. Fowlie is also offering one of his herd boars, I Am a Crimson Wonder 126763. He is absolutely right in every respect and being priced worth the money. Write Mr. Fowlie for further particulars, mentioning the Twentieth Century Farmer.

Smith's Jacks

Al E. Smith, Lawrence, Kan., has a large selection of big-boned, high-class Mammoth black jacks, with large, well-shaped heads, long, tapering ears, great length and depth of body. He can show all the height, finish, weight, bone and breeding required in a good jack. Mr. Smith's entire herd are large, high-class fellows, the kind that get the large mules. He has jacks that sired mules from small mares weighing 600 pounds that sold at weaning for $125 and $130. His prices are reasonable. He pleases his buyers and is able to sell to the same man year after year. He says he has sold one man two jacks every year for five years. The man, selling them after the season, comes back and buys again. It will please lovers of good stock to see Smith's jacks, jennets and horses and see how nicely he has barns arranged to take care of so much stock. He and his boy do nearly all of the work. Mr. Smith is always willing to show his stock and his buyers say they feel at home and are well entertained when at his farm. He has the jacks and jennets, if you want good ones, priced right. Phone him when you reach Lawrence and he will meet you.

Great Hereford Opportunity

W. N. Rogers of McCook, Neb., has sold his ranch, and is going to dispose of his entire herd of Hereford cattle. This simple statement of facts should attract the attention of Hereford breeders in every part of the country, as it will afford them an opportunity of buying animals from this herd that could not be purchased at any price were Mr. Rogers going to continue in the business. This herd was established twenty-four years ago and stands today as one of the greatest herds in the west. For ten years no herd in the entire country carried off more prizes at the leading shows of the country than this one. In recent years Mr. Rogers has not been showing, but has been concentrating his efforts in an endeavor to bring his herd, if possible, to a higher point of perfection. In doing this he has kept no animal for breeding purposes that did not come up to a required standard, and an inspection of his herd at this time will readily show that he has not fallen short of his aim. One of the strong characteristics of this herd has always been the great scale that it possessed throughout. It is doubtful if any breeder in America has used so many herd bulls possessing the scale of those used to head this herd. One of the foundation bulls was Vincent 2d, a World's Fair winner at Chicago in 1893, and weighing 2,800 pounds. Another great bull used was Anxiety Monarch, with a weight of 2,500 pounds. Then comes Beau Donald 28th, a bull that weighed 2,500 pounds. He sold for $1,000 at 10 months old and probably won more prizes than any bull ever shown in this country. His record as a sire of prize winners is a matter of record in Hereford history. The next bull in service was Monarch of Shadeland 3d, the 3,000-pound son of Anxiety Monarch, and the only bull that ever defeated Beau Donald 28th for championship. The chief bull in service now is Beau of Shadeland 31st, a son of Beau Donald 28th and out of a Wild Tom dam. This bull is proving himself to be a great sire. He is a massive, low-down, thick-fleshed, well-balanced fellow, with lots of quality, and has few equals as a bull of strictly herd heading character. Mr. Rogers is offering to sell this bull and thirty-five head of his choicest breeding cows at private sale. Every one of these cows is a regular breeder and either has a calf at side or is safe in calf, mostly by Beau of Shadeland 31st or Monarch of Shadeland 3d. These females include all of his prize-winning cows and represent such sires as Beau Donald 28th, Monarch of Shadeland 3d, Jury, Beau President, Anxiety Monarch, Beau of Shadeland 31st and others. Here is an opportunity for someone to step right in where Mr. Rogers is leaving off. It is an opportunity such as is seldom offered, and we trust that some of our readers will see the opportunity and write Mr. Rogers for further particulars, mentioning this paper.

Mousel Bros.' Hereford Sale

We called on Mousel Bros. at Cambridge, Neb., last week and spent some time in looking over the cattle they are going to put in their sale to be held at that place on January 28. The reputation of this firm is too well known throughout all Herefordom to need any particular mention on our part. Suffice to say, they are going to offer a lineup of cattle in this sale that are good enough in every respect to command the attention and patronage of any Hereford breeder in America. The offerings they have put up and the cattle they have produced in the past are the best criterions of what may be expected in their coming sale. The real facts are, we question whether there will be another such an offering as this sold in any one sale in America this year. The offering will consist of forty bulls and thirty females. Twenty head of the bulls are from 18 months to 2 years old and the balance are around 1 year old. Females will consist of cows with calves at foot, bred heifers and show heifers, some bred and some open, including the first prize heifer at the International

(CONTINUED ON PAGE TWENTY-TWO)

HORSES

WOLF BROS. ALBION, NEB. BOONE COUNTY.

ANNOUNCE THE ARRIVAL OF THEIR

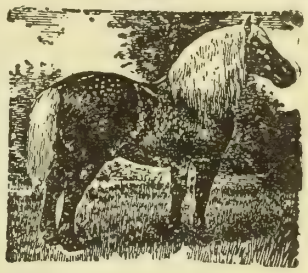
NEW IMPORTATION OF PERCHERON and BELGIAN STALLIONS and MARES

We are showing without doubt the best lot of imported stallions and mares we ever owned, which together with our American-breds will make a grand lot for you to select from. They are the big, heavy-boned, drafty kind, with plenty of style and action. They must be seen to be appreciated. Come and look them over and we know you will be pleased. A certificate of soundness given with each animal. We invite correspondence.

BREEDERS' SALE

400—REGISTERED HORSES—400

In Coliseum, Bloomington, Illinois, JANUARY 27, 28, 29 and 30, 1914.



300 Imported and Native Bred Registered Percherons, Belgiums, French Draft, Shire and Clydesdale Stallions and Mares.
100 Head of Imported Stallions and Mares that will land by sale day.
100 Head of Imported Stallions and Mares that have been here a year.
100 Head of the Best Registered Mares that ever went into an auction ring.
50 Head of Imported Fillies, 1 and 2 years old.
100 Reg. Stallions of the very choicest breeding and individuality.
100 Reg. Trotters Grade Draft, Stallions and Mares.
100 Head Ponies Imp. and Native Bred Registered Shetland and Welsh.

D. AUGSTIN. C. W. HURT, Mgr.
Catalogue Ready January 12, 1914. Arrowsmith, Illinois.

America's Famed Horse Districts

This particular district, famed for Percherons. The Chandler herd noted for draftiness, substance and bone, is noted for turning the tide to American-bred Percherons. Possibly not French fat, but bigger frames, stronger vitality, better feet and legs. American users love this useful type and get them from my big bunch reg. studs, yearlings to fours. Write today. **FRED CHANDLER, Rt. 7, Chariton, Iowa.**

North & Robinson Grand Island, Neb.
..Breeders and Importers..

We are pleased to announce that our barns are filled up with a line of big, heavy boned, drafty Percheron, Belgian and Shire stallions and mares that constitute as good a lot of horses as we have ever been able to offer for sale. Correspondence solicited. We invite inspection at all times.

FRESH IMPORTATION OF HEAVY BONED, BIG
BELGIAN STALLIONS
just received. You should see them. Eighty Belgians and Percherons on hand. A carload of good mares (both breeds) for sale now at prices that will move them. Some first class jacks also for sale.
W. L. De CLOW, Cedar Rapids Stallion and Jack Farm, Cedar Rapids, Iowa.

JACKS AND JENNETS.
Eighty large-boned, black Mammoth Jacks, 15 to 16 hands standard, guaranteed and priced to sell. The kind all are looking for. Also good, young Percheron stallions. Reference, five banks of Lawrence. 40 miles west of Kansas City on Santa Fe and U. P. R. R.

AL. E. SMITH, - - LAWRENCE, KAN.

POLAND-CHINA HOGS

IMMUNE POLAND-CHINA GILTS

We have a splendid lot of spring gilts for sale, sired by Blue Valley and Blue Valley's Orange by Big Orange They have been given the double treatment and are immune from disease, and all bred for early spring farrow. Satisfaction guaranteed.
THOMAS F. WALKER & SON, Alexandria, Neb.

POLAND-CHINA OPPORTUNITIES
Big, smooth, heavy boned, easy feeders. Spring males, by the noted **Wayside Jumbo.** Write me. I have what you want.
FRED WILLE, Columbus, Neb.

HERD HEADERS FOR SALE
Am offering for sale the three tried herd boars, Big Omaha, Metal Top, and Guy's Price Last. Every one a good one. Also a number of spring males. D. C. LONERGAN, Florence, Neb.

DUROC-JERSEY HOGS

SCHWAB'S DUROC-JERSEYS
A choice lot of spring and fall boars for sale; sired by Buddy K 4th, Wide Awake, Gold Bond, W. L. B.'s Perfection, Cremo and others. Also bred sows. Priced worth the money.
GEO. W. SCHWAB, Clay Center, Neb.

Alfalfa Lawn Durocs
A splendid lot of fall and spring males for sale, sired by Melina's Wonder, Crimson Wonder Select and Colonel Tippy. They are strictly right and worth the money. Henry Stuthman, Pilger, Neb.

DUROC BRED SOW BARGAINS
Sows for sale sired by I Am Crimson Wonder 5th, Crimson Advancer, C. H.'s Crimson Wonder and Critic Col. 2nd. Bred mostly to Crimson Duke by Crimson Wonder Again.
ERNEST POWLIE, - HICKMAN, NEB.

When communicating with advertisers on this page kindly state that you saw their advertisement in the Twentieth Century Farmer.

HOLSTEIN-FRIESIAN

Purebred Registered
HOLSTEIN CATTLE

You can find no way to invest your money and effort so profitably as in the selection and use of a pure-bred Holstein sire of good individuality. In a few years' time you can grade up a very poor herd to a profitable basis.

The Illinois State Experiment Station has been testing a herd where the average production has been increased $41.65 per cow in four years by the use of a pure-bred sire, and by testing the individual cows and disposing of the poor producers.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro, Vt.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.
DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

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You can get the Woman's Home Companion and the American Magazine, two of the world's best magazines at Half Price in Club with the

TWENTIETH CENTURY FARMER

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Omaha, Nebraska

Review of Live Stock Market

By A. C. Davenport

THROUGHOUT the whole year there is no time when the live stock markets are so devoid of new or interesting features as during the last ten days of December. Year after year it is simply a repetition of the same old story of limited demand for both cattle and sheep. As a rule buyers all need a few head to take care of the moderate call for fresh meats, but the demand is confined to such narrow limits that comparatively little stock is sufficient to supply the market. Fortunately shippers understand the situation so well that it seldom happens that receipts are large, but as often as it does happen the shippers have reason to regret their rashness in sending stock to market the last of December. This year receipts at most all points were very moderate and as a result prices were generally stronger, but as a matter of course such an advance is generally of a temporary character only and more than likely to be wiped out the first time that receipts prove to be large. Thus during Christmas week this year most cattle markets advanced 10@25c, while the sheep and lamb market at some points improved to the extent of 50@60c.

It is more than likely that the live stock markets will do little else at present than mark time and that it will be the week after New Year's before the trade gets down once more to a really business-like basis.

Foreign Importations Are Light

Cattle men are feeling relieved over the fact that shipments of dressed beef from Argentina do not promise to be very large for the near future. Not a single pound of such beef was loaded for the United States last week, but there are a few small lots afloat due to arrive in the next week or so.

Official reports show that during October only 5,700,000 pounds of foreign meats of all kinds arrived in the United States, and while the figures for November have not yet been made public, it is intimated that they will be even smaller. Cattle sellers are also congratulating themselves upon the report that the importation of Canadian cattle has practically ceased. It is said that fat steers are worth more at Winnipeg and Toronto than they are at the American markets across the border, which in itself is sufficient to shut off the runs. It is even possible that the Canadians will be forced before the coming of grass cattle to buy beef in the United States, the same as they are now buying mutton and hog products, for the reason that so many cattle have been shipped out of the Dominion this fall. The government figures show that during the ten months of the current year ending with October Canada received in round numbers $3,800,000 for cattle shipped to the United States, most of them on the stocker and feeder order, but, on the other hand, bought in the United States meats, mostly pork, lard and mutton, to the value of $5,173,000.

Canadians Worry Over Shortage

The Canadians in Ontario, which province has been supplying markets like Buffalo and Lancaster, Pa., with feeders, are very much worried over the depletion of cattle supplies in their territory. Enterprising Canadians have for years been trying to build up the live stock interests of their country and are now greatly deploring the wholesale shipments of stock to the United States because of the high prices prevailing in this country. It is freely predicted that Canada cannot duplicate the shipments of 1913 next year, as the young stock will not be in the country. From Saskatoon, in western Canada, come laments of a similar character. Governmental and other influences have for a long time co-operated in the development of the live stock industry, and it is very much regretted that live stock owners have yielded to the temptation of high prices offered by American buyers and have disposed of their herds.

While it looks as if Canada would not cut an appreciable figure in the American cattle trade for some little time to come, the season is approaching when larger shipments would naturally be expected from Mexico. However, the political situation in Mexico is so uncertain that no one can be certain as to the movement of stock from that country. Barring interference on the part of the authorities, shipping should begin in earnest about February 1, and if not confiscated by some one of the warring factions there ought to be a good many cattle to come out of that country. As a matter of course some of them will be utilized as canners, but the great bulk of the Mexican cattle will not be available for beef until next fall after they have been run on American pastures next summer. This means that they will not come into competition with the American cattle now on feed and to be marketed the latter part of this winter and the coming spring.

Figures for Six Big Markets

As near as can be determined by figures now at hand the six big markets of the country will have handled by the close of 1913 about 7,400,000 head of cattle for the year, or a decrease of about 120,000 head as compared with 1912. Sheep at the six big points will approximate 13,100,000 head for the year, or about 150,000 head more than for 1912. The receipts of hogs at the same points will amount to about 18,400,000 head for the year with a decrease of about 125,000 head as compared with the previous year.

Hogs are less influenced by the holiday season than either cattle or sheep; in fact, hog packing goes on just the same during the holiday season as at any other time with the exception that the packing houses are all closed down on Christmas day. The market has been in a good, healthy condition and prices have shown a strong inclination to advance. In fact, at present writing they are generally quite a little stronger than a week ago. This strength has been due entirely to very free buying on the part of packers and has taken place in spite of the fact that receipts at most points have been quite liberal. It looks very much as if packers really wanted the hogs and while they take advantage of big runs to fight the market down, they still want the hogs and have been buying them with very much more freedom during the last two weeks than has been the case for the last two or three months.

As a matter of course no one knows what the immediate future will bring forth, but there is no question but what the prevailing sentiment among hog men is bullish and it will require a great deal of very shrewd maneuvering on the part of buyers to keep the market down in the face of such an apparently good demand.

Cowpox

Symptoms: Teats very sore, break out in pimples and form scabby sores. A troublesome, contagious disease, and the cow should be isolated.

A milker can take it from one cow to another on his hands or clothes.

Remedy: Dress the sores three times a day with an ointment made by mixing four drams boracic acid, twenty drops of carbolic acid, with two ounces of vaseline.

If the teats are very sore it may be well to use a teat syphon to draw the milk.

Dampening the Cow's Udder

Now that the cows are again in the stables it is important that we give those little attentions that go to make for the comfort of the animals as well as for the bettering of the product that we are producing. Among the practices that aid us in accomplishing the latter end is the one of dampening the cow's udder and flanks before milking her.

The purpose of this practice is to cause the dust that may be present on the udders and flanks to adhere more firmly, that it may not fall or be rubbed off into the milk. The moisture does this. Much of the dust is carried away, of course, by the mechanical action of rubbing the cloth or sponge, but what remains is made heavier by the moisture and caused to cling so firmly on the udders and flanks that it will not be dislodged before the milking is completed, if the dampening is done just before the milker begins his task of milking.

If the dampening is done too long before milking the moisture is evaporated and the benefit is partially lost. The udder should not be made wet, as is often done, but merely damp. A pail with water and cloths, or a sponge, are the equipment necessary for this work. This equipment, especially the cloths, should be sterilized frequently to prevent the development of harmful bacteria.

How to Tell the Age of Cattle

The calf when born has two pair of incisors, the other two pair appear during the first month. When a calf is 18 months old, it loses the middle pair of milk incisors and grows a permanent pair. The next pair, one on each side, is replaced at 27 months of age, the third pair at 36 months, the fourth or outside pair, at 45 months. The time of appearance of these incisors varies within rather narrow limits, so that we are able to tell the age of young cattle fairly accurately.

The calf also has a temporary set of molars, which are later replaced with permanent ones, but they are not considered in estimating the age of the animal.

G. E. MORTON,
Colorado Agricultural College.

Pays to Be Kind to Stock.

An Illinois farmer writes: "We hired a man once because we noticed that he spoke pleasantly to his team. It was a small thing, but the straws show which way the wind blows. He stayed with us three years—only left to go onto a farm of his own—and all that time we never heard a curse, or saw a blow struck in anger. The stock did better during those three years than it had done for a long time. The cows looked more thrifty, the horses grew less skittish and restless, and even the young stock settled down into regular, sober habits. Did it pay? Try it yourself and see."—Kansas Farmer.

Our Readers' Exchange

(CONTINUED FROM PAGE NINETEEN)

round trip has been authorized from Cheyenne. The dates of sale are January 19, 20, 21. From all points in Wyoming on the Colorado & Southern and Union Pacific a round-trip rate of one fare and a third has been authorized to Cheyenne, to which will be added the one-way rate from Cheyenne. Return limit, January 26. From stations on the Burlington rates will be made on the basis of 2 cents per mile each way.

Montana—Rates from Montana points on the Burlington will be made on the basis of 2 cents per mile. Dates of sale, January 17, 18, 19. Return limit, January 31.

Idaho—From all Idaho points rates have been authorized on the basis of one fare and a third or less. Dates of sale, January 16, 17, 18. Return limit, January 31.

Kansas, Nebraska, Oklahoma, South Dakota and Iowa—Rates from all points in these states will be made on the basis of 2 cents per mile in each direction. Tickets will be sold on January 17, 18, 19. Return limit, January 31.

Breeders' Notes

(CONTINUED FROM PAGE TWENTY-ONE)

Live Stock Show at Chicago this year. This is without doubt one of the best heifers in America today, and her like is seldom offered for sale. She is a daughter of the great breeding bull, Beau Mischief. The dam of this heifer, Germania 2d by Princeps, will also be included in the offering. This cow is put in as an attraction and will drop a calf soon after sale time of the service of Beau Mischief. In regard to the bull offering, will say that twelve head of these are sired by Beau Mischief and the balance by Princess A, Parsifal and Sensation. The bulls sired by Beau Mischief are every one of herd-heading character. Among those of other breeding are several that are good enough to go to the head of any pure-bred herd. Besides these, there are a dandy lot of big, husky, heavy-boned, beefy fellows, just the right kind for range service. We will have more to say regarding this offering in our next issue. In the meantime you had better get your name in for a catalogue, mentioning the Twentieth Century Farmer.

POULTRY

Baby Chicks

BABY CHICKS—TEN VARIETIES—Annual incubator capacity, 100,000. Eggs for hatching from vigorous, farm-ranged birds. Write your wants. Maplewood Farm, Exeter, Neb.

Ducks

201 INDIAN RUNNER DUCKS. AYE Bros., Box 3, Blair, Neb.

FAWN AND WHITE RUNNERS, $5 per trio. Also Scotch Collie pups. James Walters, Glidden, Iowa.

112 PEKIN DUCKS. AYE BROS., Box 3, Blair, Neb.

Geese

42 TOULOUSE GEESE. AYE BROS., Box 3, Blair, Neb.

Langshans

FOR BLACK LANGSHAN COCKERels try Jake Hetrick, Wahoo, Neb.

FOR SALE — PURE-BRED WHITE Langshan cockerels, $2 and $2.50 each. Henry Neidig, Madison, Neb.

896 BLACK LANGSHANS. AYE Bros., Box 3, Blair, Neb.

FULL-BLOOD BLACK LANGSHAN cockerels for sale. C. C. Cunningham, Kennard, Neb.

CHOICE BLACK LANGSHANS—MAE Curtis, Lyons, Neb.

Leghorns

ROSE-COMB BROWN LEGHORN cockerels. Otto Frahm, Fort Calhoun, Neb

SINGLE-COMB BROWN LEGHORN cockerels. No better birds in the state of Minnesota; $3 each. M. L. Hawes, Granada, Minn.

MY ENTIRE FLOCK CHOICE ROSE-comb White Leghorn cockerels, $1 each; hens, $8; pullets, $10 dozen. Kaveney Bros., Linwood, Neb.

123 SINGLE-COMB BROWN LEGhorns. Aye Bros., Box 3, Blair, Neb.

50 SINGLE-COMB BROWN LEGHORN cockerels, scoring from 90 to 96, $2 each. Hawkeye View Farms, Selma, Iowa.

SINGLE-COMB WHITE LEGHORNS, $1 each, and Indian Runner drakes, $1 each. Leon Haney, Gretna, Neb.

456 SINGLE-COMB WHITE LEGhorns. Aye Bros., Box 3, Blair, Neb.

Orpingtons

SINGLE-COMB BUFF ORPINGTONS, Indian Runner ducks. Peter Brehm, Harvard, Neb.

355 BUFF ORPINGTONS. AYE BROS., Box 3, Blair, Neb.

KELLERSTRESS WHITE ORPINGton cockerels from $1.50 up to $5 during December. Jos. F. Jirovec, Clarkson, Neb.

BUFF ORPINGTON COCKERELS — Prize-winning stock, bigger and better. Catalogue free. Frank Lewis, Gibbon, Neb.

HIGHEST QUALITY WHITE ORpington yearling hens and pullets at very reasonable prices, if taken now. A. L. Umpleby, Broken Bow, Neb.

PRIZE-WINNING, SINGLE-COMB Buff Orpingtons. Mrs. Cook, Eddyville, Neb.

Plymouth Rocks

PARTRIDGE PLYMOUTH ROCKS for sale. A. G. Burbank, Cordova, Neb.

211 WHITE ROCKS. AYE BROS., Box 3, Blair, Neb.

WHITE ROCK COCKERELS, EXTRA large, $1.50 each. Mrs. George Hellbusch, Belgrade, Neb.

BARRED ROCK COCKERELS, $1 each. Iver S. Johnson, Stanton, Neb.

417 BARRED ROCKS. AYE BROS., Box 3, Blair, Neb.

FOR SALE — BARRED PLYMOUTH Rocks, 50 cockerels at $1 each. J. A. Haney, Gretna, Neb.

BUFF ROCKS, YEARLINGS — ONE exhibition cock, $10; two cocks, excellent breeders, $5 each; five hens, exhibition breeders, $2 each. Scott Covalt, Council Bluffs, Ia.

Pea Fowls

PEA FOWLS FOR SALE IN TRIOS. Frank Dickson, Panama, Neb.

POULTRY

Rhode Island Reds

222 RHODE ISLAND REDS. AYE Bros., Box 3, Blair, Neb.

SINGLE-COMB RHODE ISLAND Red cockerels, hatched from trap-nested hens. Thompkins strain. Otto Timm, Bennington, Neb.

Turkeys

MAMMOTH BRONZE TURKEYS—Both sexes, big-boned birds; Light Brahma cockerels, good ones. Frank A. John, Bedford, Ia.

WHITE HOLLAND TURKEYS, White Pekin ducks, White African Guineas, Single-Comb Brown Leghorn hens and cockerels, Anconas; first-class stock. Edward E. Dooley, Selma, Ia.

WHITE HOLLAND TURKEY TOMS, $4; hens, $2.50, $3. Black and White Langshans. Mrs. J. W. Johnson, Loup City, Neb.

BURBON RED TURKEYS FOR SALE. Clinton Myers, Route 4, Fairbury, Neb.

Wyandottes

THREE HUNDRED WHITE WYANdotte cockerels from the best blood in America. Large, vigorous, pure white birds. Oscar L. Bock, Council Bluffs, Ia.

348 WHITE WYANDOTTES. AYE Bros., Box 3, Blair, Neb.

CHOICE ROSE-COMB WHITE WYandotte cockerels. Price, $1.50. Mrs. Belle Goodrich, Enon, Mo.

SILVER-LACED WYANDOTTE COCKerels—selected, healthy, well marked birds—$1.50 each. H. Dasenbrock, Leigh, Neb.

30 EARLY, PURE WHITE WYANdotte cockerels, 36 laying pullets. Owen Rummell, Pierce, Neb.

Poultry Remedy

CURE SICK CHICKENS WITH Germikil. Catalogue and sample free. Aye Bros., Box 3, Blair, Neb.

Miscellaneous

SPECIAL ATTENTION WILL BE given poultry ads in the February 7 issue. Why? It is the big, special poultry number. Best number of the year for poultry advertisers. Your ad should be in it. Let us tell you about it. Poultry Department, Twentieth Century Farmer, Omaha, Neb.

FOR SALE—18 KINDS OF POULTRY—cockerels, geese, 6 kinds of ducks, Pearl and White guineas, bantams, dogs, rabbits, fancy pigeons. Write D. L. Bruen, Platte Center, Neb.

POULTRY CATALOGUE FREE. AYE Bros., Box 3, Blair, Neb.

HELP WANTED

WANTED—TRUSTWORTHY FARMER boy desiring to earn money for college education, willing to work, leave home and learn salesmanship under personal training and guarantee. Address French-American Art Co., 7 E. Washington Ave., Council Bluffs, Iowa.

THE AUTOMOBILE BUSINESS PAYS $25 to $50 weekly. We teach you how. Write for our free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

WANTED—A MAN TO SOLICIT SUBscriptions for The Twentieth Century Farmer; salary, $42 a week. Address Circulation Manager, The Twentieth Century Farmer, Omaha, Neb.

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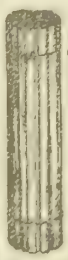

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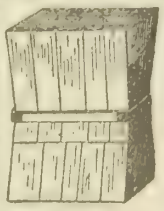

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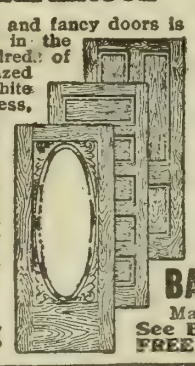

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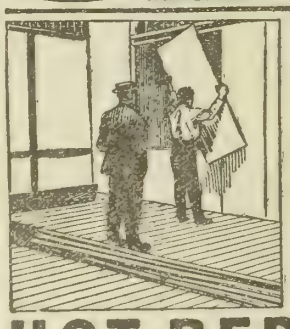

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TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, January 10, 1914 | Number 683

Bright and Breezy

Quite as Effective

They were quarreling. "Well, you can't say I ran after you," said the wife. "Neither does a mouse-trap run after the mice, but it catches 'em just the same."

Man and Beast

"Well," said a farmer to an Irishman who was employed on his farm, "I hear you had a little encounter with my bull yesterday. Who came off best?"

"Sure, your honor," said Pat, "it was a toss-up."

Not a Smoker

The youth who was smoking a cigarette opposite the monkey's cage took another from his pocket.

"Would it do any harm," he asked, "if I offered him one of these things?"

"Not a bit," responded the attendant; "he wouldn't touch it. A monkey isn't half as big a fool as he looks."

Close Quarters

The proofreader on a small country daily was a woman of great precision and extreme propriety. One day a reporter succeeded in getting into type an item about "Willie Brown, the boy who was burned in the West End by a live wire."

On the following day the reporter found on his desk a frigid note asking, "Which is the west end of a boy?"

It took only an instant to reply: "The end the son sets on, of course."

No Religious Ceremony

Recently Mrs. Smith asked her husband to open a can of tomatoes, and then, leaving him to work out the problem alone, she proceeded to some other duty in the adjoining room. A minute passed, and then she suddenly paused and glanced toward the kitchen door.

"John," she called out, "what are you opening that can of tomatoes with?"

"I am opening it with a can opener," came back the peevish rejoinder of John from the kitchen. "What do you suppose I am opening it with?"

"I don't know," answered little wifey in a reproachful voice, "but I have every reason to believe that you are not opening it with prayer."

It Looked Like Labor

Some time since two farmers were talking crops over a rail fence, when they saw a tramp coming down the road with a shovel on his shoulder.

"Look here, Willie," exclaimed one of the farmers when the tramp came abreast of them, "do you mean to say that you are actually going to get down to work and do a piece of diggin'?"

"Not on your life!" promptly responded the hobo, with charming frankness.

"I'm relieved to hear it," said the [illegible] of the farmer, "but what are you goin' to do with [illegible]?"

"I'm a tramp poet," answered the tramp. "I am a trifle [illegible]."

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Are Your Roads in Politics?

WE WOULD accomplish more in many ways if local politics were not so badly mixed with everything we undertake. No matter what reform is suggested, somebody fights it because his political toes are stepped on. The farmer is more deeply concerned than anyone else in the problem of good roads, not only because he uses them more in his business, but because he furnishes a large per cent of the cost of making and maintaining them. How many farmers have ever stopped to think how large a proportion of the money expended on our highways goes into the construction of bridges and culverts? Have you ever heard of "bridge contract grafts?" Would it not be a good idea to stop and consider where some of your hard-earned cash goes to after it is paid out for taxes to be used in road improvement?

If a perfectly honest and entirely competent man could be hired and given a free hand in expending this money where it would do the most good, where do you think it would go to, and how do you think it would be used? This matter will be considered by John N. Edy, the good roads man, in our next issue, and he will have something to tell you about this good roads proposition that cannot fail to interest you. Of course, such a condition as he pictures is too good to be true, but, as he says, "It doesn't cost anything to talk about it."

Prattle of the Youngsters

We Know That Kind

"Your father is a religious man, isn't he, James?" a small boy was asked. "Oh, yes," was the naive answer. "He just hates anybody who doesn't go to church."

Plenty

Harold, 5 years old, was entrusted with the duty of carrying some milk to his grandmother produced from the home dairy herd, consisting of one cow. "I hope," said grandma, "that you are not bringing me all you have." "Oh, no," said Harold, "we got a whole cow full at home."

Another Charm

Small Boy (noticing the Phi Beta Kappa key hanging from the minister's watch chain)—Did you find it again, or is this another?

Minister—Why, my little man, what do you mean? I never lost it.

Small Boy—Oh, mother said you had lost the charm you had when you were young.—Judge.

Business Methods

The Sunday school teacher was possessed of the praiseworthy desire to promote thrift among the class of lads. He had given Joe and Johnny a dime each for doing some work for him.

"I hope to hear, when we meet again," he said, "that you have used the money to advantage."

The next time they met Joe produced two dimes.

"Well done, my lad," said the delighted teacher. "I am pleased to see my lessons are having their fruits. But what of your dime, Johnny?" said he to the other hopeful.

"Please, sir, I lost it tossin' wid Joe."

No Blessing Required

The little daughter of a minister was about to give a birthday party. It was her first effort as hostess.

One thing worried her. Daddy always said grace before meals.

"Will I have to do that, mamma?" she asked.

"No, dear," said her mother, "it's just an informal dinner."

When the small guests were seated at the table the hostess feared someone would notice the omission of grace.

Folding her chubby fists over her napkin, she made the startling announcement: "My mamma says this is such an infernal dinner we don't need to say grace."

Damp Enjoyment

"Now, Bobby," instructed the fond maternal parent of the prodigy in velveteens, bound for a children's party, "the weather looks rather threatening. Here is half a dollar for you, and if it rains come back by cab."

Two hours later it came down cats and dogs, and f. m. p. (fond maternal parent) returned devout thanks for her forethought.

But when little Bobby Velveteens returned he was wet to the skin.

"Why, Bobby," cried the f. m. p., "didn't you come back by cab, as I told you?"

"Oh, yes, ma!" answered Bobby. "And it was simply splendid! I rode on the box beside the driver!"

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Should the State Board of Agriculture Be Reorganized?

IN THIS article we will try to make clear that the Nebraska State Board of Agriculture, as it is now managed, is a menace and detriment to the agricultural interests of the state. It is enabled to be this because it is sailing under false colors and not what it is represented to be. It seems to be what it is not. The State Board of Agriculture should be the head and front of all the agricultural activities of the state This is not true in Nebraska. It is simply a state fair board.

There is another thing we want our readers to understand. The twenty-nine men who constitute what is called the Nebraska State Board of Agriculture should not be too severely criticised. Excepting the seven on the board of managers, they have nothing to do or say about the management of the fair between annual meetings. This makes it easy for the men in control to perpetuate themselves in office. There is no opportunity for the people interested to have anything to say, because this is a close corporation.

The Three-in-One Combine at Work

To illustrate how easy it is for the "three-in-one" combine to manipulate the annual meeting, we will give three examples:

The usual harmonious proceedings of the 1911 meeting of the State Board of Agriculture was broken into by Charles McLeod of Stanton county, who offered the following resolution:

> The old prejudice that has existed in the Nebraska State Board of Agriculture for more than a quarter of a century, based upon its methods of election and distribution of its membership over the state, is still a matter of contention and a source of unrest among its members, notwithstanding the reform of two years ago, when the old nominating committee method of election was supplanted by equal distribution in the state, using the congressional district as the unit of division in this apportionment. The charge is still coming up, however, that the Nebraska State Board of Agriculture is a close corporation, a wheel within a wheel, an endless chain, so to speak, that it is organized under such rules of government as to be able to control and perpetuate its official head, the board of managers.
>
> Resolved, That no member of the State Board of Agriculture who has served in the elected position of president of this association is thereafter eligible to appointment or election on the board of managers until two (2) years after his term as president has expired.
>
> Resolved, That the board of managers be selected in the following manner:
>
> The state Board of Agriculture shall select a committee of six (6), which, together with the newly elected president, shall select the new board of managers, one from each congressional district not represented by the president, said selection to be ratified by the society.

These resolutions came like a thunderbolt from a clear sky, although they hit no one but former Presidents Rudge and Youngers. But Mr. McLeod, in introducing them, placed himself in the attitude of an insurgent. The resolutions were tabled and a little later there was meted out to Mr. McLeod the summary punishment of being retired from the State Board of Agriculture because he dared to speak his opinion.

Shutting Out Debate

From the annual report of the 1913 meeting of the Nebraska State Board of Agriculture we quote the following:

Mr. Graff—There is a matter that I would like to bring up here, if I may, and it is in order, and that is the matter of cheap entertainments on the fair grounds—entertainments that do not appeal to more than 5 per cent of the patrons of the fair. I think the people have been demanding a better class of entertainment the last two or three years. They seem to have passed the age where anything will entertain them. I am frank to say I'd be in favor of cutting out entirely the cheap entertainments out there. These cheap affairs are an eyesore to the people, and then we could have that much more room for good, clean concessions.

Mr. Rudge—I don't know whether that is out of order at this time or not, but anyway, I think that we might refer that to the board of managers and leave it to them. I will make that a motion, that this matter be referred to the board of managers, to be taken up by them at their meeting and recommendations made as to any changes.

Without any further discussion, the motion of Mr. Rudge carried.

The foregoing shows how easily important matters affecting the State Fair can be sidetracked in the annual meeting without even allowing discussion. To the farmer who, with his wife and children, attends the fair the question of what kind of amusements and concessions are permitted on the grounds is a vital one. Even Mr. Rudge, "the best posted fair man in the state," might have learned something from a discussion of this question.

Parcel Post Resolutions Sidetracked

At the January, 1912, meeting of the State Board of Agriculture President Lawson of the Nebraska Farmers' Congress presented resolutions which had been passed the week previous at a joint session of that organization and the Nebraska Rural Life Commission, the Nebraska Farmers' Grain, Live Stock and Co-operative Association and the Nebraska Country Life Commission. These resolutions urged congress to pass the parcel post bill, favored the teaching of higher grades in rural schools, recommended that practical agricultural subjects and vocational training be incorporated in the course of studies of the high schools of towns and cities, to the end that the teaching forces be better equipped for work in rural schools. These resolutions were promptly tabled. The same resolutions were passed by all the live stock associations which met at Lincoln the same week. It was the general impression and talk among the farmers at the organized agriculture meetings that these resolutions were sidetracked by the State Board of Agriculture because of the fear that the parcel post might interfere with the business interests of some of the board of managers of the State Fair.

Three Examples of Another Kind

Those controlling the board of managers have done many things which would not have been sanctioned by the members of the Board of Agriculture if they had had a voice in the management of the State Fair. As an illustration: How many of the twenty-nine members would have endorsed the removal of the hog and cattle barns from the high, sightly, dry, airy, comfortable location on the east side of the fair grounds to the mud hole and frog pond where the barns were re-located in 1910? One week prior to the 1910 State Fair these grounds were flooded up to the eaves of the hog houses. If this rain had come a week later in all probability all the hogs in show barns would have been drowned.

In 1912 the city of Lincoln extended its

(CONTINUED ON PAGE NINE)

Summary of Last Week's Article

THE Nebraska State Board of Agriculture is not a state institution. It is a close corporation, created by legislative enactment in 1858, for the purpose of holding a state fair, but with no other specified duties.

It is a self-perpetuating body, composed of twenty-nine members, who are the successors of the original charter members. This body has no duties to perform outside of the annual meeting. In addition to these the president of each county agricultural society, or a duly elected delegate, are ex-officio members of the annual meeting.

At the annual meeting the president selects three members from among the twenty-nine, who are to be approved by vote. These three, with the president, first and second vice presidents and secretary, constitute the board of managers, which plans, arranges for and in all respects handles the State Fair grounds, its property, its improvements, its expenses and its income.

The state has no control over the collecting or disbursing of the money received for entries, concessions, admissions, and from all other sources, except from the state itself. The board of managers can spend this money as it sees fit. The State Fair buildings and grounds are the property of the state.

Lessons in Co-operation Worth Knowing

Rocks Upon Which Southern Texas Truck Growers' Association Went to Pieces Found Everywhere

By Chester T. Crowell

WHEN onions began to be grown in sufficient quantities in southwest Texas for carlot shipments, about ten years ago, the inexperienced growers came face to face with a problem that had never before troubled them. It was the problem of preventing a glut in the markets. They knew only the principal markets of the United States, and all of them wanted to ship to those markets. They began to find out that even with a few hundred cars of onions they could glut Chicago and St. Louis and ruin every market east of the Mississippi. They needed organized distribution of the crop.

To solve this problem a few growers met in San Antonio in 1906 and organized the Southern Texas Truck Growers' Association, which has been until this year one of the greatest co-operative marketing agencies not only of the United States, but of the world. It has been copied in Scotland, in Australia and every continent of the earth. It is the more interesting because it was founded not by theorists, nor upon the advice of experts; it simply grew and developed with the needs of each passing season until its operation covered almost every phase of the activities of the farmers of southern and southwest Texas. It marketed all sorts of perishable produce, not only onions, but cabbage and lettuce and melons.

Rise and Fall of the Organization

Little but the name of the organization remains today, and the issue of dissolution is actually before the board of directors. The tracing of the rise and fall of that organization carries many lessons for every farming community in need of co-operative organization, because the rocks upon which this organization foundered protrude in every farming community.

Beginning first with the problem of distribution, the association opened the possible market for the crop through its own sales manager until it was possible to sell 3,000 cars of Texas onions every spring instead of 1,000. It then took up the matter of supplying seed and reached around the earth to the Canary Islands to make a contract for seed at producer's price, which has saved the growers in seven years about $150,000.

The next problem which arose was that of obtaining credit for farmers who were already mortgaged and had to borrow money to plant their crops, because they were newcomers in a new country. A system was devised by which a grower could file claims in the office of the association against the returns on his cars of onions, and these claims would be paid before anything went back to the grower. With this sort of an arrangement a grower's credit was limited only by the number of cars he could produce, because the management of the association was able and honest from the start. This arrangement saved the growers many fortunes in interest.

Effective in Dealing with Railroads

The association next found that as the largest shipper in its territory it could exert tremendous control over the railroads, and it took up the matter of collecting all claims for damage to shipments or over-charge. Presented by the agent of the association, these claims were settled in the minimum time, at the minimum of expense, and with little question when they were just claims. The total collected in seven years is close to $100,000, not 10 per cent of which would have been collected without an association. The railroads were always ready to advance freight rates, but every time such an effort was made pressure would be brought to bear and the effort would be stopped early. There is now pending again—immediately it became known that the association might not live—a plan to advance freight rates 10 cents a hundred on onions and other produce out of this territory. On a crop of 4,000 cars, such as was shipped last season, this would amount to $90,000 more in freight. If the association dissolves, that is likely to be the first penalty the growers will have to pay for their mistake.

In short, the activities of the association have come to be so broad that on what might be called its side lines it has saved the growers each year more than the $75,000 that it costs to maintain the association.

How Could Such an Association Fail?

As a climax to its activities it conducted a national advertising campaign last season, telling of the special merits of the Texas Bermuda onion, spending $25,000 on the campaign.

Kind of Onions the Truck Growers' Association Made Famous

The revenue of the association has been raised by a tax of 7 cents a crate on onions which it handles. In a normal year these onions will sell on the markets at $1.25 to $2 a crate, which means that the grower will net back about $1 a crate. This will mean about $450 a car, and the production will be about a carload to the acre, or a little less.

How could an association like this, which made the very growing of the crop possible, go upon the rocks? The answer is brief.

The Root of All Evil—Selfishness

The association made the market, but when a market is made and maintained it is made and maintained for everyone. It is not possible to make a market just for the association members' products and not make a market for an independent shipper. Consequently, as the net revenue sent back to the grower grew with the strength of the association, the independent shippers who were not affiliated with the association also found their checks growing. The independent shipping agencies carefully garbled the facts in the case, because if the association got all of the business there was none left for the independent agencies. The men behind these agencies conducted steadily for years a campaign of misrepresentation against the association that even went so far as to accuse the sales manager, Roy Campbell, who has been the brains of the organization since its founding, of plain stealing.

There was no way to answer these charges except to depend upon the growers to understand the history of the business of onion growing in southwest Texas. Mr. Campbell was too busy to go out into the field himself; the directors of the association were men of affairs. A story sufficiently repeated is certain to find believers in time. At least it creates dangerous suspicion. This grew until there were repeated investigations of the affairs of the association. Every investigation brought an unqualified approval, whether it came from a committee of growers or an expert accountant, but the slander continued. It was business to see that the slander continued, and it seemed to be no one's business to refute the charges, many of which were an insult to the intelligence of those asked to believe them.

Benefits of Organization Forgotten

It was known that the cost of operating the association was about $75,000 or more a year. This sounded to the average farmer like a tremendous amount. He forgot all the benefits it brought and wondered if there might not be graft and extravagance simply because the figures were large. The independent agencies would discuss this feature in a way calculated to make each grower think he was paying the entire $75,000. The growers lost sight of the fact that the expense of the organization was great because it was handling from 4,000 to 6,000 cars of produce a year.

After the tremendous appreciation that followed the early efforts of the association had passed, there was a steady dropping away of strength. This continued until it actually put the association members at a disadvantage in the market, because the sales manager would have to hold back his produce and maintain the market for the independents in order to prevent all of them from going broke together. When this stage had been reached the association began to lose strength rapidly.

At the Parting of the Way

Finally a number of the older growers who had been the prime movers in the organization came, together with Roy Campbell, and sug-

gested that the time for trying to maintain a market for everyone was past. They knew that in a "dog-eat-dog" selling campaign he could do as well as the best of the independent agencies and they put the matter before the rank and file of the growers that unless a solid organization could be obtained they would not continue in the association.

They told the growers that the future of the business depended upon organization; that with a solid association prices could be maintained and the acreage increased year by year, with profit to all. They pointed out that there was no use criticising the selling plans of the association, because any selling plan that was half way sensible would win if the growers were united. But the 1912 and 1913 seasons had been disastrous and the growers turned with one accord to blame their selling agency. They were in the position of the man who lost his suit in court—it was always the fault of his lawyer.

Law of Supply and Demand at Work

As a matter of fact, the 1912 season was a failure because speculators brought in onions from Europe in such large quantities that they broke the market, and the 1913 crop was a failure because there were so many stored onions in the north they were selling at 25 cents a bag of 100 pounds on markets where Texas onions would have to bring $1 a bushel to give the Texas grower anything at all. No selling organization can defy the laws of supply and demand in the face of such a situation as that.

But the growers were in no mood to strengthen their association. They were disgusted with it. The contract of Roy Campbell, sales manager, was at an end, and he told the growers he was tired of being criticised by those who did not understand, when he could handle as an independent agent one-third as many cars and make more money. He sought no renewal, but he will be about the strongest single agent in the field next year.

Looks Like a Case of Dog Eat Dog

A new board of directors of the association was elected. It found it could not be sure of enough tonnage to warrant the employment of sales managers and representatives in the market as the association had done in the past, so it turned to the next best way, and made a contract with a commercial marketing agency to handle the tonnage of the association members for a fixed charge. It was then discovered that the proposed contract did not please the growers Meanwhile the independent agencies are making contracts with growers, and every day that passes sees the possibility of association tonnage growing weaker. Mr. Campbell has taken over the old affiliations of the association in the markets of the country as his own.

The association will eventually choose a company to do its marketing for it instead of having its own organization of salaried men. But whatever it does it will have less tonnage than it has ever had before. Under these circumstances there is but little use in having an association at all, because its strength lies always in control of the crop. The independent agencies have won their fight and they will reap a good harvest as their reward in the season of 1914. They have broken the only organization in the field that had an eye single to the interests of the growers and not operated for profit.

Must Learn First Lesson Again

The trouble has been with this organization, as it has been with others of its sort in the past, that the growers are penny wise and pound foolish. They are ready to save the expense of maintaining their organiation at the cost of losing the manifold benefits it was able to bring to them individually and to the business in which they are engaged.

Henceforth they are at the mercy of the railroads as to rates; they must pay more for their seed; their over-charges on freight will never be checked up; they must fight in the courts to collect on damaged shipments; their credit is back where it was before the organization was formed, and no agency will know where the other agency is shipping, so that the old situation of some markets clamoring for onions while others are glutted will recur.

The only hopeful view under the present circumstances is that when the bulk of the present growers have learned by costly experience what the early growers learned before they formed the association, they will turn again to the organized plan and re-establish their own distributing and selling agency. Many of the growers who have fought hard to prevent the present situation confidently predict that two years hence Texas wil have the strongest association it has ever known.

Why Farmers Are Interested in Good Seed

Pure Seed Laws Should Be Passed and Enforced for Protection of Farmers and Honest Seed Dealers

PROBABLY one of the greatest sources of loss in farming has been due to the inferior grades of agricultural seeds which have been used.

Consider what is involved in seeding a field to clover or alfalfa. First, there are days of hard labor in preparing the ground for the seed; second, there is to be paid out a large amount of money for seed to put on this field. Then, if the seeds have been poor in quality, infested with noxious weed seeds or dead ones which will not germinate, the crop is at least a partial failure, money and labor have been wasted, and worse even than this is the abundance of weeds which have been sown. Wild mustard, green and yellow foxtail, buckhorn, plantain, witch grass, bind weed, chick weed, dodder and many others are often found in a single sample of seeds. Such names as "extra fancy," "choice" and "fancy recleaned" have absolutely no bearing on the actual quality of the seeds.

What Dodder Does to Alfalfa

Such plants as dodder in red clover or alfalfa fields, if once sown, may require long years of work and vigilance to get rid of them. Dodder is undoubtedly the worst weed pest known, both because of its habits of growth and its difficulty of eradication. It is a parasitic plant; that is, it does not make any food material for itself, but steals its food from another growing plant. There is sufficient nourishment stored up in the tiny seed to start the young dodder plant growing. Before it became parasitic it probably belonged to the morning glory family and is a vine. As soon as the young plant begins to grow it begins to wind about and attaches itself to some support. The clover and dodder seeds begin to grow about the same time and the dodder attaches itself to the clover. From this time on it loses all connection with the ground. It sends little suckers into the clover stem and begins drawing nourishment from the young clover plant. One sample of red clover inspected carried with it approximately 19,000 dodder seeds per pound of clover seed. It is easy to see how much of a chance the farmer who sowed this seed had of getting a good crop of hay. This lot of seed was actually sold to a Washington farmer before the enforcement of the seed law. A plant manufactures food in its leaves, but the dodder does not make any food for itself, so it has no leaves. In the early part of the season it is inconspicuous, but later it appears as a reddish brown, thread-like vine, twining about the clover or alfalfa stems, branching and spreading from one plant to another and finally producing a mass, through which it is difficult to drive a machine. The clover or alfalfa thus choked and smothered has a poor chance making a good crop. The dodder produces great masses of small white flowers and millions of seeds, which will maintain fertility for long periods of years.

Dodder Plant on an Alfalfa Stem

Numerous cases are reported where farmers did not know what dodder was and cut the hay in infested fields, dragging it and spreading the seeds over the entire place. There is no farmer who would knowingly purchase such seeds at any price.

Cannot Detect Impurities on Sight

A farmer may be able to recognize on sight good and bad qualities in almost any kind of live stock, but it is almost impossible for him to be able to recognize on sight all the different kinds of seeds which he uses, especially the innumerable kinds of weed seeds. Samples of agricultural seeds have been tested in the United States Department of Agriculture laboratory which contained more than fifty different kinds of weed seeds. Seeds of worthless weeds, such as yellow trefoil, burr clover and sweet clover, are used to adulterate agricultural seeds. Because of the great similarity in appearance of these seeds and clovers and alfalfa, it has been easy to do this. Samples have been tested which contained from 40 to 50 per cent of these similar seeds.

Yellow trefoil and other adulterants are not as serious in their effect on the crop for years to come, but in large quantities they greatly reduce the value, and no farmer wants to pay red clover or alfalfa prices for worthless weed seeds. Most of these cost less than one-third what clover or alfalfa does.

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TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

T. F. STURGESS - - - - - - Editor
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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance....$1.50
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING—Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

General moisture conditions in the Missouri valley country are the best in many years.

Better methods of marketing of farm crops can be obtained only through co-operation.

At the farmers' co-operative laundry at Catfield, Minn., 125 families have washing done each week at a cost of 58 cents a washing, including the ironing. This kind of co-operation is popular with the women. We should have more of it.

The veterinarians have not yet succeeded in convincing the Nebraska Sanitary Board that they should be given a monopoly on the hog cholera serum business. Neither have the hog growers convinced the members of the board that they should not adopt the rules asked by the veterinarians.

The arrangements now being made for the 1914 power farming demonstration to be held again at Fremont, Neb., the third week of August, include working exhibits of irrigation pumping outfits, portable sawmills, hay-balers and other machinery which may be used to demonstrate the ability of the tractors to do belt work.

The fire loss in the United States is thirty times as large, in proportion to our population, as that of any other civilized country. The loss of property is about $500,000,000 a year, and the loss of life averages 3,000. It would be interesting and startling if statistics could be obtained showing how much of this loss is due to carelessness and might easily be prevented.

The Farmer's Wife at Last

The extension departments at the agricultural schools have been taxing their ingenuity to invent some new plan of attack on the farmer in order to interest him more positively and certainly in the matter of farm improvement and increased profits in farm operations. This wide scope of educational opportunity that each of these institutions is carrying on has called for considerable original thought, as it would never do for one school to pattern after or imitate what another is doing or has intrduced.

The entire farm, in all its aspects, prospects and side issues, has been taken up in view of the needed education and training that should be carried to the obstinate, self-willed, contrary farmer who will not attend the farmers' institute, read experiment station bulletins, or in any way show his appreciation of the efforts that are being exercised in his behalf. The extension department has volunteered to send an expert to his farm to teach him how to plow, how to plant, how to cultivate, and a thousand more of the little details of correct farming, but he turns a deaf ear.

They have tried to get his attention on how to feed the old brood sow, how to raise the skim-milk calf with profit and satisfaction, how to select the cow that gives the richest milk. They have even enticed his daughter into the domestic science department of the agricultural college, and now they are after his wife, the last thing in the world that he had ever dreamed of anybody wanting. Just think of the brazen effrontery, this bold inventive genius of the extension department of the agricultural college coming right out into the country and into the farm home and proclaiming that the department of household science of the university will open its school for housekeepers, the wives of the farmers, for a series of lectures and a course of training to last two to four weeks.

The health of the family, provision for beauty of surroundings, and wise administration, are considered in lectures on home nursing, home decoration, household management and care of the children. There will also be lectures on the principles of nutrition, on purchase, preparation and use of foods, including laboratory work; applying these principles to cooking and serving foods; the selection, alteration and use of commercial patterns in connection with cutting and fitting, and many other features of the complete home, where homemaking qualifications are made a feature of education in the family. The foundation of the entire home structure has been the last thing thought of, the last thing suggestive of reform on the farm. It is to be hoped that this, however, will prove the crowning event in farm education, and that happiness, comfort, pride and a higher appreciation for home will be cultivated into the boys and girls on the farm through this better realization of what home can be made when properly planned and intelligently worked out.

Organized Agriculture

The week of concentrated educational effort by the various associations and organizations of the state of Nebraska allied with the agricultural and live stock interests of the state will be in general convention and open session at Lincoln, January 19 to 24, inclusive, 1914. This week of protracted discussion, in which every feature of state association is made a part, has become a fixed principle in the course of university and agricultural college study, in which all the citizens of Nebraska are invited to attend and take a part.

The expression, "Organized agriculture in Nebraska," implies all organized agricultural associations and educational interests that have for their purpose the advancement and upbuilding of the soil, crop and live stock resources of the state. Organized agriculture in Nebraska has become the great central influence in the assembling of information about the farm, the home, the flock, the herd and all the things that pertain to the economical business management of the soil.

Organized agriculture in Nebraska has become a factor in the educational machinery of the state that is important and essential in the annual roundup of the acquired information from its various and varied agencies. This centralized opportunity of acquiring information has scarcely a rival in educational advantages. The reader, the student, the person who has time and inclination to read and digest all the papers, addresses, discussions, questions and answers that will come before the various meetings to be held during this special week of organized agriculture, January 19 to 24, will have a fund of practical information that cannot be obtained through any other source.

The practical side of such a convention as is contemplated by organized agriculture can only be appreciated when it is known that specialists and experts in every line of industry represented were consulted in the obtaining of the best talent for the lectures, papers and addresses to be given on this occasion. This week of organized agriculture was established years ago and has steadily grown into favor among the people of the state until it is now a fixed principle in the state's educational observance.

The 1914 occasion programed for January 19 to 24 promises to be of more than usual interest. The great activity in the organization of farmers and stock growers into associations of a co-operative tendency has stirred up a sentiment for better organized influence throughout the state. The farmer, the last man to organize, is taking to it logically and will soon make up for lost time.

Must Reduce Feeding Cost

The idea of cost reduction seems to prevail among the growers and feeders of live stock, especially in all classes and kinds of meat-producing animals. The producing and developing of animals to the finished condition for slaughter involves an expense for commercial feeds that must be considered in the estimate of profit or loss in the animal industry. There was a time when the cornerib and the haystack were not matters of much consideration with the farmer. They were grown to be used in carrying the live stock of the farm through from one period of grazing to the next, from fall to spring. There was not much demand in the market for these feeds at prices that seemed to justify the ambitions of the farmer in selling them off the farm; therefore the natural trend toward keeping stock to consume the feed crops produced.

The increased demand for all grains and hays produced on the farm has in recent years put the farmer to figuring whether to sell these products in the market direct or to put them through the feed lot and dispose of them as beef, pork and mutton. This is a serious proposition with the farmer in these times of hit or miss in the feeding business. The feeder takes chances of getting as much, more or less for his feed consumed in the feed lot as sold direct from the farm to the feed market. This condition of uncertainty will always exist in the fat stock market. There will always be more or less of lottery in feeding for the fat market. The best of professional feeders, after long years of experience, have found depressing markets at just the time they had figured on active demand and good prices.

The scarcity and high prices of feeds demand closer attention to the cost of producing fat animals. It demands closer attention to the production of all animals that are feed consumers, whether in the line of animal production or animal development. The cost of feeding must be reduced to the minimum, and yet encourage growth and taking on of flesh. The farmer and owner of live stock are now undergoing a period of economical production, and must keep in mind the cost of the feed consumed.

The silo probably suggests the best means of cheapening the cost of carrying stock of all kinds through the feeding season. The silo is just coming into use in its varied relationships in which it may be made serviceable in cheapening the cost of wintering stock. The silo will soon be in use over the range country where it is at all practicable to grow forage and fodder crops suitable for silage. Sorghum and kafir corn can be grown in many of the dry districts sufficiently early to get a good growth of green feed for silage. This, fed in conjunction with hay through the winter, will greatly help in what are now called the hay-fed range cattle that come to market before the grass-fat cattle of the range are ready. In all the alfalfa irrigation valleys the silo wil become a strong factor in cheap feed suppy.

How About the Mule?

What influence will the present tendency to mule breeding have upon the horse supply of the future? The high prices and the scarcity of mules have suggested to many farmers and horse raisers, both north and south, the desirability of raising mules from the standpoint of sales for profit.

There is an increased demand for large mares to breed mules. This tendency is not confined to any particular locality. It is not alone in the northern horse-raising states, but is spreading into the south. Carloads of large, young mares have been bought this winter and shipped into the heart of the southern states for the joint purpose of teams and mule raising. The mule is gaining in popularity for team work wherever the horse and mule are in use.

The tendency to mule preference seems to be based upon economy of service in team work, on the farm and wherever horse power is demanded. The demand for more mules means mares employed in the raising of mule colts, and this means the diminishing of the horse-producing ability of the country. It is reasonable to estimate that not more than 50 per cent of all the increase of the horse population of the entire country are females. This is a fair basis of the possibilities of the horse increase. If this producing element is interfered with in its legitimate course of perpetuating its kind, there must result a decrease below normal conditions.

The diversion of any considerable number of mares from the production of the horse kind to the production of mules, a non-producing animal, must sooner or later result in a great dearth of horses. The mule colt fever is spreading, and farmers everywhere are talking the desirability of mule raising, just because the mule colt is a ready seller at a good price. It is well to keep in mind that increased production of mules means decreased production of horses as a producing proposition.

The Bull that Pays

There is probably no factor associated with the cattle business that cuts more figure with profit or loss than this one item, the herd bull. It matters not whether you are breeding beef cattle or dairy cattle, whether pure-bred cattle or grade cattle, you cannot afford to be cheap or careless in providing the bull for your herd. The work of one generation of cattle means putting you forward or putting you back. It is a good idea for the owner of a herd of breeding cows to make a careful survey of the herd individually and note the deficiencies and objections in each animal, then measure up the choice cows with the least desirable ones and see if this discrepancy is not too much to attempt to correct in the breeding. Would it not be best to cull out a few tail-enders and replace them with better cows?

It takes three years to get the produce of one of these cows up to breeding age, and then you cannot hope to have a heifer that you like; the tendency of such produce is to be below the average. The herd bull must be a very good animal, of strong breeding character, with inherent good qualities, if his produce comes with uniform style and type. Study carefully in buying the herd bull. Preferably, take one that you see and know that his breeding is satisfactory. Some persons are prejudiced against a tried bull, a bull of age. This is no fault when he proves to you what his get are like.

The price is always what stands in the way of the buyer getting the best. If bulls all sold at so much per head, the same price, take your choice, I guarantee that the best bulls would all go out with the first applicants, if the price was at all reasonable. It is the difference in price of the bulls that keeps so many herds poor. The $100 bull is bought and the $200 bull is left. The bull buyer sees nothing but the $100 difference, and he tries to make himself think there is not much difference in quality. "Anyway, they are sired by the same bull, and the $100 bull probably will breed just as good calves as the $200 bull, and I have saved $100."

Remember it is individuality that you are striving for in your herd, and with this uniformity, a correctness of type that all breeders admire. You cannot get this in the bull unless you buy it and pay for it. The sooner you get such notions out of your head the safer will be the ground you stand on. Buy a little better bull than you intended to—a poor bull is dear at any price—then take good care of him, feed him well and grow him into a vigorous animal, and you will not regret it.

Typhoid Death Rates

Typhoid fever is a much greater danger on the farm than in the city. This statement is the result of an investigation made recently by the Illinois state water survey. In the last ten years the larger cities have reduced their death rates from typhoid from 50 to less than 15 per 100,000. In the rural districts the rate is even higher than it was ten years ago, except in a few communities. The average is about 22 for every 100,000. The improvement in the death rate in the cities is attributed to increased sanitation, and the only reason the city death rate from this cause cannot be still further lowered is because of the milk supply, which must necessarily come from the country. Most of the typhoid fever epidemics of late years have been due directly to infection from milk.

As the rural districts become more thickly settled the danger from this source is going to increase unless more care is taken of the water supply. Great care should be taken in the location of wells, which should never receive the drainage from barns and other outbuildings. On proper care in obtaining and keeping pure the water supply may depend, not only the health of the farmer's family and neighbors, but of the people in the city who buy the milk from his farm.

Pumping Plant Irrigation

The feasibility of utilizing the underflow of water for irrigation purposes is being quite generally discussed among state associations. The farmers' congresses of the various states having dry farming lands that cannot be supplied with surface or stream water are agitating the feasibility of the pumping plant.

Western Kansas held a meeting December 10 and 11 at Goodland for the purpose of promoting irrigation farming. State officials, leading farmers and irrigation experts were present. Among those who addressed the convention were the governor, President Watters of the State Agricultural College, H. N. Cottrell, agricultural commissioner of the Rock Island road, and H. E. Murdock, irrigation expert in the United States Department of Agriculture.

This is an enterprise that merits the closest study and investigation. It is clearly apparent that certain dry land districts must be afforded some means of water supply to tide them over seasons of severe drouth in order to maintain a reasonable certainty of crop production. There is no question as to the underwater supply; the proposition is to make it available for use at a cost that will justify the venture. There are very few things that are impossible when the ingenuity of man is directed to its solution.

Dairy Cow in Minnesota

The Minnesota State Agricultural Society has determined to conduct a dairy cow contest as a feature of development for the state. This will be systematically conducted upon a basis of individual conformation, butter-fat value, skim milk, the product of a six-months' test. The purse that the State Fair association has put up is $500 per year. All entries must be filed with the secretary of the State fair.

Competition is confined to cows owned within the state of Minnesota and to registered cows only. The applicant must be 2 years old or over at the beginning of the test. This is a test to determine the interest that will come with this kind of a contest. If it proves of sufficient interest, it will become a part of the premium list classification for future years. This is a good contest incentive for the development of high-class milkers of any of the pure-breds, and should be taken up by state fairs generally as a state proposition.

Silo Courses by Mail

The Agricultural College of Kansas has decided to give instruction by mail on the preparation of concrete for the building of permanent silos in that state. It has been the policy of the agricultural college to send out men to assist in the construction of silos when requested to do so, especially in an advisory way. These visits are not to exceed a day in a place, and this plan of assistance will still continue in connection with the instruction by correspondence.

It is announced that specifications for reinforcing, examination of concrete material, plans, and any other desired information in regard to silo construction, will be furnished by correspondence free of charge. There is an increasing demand for concrete builders in the state. It is claimed that silos will be built in advance of the needs of next year's crops. The concrete silo seems to be demanded.

Practically all of the corncob pipes used in America are produced by six factories, all of which are located in Missouri.

Do Championship Work In Your Own Fields

It's Easy With the Janesville

Now that you have heard how easy Janesville Plows won the sweepstake prize in all contests entered in Wheatland, Big Rock and Grant Park, Ill., last fall, let's bring your plowing into the championship class. You may not care for prizes but you do want top notch work. No other plow can duplicate the work of the Janesville. Champions of previous contests did their best but could not win until they used the Janesville.

JANESVILLE PLOWS With S. & S. Auger Twist Mouldboards,

Do Work in the Field That Makes the Crop

Manufacturers of Farm Implements

They leave the ground well broken — all stubble and trash buried and the surface smooth and clean. Send for the souvenir Booklet and look at the photographs of fields plowed with a Janesville Plow. See the results that can be had with the S. & S. Bottom. It does not take a skilled driver to get first class work with this plow. John Webber, a 14 year old boy won first prize with a Janesville at Grant Park, Ill., Sept. 27, 1913.

Send in Your Name and learn how easy you can do championship work in your own fields with a Janesville. Light draft, flexibility, etc., are excellently taken care of—but it's the plow bottom that does the work and that's what counts. All makes of Janesville Plows can be equipped with S. & S. Bottoms, including walking plows. Write for the booklet and catalog. Address

Janesville Machine Co., 33 Center St., Janesville, Wis.

This Beautiful Souvenir Booklet Mailed FREE

to anyone who will write for it. Send in your name at once. See photographic views of field work that won prizes—also photographs of winners—their equipments, etc. Invaluable if you want good plowing. Write today.

264 Page Book On Silos and Silage

1913 copyrighted edition just off the press. Most complete work on this subject published. Used as text book by many Agricultural Colleges. Gives the facts about Modern Silage Methods—tells just what you want to know, 264 pages—indexed—over 45 illustrations, a vast amount of useful information boiled down for the practical farmer. Tells "How to Make Silage"—"How to Feed Silage"—"How to Build Silos"—"Silage System and Soil Fertility"—"Silage Crops in Semi-Arid Regions." All about "Summer Silos" and the Use of Silage in Beef Production. Ninth Edition now ready. Send for your copy at once. Enclose 10c in coin or postage stamps and mention this paper.

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It lies within **your** power to wipe

Cow Abortion

out of **your** herd and **keep** it out.

Use Dr. Roberts' Treatment. Apply it yourself. Properly applied, it never fails to stamp out this disease and clean the herd. Saves lives of calves. Write at once to

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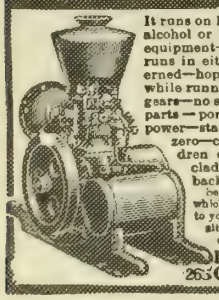
20 Reasons Why You Should Investigate the SANDOW Kerosene Stationary ENGINE



It runs on kerosene (coal oil), gasoline, alcohol or distillate without change of equipment—starts without cranking—runs in either direction—throttle governed—hopper cooled—speed controlled while running—no cams—no valves—no gears—no sprockets—only three moving parts—portable—light weight—great power—starts easily at 40 degrees below zero—complete, ready to run—children operate them—5-year iron-clad guarantee—15-day money-back trial. Sizes 2 to 20 H. P. Send a postal today for free catalog, which shows how Sandow will be useful to you. Our special advertising proposition saves you one-half cost of first engine sold in your county. (167)

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When communicating with advertisers on this page kindly state that you saw their advertisement in the Twentieth Century Farmer.

Feeding Big Steers for Market

How One Man Fed Steers and What He Learned

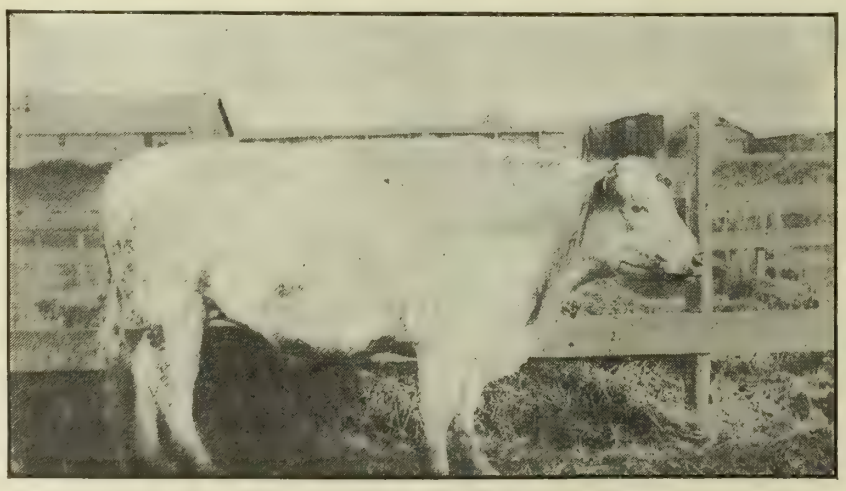
THE practical feeder seldom finds time to keep records of gains on individual steers. Experiment stations have found time to do this in many cases. Their cattle, however, are not fed and handled just as are the bulk of fattening cattle in feed lots. Consequently, when we find a feeder who has taken pains to keep some individual records on his steers we are all keen to learn his results.

Winter Feed Lot of Mr. Gross

F. M. Gross, an extensive feeder at Ord and Spalding, Neb., last winter fed out seventy-five head of weighty steers in his feed lot at the former town. These were purchased December 1, 1912, in the sand hills sixty-five miles north of Ord. They were driven across country, and upon arriving at Ord, December 28, the lot averaged 1,305 pounds. They were a large-framed, even lot of steers, carrying considerable quality, and cost the buyer an even 8 cents per pound. Mr. Gross weighed several of the steers separately at this time and recorded their weights.

Upon March 31, 1913, the writer had the pleasure of seeing these steers and weighing many of them separately. The roan steer shown in the accompanying cut weighed at this time 1,680 pounds. His weight December 28 had been 1,310 pounds. This gives him a daily gain of four pounds for the entire period. Another steer had gained practically the same. Of some twelve head weighed, the largest tipped the beam at 1,850 pounds and the average would have exceeded 1,700 pounds by quite a margin.

At this time these steers were consuming one-half bushel of shelled corn apiece daily and had access to alfalfa and prairie hay at will. The corn was being shipped in and cost 52 cents a bushel. It takes considerable feed to keep up an animal's bodily activities. This is called a maintenance ration. The larger the animal the more feed there is required for this purpose in proportion to the amount which is used for making gains. The feeder of weighty animals, whether it be cattle, hogs or sheep, has this disadvantage to contend with, as contrasted with the man who feeds young animals which are growing and fattening at the same time. Consequently, even though the big steers referred to were making good gains, there would need to be quite an advance in selling price over cost to let the feeder out.



Steer that Made a Daily Gain of Four Pounds

H. J. GRAMLICH.

Editor's Note—This raises the much discussed question of "baby beef." What do our practical feeder readers think of the foregoing article? What kind of animal is most profitable from the feeders' standpoint?

Importance of a Moist Subsoil

The condition of the subsoil has a very important bearing upon the downward movement of water. In a dry soil the natural precipitation moves downward very slowly and the majority of the moisture will be stored near the surface where the loss of water by evaporation goes on the most rapidly. When the subsoil is moist the water moves more freely and goes to greater depths. Investigations in Utah show that when desert land is broken for cropping purposes the precipitation penetrates farther and farther into the soil with each year of cultivation. This is due largely to the loosening of the top soil, and as the lower layers become moist the water is enabled to slide down more easily to greater depths.

This is a very important principle for the dry farmer to understand, as he can take the necessary precautions to keep his soil from getting very dry below the first foot. If a soil does become extremely dry, it should be summer tilled without cropping, so as to get the subsoil into a moist condition.

JAMES D. MARSHALL.
Colorado Agricultural College.

SELF DELUSION

Many People Deceived by Coffee

We like to defend our indulgencies and habits, even though we may be convinced of their actual harmfulness.

A man can convince himself that whisky is good for him on a cold morning, or beer on a hot summer day—when he wants the whisky or beer.

It's the same with coffee. Thousands of people suffer headache and nervousness year after year, but try to persuade themselves the cause is not coffee—because they like coffee.

"While yet a child I commenced using coffee and continued it," writes a Wis. man, "until I was a regular coffee fiend. I drank it every morning and in consequence had a blinding headache nearly every afternoon.

"My folks thought it was coffee that ailed me, but I liked it and would not admit it was the cause of my trouble, so I stuck to coffee and the headaches stuck to me.

"Finally the folks stopped buying coffee and brought home some Postum. They made it right (directions on pkg.) and told me to see what difference it would make with my head, and during that first week on Postum my old affliction did not bother me once. From that day to this we have used nothing but Postum in place of coffee—headaches are a thing of the past, and to the whole body."

"Postum looks good, smells good, tastes good, is good, and does good to the whoe body."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum now comes in two forms:

Regular Postum—must be well boiled.

Instant Postum—is a soluble powder.

A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage **instantly.** Grocers sell both kinds.

"There's a Reason" for Postum.

Should the State Board of Agriculture Be Reorganized?

(CONTINUED FROM PAGE THREE)

boulevard system to the entrance of the State Fair grounds. During the forty-eight weeks that the State Fair is not using the grounds the fast horse men and automobile pleasure riders living in the vicinity use this boulevard and the race course. Naturally, to add to their enjoyment and pleasure, they wanted the boulevard system extended throughout the fair grounds to the race track. Members of the board out in the state were opposed to spending $2,000 to complete the city boulevard system to the race track. Without even authority from the board, the boulevard was built.

Another Unfinished Building

The last legislature voted an appropriation of $100,000 to build a new agricultural building. When the bill was up for consideration those representing the State Fair had the architect's plans and specifications for the new building already prepared, and the legislators were assured it could be built for a little over $90,000. For some reason the asking for bids was delayed. When received the lowest was $128,000. Changes were made in the plans, but still the total cost was $4,000 more than the amount appropriated. We are informed that, without authority from the board, the additional expenditure of $4,000 was included in the contract. This, of course, would have to be paid out of State Fair receipts. With the plans prepared before the appropriation was passed, yet the building was not ready for use for the 1913 fair.

The State Fair Political Machine

The trite old saying, "Satan finds some mischief still for idle hands to do," has been proved true by the men who control, through political manipulations, the management of the state fair. To conduct the state fair, which is organized into departments, with a superintendent at the head of each, requires only two or three real busy months just prior to the fair for the secretary and his office force. The balance of the year leaves quite a little spare time for other things. This has made it easy for those in control to build up a political machine. We have shown how these men have been able to continue themselves in office. This would not be possible if the State Board of Agriculture were a representative body and not a close corporation and self-perpetuating.

In the table published last week it was shown that Mr. Mellor was president in 1903 and 1904. The president appointed Mr. Rudge on the board of managers and he was chairman of the board during that time. Then Mr. Youngers was elected president for 1905 and 1906 and Mr. Mellor secretary. Mr. Rudge was appointed to the board by Mr. Youngers and was made chairman. During that time five members constituted the board of managers.

In 1908 the secretary's office was moved to the state capital, the center of political activity for the state. The secretary's salary was increased. From this strategic position, who with ordinary ability could not build up a political machine? This is what Secretary Mellor has at his command: The use of one of the best offices in the state house free; free light; free heat; free janitor service; a paid stenographic force; a salaried publicity man, chosen because of his ability as a newspaper writer and not because of his knowledge of agriculture; and with the chairman of the board of managers located at Lincoln, to help him by his counsel and advice.

With this organization, and the use of the free pass for political friends, is there any wonder that a powerful and effective political machine has been built up?

Next week we will tell our readers what it is costing the state to maintain this political machine, also why it is a menace and a detriment to the agricultural interests of the state.

Quietness in Milking Barn

Like many dairy subjects, the question of quietness in the milking barn during milking hours has its opposing supporters. On the one side you hear the argument that during milking time the cow should be entertained with soothing song and music. Some go so far as to install victrolas in their milking barns. On the other side you hear that the barn at that time should be a place of absolute peace and quiet. Let no sound be heard to draw the cow's attention from that mysterious process of milk manufacture save the quiet rumination of the herd and the sound of the regular streams of milk as they fill the milk pail.

Personally, I am not in favor of converting the milking barn into a conservatory of music, especially if the program is to be furnished by milkers, who become so absorbed in their yodeling and humming that with them milking becomes a secondary consideration, and the cow soon loses patience and will not give down her milk readily. Neither do I believe the investment in musical instruments necessary. On the other hand, it has been my experience that milkers who sulked about the barn with never a word to say were generally out of sympathy with their work, and therefore the first to use the milk stool. I maintain that you cannot and should not keep a cheerful and contented milker absolutely quiet.

But where are you going to draw the line, if noise aggravates and silence is monotonous and breeds discontent? Let each cow have her name. Then put the man at some work other than milking who does not take kindly enough to his job or to his string of cows to call each one by name, to bestow an occasional pat, and to ask her to step over and put her foot back. Let the milking hours be a pleasant event for both the cow and milker. When the two get to a point where they have formed a mutual friendship you have reached the ideal condition. I doubt whether or not the milker can reach that point either by noisy singing or by noiselessly sulking about his work.

H. T. DVORACHEK.
Colorado Agricultural College.

Something New!

This offer is made by the Lake County Land Owners' Association in order to secure new settlers and to develop the district.

We Will Take Your First Crop

In Full Payment for the Land

Regardless of the size or value of the crop, and without any cash payment to us on your part whatsoever.

We have very little money to spend for advertising, but we know what our land will produce, and we will give a new settler 10 acres and take his first crop of watermelons in full payment for same.

This crop can be produced at small expense and is marketed within a few months. We take only the *first* crop. You can raise other crops for yourself the same year.

Our lands lie on either side of three hard roads and two railroads, with 12 stations, including five towns and one city; they are high, rolling, well drained, with beautiful clear water lakes and beautiful homes throughout district; elevation over 100 feet; ideal climate and pure drinking water. No better grapefruit or orange land on the continent. Over one million boxes of fruit shipped from this part of state last year. Modern packing houses.

Our growers make big money out of tomatoes, syrup cane, winter vegetables, staple crops and watermelons, which are shipped in solid train loads; 62 spot cash buyers here one day last season.

Come now and pick out your land while prices are low. Our land is selling at $35 an acre and up on easy terms. You can have it planted on shares or set out to grapefruit, which bears in 4 years. A 10-acre grapefruit grove means an income for life—old age insurance. For particulars, address

Lake County Land Owners' Association
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Owners, not agents. R. R. fare refunded to buyers.

SCIENCE BEST TAN PRACTICE

We can guarantee "Best Tan" because there is no guesswork in our business. Our laboratory and chemist enables us to treat each hide specially to its needs, and to make it soft, pliable and durable. Get your hide "Best Tanned"

Fashions Free

This catalog shows the latest styles in furs. Another book "A Trip Through a Modern Tannery" illustrates how "Best Tan" is made, and why it is best.

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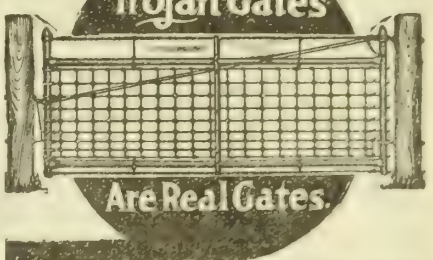
Galvolt ELECTRIC Galvanized Steel Farm Gate

SHIPPED FOR INSPECTION AND FREE TRIAL

This offer is to introduce TroJan Steel Farm Gates and to show that our Electric Galvanizing Process unites the galvanizing with the steel so you can't scrape, chip or crack it off. Picture below, No. 1, shows how our galvanizing sticks. Picture No. 2 shows how ordinary galvanizing scrapes off. Write for free sample of tubing. Also get prices and free trial offer.



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Farmer Agents Wanted

In territories where we have no dealers we want live wires who have a little time to spare. TroJan gates are made right, look right and sell at a price that makes selling easy. Many agents making $100 per month and more. Write for full particulars. Address

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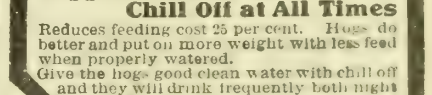

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Supplies Water With Chill Off at All Times

Reduces feeding cost 25 per cent. Hogs do better and put on more weight with less feed when properly watered.

Give the hogs good clean water with chill off and they will drink frequently both night and day. No ice to chop—no worry.

IDEAL Hog Waterer Cannot Freeze

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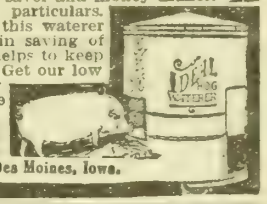

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Other Sizes Proportionally Low.

Get my latest and best offer—all complete with my NEW BOOK, the finest in the engine business. Write me before you make arrangements to try any engine.

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No Need Now to pay double price for a good engine, or to take a poor, or doubtful one at any price. No extra cost to be sure.

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Genuine 6-size, 7-jewel Railroad watch worth $15 to anyone who requires an absolutely reliable timekeeper and a watch that will last a lifetime. Locomotive on dial, stamped and guaranteed 7-jewel, 7-regulation adjustments, patent recoil escapement, quick-train. Fitted in heavy or medium weight dust-proof screw case, both case and works absolutely guaranteed for 20 years. To advertise our watches, make new friends and introduce our great catalogue of Elgin watches we will send this exact watch to any address by mail postpaid for ONLY $2.95. Send this advertisement with $2.95 and watch will be sent to you by return mail postpaid. Satisfaction guaranteed or money refunded. Send $2.95 today. Address

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With a tractor it's entirely different. It eats only when it works. When you are through, turn a switch and your expense stops.

Horses or mules eat three times every day, 365 days a year, whether they're working or not. Government statistics show that farm horses average only 100 full days' work a year—265 days' feeding all for nothing.

Avery owners report that tractor plowing costs them *less than half* what horse or mule plowing does. Also big saving on other work disking, harrowing, drilling, harvesting hauling, etc.

Tractor farming means *bigger crops*, too. Three year tests made by the Kansas State Agricultural College gave an increase of more than double the ordinary crop by plowing at the right depth and at the right time.

You can't plow fast enough or deep enough with horses or mules—it takes a tractor to do it.

AVERY "ONE-MAN" OUTFITS

"Light-Weight" Tractors and "Self-Lift" Plows

Hundreds of farmers have proved that Tractor Farming with Avery Tractors and Plows is a great success.

The reasons are—they are the lightest weight tractors built, considering their draw bar efficiency. Also the simplest. And with an Avery "Self-Lift" Plow one man or one boy alone can run the entire outfit. Avery Tractors are built in five sizes, from 8-16 to 40-80 h.p., and pull from 2 to 10 bottoms. Fit large, medium or small size farms.

Avery Tractors and Plows Are Sold on Approval at Low Prices and Fully Guaranteed

Test out an Avery Tractor and Plow on your own farm. After acceptance we back you up with strong guarantees. Avery prices are also low.

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AVERY COMPANY, 1975 Iowa St., PEORIA, ILL.

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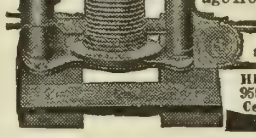
You can buy any cut in The Twentieth Century Farmer for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as we have only one of each kind. Address,

TWENTIETH CENTURY FARMER,
Omaha, Neb.

PULL OUT THE STUMPS!

The HERCULES—



All Steel Triple Power Stump Puller pulls an acre of stumps a day—increases the value of your land 100%. Makes room for *money* crops. Guaranteed for 3 years against breakage from any cause. Send name for fine free book, 30 days free trial offer and special low-price proposition.

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FOR worn out farms it is the greatest fertilizer known. Will inoculate land for alfalfa perfectly. CATTLE pastured on Sweet Clover fatten as if fed on prepared food. Sown in the orchard it loosens the soil and promotes growth. Ploughed under it increases crops from 50% to 100%. Write for prices and free seed book.

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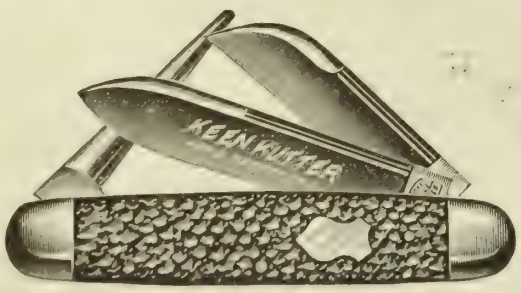
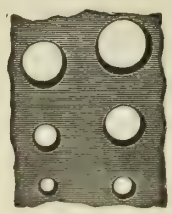
Do You Know the Value of a KEEN KUTTER Pocketknife?





The name, "KEEN KUTTER," stamped on every blade, is a positive guarantee of its unexcelled quality.

The regular selling price of this knife is $1.50. Ask any dealer; he will tell you the same.

This particular knife is designed for the special use of farmers, stockmen and sportsmen, on account of the Leather Belt Punch Blade for making various-sized holes in leather for buckles, rivets, belt lacing, etc.

WE WANT YOU TO HAVE ONE

Send us $1.50 for a year's subscription to THE TWENTIETH CENTURY FARMER and we will send you the KNIFE FREE.

The Twentieth Century Farmer, Omaha, Neb.

Unjust Rates on Live Stock

Proposed Changes in Rates on Registered Animals

THE National Society of Record Associations is a voluntary organization of the pure-bred live stock registry associations, and includes thirty of the leading associations in America, representing a total membership of more than 97,000 breeders. This association has been persistently working toward an adjustment of the present inequitable and unreasonable railway rate requirements governing the shipment of pure-bred live stock. The supreme court of the United States handed down a series of decisions in the spring of 1913, the effect of which precludes live stock shippers, in case of loss of live stock in transit, from recovering anything but the value stated in the live stock contract signed by the shipper at time shipment is made.

This is the most important decision ever handed down by the supreme court affecting live stock interests. Railroads have heretofore settled for animals lost in transit on the basis of actual value. They now refuse to pay more than the amount stated in the contract and are upheld by the supreme court of the United States in such action. The present rates on the shipment of live stock, particularly breeding animals shipped in less than carload lots, are not equitable. The value stated in the limited live stock contract is entirely too low, and the rate imposed when a shipper declares actual valuation of animal being shipped is so exorbitant as to prohibit a declara-

(CONTINUED ON PAGE TWENTY)

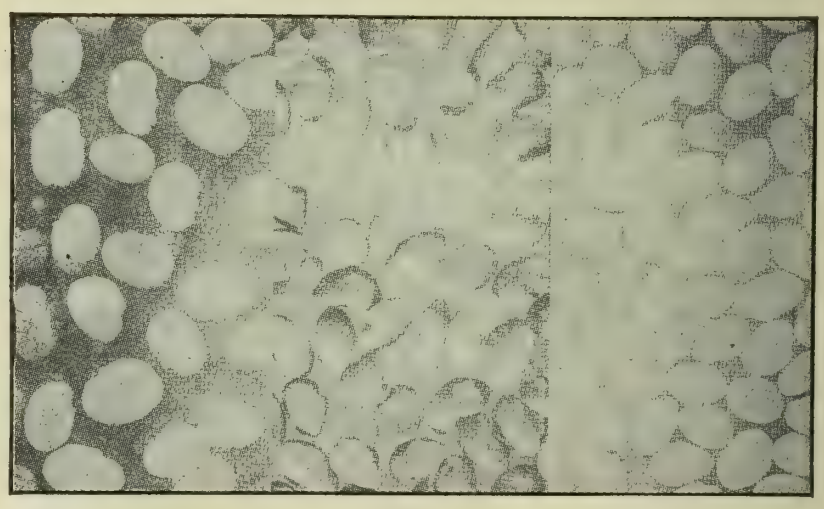
Why the Farmers Are Interested in Good Seed

(CONTINUED FROM PAGE FIVE)

There are now about fifteen states in the union which have laws regulating the kind of seeds which can be sold within the state. Most of these laws are based on the same principle, but vary in details and method of enforcement. Dealers are required to label the seeds which they offer for sale. Undoubtedly, where this is strictly enforced, it is one of the best methods of getting better grades of seeds on the market. No dealer cares to sell adulterated stock to his customers if he has to tell them that they are adulterated. If bags or bins of seeds must bear a label showing the percentage of purity, the quality will improve noticeably. Of course, there must be adequate inspection and testing to insure the accuracy of the labels.

Per Cent of Germination Important

It is equally important that seeds be tested for germination as well as for purity. It does not matter how pure seeds may be if they will not grow. Tests for germination may be carried on easily at home, at least of clovers, alfalfa and other large seeds. Folds of blotting paper or cloth and dinner plates furnish all the apparatus necessary. Blotters or cloths should be dipped into the water and the blotters drained and the cloths wrung slightly. They should be moist, but not wet. They may be sprinkled at any time during the test period if they dry out. One hundred seeds are used and a duplicate should be run at the same time, one being laid on top of the other. A convenient size for blotters is 6x18 inches, folded twice. Place larger seeds between the folds of blotting paper, smaller ones, like timothy or white clover on top, and place the blotters between two dinner plates. All clovers, alfalfa, wheat, barley, rye, oats, etc., will germinate in six days, timothy in ten and most garden seeds in from six to ten.



Sweet Clover **Alfalfa** **Yellow Trefoil**
——(Magnified Five Times)—— (Magnified Seven Times)

Many states now have laboratories where tests are made for farmers free of charge. The United States Department of Agriculture also does this work, and no farmer need any longer buy seeds without knowing their quality.

Approximately 95 per cent of all red clover, timothy and alfalfa seeds sold in the state of Washington during the past season have been 99 per cent pure. This is splendid evidence of what can be done in two years' enforcement of a good seed law.

L. M. ALLEN.

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6379—Girls' Coat—A smart box coat, cut with body and sleeves in one, a seam running along the outside of the arm and also along the shoulder. There is a small gusset under the arm to prevent pulling or tearing. The sleeve extends to the wrist, where a wide cuff provides a finish, and a collar to correspond trims the neck. The belt is of the material, but may be of leather. The pattern No. 6379 is cut in sizes 4, 6, 8, 10 and 12 years. Medium size requires 2¾ yards of 44-inch material.

8266T—Fancy One-Inch Scallop — This pattern contains three yards of one-inch scalloping, with a design in French and eyelet embroidery. This is suitable for use on children's or infants' clothing wherever a straight scallop is required.

6396—Girls' Dress—This novel frock has short tucks at each shoulder, giving a little fullness to the plain blouse. To this is attached a three-gore skirt, and at the waistline is a shaped peplum, which may be used or omitted. The plain sleeves can be full length or shorter, ending in a cuff. The pattern No. 6396 is cut in sizes 6, 8, 10 and 12 years. Medium size requires 2½ yards of 36-inch plaid material and ⅞ yard of 27-inch plain goods.

6417—Ladies' Shirt-Waist — This plain, serviceable model has no frills anywhere. It closes without the usual band down the front, but it has a useful patch pocket. The turnover collar is soft and has deep points and the plain shirt sleeve is gathered into a regulation mannish cuff. Such a design is good for linen, French flannel and other serviceable material. The pattern No. 6417 is cut in sizes 34 to 42 inches bust measure. Medium size requires 3⅜ yards of 27-inch material.

4911—Ladies' Apron—This apron, which has a bib in front only and ends at the belt at the sides, is an excellent apron for cooking and similar work. Gingham, linen, chambray or percale can be used. The pattern is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size requires 5½ yards of 27-inch material.

5430—One-Piece Blouse—The body and sleeve in one is the main characteristic of this blouse. The diagram shows how very simple it is. An inexperienced sewer could make it without the least difficulty and be well satisfied with the finished garment. For making the blouse striped madras, gingham, percale and flannel are suggested. The pattern 5430 is cut in sizes 4, 6, 8 and 10 years. Medium size requires 1⅜ yards of 36-inch material.

6516—Ladies' Dress—Serge, cheviot or charmeuse can be used to make this dress. The dress closes at the left side of the front. The body and sleeves are made in one piece. The one-piece skirt can be made with either the high or regulation waistline. The pattern 6516 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2⅜ yards of 54-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Lumbago-Sciatica Sprains

"The directions seys, its good for lumbago too,— Sloan's cured my rheumatism; I've used it and I know." **Do you use Sloan's?**

Here's Proof.

"I had my back hurt in the Boer War and two years ago I was hit by a street car. I tried all kinds of dope without success. I saw your Liniment in a drug store and got a bottle to try. The first application caused instant relief, and now except for a little stiffness, I am almost well."—*Fletcher Norman, Whittier, Calif.*

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"I was kept in bed with sciatica since the first of February, but I had almost instant relief when I tried your Liniment."—*W. H. Hawkins, Frankfort, Ky.*

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"As a user of your Liniment for the last 15 years, I can say it is one of the best on the market. Fifteen years ago I sprained my ankle and had to use crutches, and the doctors said I would always be lame. A friend advised me to try your Liniment and after using it night and morning for three months I could walk without a cane and run as good as any of the other firemen in my department. I have never been without a bottle since that time."—*Mr. William H. Briscoe, Central Islip, N. Y.*

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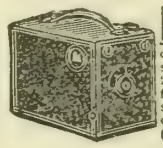

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Send your name and address and a 2c stamp (it pays part of the postage) and we'll send you **Free** and postpaid this beautifully lithographed and perfect reproduction of the oil painting "Betty," painted especially for us. 1914 calendar is attached.

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Latest Fashion Book

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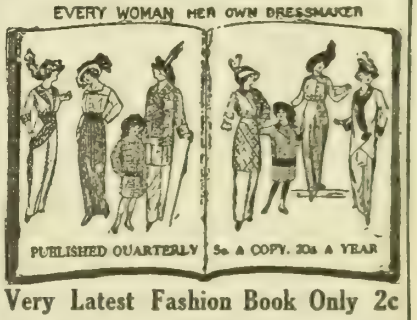

Very Latest Fashion Book Only 2c

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The **Winter.** Fashion Number is ready **November 1.**

The price is 5 cents a copy or 20 cents a year, "**EVERY WOMAN HER OWN DRESSMAKER**" tells how to make Coats, Waists, Skirts, Costumes, Aprons, Dressing Sacques, Underwear, Baby Clothes, Clothes for Boys and Girls, etc., etc. Every woman who uses patterns or does sewing at home should buy "**EVERY WOMAN HER OWN DRESSMAKER**" four times a year. Besides telling how to make clothes it illustrates and describes hundreds of the newest styles for Ladies, Misses and Children.

OUR SPECIAL OFFER—IF you use patterns, or if you order any pattern shown in this or any other issue of our magazine, we will send you the very latest issue of "EVERY WOMAN HER OWN DRESSMAKER" for 2c. Just send your address and 2c. to Pattern Department Twentieth Century Farmer, Omaha, Neb.

Getting Meals for Company

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you would be delighted and surprised to see how easy it is to get a meal for a large company. You can have the daintiest dishes—good things that tickle the palates of your guests—and yet they will be inexpensive. But it is for everyday use that this chopper pays for itself over and over again.

If you do any butchering, you will find it just the thing for chopping sausage meat. It is the one chopper that gives the chopping cut—does not squeeze, mangle or crush. It really CHOPS meat and other food, using a four-bladed knife that chops clean and fast. A minute is time enough to chop sufficient for a meal for a good-sized family. This chopper is without an equal. If you want a still lower-priced machine, ask to see the ENTERPRISE FOOD CHOPPER.

Costs from $1.25 to $2.25, according to size.

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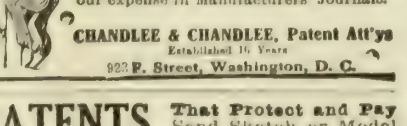

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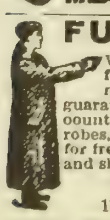

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Of Interest to Our Women Readers

Winter

Still come the flakes of white,
Like blossome pure and bright,
From heaven's great orchard trees,
Which feed no humming bees,
Borne by the wind which shook them from their hold
Down on the hills, where flocks all seek their fold.

All through the silent woods,
The trees with powdered hoods
And foreheads calm and fair
Are bowed like saints at prayer;
While leaning down are faded golden rods,
With weight of spotless ermine from the gods.

J. H. Hartzell.

Our Home Chat

The other evening I was reading a fairy story to a little girl. The book was charmingly illustrated by Peter Newell and the stories were old-time favorites, but the little girl did not seem to enjoy them much. Every little while she would stop me to ask, "What does that word mean?" and I would explain it to her. Finally she said, "Let's do something else. I don't believe I like that story very well; it has such long words in it."

One of the daily papers told not long ago about a teacher in one of the public schools asking the pupils what they supposed a "pimpernel" was. They had been reading Tennyson's "Maud" in the school, and the pupils had read over and over again the line, "The pimpernel dozed on the lea." The pimpernel is a small flower that grows in Engand, and the question would have been a hard one for most American grown people. Here are a few of the things that the children imagined the pimpernel was: A tramp or gypsy, a frog, a lizard, a small deer, a dog, a dragon fly, a small shrub like the prickly pear. The last one was not so far away. Now, what good did the children get out of that poem?

You all know about the little boy that came home from Sunday school and said they sang a song about a "cross-eyed bear," when they had been singing "The Consecrated Cross I Bear," and there is probably not a child in your community that does not get just as hazy ideas out of things he commonly hears and that he is supposed to understand.

Children seem to ask a lot of questions, but just think of what a lot of things they have to learn! Most of them stop asking after a while because the grownups are so likely not to take their questions seriously and either to make fun of them or say, "Don't bother me; I'm busy." Poor little kiddies! It is a pity we don't take a little more time to explain, for there are a lot of things and words in the world, and five or six years are a short time in which to learn so much.

THE EDITOR.

That Blue Calico Dress

I heard of a farmer woman who tried to get the other farmer women of her vicinity to adopt a uniform that would show everybody who saw them that they belonged to the great and honorable agricultural class. You know the Jews taught that this class of toilers were of the highest cast before God. Scientist, doctor, lawyer, lord, king, were all below the toilers of this life industry. As the Jews make a success of all they undertake, and drag it out of beaten ruts, one can but wish they would get back to their ancient honored calling.

Now, I don't know whether that woman succeeded in getting her neighbor women to wear all blue dresses and cute little nurse-like caps at their work and when they went to market or not, but if she failed it was too bad, for a certain dress or cap does sort of elevate a profession and draw attention to it. The square artisan cap has such a helpful, good look to me. I never see it on the head of a well set-up man, with a pleasant, strong face, and a hammer in his hand, but what I think of Adam Bede. To me, though I was young and romantic when I first read Adam Bede, Adam was the true man of all the men in the book. He was God's own man. Arthur, the young aristocrat, the minister, all were shoulders below Adam in every way, in my estimation. Caste, education, etc., could not lift them above him. I feel toward Adam as the ancient Jew felt toward the man who tilled the soil. And why not a working uniform of honor? Blue is the soldier's color, the color of the sky and sea; and blue calico is cheap and becoming, more so than the striped dress of the hospital nurse, and it is easily kept clean, and one on a pinch could wear it about work without ironing.

Once I heard a woman lecturer say that housewives should wear more white at their work than they do. I looked at her white hands and thought: "That remark gives you away. You never did more than play at work. You never had a calf butt into your dress with milk on its mouth. You never, maybe, had babies grasp your dress skirt with berry stains on their wee fingers. You never worked morning, noon and evening in a chicken yard. Oh, there is so much real, necessary work you have no idea of or you'd never say white every-day uniform for the agricultural women!" No, no; blue calico is nicest and best for her work, whatever it be. We oughtn't to let some other cult of womankind get a hold of that uniform.

IDA M. SHEPLER.

Likes Farm Life Best

I have been very much interested in the articles about the poor farmer's wife and would like to add my experience. I was raised in a western town and thought it was a disgrace to be a farmer or any relation to one. I had never been on a ranch until I was over 20 and then only for a few hours. There I met a young man and later married him, and we went to housekeeping on a ranch in the extreme west, ten miles from a town and two and a half miles from a railroad. We had two small rooms, but they were cozy, and we were contented. We had a pump just outside the door, but in the winter the well went dry and we had to haul water three miles for household use and stock. We had a garden and flowers, also pigs and chickens, and I must say we were not bothered with neighbors' chickens as we are in town.

Our nearest neighbor was about three miles away, but in the winter we would take turn about and spend the whole day together—not only the women, but the men as well. One neighbor, living farther from town than we, went to town nearly every Saturday evening in the summer time and would always stop for us. In the summer, when all the crops were in, all the people (farmers and cowboys and visitors in the valley) would go together on a picnic and be gone two or three days. Of course, a few had to stay at home to do the chores.

We came to town to live seventeen months ago, and I am ashamed of my city sisters. There have been just three women to see me in all this time, but everyone gives as an excuse that they have so many meetings to attend that they don't have time to call on strangers. How does that make me feel? I would give a good deal to get on a ranch again, even if I do have to work hard and go without things that I have in town. On a ranch one feels so free and can get all the exercise they want, while in town people think you have no manners if you climb into a lumber wagon and drive around, or if a married woman runs around the house. We do not like to live in town, and we do not want to have to raise our two babies anywhere but in the country. I would gladly exchange places with some "poor, overworked farmer's wife." You see a good deal about keeping the boy and girl on the farm, but I have seen nothing about the farmer's wife who wants to get back to the farm but can't. MRS. G. S. H.

The Farmer's Wife

To the Editor and Readers: I noticed in the Farmer of October 11 our editor asked the farmers' wives to write something about their work, social opportunities, etc. In fact, just how they manage, without the modern conveniences of the city wife, to do all the work that falls to their lot and yet keep abreast of the times. A splendid subject to write on, and I hope the good sisters who read the paper will "wade right in" and give the best and the worst.

I lived on a farm for years, where "the work was never done," and what was left undone in summer was finished up in winter. Now I am living in the city and could give you pictures from my mental photograph gallery that if once seen by any farmer's wife would make her glad she was on the farm, and her face would be a mirror of contentment and happiness.

One of my neighbors, whom I knew when they lived in South Dakota, where they were doing fairly well, has a husband who has now been sick for months, and after working hard in the home for her five children she goes to the heart of the city at 5 p. m. and does office janitor work until 10:30, when she returns to her family, tired and

(CONTINUED ON PAGE FIFTEEN)

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

The Turtle Dove's Nest

High on the top of an old pine tree,
Croods a mother dove and her young ones, three.
Warm over them is her soft, downy breast,
nd they sing so sweetly in their nest.
Coo," say the little doves, "Coo," says she,
ll in their nest in the old pine tree.

Wisely the mother begins by and by
o make her young ones learn to fly;
ust for a little way over the brink,
hen back to the nest as quick as a wink.
Coo," say the little doves, "Coo," says she,
ll in their nest in the old pine tree.

ast grow the young ones day and night,
ill their wings are plumed for a longer flight,
ill unto them at last draws nigh
he time when they all must say good-bye.
hen "Coo," say the little ones, "Coo," says she,
nd away they fly from the old pine tree.

Turtle or Mourning Dove

When I was a little girl, out in he western mountains, as many of ou are, I used to be quite frightned sometimes by the long, eerie ries of the turtle doves in the pines

Turtle Dove

f some lonesome gulch, and if a oyote call was added, I would turn ny pony's head and gallop home as ast as I could go. There is no ound better fitted to make the lood run cold and the hair stand on nd than the call of these doves in moaning pine forest, and yet the oor things are just trying to sing. The sadness in their voices has aused them to be called mourning loves. They are pretty brown creatures, and may be seen wherever you ive—meadow, prairie, forest, wood, ield—any character of country suits hem.

Turtle doves do not eat bugs and worms at all, but they are valuable ust the same, for they eat the seeds of weeds that would otherwise spread very much more rapidly than hey do. If you have foxtail or anything of that kind on your farm, he turtle doves will be right there after it. They eat some grain, nostly waste grain dropped in the ields in harvesting, but they do not eat much even of this, as they prefer weed seeds to those of cultivated grain.

They build their nests just anywhere—in trees, bushes or on the ground, and it is not much of a nest either, just a pile of sticks and grass, with two big, white eggs in it. They nest twice during a season, and are very devoted to their young and to each other. If one loses his mate he frequently never takes another. You may often see a pair of turtle doves sitting on a fence rubbing their bills together as if they were kissing each other. They seem so affectionate that happily married couples are often called turtle doves. Don't you think turtle dove is a prettier name for these birds than mourning dove? THE EDITOR.

(Prize Story)

The Christmas Cover

By Myrtle Wolery, Aged 13, Whiting, Ia.

It was the night before Christmas. Bertie and Lenny had both written to Santa and told him just what they wanted.

"I do hope I get my skates," said Bertie, pinning her note to the toe of her stocking.

"Well, I hope I get my ball, bat and overcoat," said master Leonard, examining his note with satisfaction.

"Bed time, children!" called mamma. "It's almost 10 o'clock."

"Coming, mamma," answered Bertie, turning for a last look.

Christmas morning dawned bright and clear, and as soon as papa made the fire the children ran to their stockings.

"Why, papa, what in the world is the matter?" cried Bertie. "My stocking is empty!"

"So is mine!" said Lenny.

Just then mamma's step sounded in the hall. The children ran to tell her all about it, but stopped short, for mamma's hand rested on the neck of a big dog.

"Here is your Christmas present, dears," she said, smiling. "Isn't it a fine one?"

"No, it isn't," said Leonard.

"Oh, a dog! He can do everything!" cried Bertie, clapping her hands. "What a fine present!"

Picture Contest No. 9

Write a verse of four lines about this picture. Each of the two children writing the best verse about this picture will receive a book as a prize. Make your verse bright and original. Put yourself in the children's places and think what you would say and do if you were there. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all given consideration, as well as the quality of the verse, in awarding the prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than January 24.

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If you believe in the power of music to elevate your thoughts and broaden your intellect, to stir your imagination and quicken your emotions, to soothe your mind and lighten your toil, you can appreciate what it would mean to have a Victrola in your home.

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With this wonderful instrument, you bring some music into your life each day to add to your happiness and make your home more complete.

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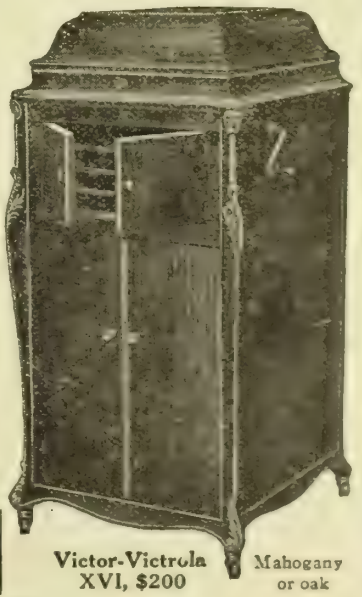
Any Victor dealer in any city in the world will gladly demonstrate the Victor-Victrola to you and play any music you wish to hear.

Write today for the illustrated Victor catalogs.



Victor-Victrola XVI, $200 Mahogany or oak

Victor Talking Machine Co.
Camden, N. J., U. S. A.
Berliner Gramophone Co., Montreal, Canadian Distributors

Always use Victor Machines with Victor Records and Victor Needles—*the combination*. There is no other way to get the unequaled Victor tone.

Victor Steel Needles, 5 cents per 100
Victor Fibre Needles, 50 cents per 100 (can be repointed and used eight times)
New Victor Records demonstrated at all dealers on the 28th of each month

Don't Shoot Dollars Into the Strawstack

SAVE the grain. You worked hard to prepare the soil—to plant—to harvest. You wouldn't spill grain out of a sack or throw it out of a bin—why let it go into the stack?

Hire a Red River Special

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Timely Items of Interest to Poultry Raisers and Fanciers

A READER asks us to explain a certain statement in a late issue. The statement reads something like this: "Better feed all corn than all wheat."

The reader justly and rightly wants to be told why, as he had always believed wheat to be the great laying feed, and corn the great poultry fattening feed, the latter not productive of eggs. Hence the statement sounds very strange to him.

Well, I might have added some explanation, for I was speaking from a several-time experience of my own, even before the matter of the effect of certain feeds fed exclusively had been taken up at times by certain experiment stations. These experiments show that a full ration of wheat, fed continuously for a certain length if time, leaves the flock in a run-down condition, while corn, fed judiciously that length of time, leaves them in good staying power.

My contention was, if I had to take my choice between an all, or even a very large proportion of, wheat or corn, I would make choice of the corn. I know from long experience the effects of each alone on the flock. But I would consider I had made a better choice could I have the two nearly evenly divided, or, if any difference must be made, give me just a little more of the corn.

My experience with an all-wheat ration feed was certainly an increased producion of eggs for a while, but the intestinal looseness it sooner or later brought on soon shut down on the heavy production. Lessen the vitality of your flock and the egg laying lessens or stops entirely in most birds.

This is my experience. Those who live where only wheat is handiest as poultry feed may dispute the experience. From my experience with it, I cannot but warn the amateur at least not to feed it too extensively, as many writers advise done. But mixed, even say a heavy feed of wheat one morning and something the next meal full of fattening material, you have evened up the effects upon muscles and kidneys of too much protein feed.

***

In the states producing the bulk of our oats and corn, the poultry crop, a large one in these states, is bound to take its rations mainly from both or go hungry. You cannot make the farmer, to any great extent, see it any other way.

Chickens thrive on oats and manufacture bone, muscle, feathers and eggs out of them, and, with plenty of grass at hand, will do well a long time on just oats and grass alone. It is never safe to allow fowls free access to oats at all times of the day. I don't know why, but they seem to pick for any black grains, and these, unless it be mixed with black oats, are the poisoned grains. Another thing, crops packed too tight with dry hulls often get irritated and sore, and the bowel secretion may get too dry and unhealthy.

But corn, straight old corn—a chicken or other fowl seems to know by instinct that corn belongs by right to it. In the best mixed laying ration of grain I ever put before a hen she deliberately picked out, first the corn, then the wheat, and usually, unless it was the oats, she had to get pretty hungry before she ate the rest.

It is useless to say that corn is not a laying ration, because it is; it is a good one. If it were not, then where do the eggs come from that are taken off our farms to add to the national wealth? The farmers feed it. Corn holds a good per cent of protein, not so much as wheat quite, it is true, but if milk is fed this more than evens up. Corn is full of fat-producing food, and this is why the flock allowed free access to corn piles has brought it into disrepute in the minds of some parties who get the idea that it makes all of fat and nothing of eggs. Of course, let an old hen have free access to a corn pile and she may stuff herself into all fat, and next, maybe, liver enlargement, but this proves nothing against the corn, if she is simply fed only enough of it to keep her in good condition with a surplus over. She may not lay so many eggs as if the corn be mixed with wheat, oats or bran, but she will not refuse to lay by any means. Where corn is fed in summer, the grass offsets any other lack in the ration. If fed in winter, largely or altogether, and much grit, charcoal and plenty of water goes with it, it is not going to hurt the flock, though, as I intimated, the eggs may be fewer until grass comes. But, remember, I'm not saying this is just the right way to feed in winter. I'm simply saying that if you feed corn in reasonable ration, the flock need not necessarily become too fat or stop laying altogether.

Breeding True to Color

Anna B.: I keep the Rhode Island Reds, but have trouble in breeding true to color. I have no fault to find with their laying quality, but my very best layers are not true Rhode Island Reds, according to those I notice that are fitted to win prizes. It hurts me to discard these layers. Sometimes I wonder if I am not cheated when I buy breeding stock?

Answer—Your question is one I have had put at me half a dozen times of late. Your Rhode Island Red breeders are no doubt pure-bred, and so are the excellent layers that get off in shape and color. Don't destroy these layers. It is from these you must build a laying strain that it will not only profit you to keep, but to advertise as a laying strain. If there is one thing above another these laying contests are showing us, it is that the great laying hen will not breed exactly true to standard demand for shape or color. Try to keep your male breeding stock up to color, if possible to, but do not worry if the hens show bad color. It isn't feathers we breed for; it is eggs. I never kept

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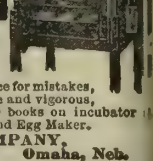

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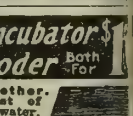

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e Rhode Island Red, but I watched r years those kept by a neighbor. e declared that the light hens, so ht they were yellow instead of d, and often had white in wing d tail feathers instead of black, re her best layers. Also some at had smutty-colored under feath- s were great layers. Watch the g producers, not the fine-colored ecimens, unless they, too, produce ll.

Packing Eggs for Shipping

In shipping eggs for hatching rposes, for safest shipments small skets, with specially strengthened ndles, are used. These are lined th paper, next filled with excel- r, different shippers having dif- ent ways of placing eggs in the celsior. One wraps them in pa- r, on which is his name and ad- ess; he then makes a hole in the celsior, pressing the wrapped egg wn the hole, placing a wad of ex- sior above it. The egg is packed all end down, because the air cell in large end. Others again wrap mly, but rather loosely, in any d of paper, place the eggs in a v, press excelsior all between and ut them; while others wrap first paper, then wrap excelsior about s, making a little ball of it, then, er laying these upon a bed of ex- sior, pack excelsior well about f above them. The excelsior st be packed in firmly enough to p eggs from moving, after which ne shippers make a top of card- rd to fit in the top of the bas- , and be stitched tight to its es, while others merely sew a vy muslin top over it. Card, h name, can be tied to the han- of the basket, but is safer ched on the cover or written re.

Stay with One Kind

The person in the poultry busi- s that is never satisfied with a ed when he gets it is the person t would, if it were not almost possible, bring the poultry busi- s into disrepute, for he never will ceed. Unless you are keeping ls for certain experiments—and n here you must stay with the ed several years to know it well— ke choice of a good breed, and y with that breed, keeping it up the best possible condition, and s will mean study until you learn know just what you can expect m it. When you have learned all re is to learn, you must yet be isfied with nothing but the best to date from that flock in health, tility, egg laying, market quality d type. There is nothing in nging from Brahma to Plymouth ck, then to Wyandotte, Rhode and Red and so on. Take any e of these or others that you ow must be good, then go to rk to make a strain of the kind it you can honestly put your me to as the strain you have per- ted, and now tie to for profit— d none better, truly.

Roosting Closets

Some years ago a sort of roosting set was advocated for chickens in d climates during the winter months. This closet was merely a closing in of the roost by heavy curtains let down about the poultry at night. It seems that this works best only where the closet is not made too tight, where air can circulate in from one side, over or under the roosts, as the case may be—that is, not cold air from the outside, but what air may be circulating partially heated in the room outside of the roosts. At the Maine experiment station the tests with the curtain proved a failure and were discontinued. The roosts were from wall to wall, with a dropping board underneath. When the curtain was down to the front of the roosts, the roosting place with back, ends and floor closed in with the curtain was a veritable closet, and, though the thermometer at this station drops often to 30 degrees below zero, it was found the curtain must have kept the fowls too warm and close, and consequently the air bad, for they were peculiarly susceptible to colds. The roosting closet was at last pronounced a positive evil, and since the fall of 1910 has been deprived of its curtain, since which time in winter the colds have practically disappeared, the mortality is low and egg laying continues.

Good Mixture for Poultry

Some feeders of market poultry on an extensive scale, and also fatteners of capons, feed this formula: Equal parts oatmeal, graham flour and cornmeal; to every 100 pounds of this dry mixture add six pounds of brown sugar and three pounds of tallow. Mix with sour milk of some kind. For every 100 head of fowls mix in three ounces of soda at each meal. The soda sweetens and makes it palatable.

IDA M. SHEPLER.

Green Feed Necessary in Winter

The importance of supplying plenty of green feed to poultry during the late fall and winter months is urged by J. G. Halpin of the College of Agriculture of the University of Wisconsin. Nearly all of the common vegetables are relished by fowls and they should be given rations of beets, cabbage and rutabagas at regular intervals. Mr. Halpin says silage may be used, provided only a small quantity is fed at first until the hens become accustomed to it. Despite the medicinal qualities of this vegetable, onions should never be included in the ration for laying hens, as the eggs take up the flavor.

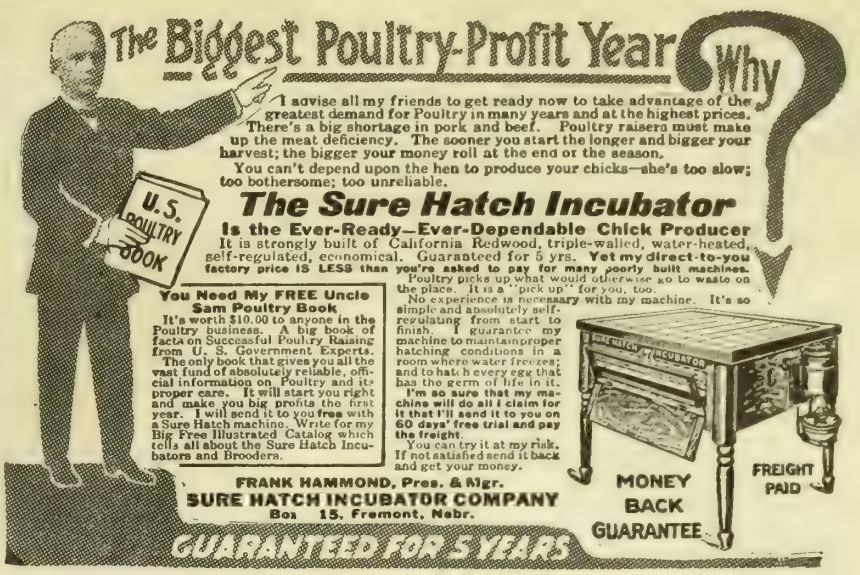
Of Interest to Our Women

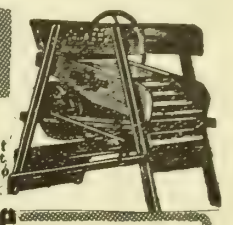
(CONTINUED FROM PAGE TWELVE)

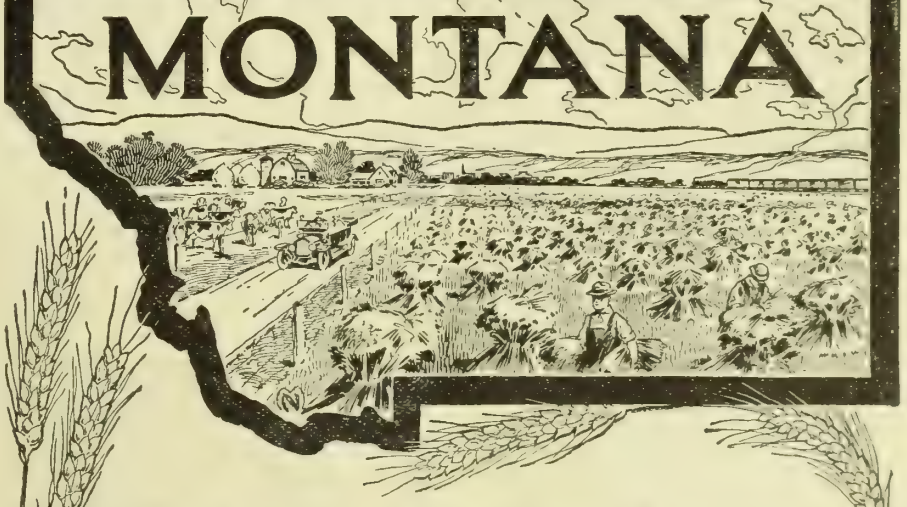
worn out, only to begin again tomorrow. She is only one of hundreds of others who have to pay high for the modern conveniences in the city.

The cost of fuel is high, and I often look back to the year's wood ahead on the old farm in Michigan, taken from the timber lot of twenty acres. The labor of getting it was not so hard as the labor of paying for wood and coal in the city. The poor man is rich in the country when compared to the poor man in the city.

SARAH WOOD CASHNER.
Washington.







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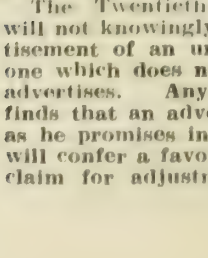

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The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Tour Through New South American Republic

By Frank G. Carpenter

KINGSTON, Jamaica, Jan. 3.—I have stopped off at Kingston on my way to South America. I am now in the center of the Caribbean sea. Two days later I shall be at Panama, and within a month I shall be amid the volcanoes and snows on the top of the Andes. I am just starting out on a tour of 25,000 miles through our great sister continent to write a series of letters. I expect to visit the principal countries of South America, going down the west coast from Panama to Patagonia, traveling for months in the Andes, investigating the possibilities of the South American desert, and writing of all the countries which face the Pacific. Later in the year I shall go around through the Strait of Magellan, or over the mountains to the great republics which lie on their eastern slopes, traversing the mighty plains and traveling up and down the principal rivers.

During this journey I shall describe the countries as they are today, and the mighty changes now going on in their civilization and industrial development. I expect to travel over all the new railroads, to describe the new factories and mills, to go down into the mines and to show the wonderful increase and the enormous possibilities of South American trade.

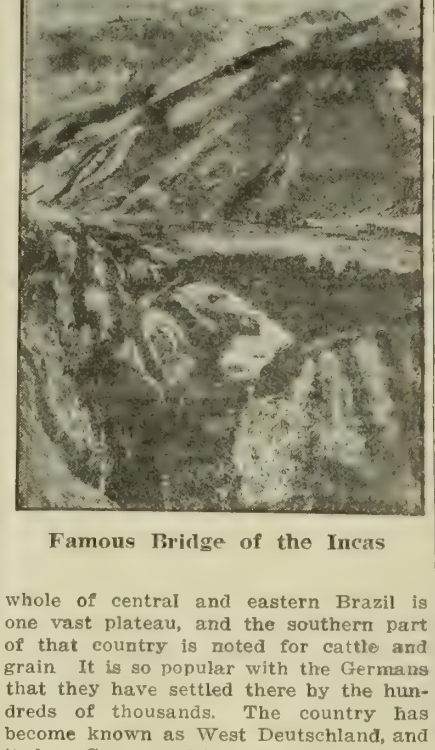
Continent of the Future

The new South America! The words make my blood tingle when I think of its future. South America is the great undeveloped world of the nineteenth century. It is the treasure vault of the universe and the mighty coming bread basket of the human race. Argentina alone could supply enough wheat to feed all mankind. The plateaus of Bolivia and Brazil added to Uruguay and the Argentine may in the future be our chief sources of meats, and the minerals of the Andes—silver, gold, copper and tin—are practically inexhaustible. As to cultivatable land, South America far surpasses our own continent, which lies at the north. North America has the more square miles, but a vast part of it is all snow and ice. South America is good all the way through from Caracas in Venezuela to Punta Arenas on the Strait of Magellan. The distance is 4,600 miles, or as far as from San Francisco to Japan. The country is flat from east to west. At its greatest breadth it is 500 miles wider than the United States from Boston to San Francisco, and the most of it consists of mighty plains so fertile that they rival the valleys of the Nile or the Ganges in their potential possibilities.

Some Big Things in South America

We are accustomed to boast that we have the greatest country on earth. North America seems about the only big thing on our hemisphere and the United States, in our opinion, stands out as prominently there as the boil on one's nose. We have no conception of the immensity of the vast continent which lies at the south, nor of the mighty countries which are there in the making. The man on the street thinks of Brazil only as a faroff locality, of minor extent, from where come the coffee he drinks of a morning and the rubber tire which eases his motor car ride to his business. The truth is Brazil is so big that it could cover the whole of the United States proper as with a blanket and have good lands left over equal to ten states the size of Maine to tuck in around the edges. Little Ecuador is twice as big as Illinois. Peru is ten times the size of Missouri, and the low shoestring of Chile, if laid out in one block would more than equal seven states as big as Ohio, Virginia or Kentucky. Argentina has one-third as much land as the United States and nearly every foot of it will raise, grass, grain or meat. Bolivia is ten times as big as the whole of New England and Colombia is bigger than France or the Spanish peninsula.

The most of these countries are white men's countries. Even those which lie in the tropics have vast tracts of land so high above the sea that their climate is delightful all the year round. The whole of central and eastern Brazil is one vast plateau, and the southern part of that country is noted for cattle and grain. It is so popular with the Germans that they have settled there by the hundreds of thousands. The country has become known as West Deutschland, and it has German cities and towns, while regular steamers from Germany call at the ports.



Famous Bridge of the Incas

You might think that the white man could not live as far south as the Strait of Magellan. That strait is 1,000 miles farther south than Cape Town, in Africa. It is away down on the globe, below Australia and New Zealand, and, nevertheless, its climate is so mild that cattle and sheep can feed out of doors there all the year round. The great Island of Terra del Fuego is now devoted to sheep, and the whole country about is a summer resort compared with the lands of central Alaska. As to that part of South America, I speak from personal experience. I have been at the Strait of Magellan in the heart of midwinter, and have tramped around in the mud, the weather being so warm that there was no frost in the ground. I do not mean to say that this is so all the time, but the winters are mild.

Filling Uncle Sam's Bread Basket

Speaking of the sheep at the strait brings us to the investigations I hope to make as to whether South America cannot cut down the cost of our legs of mutton and our tenderloin roasts. There is no doubt that frozen meats can be shipped from there to our country and be served just as fresh as though they came from the farm. I have seen them loading ships with frozen mutton in New Zealand for London. The distance between the two countries is far greater than that between New York and the South Americans ports. Nevertheless, the meat sells readily in the markets of Europe, and the same is true of the beef which goes to London from the Argentine pampas. There is no reason why the vast sheep and cattle ranches of southern South America should not aid the supply of our American markets and still less reason why we should not get cattle from the selvas of Venezuela and Colombia. I am told that Bolivia has so many wild cattle that beeves sell in parts of the plateau for $2 or $3 apiece, and that some of the cattle are killed for their hides and the meat thrown away.

Paraguay has fine pasture lands, which are now sold by the square league and some of which are being exploited by American capital, and the same is true of interior Brazil.

The bread possibilities of South America are almost equal to those of the meats. Argentina has potential wheat lands as great as those of the United States and Canada combined, and it now exports thousands of tons of grain every year to the countries of Europe. Uruguay is shipping grain, southern Brazil raises wheat and Chile has vast estancias devoted to the cereals. There is probably a great future for the highlands of the Andes as to the hardier varieties of such products, and our Argicultural department has sent down experts to investigate what can be done. They are also going into the meat countries to report to the government on the cattle and sheep and upon other foods which may be sent to the United States. I expect to make investigations along the same lines, as well as to report upon what they have found.

News for the American Farmer

Another part of my mission is to describe how farming is done in the various countries and to report upon new grains and fruits which may possibly be used in our country. The Andes mountains are the home of the potato and upon the plateau of Bolivia there are many varieties which are unknown in North America. Some of these date back to prehistoric days. The common people ruled by the Incas were raising "spuds" long before Ireland was thought of and every tuber of the potato variety we eat has a geneaological tree whose roots are buried in the heights of the Andes.

Further down the mountain the people have a vegetable known as the yucca. This is a tuber with branches like an underground tree and there may be varieties equal to that which Luther Burbank found when a boy, and from that discovery continued his investigations to fame and to fortune.

I want to investigate the guano islands, on the coast of Peru, and also go into the nitrate fields of the great South American desert, which now so largely supply the nitrogen for our American farms. Those deserts have already yielded several hundred million dollars' worth of that fertilizer, and they are now turning out nitrate of soda by the billions of pounds. As it is now, we are taking one-fifth of the whole product, and there is scarcely a live orchardist or market gardener in our country who does not nourish his crops with plant food from Chile. I want to go out into the desert and visit the mines, and tell you how the nitrates look in the ground.

As to the guano islands, they are scattered along the Pacific coast some distance above where the nitrate desert begins. They are frequented by millions of birds, and the droppings from these have already produced more than 12,000,000 tons of manure as rich is that of your hen house. They have brought into the treasure vaults of Peru something over a billion gold dollars, and, although almost exhausted, are still yielding guano.

On the Tops of the Andes

Some of my most interesting letters will be from the tops of the Andes. I shall see them at their lowest at the Culebra cut when I pass through the canal, and I shall be near where they are highest in south Chile when I climb the slopes of Mount Aconcagua, whose peak is more than four miles above the sea. During my last visit to South America I traveled by railroad over a pass in the Peruvian Andes which was higher than Mont Blanc, and I shall now be able to cross the Andes by rail in several other places, and make my way for some distance down their east slopes. Americans have recently built a railroad in Ecuador that will bring me close to the volcanoes of Cotopaxi and Chimborazo, and on the highlands of Bolivia I shall visit Sorata and Illimani, whose snowy peaks are nearer the sky than any in North America outside Alaska. A great part of the Andes is volcanic, and I shall likely be able to describe a volcano in action.

An interesting part of this journey will be in the footsteps of the Incas. I shall see their old highway in Ecuador in Quito, and shall travel over it later in Cuzco near the City of the Sun. That road was built long before there was a paved highway in any part of the North American continent, and I am told that parts of it are in good condition today. Just before I left Washington, in a chat with Logan Waller Page of the bureau

blic roads, he asked me to get him
; of the road metal and ship them
n in order that they may be tested
a view to new discoveries as to road
ial for our United States high-

was at Cuzco that the Incas had
capital and there they worshiped
un in a temple which was roofed
gold plate. It was from that region
Pizarro and the Spaniards got their
ads of gold and silver, and it is be-
that vast quantities were secreted
ne Incas and buried in lakes and
out-of-the-way places. I am told
there are many traditions as to
e these lost treasures lie. I shall
t upon these through my Indian in-
eter, and I hope to give some idea
e possible localities.
all also write about the actual live
re vaults of the highlands. I shall
rough the mining regions and show
hing of the big things now going

warlike tribe which had a high civilization. Today the descendants of these Indians are mostly in servitude. I shall see some of them in the plateau of Bolivia, in the Aymaras who use llamas as their beasts of burden and who raise the alpacas from which we get the fine wool of that name. In Paraguay I shall see the Gunaranis, who have mixed with the whites and become largely civilized and who now own farms and ranches, and in Patagonia I may come into contact with the Tehuelches, the tallest of the red men, many of whom are over six feet and of mighty proportions.

In addition to these there are savage tribes in the Paraguay and Amazon basins, many of whom go almost naked and some of whom are head hunters. I have had chances to buy heads cured by these Indians several times before on my travels, and I am told that one can get a human head, shrunk to the size of a fist,

South American Cowboys

The Andes are peppered with sil-
and gold from the isthmus to the
, and of late several of the repub-
have been exporting vast quantities
pper and tin. A large percentage
li the tin now used in the world
s from Bolivia, and the copper mines
are just at their beginning. Many
e old silver mines of the Andes are
yielding copper. This is so of Cerro
asco, which is now being operated
American capital, and also of the
mountains at Potosi in Bolivia.
gold, Bolivia is one of the treasure
s of the universe. It has already
ed over $1,000,000,000 in gold, and it
id to have tin enough to supply the
l. In some parts of the Andes there
lso precious stones. Colombia gives
ur most beautiful emeralds, and
li was the chief source of our dia-
l supply before the great mines of
n Africa came to be known.

Indians of South America

ther field of investigation will be
Indians of South America. We are
to look upon our land as the chief
of the red man. The truth is, the
d States was never thickly popu-
before the white man came, and
ndians never surpassed in number,
said, more than 500,000. Some au-
ties put the population at 250,000.
America has always had millions
ndians, and they are of as many
ent kinds as we have peoples in
ica. There were the Incas, who
highly civilized, and who were the
s of many other tribes, some of
n served as hewers of wood and
ers of water. In the north lived
Chibchas, who had an organized gov-
ent and considerable civilization.
were skilled weavers, dyers and
rs, and they had paved highways
suspension bridges. They lived in
s and erected temples and were also
t at tilling the soil.
southern Chile were the Araucanians,
be so brave, it is said, that it has
been conquered, and in northern
or Ecuador were the Caras, another

in some parts of interior Ecuador for $100.

Big Cities of South America

When I traveled over South America fifteen years ago the biggest town on the continent was not larger than the Baltimore of today. Since then many of the cities have been increasing more rapidly than any United States municipality, and now there are two cities of over 1,000,000. The largest Latin city of the world is Buenos Ayres, the capital of Argentina, and there are few places in the world which compare with it in richness and beauty. At the last census it was larger than Philadelphia, and it is now estimated to contain more than 1,800,000. At its present rate of growth it will soon surpass Chicago, and it promises to be one of the most beautifu cities of the hemisphere. Within the last few years tens of millions of dollars have been spent upon city improvements. The congested business sections have been cut through to make wide avenues, and magnificent public buildings have been erected. The city has one newspaper building which is said to have cost $5,000,000 and it has fine residences and palaces galore.

Rio de Janeiro has now more than a million population, and it has within a very few years spent more than $100,000,000 on municipal improvements. It has taken advantage of our health work at Panama, and has wiped out every vestige of yellow fever, so that it is now as safe for the traveler as any town of the world.

Santiago de Chile is growing, and its famous public park, situated on a little table mountain in the heart of the city, is one of the wonders of landscape gardening. Montevideo is a gem, and there are other cities which can give points to us in modern civic improvements and in municipal government.

Great Natural Wonders

It would take more than a letter to even mention the natural wonders of the South American continent. There is no mountain system except the Himalayas which compares in grandeur with the mighty Andes, and there is no river which is equal in volume and in its vast number of navigable tributaries to the Amazon. South America has the highest lakes in the world. Take Titicaca, which lies between Peru and Bolivia. That lake is two miles straight up in the air above the level of the sea, and it is as big as Lake Erie. It has snow-capped mountains about it, and its islands are filled with the ruins of unknown civilizations. The falls of the Parana in eastern Brazil are said to surpass the Niagara in their wonderful features, and the branches of the Amazon have cascades almost unknown.

Gateway to South America

I am sailing tomorrow for the Isthmus of Panama to see the canal as it looks at its completion. I saw it first more than seventeen years ago. Then the French were in charge, and they had 3,000 negroes at work. I visited it again when Uncle Sam began to organize his force under Engineer Wallace, and I have been on the ground from time to time while the greatest army of laborers the world has ever known, under Colonel Goethals, has been plowing down the mountains and damming the streams. The great ditch has now separated the continents, but at the same time it has tied their peoples and the countries more closely together, and it will for the future be the great gateway from one to the other. My next letter will describe it as it looks today and as it will look when the ships go through.

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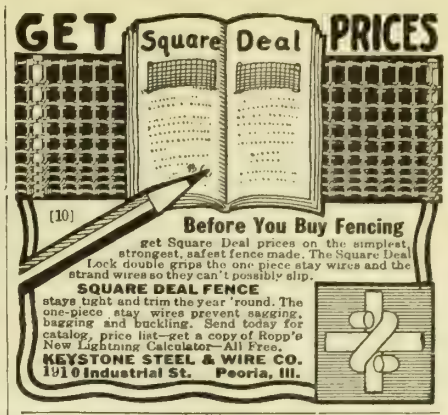

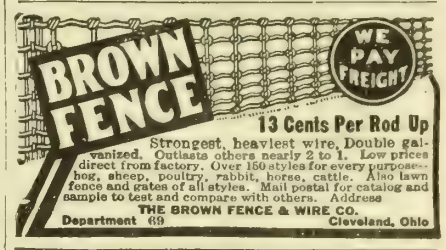

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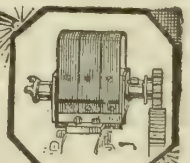

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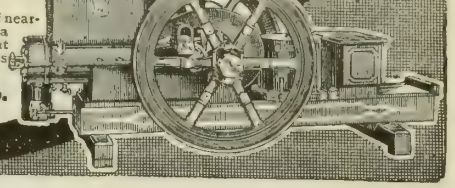

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Goes After the Single Taxers

W. S. T., Merna, Neb.: In a recent issue of your paper, J. H., Mead, Neb., in discussing the "Landlord and Tenant," said:

The simplest solution of the matter is the adoption of the single tax, which would make it possible for the tenant to become a land owner and pay interest instead of rent, and pay off the principal whenever he could. It would have a tendency to lower land values, which are largely speculative anyway, and make it easier for young men to purchase farms.

This is a most candid confession of the real purpose of the single taxers. It confirms my suspicions that their real purpose is to depress the value of land by making the farmer's burdens so heavy that he would be compelled to increase his production (by better farming or harder work) to finally lower the "cost of living" and after all have his land value lowered. Is it confiscation they want? What about the man who has been saving for years, until he is able to make a one-third payment on a home? The country is full of them. Do you want to rob such?

If you depress farm values by making the burden heavier, you might enable the man with money to get your victims' homes, but tell me, Mr. J. H., how you will have helped the renter? I am a small land owner out here in Custer county, Nebraska. What land I have has been obtained by hard work and careful management. Since it came into my possession it has increased in value. I'll not discuss whose efforts caused this increase, but just leave an opening, hoping you or some other single taxer will accept the challenge.

The farmer for years has in patience borne an unjust share of our taxes, both local and national, the latter as unfair a system as was ever devised—by which manufacturing and commerce have been built up at the expense of agriculture—until these man-made laws have overreached themselves, and nature asserts its power and says: "Because you have encouraged manufacturing and neglected agriculture, you are short on farmers and bread. And now, just as nature rebels and the farmer is coming into his own, we hear the farmer charged with the high cost of living, and a terrible howl from every quarter urging him to double his production.

Railroads and bankers tell us how to select seed corn, college professors, agricultural colleges, farmers' congresses, commercial clubs, farmers' institutes and agricultural papers tell us how to raise more corn and wheat and cattle and hogs. But never a word about how to get more money for what we produce, or how to prevent hostile legislation.

But, just as we are coming into our own, and the trend is turning farmward, along comes Taft and his crowd and tries to give us reciprocity with Canada. (The fellows who in the 1910 session of the Nebraska legislature resoluted for reciprocity are like our present State Agricultural Board when it resoluted against the parcel post—not blowing much about it).

Failing in reciprocity, now comes a democratic president and congress, after a campaign in which the control of trusts was the one great issue, and gives us a tariff revision which practically puts farm products on the free list, with the boast that living will be cheaper.

And now, to add insult to injury, come the single taxers and propose that land bear all the taxes and all other kinds of income-producing property be exempted. Most of them are less candid than your correspondent. He says we want to put the value of land down. Most of them say, "Mr. Farmer, wouldn't you like to have your personal property exempt from taxes?" or "It's wrong to fine y for building good houses."

Single taxers, send me some of yo literature; I'll read it, and if it is go for the farmer, am candid enough say I will endorse it; but if it is not, selfish enough to say I am against If it won't stand investigating by far ers, be honest enough not to appeal them. They are not more philanthro than other people. Come right out the open, like J. H. has done.

I have wandered far from my origi purpose in writing this article. My fi notion was simply to inquire of Mr. H. how the single tax would help t renter buy a home on the farm. I a not very busy this winter, and if t Twentieth Century Farmer will stand it (and if the single taxers have th way it is a live subject and of gre consequence to this agricultural state), should like to take a hand in the disc sion of this matter, if for no other pu pose than to bring out the real reas for its advocacy.

Editor's Note — Certainly, t Twentieth Century Farmer w stand for it. That is what this d partment is for. We will print a letters received, if not unreasonab long, and are glad to do it. We li a man who is ready to fight f what he believes to be right, and the same time is willing the oth fellow should have his say.

Clydesdale Man Objects

G. A., Cambridge, Neb.: In your rep of the International Live Stock Show Chicago you criticise the judge's rati on Clydesdale class on 2-year-old st lions, and also the breed in gener You have this to say:

The Clydesdales are good horses, wi lots of quality, but they looked sm and light-middled as compared wi other draft horses on display. Furth more, the judges seemed to disrega size in their rating and sought alone f quality and action. From a class eighteen 2-year-old stallions they plac at 1,200-pound colt in the second pla Some Belgian weanlings on show we nearly his size. The American farm demands a horse with a good, deep flar This insures his making good use feed. When Clyde men get to breedi good, deep-bodied horses of typical qu ity, they will be better able to ple their cause.

As a ringside spectator, I have this say—that I believe in fair play and thi the judges made no mistake when th placed Gallan Buskly Vie in second pl in this class. This colt was shown thin flesh, and it is true he was n a weighty colt in this condition, b he had stretch and all indications making a horse up to a good size; a had your reporter noted his clean, he bone and strong hoof heads, he sur would have thought that kind of u derpinning would have looked migh good under a Belgian.

He thinks he knows the kind of ho the farmer wants. Why did he not co out in the open and advise them to b Belgians? And he failed to menti anything about those draft geldings. a ring of twenty-six shown to halte Belgians, Shires, Percherons and Clyd dales all competing—Clydes won fir second and third places, and Clydesda geldings won first for pair in harne and three horses abreast, four-ho team and six-horse team—a clean swe from top to bottom. When R. B. Ogil of Chicago undertook the task of getti together the best six-horse team in t world he wasted no time looking ov those big Belgians, and he deserv credit for his sound judgment in sele ing a winning team that cannot be su passed in America or Europe.

Should some of the smart critics w

are troubled with an abnormal bump of ego want to study out for themselves why the judges at the International gave their rating to the different animals, they could go home feeling as if they had learned something for their own good, as it is surely the greatest educational show in the United States. Instead of trying to tell Clydesdale breeders what kind of horses to produce, just let the Clydesdale people alone and they will know what to do by getting the big end of things when they bump up against other draft breeds.

Editor's Note—We are pleased to print the opinion of our Clydesdale friend. The man who wrote the comment on the International Horse Show for this paper does a great deal of horse judging for county and state fairs. He has a reputation for fairness and good judgment. He says he did not intend to criticise the Clydesdale horse, being very favorably disposed toward this breed, but the judgment that placed so small an animal first, thus discouraging breeding for size. Come again.

May Farmers Vaccinate?

J. M. M., Crofton, Neb.: I see in your paper that our law-makers, with the aid of the Sanitary Board, are about to pass a law so that no man, unless he is a veterinarian, can use serum to vaccinate his hogs against hog cholera. I have been in the cattle and hog business for thirty years—had as high as 500 some years—and always, with one or two exceptions, vaccinated my own cattle, and intend to do the same with my hogs. It is not the money saving part only, but it will be done at the right time. It is too bad that everybody wants to get at the farmer, thinking he is a fool and a sucker and very ignorant. I think this idea ought to be abandoned. We farmers are able to take care of ourselves if we only get a chance. I hope you will use all possible means to prevent such an act. Thanking you in advance.

Editor's Note—It is not the Sanitary Board which is trying to get this law passed. The veterinary association is trying to get the board to agree to this, and if it does, it becomes a law. We are opposed to having this become a law. As a paper published in the interests of the farmer, it is our business to find out this sort of thing and let you know when people are trying to get the better of you, and we are always on the job. We are doing all we can in this matter, but we are not all powerful. This matter is now in the hands of the sanitary board. We published their names in our issue of December 27. Write to one or more members of the board, expressing your opinion on this matter, if you want to do your part toward helping the stock breeders' cause.

Making Money Through Co-operation

Some of the leading farmers of Gallia county, Ohio, are awakening to the possibilities of organized effort and co-operation. This has led them to form two co-operative organizations—the Gallia County Cow Testing Association and the Gallia County Buying Association. The same officers control both organizations, and one man can belong to both or only one. Each of the twenty-five men who are now in the cow testing association pay $15 toward the expense of keeping a tester, and if more than ten cows are being tested by a member the cost is $1.50 per cow. Since there are twenty-six working days in the month, the tester is busy every day. One man found that one of his cows gave 1,165 pounds of milk in the month of November. The milk contained 60.75 pounds of butter-fat, which was sold for 33 cents per pound. The value of this and the skim milk amounted to $23.97. The cost for feed was $6.80, leaving a profit of $17.17 for one cow for one month. This same man, living on a 160-acre farm in Gallia county, sold $1,500 worth of hogs during the year, and as much more was received for cream. This showing was made in a county where the soil is supposed to be poor.

The activities of the association are also applied to the buying of fertilizers and feed. When orders are taken for the purchase of any large quantity of feed or fertilizer, each order must be accompanied by $2 in cash. When the fertilizer arrives the buyer takes it from the car and pays for it at that time. Should he refuse to take it, he forfeits the $2. A saving of several dollars per ton is effected by such co-operative buying. With such practical results as this already realized by several farmers' organizations in Ohio, the outlook for this phase of co-operation is bright.

Navy Beans as a Crop

U. S. L., McLouth, Kan.: How many navy beans will it take to plant an acre? How are they harvested? What is a good yield per acre? When should they be planted, and are they a paying crop for northeastern Kansas?

Answer—About one-half bushel to three pecks per acre should be planted. Plow the ground early, five or six weeks before planting, and harrow frequently. Do not plant the seed until all danger of frost is past and the ground is thoroughly warmed, to prevent decay of seed. Plant in hills or drills. Well drained clay loam, or gravelly loam, is the best soil for this crop. It will not produce anything but vines on land that is too rich and heavy. Cut by hand just below the surface, or with a bean harvester, and gather with a hay rake. Your locality is suited for this crop if you have the right kind of soil. It is not profitable to raise navy beans for stock food, but if you have a market for them in your vicinity, they might be a good crop to raise.

Manure for Orchard Fertilizing

The writer was born away back in New England, in the state of Maine, where manure had very great value. I was educated to save every ounce of manure, scrape it up and use it with the utmost care. Brought up in that way, it is possible that I have an abnormal appreciation of the value of manure. In Nebraska I used to haul manure when I could think of nothing else to do to keep the men busy. In the year 1886 I hauled out 3,000 loads of manure from the stock yards and other sources of supply around about Crete. Eight years later I could still see to that last load and the last forkful where the manure was applied. Some years later I hauled out 3,000,000 pounds of manure, making use of the same in the orchards and vineyards of Orchard farm.

This fall we got pretty well through with our fall plowing; the ground froze and stopped the fall plowing about twenty acres short of completion. As my neighbors are not yet up on the value of manure, I can get manure for about 12½ cents a ton. The roads are smooth and solid and I am still hauling manure, applying it to such spots in the orchard as indicate hardpan or any other deficiency and making application of manure to the weaker trees scattered over some hundreds of acres. The use of manure is expected to help hardpan and gumbo spots. Gumbo spots are very rich in fertility, but need manure to loosen the texture.

Editor's Note—The above is a circular letter sent out by S. C. Stephens of Nampa, Idaho, to his branch orchard managers. As it contains some excellent advice from a man who has been successful in this line in both Nebraska and Idaho, we think it worth passing along to our readers.

There's no good reason why you should wait till spring before getting a

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ON the contrary you may buy a De Laval Cream Separator NOW and save half its cost by spring. If, for any reason, you can't conveniently pay cash you can buy a De Laval on such liberal terms that it will actually pay for itself.

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WHY not start 1914 right in dairying? SEE and TRY a DE LAVAL NOW when you have plenty of time to investigate thoroughly. The nearest DE LAVAL agent will be glad to set up a machine for you and give you a free trial.

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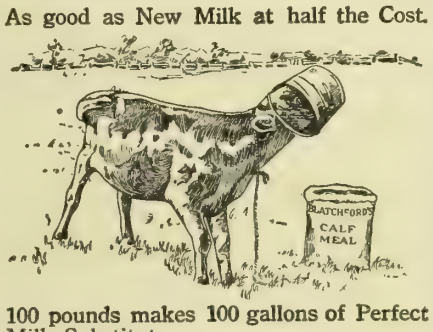

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You can learn the facts about any section of the country through The Twentieth Century Farmer's Free Land Information Bureau, which is maintained for the benefit of our readers. Climatic conditions, land laws, best lands for any particular crop, best sections for fruit growing, stock raising and general farming—all such facts may be had if you will simply send postage for reply, and address
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GRAIN BELT BRAND
Vegetable Hog Potash

Don't starve your hogs to remove worms; try this: Send for sample of our product, then select six growing pigs, feed them all the grain, oil meal, tankage and milk they can eat, then place before them in dry trough sample of Hog Potash and see how they eat it. Worms cannot live where it is fed regularly. Sold at prices of good salt. Send today for sample and descriptive circulars.

Agents wanted in unoccupied territory.

Manufactured by

UNION STOCK YARDS COMPANY
South Omaha, Neb.

O. I. C. HOGS

THIS
O.I.C.
SOW WEIGHED 932 LBS. AT 23 MONTHS OLD
IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN** RFD79 Portland, Mich.

RED POLLED CATTLE

RED POLLS

Bulls and heifers for sale. Prices reasonable. Quality the best. Satisfaction guaranteed. Write your wants or call.

W. F. SCHWAB, Clay Center, Neb.

JERSEY CATTLE

WINELAND FARM JERSEYS

Bulls of serviceable age for sale, sired by Duke Raleigh by Noble of Oakland. Also a number of choice heifers bred to freshen soon. I can suit you in both quality and price.

H. C. YOUNG. Lincoln, Neb.

DUROC-JERSEY HOGS

SCHWAB'S DUROC-JERSEYS

A choice lot of spring and fall boars for sale; sired by Buddy K 4th, Wide Awake, Gold Bond, W. L. B.'s Perfection, Cremo and others. Also bred sows. Priced worth the money.

GEO. W. SCHWAB, Clay Center, Neb.

DUROC BRED SOW BARGAINS

Sows for sale sired by I Am Crimson Wonder 5th, Crimson Advancer, C. H.'s Crimson Wonder and Critic Col. 2nd. Bred mostly to Crimson Duke by Crimson Wonder Again.

ERNEST FOWLIE, - HICKMAN, NEB.

HOLSTEIN-FRIESIAN

Purebred Registered
HOLSTEIN CATTLE

Large sums are put into land, buildings, horses, machinery and labor in order to maintain cows that are utterly unable to return a profit.

On a dairy farm the efficency of the herd should be the first consideration. With good purebred Holsteins you are sure to earn a generous profit on any intelligent investment of your money, time and labor.

After the cost of her feed is deducted a good Holstein will return a profit of $60 to $80 per year in addition to a valuable calf.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro, Vt.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

POLAND-CHINA HOGS

IMMUNE POLAND-CHINA GILTS

We have a splendid lot of spring gilts for sale, sired by Blue Valley and Blue Valley's Orange by Big Orange. They have been given the double treatment and are immune from disease, and all bred for early spring farrow. Satisfaction guaranteed.

THOMAS P. WALKER & SON, Alexandria, Neb.

The fact that the Twentieth Century Farmer absolutely refuses all "fake advertising" should assure the honest advertiser good results, and the reader a square deal.

POLAND-CHINA OPPORTUNITIES

Big, smooth, heavy boned, easy feeders. Spring males, by the noted **Wayside Jumbo.** Write me. I have what you want.

FRED WILLE, Columbus, Neb.

Cause for So Many Weak Pigs

Due to Lack of Exercise of Brood Sows

FROM present indications the next crop of pigs will be one of the most profitable that has ever been raised by the farmers of this country. If this is true, no effort should be spared to save the pigs next spring, and not only to save them, but to have them come so strong and vigorous that they may do well from the start. There are two essentials in conditioning of a sow for the farrowing of a strong litter—feed and exercise. Next week we will discuss the feeding of sows for farrowing.

Every spring at farrowing time we hear the complaint from hog raisers that their pigs are coming weak, have no vitality, and they are wondering what is the trouble. In nine cases out of ten this condition is due to the fact that the herdsman in caring for the sows during the winter has not seen to it that the sows have had sufficient exercise. We consider there is no one thing so important to the farrowing of a strong litter.

Since farmers commenced breeding their sows for next spring's farrow we have had almost ideal weather conditions for the handling of brood sows, permitting them to get out into the fields and lots and thereby getting sufficient exercise to put them into condition for farrowing good, strong, vigorous pigs. From now until farrowing time we are liable to have weather that will make the sows hunt the barns and sheds and not move about as they should unless compelled to do so. We regard voluntary exercise as more beneficial than involuntary exercise.

One of the best plans we know of to make the sow take such exercise as she will need is to feed the corn ration on the ear, thrown promiscuously in the stalk field, and compel her to go there to get any corn she may eat. Don't be afraid that you are making her go too far if the field is a quarter of a mile or even more from her sleeping quarters. Don't think that this is a wasteful way of feeding corn, for you will find next spring that there will be no corn on the ground going to waste. You will also find as a result that you don't have the much despised little "squeaker" who is not able to get his rations from the mother sow.

Snow will probably come and cover up some of your corn and perhaps it will be deep enough to prevent the sows getting to the field handily. Just get your shovel and open a path to the field, then drive the sows out there and trust them to get the corn. This takes work, but we know that you will feel well repaid for the time and labor expended when you are driving over the scales the porkers that without this care and attention might be buried back of the hog house just because they didn't have the necessary vitality at the start.

Unjust Rates on Live Stock

(CONTINUED FROM PAGE TEN)

tion of the actual value. The same conditions prevail in the shipment of breeding cattle, the only difference being in degree. In addition to the foregoing all of the railroads are in the habit of issuing exceptions to the live stock classifications and rates, which have the effect of superceding the published tariffs and which impose additional requirements which are a burden to the shipper in time and expense.

The National Society of Record Associations has gone into this matter exhaustively within the last two years. Every effort has been made to adjust this matter through he uniform classificaion committee of the railroads, but without success. The executive committee of the National Society of Record Associations has therefore decided to try to carry this matter to the Interstate Commerce Commission and to ask for a favorable decision on the following four counts:

First—That the minimum weight required by the railroads for the shipment of animals in L. C. L. be left as it is in the western classification, and that the minimum weight in the official and southern classification be made uniform with that of the western classfication.

Second—That the railroads be requested to cease issuing exceptions to the classifications, requiring attendants to be in charge of live stock in shipments L. C. L., and that no attendant be required on any of the railroads.

Third—That the liability assumed by common carriers under their present limited liability live stock contracts be increased, in the case of registered animals shipped L. C. L., to $200 on horses, $150 on cattle, $50 on hogs and $50 on sheep, with the understanding that shippers must present registration papers before being permitted to ship live stock on this contract.

Fourth—That where shippers voluntarily desire to ship their animals at a higher valuation than specified in the regular limited liability live stock contract, the increase in rate be made 5 per cent per each 100 per cent increase in valuation or fraction thereof, instead of 25 per cent increase in rate per each 100 per cent increase in valuation or fraction thereof.

At the annual meeting of the National Society of Record Associations the preceding matters were taken up and reviewed, and it was decided that a committee from the National Society of Record Associations should first be sent to Washington to present this matter to the Interstate Commerce Commission, as it was the opinion of breeders who have had experience in rate matters that more could be accomplished in this way than by dealing through attorneys.

The following officers were elected for the coming year:

President—A. Renick, general manager of the American Shorthorn Breeders' Association.

Vice President—C. A. Tyler, secretary American Hampshire Sheep Association.

Secretary-Treasurer—Wayne Dinsmore, secretary Percheron Society of America.

Executive Committee—C. F. Curtiss, American Berkshire Association; A. P. Nave, Percheron Society of America; R. J. Kinzer, American Hereford Association; W. N. McFadden, American Poland-China Association; R. B. Ogilvie, American Clydesdale Association; Charles L. Hill, American Guernsey Cattle Club; F. W. Harding, American Cotswold Club; Dwight Lincoln, American Rambouillet Sheep Breeders' Association.

Feed Calves by Hand

The dairyman who today allows his calves to suck the cows is about as far behind the times as the man who harvests his grain with the cradle. There are still a few men who pose as dairymen who follow this practice. They give the calf about so much time to get his share, or more than his share, of the milk and then wrestle with him to get him away from the cow.

The better practice is to allow the calf to get the first milk direct from the udder and remain with the cow for thirty-six hours, then take away and milk given him to drink from a pail. The amount given should not exceed one gallon twice a day. The better way still would be to give this amount at three intervals instead of two. Give whole milk the first four weeks and then begin substituting gradually skim milk, but not materially increasing the amount, for that causes scours oftentimes.

When the substitution of skim milk for whole milk begins, a little oil meal, cottonseed meal or some other nitrogenous feed should be added. Blood meal is good.

Late Foals Are Best

Many farmers would no doubt have less trouble raising colts if they planned to have the youngsters come about grass time. This would make it unnecessary to confine them in stables, which are often unsanitary and dark, until the weather was warm enough to turn to graze or exercise.

The mare would also be better for having had some grass. On this point a journal says: "When mares have had some grass, the colt is delivered with less difficulty. There is also less danger of infection. The milk is better and the colts do not have any bowel difficulties. Mares known to be regular producers can skip one heat period in order to meet these conditions.

Let the grass in your section regulate the starting of the foal crop. After mares have had some grass and the shedding process is over, they will be in a better condition to breed. More of them will settle at a single service. These are the only profitable mares to breed, as this saves the sire and unnecessary trips for the mare owners at the busiest period of the year on farms.

This is a matter that will pay more farmers to think over carefully.

Pruning and Spraying Trees

Pruning and spraying are practiced regularly by good orchardists. All wounds made in pruning must be properly healed. If the cut is large, it should be painted to keep out water, air and insects. Such wounds will heal readily if made parallel with the main branch. In case a tree starts to split, do not put a band around the split branches, as it will girdle them. The way to remedy such a difficulty is to bore a hole directly through each branch and put a bolt fitted with large washers through the holes.

Sale Dates

Hereford Cattle

January 28—Mousel Bros., Cambridge, Neb.

February 19 and 20—Nebraska Hereford Breeders' Association. Sale at Grand Island, Neb., Robert Mousel, Cambridge, Neb., manager.

April 15 and 16, 1914—Breeders' Combination sale at South Omaha, W. N. Rogers, McCook, Neb., manager.

Holstein-Friesian Cattle

February 3 and 4—H. C. Glissman, Station B, Omaha, Neb. Sale at South Omaha.

Aberdeen-Angus Cattle

April 1 and 2, 1914—Charles Escher, Botna, Ia. Sale at South Omaha, Neb.

Hampshire Hogs

March 14, 1914—Roy Fisher, Winside, Neb. Sale at Wayne, Neb.

Duroc-Jerseys

February 2—E. H. Carpenter, Fontanelle, Neb.

February 3—Gus Krueger, Beemer, Neb.

February 4—Clarence Wallace, Wisner, Neb.

February 5—Robert Leisy, Wisner, Neb.

February 6—Henry Stuthman, Pilger, Neb.

February 9—O. E. Green, Genoa, Neb.

February 18—George W. Schwab, Clay Center, Neb.

February 21—E. E. and N. T. Youngs, Lexington, Neb.

February 26—J. J. Kane, Wisner, Neb.

February 27—Blackburn Bros., Royal, Neb.

February 27—O. G. Smith & Son, Kearney, Neb.

March 2—L. J. Kuzel, Clarkson, Neb.

Poland-Chinas

February 11—D. C. Lonergan, Florence, Neb.

February 20—A. E. Rich, Creighton, Neb.

February 24—Jacob Dietsch, Boone, Neb.

March 6—William Ferguson, Scribner, Neb.

Shorthorns

February 27—J. C. Hardman & Son, Valley, Neb.

March 11—E. H. Cosgrove, Farnam, Neb.

March 25—A. C. Shallenberger, Alma, Neb.

Clydesdale Horses

February 27—J. C. Hardman & Son, Valley, Neb.

The above represents the type of big, heavy-boned jacks being offered for sale by Al E. Smith of Lawrence, Kan. Look up his advertisement on this page and write him, mentioning this paper.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Beau Mischief. Herefords at Auction

The simple announcement of the fact that Mousel Bros. of Cambridge, Neb., are going to hold their annual sale of Beau Mischief Herefords at that place on January 28 should bring to them an inquiry for catalogue from every breeder of Hereford cattle in the corn belt. In this day and age of the world the man who does things is the one who gets ahead, no matter what line of business he pursues. It is a well known fact, and a matter of Hereford history, that Mousel Bros. in the last decade have produced some of the very best show and breeding cattle of the breed. The high class of the offerings which they have made from year to year has been marveled at by everyone who has been fortunate enough to be able to attend these sales, and it is also a fact that each succeeding offering has, if possible, seemed to be better than the one preceding it, and so it is with the offering they will sell on January 28, for we firmly believe that, taken as a whole, this will be the best offering they have ever sold. They are going to sell seventy head in this sale, consisting of forty bulls and thirty females. One important feature of this offering is the fact that in its entirety it represents the natural increase from their own herd. The forty bulls are an outstanding, good lot. Among them are a number of especially good herd headers and show prospects for years to come. There is also an abundance of good material for range purposes. One of the surprising features of their offering each year is the fact that they are always loaded with a few outstanding individuals. Two years ago they had Beau Mousel and Beau Kinzer. Last year they had Beau Contender and Beau Lindell 2d. This year they will have Beau Mischievious 2d and Beau Mischief 40th. These calves are both outstanding in every respect; in fact, we believe the latter is one of the greatest calves they have ever produced. Their ability to bring these good ones out each year is ample evidence that they primarily laid the right foundation and have been following along the right lines in the matter of mating and breeding. In looking over the get of Beau Mischief, one can not help but marvel at the uniformity that they carry throughout. Low down, deep, thick fleshed, well balanced, heavy quartered, with a spring of rib that is simply marvelous—they possess the characteristics that cannot help but enable them to meet the popular demand of the most exacting breeder. In point of quality and strength of individual makeup, the female end of the offering is not, in any sense, behind that of the bulls. It will consist of cows with calves at foot, bred heifers and show heifers bred and open, including the first prize heifer at the International Stock show at Chicago this year, Mischief Maker 36th. We believe this will be one of the very best heifers that will be sold in America this year. Her dam, Germania 2d, also goes in the sale, bred to Beau Mischief and due to drop a calf shortly after sale time. Another cow going in for an attraction is Lilac, the dam of Beau Lindell 2d, the first prize calf at Denver last year and sold at the Grand Island sale for $925 to Gudgell & Simpson of Independence, Mo. Another great heifer going in is Gypsy Queen by Beau Mischief and out of Missouri Queen 3d. These are only a few of the exceptionally good ones. We might go on and name many more, but we do not feel that it is necessary. Write for catalogue at once and arrange to attend this sale. You will find it a feast worth while, for it is seldom that Hereford breeders are afforded the opportunity to select from such a splendid array of cattle as will be offered in this sale. Kindly mention the Twentieth Century Farmer when writing.

Word from Pleasant View Farm

We are in receipt of a letter from George W. Schwab, proprietor of Pleasant View farm at Clay Center, Neb., in which he informs us that everything is coming along in first-class order. Mr. Schwab informs us that the year just closed has been one of the most successful in the history of Pleasant View farm. There has been an unusually good demand for different kinds of stock, and purchasers were entirely satisfied with the animals which they procured from him. In the line of Duroc-Jerseys he still has several yearling and spring boars for sale. Also a number of Red Poll bulls and several head of cows, all milking and bred again. In the line of Percheron stallions they have some splendid, big, growthy fellows of good color, bone and conformation, all tried and broke horses, weighing from 1,800 pounds to over a ton. Every one of these horses is bred and grown on this farm, and as a result are thoroughly acclimated and should commend themselves to anyone wanting a first-class horse and one that is absolutely dependable. Write Mr. Schwab for further particulars as to what he has to sell. You can depend upon an

(CONTINUED ON PAGE TWENTY-TWO)

Young Herd Sired by Beau Mischief, Winner at 1913 International.

"BY THEIR FRUITS YE SHALL KNOW THEM."

Herefords Extraordinary

AT AUCTION

At Cambridge, Neb., Jan. 28, 1914

70 Head - 40 BULLS 30 FEMALES - 70 Head

These cattle have been selected with the most discriminating care. Every animal is a good one, and among them are a number of outstanding individuals that are good enough to show in any company. Twelve head of the bulls are by the great **Beau Mischief**, and every one is of herd heading character. The balance are by Princeps A, Parsifal and Sensation. They are bulls for the most discriminating breeder, and also big, rugged, heavy boned fellows for range service.

The females will consist of cows with calves at foot, and heifers bred and open. One of these is **Mischief Maker 36th**, first-prize heifer at the International this year and one of the best heifers in America. Her equal will not be sold this year. Her dam, **Germania 2d**, by Princeps, is included, due to drop calf about sale time, to same bull. These are only a few of the attractions. They must be seen to be appreciated. See field note for further information. Catalogues are ready and may be had by addressing,

MOUSEL BROS., Cambridge, Neb.

Auct., Col. E. D. Snell. **G. E. Hall will represent this paper.**

HORSES

WOLF BROS. ALBION, NEB. BOONE COUNTY.

ANNOUNCE THE ARRIVAL OF THEIR

NEW IMPORTATION OF PERCHERON and BELGIAN STALLIONS and MARES

We are showing without doubt the best lot of imported stallions and mares we ever owned, which together with our American-breds will make a grand lot for you to select from. They are the big, heavy-boned, drafty kind, with plenty of style and action. They must be seen to be appreciated. Come and look them over and we know you will be pleased. A certificate of soundness given with each animal. We invite correspondence.

America's Famed Horse Districts

This particular district, famed for Percherons. The Chandler herd is known for draftiness, substance and bone. Big bunch reg. studs for sale, yearlings to fours, with weight and finish equal to French. From imported ancestry on both sides and well grown. Grown here simply means surest foal getters and farmer's prices. Just East of Omaha. **FRED CHANDLER, Rt. 7, Chariton, Iowa.**

Percherons, Belgians and Shires

Imported and Homebred Stallions and Mares, ranging in age from coming two-year-olds to matured ages. We have a lot of two and three-year-old stallions weighing from 1900 to 2100 pounds; among them a fine lot of pasture-raised stallions—the kind for the western breeder. A fine lot of mares for sale. Always have stock for sale—never sold out. Write for prices, descriptions, etc

NORTH & ROBINSON CO., - Grand Island, Neb.

FRESH IMPORTATION OF HEAVY BONED, BIG

BELGIAN STALLIONS

just received. You should see them. Eighty Belgians and Percherons on hand. A carload of good mares (both breeds) for sale now at prices that will move them. Some first class jacks also for sale.

W. L. De CLOW, Cedar Rapids Stallion and Jack Farm, Cedar Rapids, Iowa.

JACKS AND JENNETS.

Eighty large-boned, black Mammoth Jacks, 15 to 16 hands standard, guaranteed and priced to sell The kind all are looking for. Also good, young Percheron stallions. Reference, five banks at Lawrence. 40 miles west of Kansas City on Santa Fe and U. P. R. R.

AL. E. SMITH, - - LAWRENCE, KAN.

Co-operation

Fullest co-operation is given every Twentieth Century Farmer live stock advertiser—the order-bringing kind.

"I surely do appreciate the co-operation you are giving me. That kind of service on your part makes me glad indeed that I doubled my space with you." Fred Chandler, Chariton, Iowa.

When placing your advertising, consider not only our immense circulation of 107,000, its quality, the territory covered and the attractiveness of each issue, but also the personal service and co-operation that awaits each live stock advertiser. Let us tell you about it.

TWENTIETH CENTURY FARMER

LIVE STOCK DEPARTMENT, OMAHA, NEB.

Salzer's Vegetable and Flower Seeds Grow

Get Salzer's Big 1914 Seed Book and Premium List

Bigger and better than ever. Full of valuable information, worth money to you.

Succeed with Salzer's Seeds

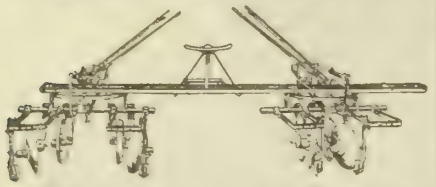
One package each of Salzer's Radiant Sweet Peas, Elegant Asters, Gorgeous Eschscholtzias, Blue Cornflower, Brilliant Poppies, Sunny Cosmos, all for 10c.

Big 10¢ Offers

These six packages flower seeds and six generous packages of vegetable seeds for 20c, or send 25c and get both collections and our Novelty Red Riding Hood Tomato. Write right away for the catalog.

Salzer 127 S. Eighth St., La Crosse, Wis.

FARM MACHINERY



Flying Swede Cultivators, Gang Plows, Hay Stackers, Vehicles and Wagons, Sold Direct to Consumers.

Send for free illustrated catalog. Write today.

Marvin C. Van Derveer

Council Bluffs, Ia.

Seed Book Free

Illustrated book gives full details of Griswold Seeds—the kind that make bumper crops. We handle only fresh, tested garden and field seed, alfalfa, seed corn, etc.

Griswold Seed Co., 155 S. 10th St., Lincoln, Neb.

Real Fresh Frozen Lake Superior Herring, from our own Fishery, special for family use: $2.60 per [illegible] lbs in box. New Salted $3.50 100 lbs. keg. **ELLINGSON & HANSON**, Duluth, Minn.

STRICTLY DRY LAND ALFALFA SEED

of high germination, grown under conditions that insures perfect satisfaction. Prices and samples on request.

Dawes County Alfalfa Seed Growers' Association,

William Chisholm, Mgr., Chadron, Neb.

Review of Live Stock Market

By A. C. Davenport

THE live stock markets of the country are just awakening from the lethargy of the holiday season and trade during the last week was rather devoid of interest and entirely lacking in new features. Receipts of all kinds of live stock at practically all points were limited, the country having learned by experience that it is not wise to flood the market too soon after the holidays. As there was a fair buying demand for a limited supply of cattle, the market took on a good healthy condition, prices at many points showing a little improvement over the previous week. Sheep sold quite freely and they, as a rule, made some improvement during the week. Hogs, which are influenced very little by the holiday season, sold freely, and during the latter part of the week made substantial price gains. All in all it was a very satisfactory week, considering that it came at the end of the old year and the beginning of the new.

Movement of Feeders Calamity

There has been a great deal of talk and speculation for months back as to the number of cattle and sheep in the feed lots of the country. This question, from a stockman's standpoint, is most important, as it indicates to a great extent the available supply of fat stock to be marketed before the coming of grass cattle next summer. Contrary to expectations of most operators on the market, figures compiled at the five leading markets indicate an increase in the number of cattle sent back to the country during 1913 of 290,000 head as compared with 1912, the total figures being the largest for the last six years or more. A good many, taking these figures at their face value, have come to the conclusion that the supply of cattle in the country has increased, but it is only necessary to remember the drouth that Kansas went through last summer and the wholesale shipment of cattle from that state last fall to understand where much of the increase came from. To take the exact figures, Kansas City gained in its shipments of stockers and feeders during 1913 240,000 head as compared with 1912, which accounts for a large part of the increase. As all the drouth cattle did not by any means go to Kansas City, it is safe to say that had there been no drouth in Kansas the number of feeders handled at the big markets, instead of showing an increase, would have shown an actual decrease. In other words, the increase of stockers and feeder cattle handled was due to a shifting of the country's supply from one big cattle state to others and not to any increase in the actual number of cattle in the country as a whole.

The future supply of meats was not added to in the least by this abnormal transfer of stock from one locality to another. In reality, the increased shipment of feeders to the country was a calamity, and as thousands of head of young breeding stock went to packers at the same time, it really means a decrease in the future supply of stock.

After the figures are all in the majority of cattlemen hold to the belief that, while there are a good many cattle on feed, shipments during the last three months have been so heavy that the new year will not be very far advanced before the country will begin talking about a shortage of cornfed cattle. On account of the high price of feed and an apparent lack of confidence in the future of the market a great many feeders sold their cattle prematurely, to the great detriment of the cattle market and to the injury of their own bank accounts. These cattle have gone into consumption and will not again appear on the market.

Eastern Sheep Lots Depleted

In the case of sheep, conditions are somewhat different. Shipments of feeders from the five markets during 1913 showed a gain of about 400,000 as compared with the year 1912, being smaller than for 1910 and 1911. This result was anticipated, it being thoroughly understood that the lamb crop in the spring of 1913 was unusually large, and as a matter of course heavier shipments of sheep and lambs were to be expected for the fall months of the year.

Sheep feeders also shipped very freely during the latter part of 1913, and all reports would seem to indicate that eastern feed lots have suffered severe depletion. With sheep feeders there seemed to be a feeling that prevailing prices were reasonable while the cost of feed was high and that it was better to accept a moderate price early in the season than to buy feed and hold stock for the later market in hopes of securing a higher price. In consequence of this a great many sheepmen figure that while there were originally more sheep and lambs on feed than the previous year, the recent heavy movement to market has cut the number down to such a point that, in their belief, current prices on lambs will be well maintained. As a matter of course heavy runs may temporarily depress the market. Some sheepmen are also figuring on a somewhat higher range of prices for ewes and wethers, basing their expectations on a belief that aged sheep are relatively in lighter supply in the country than lambs.

Argentine Importations Ceasing

The northwest seems to be reaping some benefit from the removal of the tariff on cattle, as several big importations of beef steers from Canada have been received at Spokane. It is claimed that the price of beef in that city has been reduced from ½ cent to 1 cent per pound at retail because of these importations. Recent importations at New York of beef from Argentina have been very light and have ceased to excite any public interest. Wherever the general consuming public has been offered the Argentina article it has not taken to the southern beef with any great amount of enthusiasm, and importers have been forced to sell principally to the cheap restaurants and hotels. Even the packers have about ceased using Argentina beef as a club to pound down the market on American cattle. Unless shipments from South America should prove to be much larger than expected it is doubtful if the country will hear as much in the future about Argentina beef as in the past. Importations, as a matter of course, will continue to be an incident, but not an important feature of the market.

More Activity in Hogs

The hog situation is attracting no little attention at the present time. Weights for months back have been running very light, showing a falling off of ten to twenty pounds per head as compared with recent years when feed was plentiful and cheap. At the same time a good many sections of the country are reporting fewer hogs in farmers' hands than usual for this season of the year. In the face of these facts there is a very evident improvement in the demand. The big packers appear more anxious for hogs than they did thirty days ago and the markets of the country have recently shown decidedly more activity. Prices have been gradually working upward and the trade has assumed a good healthy condition. A good many operators on the market who were rather doubtful as to the future of the trade have of late been going over to the bull side and a good many of them are predicting a higher market for the not very distant future.

Taller than Redwoods

It is claimed that some of the eucalypts of Australia are taller than the California redwoods, hitherto considered the highest trees in the world.

"Good as Wheat"

An acre of banana trees will furnish food that will support twenty-five times as many persons as an acre of wheat.

The original genuine **SCHULTZ** Hog Oiler. First successful crude oil machine invented. The hog man's wish is now a reality.

Hogs positively rid themselves of lice and mange. Don't cost much more than inferior imitations.

The best is the cheapest. Sold under a written guarantee to do the business. We want a live agent around every town to handle our line of Hog Yard Necessities.

Send for big free Hog Oiler Book.

POWER CREEK MFG. CO. (Inc.)

Council Bluffs, Iowa

Market Place

POULTRY

Rhode Island Reds

PRIZE WINNING ROSE COMB Rhode Island Red Cockerels, $2 to $5 each; good color. Glen Wilson, Blair, Neb.

Plymouth Rocks

CHOICE BARRED ROCK COCKERELS shipped on approval. George Franklin, Axtell, Neb.

Miscellaneous

SINGLE COMB WHITE, BUFF AND Brown Leghorn Cockerels for sale; also Rocks, Wyandottes, Orpington and Reds. Prize winning stock. L. P. Harris, College View, Neb.

Ducks and Drakes

OFFER UNTIL FEBRUARY 1ST, choice English Pencilled Indian Runner Drakes at $2; finely marked birds. Mrs. Roy Scofield, Burlington, Colo.

Poultry Photographs

POULTRY PHOTOGRAPHS—WE BUY good, clear photographs of poultry, chicks, poultry houses, incubators in operation, taking off hatches, etc. We pay up to $1 each. Keep your camera snapping and sell your pictures to us. Write us about it. Twentieth Century Farmer, Omaha, Neb.

PATENTS

IDEAS WANTED—MANUFACTURERS are writing for patents procured through me. Three books with list 200 inventions wanted sent free. Advice free. I get patent or no fee. R. B. Owen, 75 Owen Bldg., Washington, D. C.

Breeders' Notes

(CONTINUED FROM PAGE TWENTY-ONE)

immediate, prompt and definite reply with particulars as to just what he has in stock. Kindly mention the Twentieth Century Farmer when writing.

O. I. C. Hogs for Sale

We wish to call the attention of Twentieth Century Farmer readers to the advertisement of G. S. Benjamin of Portland, Mich., who is offering O. I. C. hogs for sale in another column of this issue. Mr. Benjamin is one of the pioneers in this business and has probably started more breeders than any other man in the country. His prices are reasonable and he has a herd sufficiently large to give the purchaser a variety of stuff to select from that is not afforded anywhere else. Look up his ad and write him for further particulars, mentioning the Twentieth Century Farmer.

POULTRY

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BABY CHICKS—TEN VARIETIES—Annual incubator capacity, 100,000. Eggs for hatching from vigorous, farm-ranged birds. Write your wants. Maplewood Farm, Exeter, Neb.

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201 INDIAN RUNNER DUCKS. AYE Bros., Box 3, Blair, Neb.

FAWN AND WHITE RUNNERS, $5 per trio. Also Scotch Collie pups. James Walters, Glidden, Iowa.

112 PEKIN DUCKS. AYE BROS., Box 3, Blair, Neb.

ROUEN DUCKS. THE BIG KIND. Write James Cassell, Fremont, Neb. R. 3.

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42 TOULOUSE GEESE. AYE BROS., Box 3, Blair, Neb.

Langshans

FOR BLACK LANGSHAN COCKERels try Jake Hetrick, Wahoo, Neb.

896 BLACK LANGSHANS. AYE Bros., Box 3, Blair, Neb.

FULL-BLOOD BLACK LANGSHAN cockerels for sale. C. C. Cunningham, Kennard, Neb.

CHOICE BLACK LANGSHANS—MAE Curtis, Lyons, Neb.

Leghorns

SINGLE-COMB WHITE LEGHORN cockerels for sale, $1 to $1.50 each; pullets, $1 each. Q. F. Lambert, Palmer, Neb.

ROSE-COMB BROWN LEGHORN cockerels. Otto Frahm, Fort Calhoun, Neb.

SINGLE-COMB BROWN LEGHORN cockerels. No better birds in the state of Minnesota; $3 each. M. L. Hawes, Granada, Minn.

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ROSE-COMB BROWN LEGHORN cockerels; no better bird, $1 each; eggs, $1 setting. Olga Hayek, Linwood, Neb.

123 SINGLE-COMB BROWN LEGhorns. Aye Bros., Box 3, Blair, Neb.

50 SINGLE-COMB BROWN LEGHORN cockerels, scoring from 90 to 96, $2 each. Hawkeye View Farms, Selma, Iowa.

SINGLE-COMB WHITE LEGHORNS, $1 each, and Indian Runner drakes, $1 each. Leon Haney, Gretna, Neb.

456 SINGLE-COMB WHITE LEGhorns. Aye Bros., Box 3, Blair, Neb.

Orpingtons

SINGLE-COMB BUFF ORPINGTONS, Indian Runner ducks. Peter Brehm, Harvard, Neb.

355 BUFF-ORPINGTONS. AYE BROS., Box 3, Blair, Neb.

BUFF ORPINGTON COCKERELS—Prize-winning stock, bigger and better. Catalogue free. Frank Lewis, Gibbon, Neb.

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PRIZE-WINNING, SINGLE-COMB Buff Orpingtons. Mrs. Cook, Eddyville, Neb.

Plymouth Rocks

PARTRIDGE PLYMOUTH ROCKS for sale. A. G. Burbank, Cordova, Neb.

211 WHITE ROCKS. AYE BROS., Box 3, Blair, Neb.

WHITE ROCK COCKERELS, EXTRA large, $1.50 each. Mrs. George Hellbusch, Belgrade, Neb.

BARRED ROCK COCKERELS—Scored, unscored. Mrs. George W. Schulz, Yutan, Neb.

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POULTRY

Plymouth Rocks

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SINGLE-COMB RHODE ISLAND Red cockerels, hatched from trap-nested hens. Thompkins strain. Otto Timm, Bennington, Neb.

FOR SALE—RHODE ISLAND PULlets, both combs, $1.50 each; one rose-comb cockerel, scored. Q. F. Lambert, Palmer, Neb.

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WHITE HOLLAND TURKEYS, White Pekin ducks, White African Guineas, Single-Comb Brown Leghorn hens and cockerels, Anconas; first-class stock. Edward E. Dooley, Selma, Ia.

WHITE HOLLAND TURKEY TOMS, $4; hens, $2.50, $3. Black and White Langshans. Mrs. J. W. Johnson, Loup City, Neb.

BURBON RED TURKEYS FOR SALE. Clinton Myers, Route 4, Fairbury, Neb.

BLUE RIBBON BRONZE TURKEY toms, $4 each. W. J. Jones, Pawnee City, Neb.

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THREE HUNDRED WHITE WYANdotte cockerels from the best blood in America. Large, vigorous, pure white birds. Oscar L. Bock, Council Bluffs, Ia.

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Miscellaneous

SPECIAL ATTENTION WILL BE given poultry ads in the February 7 issue. Why? It is the big, special poultry number. Best number of the year for poultry advertisers. Your ad should be in it. Let us tell you about it. Poultry Department, Twentieth Century Farmer, Omaha, Neb.

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POULTRY CATALOGUE FREE. AYE Bros., Box 3, Blair, Neb.

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SURPLUS SEED CORN CAN PROFITably be advertised in this department. Write for rates. Twentieth Century Farmer, Omaha, Neb.

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WANTED—A MAN TO SOLICIT SUBscriptions for The Twentieth Century Farmer; salary, $42 a week. Address Circulation Manager, The Twentieth Century Farmer, Omaha, Neb.

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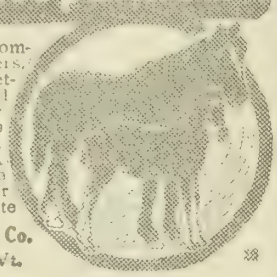

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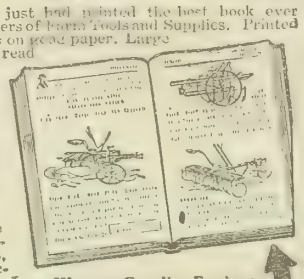

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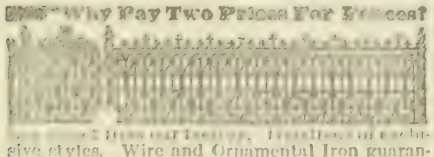

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Raising Good Alfalfa Crops

ALFALFA is one of the greatest crops raised in the central west, if not the greatest. A larger and larger acreage is planted to alfalfa in this section of the country each year. Yet there are people who are unable to get a good stand of alfalfa, notwithstanding the fact that there are fine fields of this nutritious hay to the north, south, east and west of them. The question is, Why does alfalfa not grow on their land?

In our next issue we will publish an article telling the experiences of three different farmers who failed to get crops of alfalfa at first, why they failed, and how they finally succeeded. Perhaps you made the same mistake one of these farmers did last year. In that case you can continue to follow in their footsteps and do what they did the next year, with the same satisfactory results. Alfalfa is one of the hardest crops there is to get started. It takes care, patience and the best of seed and preparation. Once get alfalfa well started, and it pays many fold for the time and trouble expended on it in the first place. If you have failed to get alfalfa started on your place, read this article and you may discover what you mistake was.

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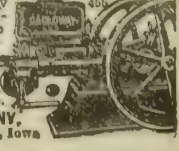


WILLIAM GALLOWAY COMPANY,
265 Galloway Station, Waterloo, Iowa

TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Should the State Board of Agriculture Be Reorganized?

WE ARE not surprised that some do not understand our purpose in printing this series of articles. Our aim is to do away with an old, antiquated "system" and replace it with something up to date and suited to present conditions. This is not in any sense an attack upon the individual members of the State Board of Agriculture, but simply an effort to show them, as well as the farmers of Nebraska, the real conditions that exist at the present time. Even the members of the board of managers are handicapped in their work because of the limitations placed about them by the present "system." Because of the power vested in the secretary of the State Board of Agriculture and the opportunity he has to exercise it, if he wills to do so, he can practically dominate and control.

The secretary is a member of the board of managers. This gives him a vote and a voice equal to the other members of the board. No man is superior to the secretary in power and authority. He is at the same time "boss" and "employe." In other states the secretary is only an employe, and cannot be a member of the governing board.

More Power Given the Secretary

The law passed by the legislature in 1913 creating the bureau of agricultural statistics and publicity in the office of the secretary of the State Board of Agriculture places the appointment and discharge of the employes of this bureau in the hands of the secretary. The only part the board of managers has in the running of this bureau is to see that the expenses of the bureau are paid, which Secretary Mellor says "have entailed an additional expense of approximately $5,000 per annum and added duties in properly caring for same." He further says: "All these expenses are met by funds secured from the profits of the State Fair." To have a "personally conducted" publicity bureau adds to the prestige and power of the secretary. Later we will show how the taxpayers are paying for this luxury.

Free Use of Free Passes

The secretary has another very effective medium through which he can fortify and strengthen his position—the use of the free pass. This is a relic of bygone days, but none the less effective. Members of the board of managers admit free guest passes are being used, but cannot tell how many are printed, nor to whom given. This is left to the secretary, who is not required to make a detailed report even to the board of managers. Members to whom we have talked justify the use of the free pass with this line of reasoning: They say the State Board of Agriculture is using state money for buildings and improvements, and for this reason members of the legislature, those who are candidates and others who have to do with the making of state appropriations, should visit the State Fair to see how the state money is being used. That doesn't sound so awful, but let us see how it works.

Why need be so secret about it? Why should no one but the secretary know how many are printed, to whom they are given and how they are used? Doesn't this give him additional power and authority?

How about the other state institutions, farmers' short courses, institutes, county farm demonstration workers and others, who have no free passes and special favors to distribute? Are they on an equal footing with the man who has a "personally conducted" publicity bureau?

T. F. Sturgess, editor of the Twentieth Century Farmer, in his address before the Nebraska Farmers' Congress, touched on another phase of the use of the free guest pass, as follows:

> I have asked every member of the board of managers, with the exception of the "three-in-one," how many passes were printed this year, how many were distributed, how many each member received. Every man has told me that he did not know how many were printed, nor how many were distributed, and that they had only received from five to seven each for their own personal use.
>
> During the 1913 State Fair the late President Haws placed an admission man at the wagon gate and he had difficulty the first day or two. People came to that gate by the automobile load, expecting to get in by a wave of the hand by the wagon gateman. They started to enter, and when stopped said: "We have always done this." They were told that if they had always done this, they could not do it this year, but would have to go to the box office and pay their 50 cents. I have used this as an illustration of methods. The secretary and his office force are busy about three months in the year with State Fair business. They are just as busy the balance of the year building up their political fences, while you men are out in the field growing the products that make the State Fair possible. You pay your railroad fare down to the fair and 50 cents admission, while the political friends of the secretary go in by a simple wave of the hand.

Meetings of Board of Managers

The meetings of the board of managers instead of being left entirely subject to the call of the secretary, should have certain regular meeting times in the secretary's office at the state capitol. These meetings should be open to the public. This would give any persons or organizations having matters to bring before the board an opportunity to do so

(CONTINUED ON PAGE NINE)

Personal Word to Our Readers

SECRETARY MELLOR, through his publicity department, has been pleading with the state press and people of the state to pay no attention to the question, "Should the Nebraska State Board of Agriculture Be Reorganized?" He is basing his plea upon the charge that this is a personal grievance of the editor of Twentieth Century Farmer. Mr. Mellor would have the people believe this because subscription solicitors of the paper violated the State Fair rules last fall. When this violation was brought to the attention of the management of the paper, solicitors were ordered from the grounds.

The rule violated was originally formulated by G. W. Hervey, associate editor of the Twentieth Century Farmer, and submitted to the Nebraska board of managers. This later proved to be the basis of the resolution presented by W. R. Mellor to, and adopted by, the National Association of State Fairs at Chicago in December, 1912. The rule proposed by Mr. Hervey was suggested to him by his experience, while a member of the board of managers, with solicitors for the various farm papers, one of the worst offenders being one of our own men. Secretary Mellor knows that the editor of this paper favored this rule before its adoption, and never entered a word of protest against its enforcement, but, on the other hand, has always been ready to co-operate in securing its enforcement. Anyone who has had experience with hired help on the farm, in the factory, or as solicitors, knows how difficult it is to handle men when they are out of sight. The farmer knows how few hired men are dependable. Any employer hiring a large number of men will suffer more or less from loss and injury because of misconduct.

We cannot be held responsible for the prejudice that has existed for over a quarter of a century against the political methods of those in control of the Nebraska State Board of Agriculture. We believe it to be the duty of a farm paper to protect the interests of the farmer and help him fight his battles. We are serving our readers when we tell them the truth and put matters before them as we find them. We know our readers are thinkers and capable of judging for themselves. In this series of articles we have tried to tell how the Nebraska State Board of Agriculture is organized, how the organization has been manipulated, and what has actually been done. With the facts before them, we leave our readers to judge as to whether there is need of a reorganization.

Economic Value of Good Roads System

In Those Communities that Really Know Good Roads the Taxpayers Are Willing to Pay for Them

GOOD roads don't grow on trees; they aren't so plentiful as all that. Whenever you enjoy the pleasures of driving over a smooth, hard-surfaced highway you may be sure that somebody—probably several somebodys—put in a lot of hard licks to accomplish its construction. The promotion and successful completion of a good roads project requires more time and energy and ability than most of us realize.

The trouble with a great deal of our road building efforts is that they lack that definiteness of purpose so essential to the accomplishment of permanent results. Our common highways have not been considered of sufficient importance to warrant their improvement along the lines of permanence and future economy; so that such good roads as we have were built spasmodically, without definite plans, as the cash appeared to be available. Such road building is neither satisfactory nor economical.

Two Things that Should Be Done

American taxpayers may as well appreciate the economic value of a system of good roads. They must realize, too, that this value depends to a large extent upon the wisdom exercised in planning and perfecting that system, and in constructing its several road units. When the taxpayers, especially the farmers, realize what a system of good roads means to them, they will do two things—they will provide liberally for the necessary improvement, and they will insist that all expenditures be made under the supervision and direction of honest, capable men. In other words, the day is not far distant when the farmer will demand that his road business be kept out of politics.

Of course, the farmer isn't the only citizen interested in this movement for better highways. True, under some plans of taxation, he is the fellow who pays all the bills, and always must pay his share. But because ours is primarily an agricultural country, the farmer must receive primary consideration; that is, our road projects should be promoted from the standpoint of permanent and increasing service to the community taxed for the improvement.

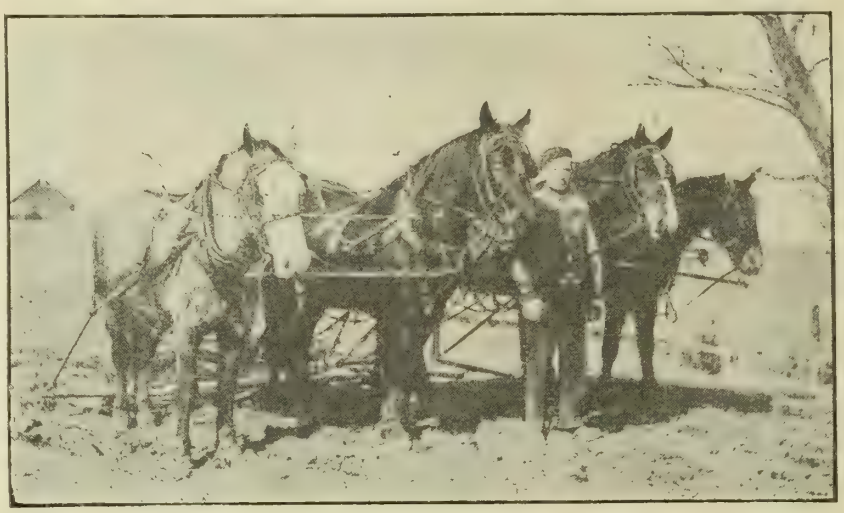
Meaning of Good Roads Promotion

Do you believe that highway projects should be promoted? I do. I believe in it thoroughly. When we promote we encourage, and all reasonable men concede that the construction of better roads should be encouraged. This good roads educational campaign being carried on throughout the country is promotion. The state governments, through the enactment of state aid laws, promote highway improvement. The United States, through its office of public roads, is engaged in the same kind of promotion. And, coming nearer home, when Bill Smith suggests gravelling a mile of road in your county, he is promoting highway improvement. Unfortunately, however, some of our promotion, while well meant, is misdirected—the results are not what they should be.

Consider, if you will, the conditions as they might exist in any progressive county in, say, Nebraska, Montana, Kansas or in one of several other states. Suppose you have 1,000 miles of established county highways, 500 bridges and culverts and $50,000 in the annual road fund. What becomes of the money? Isn't most of it spent for road and bridge repairs and reconstruction, and for construction of unnecessary culverts and bridges on new roads? How much of the $50,000 is spent for permanent road betterment? What have you to show for the million dollars spent in the last twenty years?

Does This Apply to Your County?

Understand, now, these assumptions are general, and may or may not apply to your particular county. But when you realize that your commissioners have probably spent from half a million to several millions of dollars in the last score of years, doesn't it seem likely that there has been some waste? And can you be sure that the waste has been stopped? Are your highway affairs now being conducted along sensible, business-like and economical lines?



Somebody Put in a Lot of Hard Licks

Have You Any Idea What Percentage Are Through Roads?

It seems to me that the best thing for us to do is to start our road building all over again. We might have to change some of our laws, but a great many of them could be bettered. As a matter of fact, however, it isn't often that we find a community taking full advantage of the existing statutes regarding road improvement. What we need is some sensible and scientific promotion of highway projects. In fact, I am convinced that most counties could afford to pay a man to boost good roads along the lines of systematic betterment.

It Doesn't Cost Anything to Talk

Suppose, for instance, that your county were to engage the services of an exert promoter of highway projects. Have you any idea what he'd do? In all probability your county won't engage such a man, but it doesn't cost anything to talk about it. Your promoter would study your local conditions thoroughly. He would measure the traffic on your more important roads in order to determine which, in fact, are the main highways. Taking into consideration the geographical location of your county seat and the general topography of the county, he would probably suggest the re-location of certain roads so as to permit of more economical improvement. And, after studying all the conditions, investigating local road materials and estimating the future development of the community, this modern highway man would submit his report. I venture the assertion, too, that the taxpayers would be rather surprised at the far-reaching simplicity and effectiveness of the plans proposed. And, after the first wave of opposition to the departure from obsolete but time-honored methods, your promoter would enjoy the co-operation of the entire county.

It is always that way. Those communities that really know good roads are willing to pay for them, and once into the spirit of economical and business-like highway improvement, every taxpayer becomes a promoter. Without a doubt, the greatest argument for better roads is a good road.

Not an Impossible Task

Promoting a highway system for your county is by no means an impossible task, although it will require time and patience and ability. It simply resolves itself into a question of devising a scheme of improvement that will give the best and most economical service, and then inducing the public to come through with the cash. We must, of course, permit of considerable latitude in working out the details of our system, insofar as future requirements are concerned. It is, however, comparatively a simple matter to determine the main roads and to estimate the cost of their betterment. Likewise the new bridges and culverts can be readily planned, and their probable cost estimated. There must be provision, too, for maintenance, both of highways and bridges, and also for increasing the mileage of improved main road—which brings us to another point:

Have you any idea what percentage of your highways can rightly be termed "main" or "through" roads? You probably think of a number of routes that appear to be heavily traveled. But are they? Would a traffic census show more than 15 per cent of "main" road in your county? And if one of several well traveled routes were hard-surfaced, would it not receive most of the traffic?

Good Main Roads Most Needed

Isn't it a fact, as far as general service is concerned, that some of your so-called main roads could be abandoned? It occurs to me that such is the case. I believe the term, "public highways"—that is, those upon which public funds are expended—should be restricted to those roads that are of greatest value to the public. In other words, I think we need better roads more than we need more roads.

(CONTINUED ON PAGE FIFTEEN)

Live Stock Markets in the Year 1913

Conditions of Past Year Tabulated May Serve as Marketing Guide for Another Year

A YEAR'S supply of approximately 7,500,000 cattle, 18,500,000 hogs and 13,200,000 sheep in 1913 at Chicago, Kansas City, Omaha, St. Louis, St. Joseph and Sioux City does not warrant pessimistic opinion regarding the present and prospective status of the live stock industry. Decreases of about 100,000 cattle and 350,000 hogs are indicated, but there was a gain of 200,000 sheep. Compared with 1912, Chicago exhibits losses of about 150,000 cattle, 130,000 calves and 100,000 sheep, but a gain of 360,000 hogs. Kansas City made a gain of 190,000 cattle, but scored losses of 16,000 calves, 35,000 hogs and 70,000 sheep. At Omaha losses of 55,000 cattle and 350,000 hogs were recorded, but receipts of sheep at that market were 266,000 more than in 1912. St. Louis gained 45,000 hogs, but reports decreases of 98,000 cattle and 106,000 sheep. At St. Joseph there was an increase of 70,000 sheep, but losses of 45,000 cattle and 120,000 hogs. Sioux City gained 62,000 sheep, but lost 32,000 cattle and 156,000 hogs.

Chicago receipts of cattle were the smallest in many years. Subject to verification by official figures, the year's supply was 2,522,000, against 2,652,000 in 1912. In round figures the year's supply was a million less than in 1905, and makes a poor showing compared with the record of 1892, when the official count was 3,571,000. As far back as 1888 Chicago received 2,600,000 cattle. Kansas City's heavy receipts were due largely to drouth liquidation in the southwest. Omaha's poor showing reflects the drastic clean-up in previous years in the region tributary to that market west of the Missouri river. Cattle receipts decreased except at Kansas City and Forth Worth and the figures tell the tale of scarcity. Dearth of range cattle from the northwest was a marked feature of the year's movement, although this was to some extent balanced by heavy shipments to Pacific coast points, approximately half the season's gathering in Montana going in that direction.

Fat Cattle Were Unsatisfactory

In one sense the fat cattle market of 1913 was a disappointment to beef-makers. Expectancy that finished bullocks with weight would be as popular as in 1912 was not realized, and yet the mean level of the market was the highest on record, due to the lofty altitude at the inception of the year. Until March heavy cattle were good actors, but the further they went the more unsatisfactorily they sold, until along in November and December the big steer was on a peddling basis, and instead of realizing $10 to $11 per hundred, as was the case in 1912, thousands were cashed at $8.50 to $9.

Owing to the high market early in the year and the excellent prices paid for yearlings and light cattle, average cost of steers for the year reached the highest level on record. The spread between cheap killing grades and heavy, finished cattle was narrow, especially toward the end of the year, and this condition created a high market for all grades of butcher stuff. Retailers and consumers were imbued with a determination to evade cost, the result being that cheap steers selling below $8 and all female stuff sold out of line with quality bullocks. Scarcity of feeding cattle also exerted a powerful influence in elevating values of cheap killing cattle and narrowing the spread. The sole exception to this rule was range product, which sold lower than in 1912. The force of this is illustrated by the following tabulation of average prices of steers and fat cows and heifers for the past two years:

	Beef Steers.		Fat Cows and Heifers.	
Month.	1913.	1912.	1913.	1912.
January	$7.90	$6.90	$6.10	$4.85
February	8.10	6.70	6.45	4.75
March	8.30	7.20	6.70	5.30
April	8.45	7.80	6.75	5.95
May	8.10	8.05	6.80	6.50
June	8.20	8.25	6.70	6.20
July	8.30	8.10	6.45	6.00
August	8.45	8.80	6.50	6.25
September	8.55	8.80	6.55	6.10
October	8.60	8.55	6.40	5.90
November	8.30	8.30	6.35	5.85
December	8.25	8.10	6.30	5.80
Year	8.30	7.95	6.50	5.75

Short Feeding Was Profitable

Light cattle and butcher stuff sold to good advantage all through the year, but practically all the long-fed stuff put in after February 1 lost money. Short feeding was profitable as a rule and steers bought right and fed ninety to a hundred days paid their board bill. Instead of the semi-famine of heavy beef that caused the high prices of the last half of 1912, cattle furnishing that kind of product were superabundant. Carrying them was aggravated by a dry summer and an excessive feed bill resulting from a partial corn crop. The crop of heavy cattle of 1913 was started on cheap feed and a high market, but ran with 70-cent corn and a low market. During the midsummer months cattle made little, if any, gain, which contributed to feeders' loss.

Prices during the last three months of the year were even lower by comparison with the rosy market of the same period of 1912 than when measured by quotations of normal periods. During the year there was a spread of only about $1 per hundredweight between the average cost of steers weighing 950 to 1,050 pounds and the 1,500 to 1,900-pound grade, a condition that had not existed since 1898, when corn was worth 20 to 38 cents per bushel. It was this narrow spread and relatively high value of low-grade cattle that made the high record average of 1913 possible. Steers weighing 1,500 pounds and up averaged 35 cents lower than the previous year, while grades under 1,350 pounds averaged considerably higher.

Few Range Cattle Sold

Western range cattle receipts were 35 per cent less than in 1912, but it was mainly a steer run. Few cows, heifers or calves were received from the territory west of the Missouri river, owing to the drastic clean-up in previous years and efforts to recuperate the industry The top price on range steers was $8.65, against $10.25 the previous year and $7.90 in 1911. The average price was $7.20, against $7.50 the previous year, due to lack of demand for heavy cattle. A spread of $7 to $7.65 took much of the range supply, only a few cattle selling at $8 to $9. Texas stuff matured in the northwest sold largely at $6.75 to $7.50 and the run carried a lot of Mexican stuff that was appraised at $6 to $6.50. Most of them proved very profitable.

Butcher cattle were scarce and sold at phenomenally high prices all through the year. Demand for cheap beef and dearth of female stuff from the range were responsible factors. Packers dragged the remotest sections of the United States and Canada for cannery material and "hat racks" sold out of line with higher yielding grades, so that cost of canner and cutter beef on the hooks reached unprecedented levels. This was made possible by a broad market for by-product.

Market Shy on Calves

Killers were keen competitors for fleshy steers all through the year, and stocker and feeder values reached an altitude that looked prohibitive to many feeders. Scarcity of young cattle was acute and more severely felt than in the case of mature steers. This condition was mainly responsible for lack of profit in the finality of the finishing transaction, as it eliminated the feeder's margin. The profit on the 1913 crop of beef went into the pocket of the breeder.

Beef-bred calves were carefully conserved all through the year, the veal supply being limited to the crop of bovine youngsters from the dairy regions. Few western calves came to market and veal went into the category of luxuries. The favorable market for yearlings saved many a beef-bred calf from the shambles.

(CONTINUED ON PAGE EIGHT)

The World's Meat Supply

ON THIS page we reprint from the Breeders' Gazette a review of the live stock markets for 1913. In the figures presented there is food for thought for the live stock raiser. As to the causes and influences that have affected the marketing of live stock, there will be little that is new to the readers who have read the live stock market comments appearing from week to week in this paper. The tables and figures confirm the opinions expressed from time to time by A. C. Davenport, our market editor. We want to give you another view of the meat problem to consider in connection with the market figures for our own country.

According to government statistics, our population increase and the increase in meat production just about kept pace for the decade 1899-1909. The supply or production of dressed meat per capita in the United States varied hardly a pound as between 1899 and 1909, but the cost of animals on foot slaughtered increased 75.5 per cent in that period and the value of dressed meat 73.8 per cent.

In other words, while our meat production is scarcely keeping up with our population capacity increase, or our consumption capacity, prices are steadily advancing and must so long as the present disparity in conditions obtains. But, it is said, our production does not determine the world's supply; we have other countries to draw from, especially now that we have free trade.

Then let us turn to those other countries and see what their conditions are, see if they are such as offer us counterbalancing relief. According to latest available statistics, New Zealand, of whose meat supply we talk so glibly, increased in population in the last decade 30 per cent, in cattle only 16 per cent. Germany increased in population 16 per cent, in cattle 4 per cent. The United Kingdom grew in population 10 per cent, while its cattle growth was but 4 per cent. The figures for Austria-Hungary are: Population increase, 10 per cent; cattle, 2 per cent; European Russia, population increase, 14 per cent; cattle, 12 per cent. Russia did better than any of the other leading European countries. But South America is looked to now for a base of supply. Brazil increased its population in ten years 20 per cent and suffered an actual loss of 20 per cent in its cattle supply. Argentina, a great cattle country, gained 40 per cent in population, holding its own in cattle. Now we have Canada left—this vast new field of supplies. Canada's population grew 35 per cent, its cattle 20 per cent.

The force of these figures is unanswerable. They offer no rational hope of an early decline in meat prices, but tend to show that the old law of supply and demand is still in operation, despite vague theories to the contrary.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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To all points in the United States and Mexico, per annum, in advance....$1.50
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75

REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.

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A Washington sheepman says his sheep prefer the Russian thistle, wild mustard and other weeds to any other food. He says the weeds are good for the sheep. If this is the case, the reverse is also true—that sheep are good for getting rid of the weeds.

The very mild weather that has prevailed throughout the autumn and closing of the winter season of 1913 and the beginning of 1914 has seemed to fit the short feed situation over the Missouri valley country and to a great extent has counteracted the heavy feed expense anticipated by stock owners.

In over 200 districts in Kansas the rural schools have been abandoned because the small number of pupils made it too expensive to maintain them. In one case the cost was $24.25 per month per pupil, as contrasted with the cost per pupil in Topeka of $2.41. What is to be the solution of this difficulty, which is not peculiar to Kansas, but exists in sections of all the other central western states?

From the 19th to the 24th of this month meetings of Organized Agriculture will be held in Lincoln which should interest the farmers of Nebraska. From the 20th to the 22d, inclusive, there will be meetings which will interest the farmers' wives. This is a good opportunity to break the monotony and get a little vacation and broaden the mental horizon by meeting men and women in your line of work, all at the same tie.

To Stop Frauds in Seed Sales

Last week we had an article on one of our front pages on alfalfa seed and the other seeds with which it is frequently adulterated. The only preventive against buying and sowing weeds with the seed is seed testing. However, there is another way in which the unscrupulous dealer gets his knife into the farmer. Seed grown in warm countries is brought here and sold under the label, "Northern Grown," "Montana" seed, or some other misleading name. The government has issued a warning against buying of dealers whose reputation is not assured. No farmer nor expert can tell from examination of seeds where they were grown, and the imported and southern seeds produce less alfalfa per acre and are more liable to winter kill than northern grown seeds. There are no laws at the present time to prevent this substitution of seed, and the government suggests a remedy.

The essential point is that the government should provide protection by a federal law guaranteeing to the farmer that he receives just what he is paying for in the purity of type or strain of seed.

If an amendment to the pure food bill, or the pending "Lever" agricultural bill, can be enacted along the following lines, such fraud and misrepresentation can be successfully checked and stopped:

First—Provide strictly against all fraudulent and misleading advertising of agricultural seeds.

Second—Provide that all agricultural seeds must be true to the name under the label under which they are sold or offered for sale.

Third—Agricultural seeds shall be considered misbranded when seeds low in value are submitted under the label for those of similar appearance, but greater value.

Fourth—Cereal grains, seed corn and alfalfa seed, when offered for sale for seeding purposes, shall have marked plainly on the bag or test tag attached to the bag the state or locality where the seed was grown.

Fifth—Provide heavy penalty for all intentional violations of these laws.

Cost of Farm Machinery

It is often remarked that farm machinery costs too much. It is a fact, however, that farm machinery does not cost much more than half what it did a quarter of a century ago. It is also a fact that on the average farm there is not an extravagant use of farm machinery, nor are there more machines and implements in their varied purposes for helping in the farm work than are needed. There is no saving in trying to skimp along with old, worn-out machinery, or in borrowing machinery that is needed in the general crop work on the farm.

There is great extravagance on some farms in buying more machinery than is needed, and still more extravagance in the abuse of machinery by letting it stand out in the weather all year. It was never intended that a farm machine of any kind was to be left out in the barnyard and suffer the abuse of all kinds of weather. There is no farmer that can afford to handle his tools and machines in this way, not even the every-day farm wagon. The machine shed is just as important as a money-saver on the farm as the stable and barn.

It only takes an ordinary farmer a short time to invest $1,000 in farm machinery. If these machines are kept under a good, tight roof when not in use they will last three times as long and not cost one-third the repair expense as if left outdoors, winter and summer. Machines should be on a board or cement floor when housed or in a machine shed. There is no occasion for machinery rusting. Oil and paint suitable to keep both woodwork and iron in secure condition can be had at very small cost compared to the damage of weather and insecure housing. Besides the saving in this respect, there is damage often from stock getting into the outof-doors barnyard machinery storage that adds greatly to the expense of the farm machinery account.

The worst feature in the barnyard, out-of-door storage for machinery is the impression that this creates with everyone who chances to see it. No matter how intelligent the farmer may be, how well educated, how religious or what his social qualities are, he has taken unjust advantage of himself, by this careless, lazy lack of system in keeping his place neat and clean.

A very successful farmer said: "I investigate all the new farm machinery that comes into the market, and if I am convinced that there is a new machine that will save me power, labor and expense of help, and do as much or more work, I buy it and put my old machine in the shed, even if it is not worn out. I may save by this one hand, his wages and boarding, possibly one horse and his feed, care, etc. I will never use a machine on my farm when I know that I can save money by getting a different kind."

This man has machine sheds for all his tools and farm implements, and as soon as their work is closed they are put in out of the rain, storm, snow and damaging weather influences, oiled and properly looked after. Keep the best machines, and house, oil, paint and care for them.

The daily papers recently had a pitiful story in their news columns of a farmer who spent the savings of a lifetime in land investments in a distant state. When he was ready to take possession of the lands he supposed he had bought he found them heavily encumbered with mortgages about which he had no knowledge. While sympathizing with the unfortunate man, one cannot fail to think that a little common sense would have prevented the tragedy. The man who buys "sight unseen" and fails to have his titles examined is always in danger of having just such things happen to him.

The Denver Stock Show

The National Western Stock Show at Denver January 19 to 24, 1914, is showing up in preparation and entries, far in excess of the big show of 1913. Denver is the gateway, so to speak, of the great feeder cattle country of the western range. The carlot display at this show is a marvel in quantity, quality and general interest. Thousands of live stock feeders go to the Denver show to see, inspect and buy feeder cattle.

The pure-bred cattle will be there in large numbers, because there is money in the west to buy this class of cattle and buy the best that can be produced. There was a time when the eastern breder shipped his tail-end bulls to Denver because there was a demand for cheap bulls for the range. This class of trade has dwindled down to a very small yardage. The range buyer is now in the pure-bred business himself, and nothing is too good to suit him. He buys off the top of the heap and is mighty particular at that. If you want to see the best bulls produced, go to Denver. The best breeders of the country will be there with the pick of their herds.

The dairy industry is not neglected. Some of the finest herds in the west will be exhibited. The sheep and swine show has been good for two or three years, and this year will be far ahead of all past exhibitions. The quality of hogs produced over the Rocky mountain states is of itself a study for any corn belt hog raiser. They are just as good hogs as the eastern product, and all the popular breeds will be represented. When you get to the Denver show just forget that you are away out west and you will feel like an Illinois farmer looks when attending his own state fair.

No fair is coming along faster, from an exhibition standpoint, than Denver. It is ahead in some respects now, in others equal, and is exhibiting a very fast gait in the race in some others. In the baby show it has the advantage of altitude, which is said to be an exhilerating influence in this industry.

Shortage in Eggs

Twenty-five years ago we had no eggs in winter. They were plentiful and cheap in summer—in fact, almost a drug on the market. In winter we went without, or at least they were almost unknown in the city. Since the advent of the cold storage plant the city people have eggs all the year around. Are they satisfied? Certainly not. They say they cost too much, and the housewives' leagues are boycotting them to make the price come down. They would do more good if they would come out on the farms and persuade the hens to lay. Perhaps the cold storage people are charging too much. We have not investigated the matter and cannot say, but neither have the housewives' leagues. We do know that the hens are not laying as many eggs as the people could use. What we need is more and better cared for hens first, and then we can investigate the cold storage people later on if the prices fail to come down.

Plenty of Room on Range

That the western range is now being operated far below its feeding capacity on account of the lack of grazing animals is conceded by everyone at all familiar with these open grazing lands. The feed that is thus annually wasted from the lack of stock to eat it means millions of dollars loss to the country in wasted resources, and this while the cry is going up all over the farming states, "Raise more cattle, increase production and cheapen meat prices," etc. There are millions of acres of government land in the western dry land districts that should be leased to cattle and sheep growers to be used for stock grazing.

It is true that the range country is subject to an element of uncertainty in its crop of grasses for pasture, just as the most productive farming districts sometimes fail to bring forth a crop because of the lack of moisture during the growing season. The range has no specified standard by which its feeding capacity can be closely measured. In years of plenty there will be more feed than will be taken up. Every stock owner makes his estimate in such a way that he will be safe in the years of less productivity. It is this principle of light stocking of the range that has increased the grass growth on the fenced pastures.

That there exists in many localities a dearth of grazing animals at the present time must be conceded from the unbiased reports that are being received. The farms are below their feeding capacity when normal crop conditions prevailed. Extraordinary efforts will be put forth for the next few years to increase the common meat animals. Nineteen hundred and fourteen will start tens of thousands of land owners to greater activity in breeding and growing live stock than has been known in this country for many years.

Nebraska Stock Feeders

The completion of the organization of the Nebraska Stock Feeders' association, which was put under the direction of an organization committee at the feeders' meeting held at the state farm last spring, will be taken up the week of Organized Agriculture, January 19 to 24, 1914, and officers elected for the ensuing year. Every feeder in the state who feeds a carload of stock should be enrolled in this organization.

It means improvement in feeding methods; it means co-operation in educational matters for the economical production of meat animals; it means protection from unjust discrimination by transportation companies; it means an organization of allied interests that are at all times prepared for the investigation of complaints from its members; it means co-operation in the strictest sense of the term in the promotion of an industry that is of paramount importance in the welfare and public good of all classes of producers and consumers.

The first duty that man owes humanity is to help feed the world. No class of producers is more closely associated with the necessities of life than the farmer, the meat producer, the men who devote their time and energy in growing crops and live stock and fitting these products for consumption by the hungry millions who make up the great armies of toilers in the various fields of labor.

One thousand live stock feeders should join this association at its start in 1914.

This association should be the strongest backer and the closest allied interest to the work that the animal husbandry department of the university agricultural college and experiment station are engaged in.

Sheep as an Industry

There is considerable speculation indulged in now by beginners and those not thoroughly "dyed in the wool" about what the future has in store for the shepherd, the flockmaster, the owner and proprietor of the sheepfold. It is encouraging, however, to observe the tenacity, the stick-to-it-iveness, displayed by the old sheepmen, those who have passed through repeated attacks on the wool tariff. The close observer has been able to see the difference between the sheep business in this country now and thirty years ago, when practically the whole sheep business was viewed from a wool standpoint.

The changed conditions have brought mutton to the front, and wool is a secondary consideration. The big sheep industry of the western range is based upon how many lambs can be produced to satisfy the lamb-feeding industry of the alfalfa and corn districts of the Missouri valley and Mississippi valley country. The people of the United States have learned to eat sheep meat in the last twenty-five years, and they like it so well that they cannot wait for it to mature, and have as a result called for the lambs just about as fast as they are old enough to wean and get into the meat market.

The prices paid for this class of meat are sufficient to justify the sheep raiser to stick to the business and use the increase of the flock as a revenue incentive for operation, and the wool a side line to pay expenses. Both wool and mutton will increase and decrease in values as the demand for these products increases or decreases. They are both necessities and will always be so regarded, no matter what turns up. There are some things that do not, from their nature, admit of substitutes or successful rivals, and wool and mutton are in this class.

Some Nebraska Fruit

Fruit is generally only a side line on the farms of Nebraska, but judging from the report of one county which is available, Douglas, it must be a pretty profitable one. The total sales for 1913 are reported to have amounted to $72,000. A detailed report sent from this county to the secretary of the State Horticultural society is as follows:

The largest item was Concord grapes, of which we shipped sixty-five cars this season, in addition to sales on the local market. This season we marketed 4,500 crates of cherries, 4,400 cases of blackberries and 4,250 cases of black raspberries. Besides we had a good many strawberries, gooseberries, currants ,red raspberries ,apples, plums and some vegetables. We have realized very satisfactory prices for our products this season, which in a measure makes up for the shortage in the crop.

The largest tillable farm in the United States is near Tarkio, Mo., and contains 23,000 acres. The land alone is estimated to be worth $3,000,000.

During the last year a total of more than 1000 companies have been formed to engage in the breeding of fur-bearing animals in the maritime provinces of Canada.

Progress the Big Fact

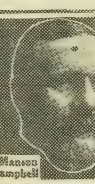
Let us not forget that progress is the most significant thing in the universe. Nothing stands still. And with this follows the awe-inspiring thought that it is all toward something better. We have our little ups and downs—our waves of reaction, when little things seem to be going to the bow-wows—but the great current is onward and upward.

Where we came from and what our destiny is no concern of ours; that is for the Master, who, without the shadow of a doubt, has planned somthing so splendid and perfect that we dare not think of it—we can only trust with the kind of faith which says: All this intricate web of things could not have been made for nothing; we are here for a purpose, and our duty is to play our parts in the great drama as well as we know, with the certainty that what little each can acomplish in his short span counts in the end.

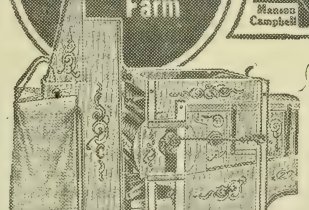
We have heard rich men regret that they had no education. Our own notion is that we all get what we most wish for. There never existed a boy desiring knowledge above wealth who did not achieve it. Give yourself over to a lifetime of effort to the getting of riches and usually it comes to pass. Determine to grow mentally as well as materially and your skull sutures will keep open and your mind clear, even though your senses become dimmed with age.

There isn't one of us who knows it all; we can all grow bigger crops, feed live stock more efficiently, plan our year's work with more system, become better neighbors, kinder husbands and wiser fathers than we are. What a richness when we reflect that without the chance to grow and learn and move forward life would be a dreary waste of eating, sleeping and drudgery.

$1.00 Puts It On Your Farm



For $1.00, I Clean and Grade Your Seed Grain



THE CHATHAM Grain Grader and Cleaner

Handles 70 Kinds of Seed Grain and Grass Seed

From Wheat, it takes Wild Oats, Tame Oats, Cockle, Rye and Smut.

Cleans the driest Flax. Has special knocker and skimmer which prevents clogging. (Other machines choke up.)

Takes Dodder, Barn Yard Grass and Foxtail out of Alfalfa and Millet "slick as a whistle."

Takes Buckhorn from Clover.

Sorts Corn for Drop Planter.

Famous BEAN MILL. Handles all varieties, takes out the SPLITS, Clay, Straw, etc.

Handles Peas as well as any Grain or Grass Seed. Removes foul weed seed and all shrunken, cracked and sickly grain. Takes out all dirt, dust and chaff. It is also a bully chaffer. Handles 60 bushels per hour. Gas power or hand power. Easiest running mill.

You can't afford to plant common Seed and take chances on a poor crop, when I am offering to scientifically clean and grade every bushel of your Seed Grain for this spring's planting for **one paltry dollar.**

Here's my proposition, and if you are a smart man you will write me before sunrise tomorrow:

Send me one dollar and I will ship you, FREIGHT PAID by MYSELF, this improved 1914 Chatham Grain Grader and Cleaner, with all equipment. Clean your Seed Wheat, Oats, Flax, Barley, Peas, Beans, Corn, Grass Seed, etc. Then PLANT those fine seed. AFTER you have harvested a bumper crop, pay me the balance of my low price. Not one penny need you pay, except the $1, until next October. And by October YOUR CHATHAM WILL HAVE MORE THAN PAID ITS ENTIRE COST IN INCREASED CROPS. Then you'll have it to work FREE for you the rest of your life.

Your Dollar Returned

I only want the dollar as evidence of good faith—to protect myself from mischievous boys. If after 30 days' hard test, you don't want my "Chatham," send it back at my expense and I will return the dollar

A "Made-to-Order" Machine

Every "Chatham" is practically a *made-to-order* machine, for I send you the exact and proper Screens, Riddles, Hurdles and Sieves to grade and clean *every Grain and Grass Seed grown in your locality.* That's the secret of my success. I would not be the leading maker of Graders and Cleaners if I had tried to make my equipment fit ten million farms. What would you think of a clothing maker whose suits were all one size? Wouldn't it be a *miracle* if he gave you a fit. Yet all makers of Graders and Cleaners, except me, send the same equipment, whether you live in Maine, Ohio or Oregon. They wouldn't do that, if they had my 41 years' experience.

Extra Screens Free

I use, all together, 81 Screens and Sieves. It usually requires 15 to 17 for the average farm. These I select from the 81. After 41 years in the business I am pretty sure to pick the exact equipment needed on your farm. If I shouldn't, just drop me a line and I'll send you the additional requirements. There will be no charge for this.

Samples Graded Free

Maybe you have some Seed Grain that you can't clean or grade or separate. Send me a sample. I will purify it and tell you how you can do it cheaply. No charge for this.

Seed Corn Sorted

My big Corn Sorting Attachment, invented 12 years ago, is a great success. Twelve thousand farmers and many leading Agricultural Colleges are using it. It is the only machine I know of which scientifically sorts seed corn for drop planters.

New Book Ready

Send me no money now—just a Postal, for the finest, most complete Book on Seed Selection I've ever written. After the Book comes, write me what size machine you want and I'll ship it, freight prepaid, on receipt of $1.00. Then clean and grade all your Seed Grain. If you write today, you get my Book by return mail. Address nearest office.

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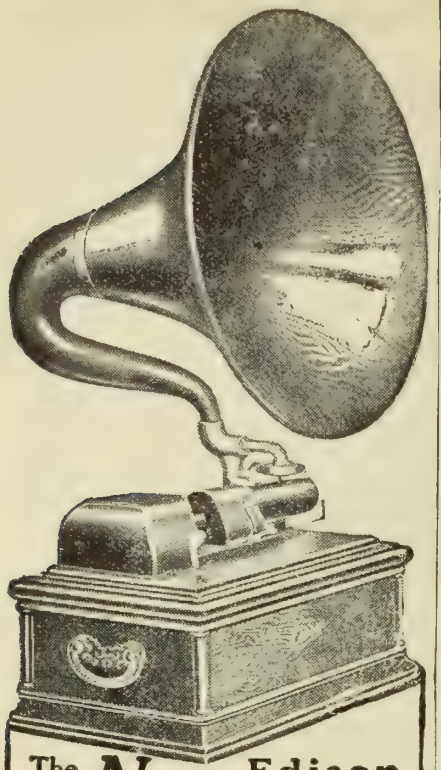

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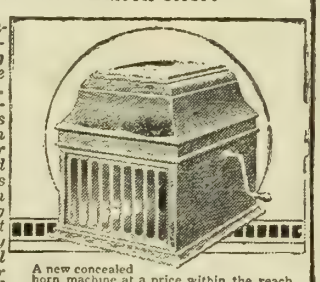
An offer introducing *The New Edisons.* Write quick—*while this offer lasts.*

WRITE *today* for our *new* Edison catalog—that tells you all about the wonderful *new* model Edison and our *new* Edison offer!

Hear the latest up-to-date song hits of the big cities. Laugh until the tears stream down your face and your sides ache from laughing at funniest of funny minstrel shows; hear the grand old church hymns, the majestic choirs, the pealing organs, the splendid operas, the crashing brass bands, the waltzes, the two-steps, the solos, comic vaudeville, duets and quartettes. Take your choice of any kind of entertainment. All will be yours with the Edison in your home.



A new concealed horn machine at a price within the reach of all! On easy monthly terms if desired.

The Offer:

We will send you the *new* model Edison Phonograph and your choice of all the brand new records on an **absolutely free loan.** We want you to hear all the waltzes, two-steps, vaudevilles, minstrels, grand operas, the old sacred hymns, every kind of comic and popular music, also your choice of the highest-grade concerts and operas, as rendered by the world's greatest artists. Entertain your family and friends. *Then, when you are through with the outfit, you may send it back at our expense.*

REMEMBER, not a penny down—no deposit—no guarantee—no C. O. D. to us—no obligations to buy—*a full free trial* in your own home—*direct* from us—*direct* to you. Returnable at our expense or payable (if you want to keep it) at the rock bottom price direct from us.

The Reason:

We are tremendously proud of this magnificent new instrument. When you get it in your town we *know* everybody will say that nothing like it has ever been heard—so we are pretty sure that at least some one, if not you, then somebody else, will want to buy one of these *new style* Edisons, *especially as they are being offered now at the most astounding rock-bottom price and on easy terms as low as a few dollars a month.*

Our *New* Edison Catalog Sent *Free*

Your name and address on a postal or in a letter (or just the coupon) is enough. No obligations in asking for the catalog. Get this offer—*while this offer lasts.* Fill out the coupon now—today.

F. K. Babson, Edison Phonograph Distributors
4501 Edison Block, Chicago, Ill.
Canadian Office—355 Portage Ave., Winnipeg, Can.

To
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Edison Phonograph Distributors,
Dept. 4501 Edison Block, Chicago, Ill.

Gentlemen:—Please send me your New Edison Catalog and full particulars of your free trial offer on the new model Edison Phonograph.

Name.....

Address.....

Live Stock Markets in the Year 1913

(CONTINUED FROM PAGE FIVE)

The extreme range of steer values for the year, by months, with comparisons, follows:

Month.	900 to 1,050 Lbs.	1,050 to 1,200 Lbs.	1,200 to 1,350 Lbs.	1,350 to 1,500 Lbs.	1,500 to 1,900 Lbs.
Jan.	$6.00@ 9.00	$6.70@ 9.00	$7.00@ 9.10	$7.50@ 9.40	$8.40@ 9.50
Feb.	6.20@ 6.85	6 60@ 8.60	7.00@ 9.10	7.00@ 9.00	8.50@ 9.00
March	7.00@ 9.00	7.35@ 9.15	7.75@ 9.15	8.00@ 9.15	8.50@ 9.30
April	7.10@ 9.00	7.30@ 8.95	7.50@ 9.25	8.25@ 9 25	8.65@ 9.25
May	7.00@ 8.90	7.35@ 9.05	7.45@ 8.90	7.65@ 9.00	8.15@ 9.10
June	7.10@ 9.00	7.40@ 9.85	7.60@ 9.10	7.85@ 9.20	8.45@ 9.15
July	6.90@ 9.10	7.25@ 9.10	7.35@ 9 10	7.85@ 9.15	8.30@ 9.20
August	6.75@ 9.10	7.00@ 9.25	7.40@ 9.10	7.90@ 9.15	8.25@ 9.20
Sept.	6 50@ 9.50	6.65@ 9.50	7.25@ 9.50	8.15@ 9.45	8.60@ 9.50
Oct.	6.60@ 9 75	7.00@ 9.65	7.55@ 9.50	7.75@ 9.50	8.65@ 9.50
Nov.	6.50@ 9.80	6.60@ 9.85	7.00@ 9.60	7.40@ 9.50	8.15@ 9.25
Dec.	6.50@10.00	6.60@10.25	7.00@10.00	7.50@ 9.10	8.15@ 9.10
1912	4.70@10.65	5.15@11 25	5.70@11.25	6.30@11 00	7.10@11.05
1911	4.30@ 9.25	4.75@ 9.25	5.20@ 9.25	5.65@ 9.25	5.85@ 9.35

Tables for Comparison

The high cost of butcher cattle and stockers is indicated by the following tabulation:

Animals.	Top Prices 1913.	Top Prices 1912	Top Prices 1911.	Average Prices. 1913.	Average Prices. 1912.
Cows and heifers	$ 9.50	$10.00	$ 8.00	$6.50	$5.75
Canners and cutters	5.15	4.40	3.65	4.40	3.60
Calves	12.60	12.00	10.00	9.75	8.50
Stockers and feeders	8.35	8.00	6.35	7.15	5.90

Average prices of the principal classes of live stock for the year 1913, by months, with comparisons, follow:

	Native Steers.	Cows and Heifers.	Hogs.	Sheep.	Lambs.
January	$7.90	$6.10	$7.45	$5.30	$8.55
February	8.10	6.45	8.20	5.85	8.60
March	8.30	6.70	8.90	6.35	8.60
April	8.45	6.75	9.00	6.45	8.30
May	8.10	6.80	8.50	5.90	7.55
June	8.20	6.70	8.65	4.95	6.80
July	8.30	6.45	9.00	4.55	7.50
August	8.45	6.50	8.40	4.40	7.30
September	8.55	6.55	8.20	4.30	7.05
October	8.60	6.40	8.20	4.50	7.00
November	8.30	6.35	7.75	4.55	7.25
December	8.25	6.30	7.70	4.85	7.60
1913	8.30	6.50	8.30	5.10	7.60
1912	7.95	5.75	7.75	4.55	7.10
1911	6.50	4.45	6.90	3.95	5.90
1910	6.80	4.80	8.90	5 25	7.55

Average prices of stockers and feeders for the year, with comparisons, follow:

	Extreme Range. 1913.	Average Prices. 1913.	1912.	1911.	1910.
January	$5.00@7.90	$6.90	$4.85	$5.00	$4.65
February	5.35@8.35	7.35	5.20	5.15	4.85
March	5.40@8.30	7.60	5.45	5.30	5.50
April	5.50@8.25	7.60	5.90	5.10	5.60
May	5.50@8.25	7.50	5.95	5.05	5.50
June	5.00@8.25	7.45	5.80	4.40	4.85
July	5.00@8.20	7.05	5.60	4.10	4.45
August	4.50@8.00	7.10	6.30	4.50	4.50
September	4.75@8.15	7.05	6.45	4.55	4.50
October	4.50@8.10	6.85	6.50	4.40	4.70
November	4.50@7.85	6.65	6.45	4.50	4.60
December	4.50@7.65	6.70	6.60	4.50	4.70
Year	4.50@8.35	7.15	5.90	4.70	4.85

Fairly Good Hog Prices

Considering supply, a high level of hog prices was maintained all through the year. The eleven principal points received approximately 25,000,000 hogs, about 200,000 more than in 1912, and toward the close of the year a short corn crop was responsible for liquidation of underweights on a scale that made receipts the heaviest in a number of years.

As was the case in 1912, pig marketing was heavy, owing to disease, which seriously decimated the new crop west of the Mississippi river. Disease ravages were responsible for material curtailment of mature hog supply at Omaha and Sioux City, but also flooded every Missouri river market with little stuff. The summer drouth also stimulated liquidation by Missouri, Kansas, southern Iowa and Nebraska, so that the heavy run of the last half of 1913 was in a sense a draft on the hog crop of the coming year.

Remarkable Demand for Pork

The outstanding feature of the trade was the continuous healthy consumptive demand for hog product, both fresh and cured, fresh meat demand being a stout prop under the market most of the time. April was the high mark, light hogs scoring at $9.70. July registered high point on heavy stuff at $9.55. During September the market was fairly deluged with little pigs and thousands sold at $3 to $3.50.

The extreme range for the year was $6.85 to $9.55 per hundredweight on heavies and $6.90 to $9.70 on lights. In 1912 the range was $5.80 to $9.40 on heavies and $5.45 to $9.35 on lights. The range of prices for the year is indicated as follows:

	Mixed. 195@250 Lbs.	Heavy. 255 Lbs. Up.	Light. 135@190 Lbs.
Jan.	$6.95@7.80	$6.85@7.77½	$7.00@7.77½
Feb.	7.10@8.70	7.25@8.70	7.40@8.70
Mar.	8.15@9.50	8.05@9.35	8.20@9.62½
April	8.30@9.60	7.90@9.40	8.30@9.70
May	8.10@8.80	7.80@8.80	8.15@8.85
June	8.20@8.75	7.90@8.90	8.25@9.00
July	8.30@9.62½	8.20@9.55	8.60@9.62½
Aug.	7.25@9.40	7.00@9.20	8.15@9.40
Sept.	7.25@9.55	7.10@9.10	7.90@9.65
Oct.	7.40@9.05	7 30@8.95	7.40@9.05
Nov.	7.20@8.30	7.15@8.30	6.90@8.20
Dec.	7.25@7.92½	7.25@7.95	7.00@7.85
1913	6.95@9.62½	6.85@9.55	6 90@9.70
1912	5.75@9.40	5.80@9.42	5.45@9.35
1911	5.55@8.30	5.35@8.25	5.25@8.25

Liquidation of the new hog crop toward the end of the year not only swelled receipts, but reduced weights.

Sheep Supply from West

Supply of sheep and lambs for the year in the west broke previous records, although Chicago fell short. Lambs averaged $7.60, or 5 cents higher than last year, and the highest on record. Sheep averaged $5.10.

The spread between sheep and lambs was nearly as wide as in 1912. Lambs sold highest in January at $9.50, and sheep in April at $8. A short crop of natives was a feature of the trade.

The market was aggravatingly irregular all through the year, declines and advances of 50 cents per hundredweight following in rapid succession. Scarcity of natives demonstrated how dependent the mutton consumers of the United States are on the Transmissouri region for a supply. Marketing of ewe lambs was unrestrained; it impaired breeding flocks and warranted prediction of impending shortage. A development of the year was expansion of winter feeding in the irrigated sections of the northwest. Average prices of sheep and lambs, with comparisons, follow:

Month.	Sheep. 1913.	Sheep. 1912.	Sheep. 1911.	Lambs. 1913.	Lambs. 1912.	Lambs. 1911.
Jan.	$5.30	$4.30	$4.10	$8.55	$6.50	$6.20
Feb.	5.85	4.10	4.15	8.35	6.20	6.05
March	6.35	5.30	4 70	8.60	7.30	6.10
April	6.45	5.90	4.20	8.40	7.80	5.50
May	5.90	5.70	4.45	7.55	8.30	5.85
June	4 95	4.40	3.80	6.80	6.80	6.10
July	4.55	4.35	3.95	7.50	7.25	6.30
Aug	4.40	4.00	3.50	7.30	6.85	6.35
Sept.	4.30	4 15	3.75	7.05	6.95	5.70
Oct.	4.50	4.00	3.65	7.00	6.65	5.70
Nov.	4.55	3.95	3.50	7.25	7.15	5.45
Dec.	4.70	4.30	3.50	7.65	7.40	5.70
Year	5.10	4.55	3.95	7.60	7.10	5.90

SKIN CLEARED By Simple Change in Food

It has been said by a physician that most diseases are the result of indigestion.

There's undoubtedly much truth in the statement, even to the cause of many unsightly eruptions, which many suppose can be removed by applying some remedy on the outside.

By changing her food, a Kan. girl was relieved of an eczema which was a great annoyance to her. She writes:

For five months I was suffering with an eruption on my face and hands which our doctor called eczema and which caused me a great deal of inconvenience. The suffering was almost unbearable.

"The medicine I took only gave me temporary relief. One day I happened to read somewhere that eczema was caused by indigestion. Then I read that many persons had been relieved of indigestion by eating Grape-Nuts.

"I decided to try it. I liked the taste of the food and was particularly pleased to notice that my digestion was improving and that the eruption was disappearing as if by magic. I had at last found, in this great food, something that reached my trouble.

"When I find a victim of this affliction I remember my own former suffering and advise a trial of Grape-Nuts food instead of medicines."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true and full of human interest.

Should the State Board of Agriculture Be Reorganized?

(CONTINUED FROM PAGE THREE)

at a regular meeting. Heretofore it has been necessary to be on the inside to learn the time and place of such meetings.

The president should not be eligible to appointment or election on the board of managers until two years after his term has expired. This would tend to inject some new blood into the management.

Mellor, the Politician

Secretary Mellor must be given credit for being an ingenious politician. He did a clever piece of work when he secured the passage of the bill transferring the gathering of agricultural statistics from Deputy Commissioner Poole's office, where the work has been done for several years, to his own office.

Secretary Mellor agreed to gather and publish these agricultural statistics without cost to the state. This is not true, for the taxpayers will have to pay for all this, as they have to put up the money for state fair improvements over and above what the fair itself puts in. The result is really an additional expense of $5,000 a year to the state for George W. Kline's salary and the cost of bulletins, etc. If state fair money is used for this purpose, it cannot be used for improvements on the grounds. The gathering of agricultural statistics by the State Board of Agriculture has not lessened the expense of the labor bureau. The appropriation for the last two bienniums for the labor bureau were as follows:

	1911-12.	1913-14.
Commissioner	$3,000	$ 3,000
Stenographer	1,000	1,680
Traveling and office expenses	5,000	6,000
Totals	$9,680	$10,680

In addition to this there was a deficiency appropriation in the sum of $285. The foregoing figures show an increase of $1,000 for the present biennium in the traveling and office expenses of the labor bureau.

Question for the Taxpayer.

Here is a question in mathematics we are unable to answer: If it costs the state $500 more per annum for labor bureau office expenses than it did when the bureau of labor handled the gathering of agricultural statistics, and it costs the state $5,000 a year for Mr. Mellor's publicity man to do the same work that the labor bureau did last biennium for $500 less than it is doing the work in that bureau this year, without the labor of gathering agricultural statistics, what have the taxpayers gained by the transfer?

We have another question we are unable to answer: Why are agricultural statistics any more reliable when handled by a newspaper man without agricultural experience in the office of the secretary of the State Board of Agriculture than when handled by a newspaper man Poole, a country editor and publisher, in the Bureau of Labor and Industrial Statistics? We are inclined to believe that the country newspaper editor is likely to be better qualified than the city newspaper man.

Mellor Tells the Reason Why

In the report of the proceedings of the 1913 meeting of the Nebraska State Board of Agriculture Secretary Mellor is frank enough to tell the reason why he added a publicity man to his office force. He says:

The agitation for Nebraska publicity has been acute during the summer and early fall months, and the board considered it of sufficient importance to give it a trial so that the legislature could form an intelligent opinion as to the advisability for such a bureau supported by state funds.

We would call attention to the fact that the summer and early months of 1912 was the period in which the members of the legislature were being nominated. Frank G. Odell was selected to do the initial work in establishing this department. Mr. Odell is an active worker in several agricultural organizations and is chairman of the legislative committee of the Nebraska Farmers' Congress. His connection was of short duration. His successor was George W. Kline, a Lincoln newspaper man, who has a wide acquaintance among the politicians of the state. Secretary Mellor says:

With the money derived from the state fair, the State Board of Agriculture conducts a state publicity bureau from which we issue daily to the city newspapers agricultural items, and forward to all county newspapers a weekly bulletin containing items of general agricultural interest, in addition to the gathering and disbursing of agricultural statistics from reports received from the county assessors and yield estimates made by 2,000 correspondents distributed throughout the various counties of the state.

This would lead the casual reader to think that Secretary Mellor is doing something besides holding a state fair. There has been no change in the method of gathering of agricultural statistics. We wonder what kind of men Secretary Mellor would select for correspondents. Would they be politicians or farmers? Other states use the government weather and crop service. G. A. Loveland, in charge of the government weather bureau at Lincoln, is a competent man and should be used by the state.

Public Welfare Commission

At the 1912 meeting of the Nebraska Press association a resolution was passed asking the legislature to pass a bill appropriating $50,000 for publicity. A committee was appointed to draft such a bill. At the 1912 meeting of the State Commercial Club association a similar resolution was passed, and a committee was appointed. At a joint meeting of these committees held at Grand Island a bill was drafted for an act to create a Nebraska conservation and public welfare commission, which was submitted to the executive committees of their respective organizations and was unanimously approved. On January 28, 1913, it was introduced in the house of representatives by Representative J. N. Norton and read the second time on January 29

(CONTINUED ON PAGE TWENTY-TWO)

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Smoke after enjoying *clean, pure, healthful*

WRIGLEY'S SPEARMINT

You'll digest your meals and enjoy smoking a great deal more if you

Chew it after every meal

It makes you feel more like smoking because it cools and soothes your mouth and throat.

It also aids digestion—prevents or relieves heartburn. It brightens and preserves the teeth wonderfully—purifies the breath instantly. It's *real* "springy" chicle gum—flavored with *real* juice of *real* mint leaves—if it's

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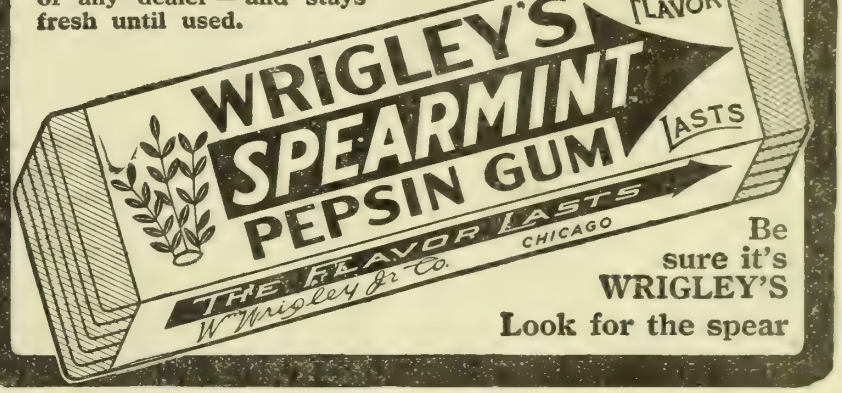

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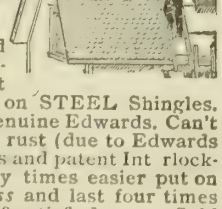

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Garden Work in the Winter

Things it is Possible to Do Before Spring Season

IF WE want an early garden next year, we want to prepare for it whenever the weather will permit during the winter. The spring is a very busy season, and the more we can get done before it comes the better. It is seldom we get our gardening done to suit us if we wait until the planting season comes to begin operations.

* * *

If your garden is fairly level, be sure to cover it well with fertilizer. Intensive culture requires a very rich soil for best results. Your fertilizer should be pretty well balanced, and any coarse material should be removed before plowing, or else one party should go along after the plow and throw it into the bottom of the furrow so it will be entirely covered by the next furrow thrown. Barnyard manure dotted so it will pulverize with but little trouble, mixed with a liberal portion of droppings from the hen house, will be fine, as it furnishes both humus and rich plant foods immediately available. If cattle are fed in a covered shed their manure can be hauled direct to the garden without being rotted, unless it has coarse material mixed with it. Spread any of these manures evenly when hauling them so they will leech into the soil evenly. If the ground can be plowed during the early winter it will be all the better, but be sure the fertilizer is properly distributed first.

* * *

Prepare a bed for some extra early garden where it will not interfere with the future operations if you will want to use a horse later. Sow several rows of spinach, a quart or so of onion sets, a few rows of radishes, mustard and lettuce. These seeds will lie in the ground until spring and come up as soon as the soil warms up sufficently. These early vegetables usually make a splendid growth and are much earlier than we can possibly have them from spring planted. Onions will often grow almost all winter, and are ready rooted when the regular season for growth comes. Egyptian multiplyers can be left in the ground all winter and will come on earlier than if taken up and replanted in the spring.

* * *

Mulch the plat of rhubarb freely. It is a gross feeder, and the richer the soil the better stalks you will get and the stronger the roots will become. This great fruit substitute should be much more freely grown than it is, for there is no difficulty in growing it, and in the early spring, when there is nothing fresh in the fruit line, it is especially welcome as well as healthful. Remember, the soil can hardly be made too rich for it, but it should be deep and loose.

* * *

Asparagus is another plant that should be given a very liberal dressing of manure. Five or six inches will not be too much, and most growers recommend salting it pretty heavily. I have never done so and have had as fine crowns as anyone could wish. I have cut stalks fully three-fourths of an inch in diameter when five or six inches high. I planted two-year-old plants and set them deep, and in very rich, loose soil, and mulched them heavily every fall.

* * *

Give the strawberry beds a liberal dressing of droppings from the hen house. If they are dry and finely pulverized you can take the shovel and scatter them with a swinging motion much as the old-time farmer sowed his grain. This is a strong fertilizer and should not be applied too heavily, but I have never used anything to equal it for strawberries. The very best time to apply it is in the winter, for it will be carried down into the soil ready for the plants when root growth starts, and in an available form. Strawberries are heavy feeders, also, especially if they are grown in matted rows, as they are usually on the farm.

* * *

Celery is another crop that it is best to do some preliminary work on during the winter. It should have an exceedingly rich soil, but decaying manure is dangerous and should never be used if well decayed manure can be obtained. If it is necessary to use it undecayed, plow it under as early in the winter as you can, and again as early as possible in the spring. Use something with the stable manure that is more concentrated so as to not have to use so much of the other. Droppings from the hen house will be all right, or a good dressing of bone meal is ideal. Remember, this is an expensive crop to produce and bleach and will be well worth a good chance to make good. It would be poor policy to be niggardly in laying the foundation.

* * *

Horseradish roots should be dug up and used during the winter and new plants set for the next year, as the old plants will be hard and woody. The best roots to use for replanting are the side roots about the size of a leadpencil, or a little larger, and six or eight inches long. Plant as soon as removed from the old root, or pack away in wet sand. Set as near upright as you can when planting, with the top about an inch below the surface. These roots thicken up during the next summer and are the marketable roots for the next winter, as the side roots will be small, just right for setting another field. I have seen these roots grown to average an inch in diameter for their whole length, smooth and firm, with no woody fiber. It is a heavy feeder, also, and it is hard to get the soil too rich, but fresh manure will be apt to cause rough roots.

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One package each of Earliest Cabbage, Shorthorn Carrot, Earliest Cucumber, Prizehead Lettuce, Flashlight Radish, Onion Mixture, for earliness, quality and yield, seeks an equal. These six packages for 10c contain enough seed to furnish you with rich, juicy vegetables, and lots and lots of them, during early Spring and Summer.

Special Offer

Above vegetable collection, together with one package each of Salzer's Radiant Sweet Peas, Elegant Asters, Gorgeous Eschscholtzias, Blue Cornflower, Brilliant Poppies, Sunny Cosmos, all for 20c, postpaid. Or, remit 25c and get both collections, our big Catalog and our Great Red Riding Hood Tomato Novelty, alone costing 15c.

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Ten packages Farm Seeds, including $1,000 Marquis Wheat, 20th Century Alfalfa, etc., for 10c, postpaid.

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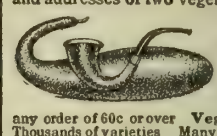

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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Compensation

I'm "kep' in" when I'm "tardy,"
An' I'm "kep' in" when I'm "late,"
I'm "kep' in" for "position"—
That means not sittin' straight.

I'm "kep' in" on my joggerfy,
My readin' an' my writin',
An' I'm "kep' in" some for laughin',
But I'm "kep' in" most for fightin'.

I'm "kep' in" when my marbles
Comes rattlin' from my pockets,
An' sometimes when my matches
Gets mixed up with my rockets.

The truth is, 'at I'm "kep' in"
For most everything I do!
But one jolly thing about it
Is, the teacher's "kep' in," too!
—Leslie's.

The Editor's Corner

Last week we received a story called "The Night Before Christmas," which we are printing on this page. With it came a note saying: "I hope you will take my story even if I am a few months over 16, as this is the first time I ever wrote one." Now, we have made a rule that no one over 16 may enter the story contest, and, of course, we have to stick to this rule, because it would not be fair to the rest of you if we made exceptions. However, this is such a good story that we want you all to read it, so we are giving it to you, and we regret that our rules make it impossible for the writer to be a prize winner. She sent us her best wishes for success in the new year, and we wish to thank her for her good wishes and to say that we wish the same for her, and for all the rest of our young people.

***

There have been an unusually large number of contests in raising corn, pigs and potatoes for the boys, and in cooking and canning for the girls, and we have been unable, on account of lack of space, to say much about them. I hope many of you have entered these contests, for they are lots of fun, and the kind of fun that does you good in the end. Not only is there a possibility of winning a prize which will be worth while, but even if you win nothing at all, you get some valuable experience. There is a Missouri boy named Floyd Fisk who did not win any prize on his corn this year, but he got quite famous for his cheerful manner of reporting his failure. This is the report he sent in:

MY CORN

No use for a boy to look forlorn
When it's too dry in the Ozarks to raise good corn;
He can feed the fodder to the goats,
And throw the nubbins to the shoats.
I have done the best that I know how—
I used the harrow, then the plow.
I plowed it deep and close at first,
Then plowed it shallow to quench its thirst;
But it remained dry as dry could be.
I looked and looked and looked in vain—
If I do not succeed I'll try again.
—Floyd E. Fisk.

Isn't he the right kind of boy?
THE EDITOR.

(Prize Story)

A Fishing Trip

By Harry B. Cochran, aged 12, Walworth, Neb.

On Decoration day, papa, mamma, my brother and I went fishing. Some of our neighbors went along with us. We waited for them a while and then started out. Soon we saw them coming and drove slowly until they caught up with us.

When we got to the pond, which

Whose Little Kitten Are You?

is about eight miles away, we fished for a while before dinner. One of the boys wouldn't come to dinner, he was so crazy to fish. This was his first fishing trip. After dinner we fished and caught a lot more fish. We put them in a half barrel with some water in it. A few of the fish were alive when we got them home. We put four or five of them in the tank. They kept dying off till only two of them were left. One day papa cleaned the tank, but we could not find them, and that was the last of our fish. They were sunfish.

We built a camp fire in the grove and fried fish for our dinner. We also caught a big turtle, but we did not eat it. Mamma caught a big turtle and shouted for help to pull him out, but he was so big that when he got to shore and braced his big feet on the bank the line line broke, and mamma fell over backward.

(Honorable Mention)

Lost in the Forest

By Cecil Madge Woody, Aged 13, Manderson, Wyo.

One morning it was nice and sunshiny and I saddled up my pony and went out in the forest. We came upon a jack-rabbit and my horse became frightened and threw me. Peanuts ran away, and I wandered in the woods, and it got dark, and I kept on going. I heard the leaves crackling in the woods and I went toward the noise, and I thought it must be my pony, but I got closer and closer and saw it was smaller than Peanuts, and it was coming toward me, and I knew it was not my horse, and I saw it was a bear. So I saw a dim light and ran toward it. I came to a hill and ran down it as fast as I could, and I came to a river and there was no bridge there. I heard the bear coming, so I ran down the creek till I came to a log used as a bridge to cross. When I got across I stopped to see if the bear was coming. As he got on the log the weight of his body was so great he tipped it and fell in. I ran to the house and stayed till morning, when they found my pony and I got home all right.

The Night Before Christmas

By Lena Jelden, Columbus, Neb.

"'Twas the night before Christmas,
When all through the house
Not a creature was stirring,
Not even a mouse.

"The stockings were hung
By the chimney with care,
In hopes that St. Nicholas
Soon would be there."

We all got ready to go to church to have our program, except papa, who stayed at home because he was lame and stiff and could not walk and was always in bed, so he stayed at home alone. When we came home he said that the dogs had barked, so my oldest brother, aged 11, and John, Herman, Edward, Freida and I all went out to the barn to see what was going on. And what do you suppose was there? Santa Claus had brought us a little Shetland pony about three feet tall. We all shouted with joy and went to the house and told papa and mamma what Santa Claus did.

We learned to ride her and named her Mandy, and she learned many tricks. When we say, "Lie down!" she will roll, and when we say, "Jump up!" she will jump on two legs. When we say, "Shake hands!" she will hand us her paw. We get the cattle with her twice a day, and also the mail, and she is still as smart as she can be. When we tease her she will bite us.

Her age is 13. We always know it by our smallest brother's age, for he is just as old, and also by the time our papa got lame and went with crutches for thirteen years. He died last June. But we can always thank him for the present he gave us when he lay sick in bed. Hope we will have our pony many years yet.

Additional Stories

Marshall Macklin, no address; Violet Frostrom, Wausa, Neb.; Shirley Curtis, Fayetteville, Ark.; Leonora Lyons, Minidoka, Idaho; Mildred Johnson, Taylor, Tex.; Bernice M. Anderson, Kansas City, Mo.; Mildred M. Mullinger, Denison, Ia.; Mamie Cousins, Diamondville, Wyo.; Edith Pumphrey, Ohiowa, Neb.; Hazel Hill, Harlan, Neb.

Trees and Lightning

It seems to be a fact that lightning differentiates between trees. The general opinion that neither the beech or the birch is ever struck by lightning has been confirmed by careful investigation. Mr. McNab, a fellow of the Botanical Society of Edinburgh, Scotland, collected information regarding lightning-struck trees throughout Great Britain, and failed to discover that either of these species had ever been struck. Investigations in North America gave similar results. In the forest regions a beech tree is regarded as the safest place in a thunderstorm.—American Boy.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write with ink, on one side of paper only.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department. Twentieth Century Farmer, Omaha, Neb.

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Please send, free of cost, to the address below, Prof. Beery's Introductory Course in Horsemanship

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Refusing to lead.
Running away when halter or bridle is removed
Getting fast in the stall.
Pawing in the stable.
Pawing while hitched.
Crowding in the stall.
Fighting halter or bridle.
Tender bitted.
Pulling on one rein.
Lugging on the bit.
Lunging and plunging.
Refusing to stand.
Refusing to back.
Shying. Balking
Afraid of automobiles.
Afraid of robes.
Afraid of clothes on line
Afraid of cars.
Afraid of sound of a gun.
Afraid of band playing.
Afraid of steam engine.
Afraid of the touch of shafts or harness.
Running away.
Kicking.
Biting. Striking.
Hard to shoe
Bad to groom.
Breaking straps.
Refusing to hold back while going down hill
Scaring at hogs or dogs along the road.
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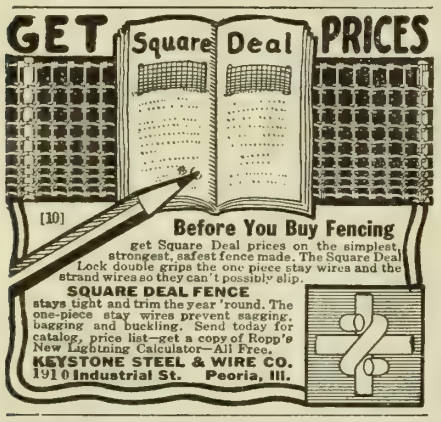

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Rider Agents Wanted
in each town to ride and exhibit sample 1914 bicycle. *Write for special offer.*
Finest Guaranteed 1914 Models $10 to $27
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We *Ship on Approval* *without a cent deposit, pay the freight,* and allow 10 DAYS FREE TRIAL.
TIRES, coaster brake rear wheels, lamps, sundries, parts and repairs for all makes of bicycles *at half usual prices.* DO NOT BUY until you get our catalogues and offer. *Write now.*
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One man and a horse can cut more ice in a day with it than he will use. Guaranteed to beat 20 men with saws! Cuts *double row;* cakes uniform, any size and thickness. Two days' cutting for others pays for your plow. In 3 sizes—$15.50 and up. Write for catalog and our *surprise* offer.
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Simple, durable, powerful. Carefully made to give satisfaction. 34 sizes and kinds. Shipped anywhere on trial. Fully guaranteed. Send for Big 48 page Catalog. It will help you to buy a better engine for less money.
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The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Of Interest to Our Women Readers

A Beautiful Hope for You

Every day is a new beginning;
Every morn is the world made new.
Ye who are weary of sorrow and sinning,
Here is a beautiful hope for you,
A hope for me and a hope for you.

All the past things are past and over.
The tasks are done, and the tears are shed.
Yesterday's errors let yesterday cover.
Yesterday's wounds which smarted and bled
Are healed with the healing which night hath shed.

Every day is a fresh beginning.
Listen, my soul, to the glad refrain
And spite of old sorrow and older sinning
And puzzles forecasted and possible pain
Take heart with the day and begin again.

Only the new days are our own.
Today is ours, and today alone.

Our Home Chat

"Are you going to attend those home economics meetings at the State University?" one woman asked another not long ago.

"Well, I should like to," was the reply, "but Jim doesn't want me to."

"Why should she?" asked the husband, who was present. "Jennie is the best cook in the county, and the best dresser, and no one has healthier children than ours; and she is economical, too. What can those professors teach her?"

"No, they can't teach her much," confessed the other woman, "but I wish she were going anyhow. There is a lot she could teach them."

Now this man was really very proud of his capable wife, and the more he thought the matter over the more favorably he was inclined toward the home economics meeting, and when the date for that meeting arrives his wife will be there.

There are a lot of women on the farms of this country who can give the professors pointers about cooking, sewing and home management, and most of them are doing good work in their home communities by the advice and assistance they give to their less capable neighbors. Some women have a real talent for homemaking—a talent that cannot be acquired by all the science any university can pour into them.

If these women would attend the meetings of the farmers' wives and add to the discussions by telling of some of their practical experiences, they would help everyone a lot—students, professors and other housekeepers. And they might learn something, too, that would help them. Every man knows that it broadens him and keeps him up to date to mingle with others engaged in the same line of work that he is, and why is this not true as well of the woman whose business is making and keeping the home?

THE EDITOR.

Sending Things by Parcel Post

I wonder if any of the "farmeresses" are taking advantage of the parcel post to send produce into the cities? It seems to me that the parcel post, as such a means of transportation, is as yet only a big temptation. Here is the way right at our door—an easy, convenient and cheap means—why do we not send? Because we lack suitable containers for enclosing our products. It seems strange that this necessity has not been put on the market. It surely would fill a great present need.

I recently made a successful attempt at sending a pound of butter a distance of 300 miles. For a container I used a square-cornered, half-pound cocoa can, which held about a pound of butter. A white, boiled cloth was wrung from ice water and fitted nicely about the bottom and sides of the can, then the butter packed in fresh from the tray, pat by pat, so as to leave no air spaces. The mould of butter was then carefully removed by means of the cloth and wrapped tightly in waxed paper over the cloth. It was then returned to the can, cloth and paper folded over the top, and the lid of the can tied on with stout tape. The can, wrapped in thick paper, tied and addressed, was then ready for the journey. It got through in perfect condition. However, if the right sized container had been at hand, nearly twice the amount of butter could have been sent for the same postage.

It is a problem how to send eggs or fruit without special containers. The city markets may be supplied with these parcel post necessities, but it is the small towns near the farmers where the supply is neglected, yet so much needed. Who is going to solve the problem?

DAISY CANNON.

Nebraska Home Economics

ON JANUARY 20, 21 and 22 the Nebraska Home Economics Association will meet at the university farm in Lincoln. Your special attention is called to the forenoon meetings, which will consist of a short lecture, followed by laboratory work. There are two sections—A, the food laboratory, and B, the sewing and design laboratory. Since the space is limited, it is well, if you wish to register for either of these, to send in your application at once, as applications for registration accompanied by the fee will be accepted in the order in which they are received. Money will be refunded promptly if applications are received after the places are filled. Circulars of detailed information will be sent upon application. Send application and money orders stating course desired. Course A, 50 cents; Course B, 25 cents, to Mrs. Davisson, University Farm.

Section A will meet in the food laboratory and the work will consist of the preparation of a few typical dishes, the use of labor-saving apparatus and the preparation and service of a simple meal.

Section B will meet in the sewing and design laboratory and will consist of the construction or adaptation of patterns to suit individuals and the making of a simple waist.

Advice to Brides

One pretty, sensible girl who truly loved her young husband, who as truly loved her, came near wrecking their happiness through her uncontrolled tongue. She had always been in the habit, and a very proper one it is, of telling her mother everything in her girlhood. Now that she was a married woman, she ought to have discriminated between what concerned her husband and what concerned herself alone. She had no business to tell her mother of confidences which passed between him and herself, and he had no idea that she would not appreciate this fact, until she happened to relate "what mother said when I told her thus and so."

"Why, you didn't tell your mother that!" he cried. His tone angered her and she retorted in a sudden flame: "Indeed, I did. I shall always tell my mother exactly what I please." "Very well," he commented coldly; "I shall understand now just how far I can trust you." Months and many heart-burnings were required before this breach was healed.

A tender and petted girl is altogether too fond of fleeing for consolation to mother or sister when some fancied slight has been offered her by the adored one, who has recently sworn a thousand times that he will think of her comfort and happiness, and that only, "till the sands of the desert grow cold." And then he goes off some morning and forgets to kiss her goodbye, or he comes home at night without the egg-beater that he solemnly promised to get. And perhaps a foolish mother or sister says he is a brute—and you can easily see what a train of evils might follow in the wake of this tiny little train of circumstances.

Don't tell anybody of your domestic troubles, big or little. They grow in the telling. The first lesson that the wise wife should learn is to hold her tongue.—Kate Upson Clark in Leslie's.

Canning Meat

Mrs. W. M., Platte Center, Neb.: I read Mrs. G. H's recipe for canning meat in your paper some time ago and thought your readers might like to try my way. Cut the meat into as large pieces as will go into fruit jars. I used quart jars. Salt and pepper to taste and pack the jars full. If there is no fat on the meat, or very little, place a small piece of tallow on top so that at least half an inch of tallow is on top of the meat when done. Seal tight with new tops and rubbers. Put a layer of hay or excelsior in the bottom of the boiler; put in the jars, packing around each one with the hay, and

(CONTINUED ON PAGE THIRTEEN.)

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6250—Girls' Dress—This is a smart little design for woolen goods. The frock is closed in front with a pretty surplice effect and is finished with buttons and loops. The broad girdle confining the waist is finished with a soft broad bow in back. Either long or short sleeves may be used; the armhole is normal. Pattern No. 6250 is cut in sizes 6 to 12 years. Medium size will require 2⅞ yards of thirty-six-inch material.

6437—Ladies' Waist—Suitable for either a shirt waist or a costume waist, this bodice has one of the new very deep yokes made without any seam whatever. It comes down on the arm and the sleeve is gathered where it is inserted as well as at the wrist. The front closing of the waist is in surplice style, leaving a small opening at the neck. The model is good for all soft fabrics, especially the new brocaded silks. The waist pattern, No. 6437, is cut in sizes 34 to 42 inches bust measurement. Medium size requires 2⅜ yards of thirty-six-inch material.

6426—Child's Dress—This pretty little frock is quite plain, the ornamental tab at the upper edge of the closing being the only trimming effect. A corresponding tab finish is used on the sleeves which end just below the elbow. The four gore skirt appears straight, but there is an underturned pleat at each seam and the closing is at the side of the front gore. This style is good for school wear in wash materials or simple woolens. The pattern, No. 6426, is cut in sizes 2, 4 and 6 years. Medium size requires 2¾ yards of twenty-seven-inch material.

4650—Ladies' House Dress—This dress is one of the simplest. It has Gibson tucks at the shoulders in front and back and these extend all the way to the belt. The closing is at one side of the waist. The sleeves are the plainest of leg-o-mutton shape and full length. Cashmere, linen, gingham, percale and other wash material will be pretty if made in this style, and the collar may be detachable and of white lawn and lace. The pattern, No. 4650, is cut in sizes 32 to 42 inches bust measure. Medium size requires 5⅝ yards of thirty-six-inch material.

11-11-2517—Two Safety Pin Cases—These cases are made of two oblong pieces of cardboard covered on one side with linen and on the other side with silk and tacked together at the top with flannel leaves between.

6364—Ladies' Skirt—Serge, cheviot or broadcloth can be used to make this skirt, which is cut in two pieces and can be made with the high or regulation waistline. The closing can be made at either of the sides. The pattern, No. 6316, is cut in sizes 22 to 30 inches waist measure. Medium size requires 2¾ yards of forty-four-inch material.

5502—Ladies' Long Kimono—Any of the crepe materials can be used in make this kimono with the trimming of contrasting material. The kimono is made in the empire style and has the body and sleeve section in one piece. The pattern, No. 5502, is cut in sizes, 32, 36, 40 and 44 inches bust measure. Size 36 requires 4⅝ yards of forty-four-inch material and 6¼ yards of ribbon.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Of Interest to Our Women Readers

(CONTINUED FROM PAGE TWELVE.)

boil for two hours; then remove the boiler from the stove and let the jars remain in the water until the next day, or until thoroughly cold. If any jar has become loosened it will have to be used at once.

When I fry down pork I occasionally pour hot water in the frying pan, making delicious brown gravy. This I empty into a pan until I have all the meat fried; then I reheat and can in pint jars. There is always a generous amount of lard in the top of the jars when cold. I always use this as soon as possible, for it will only keep a few weeks. I always roast the spare ribs and back bone and pack in lard so they will be fresh when we are ready to use them.

When trying out lard I run the fat, after cutting off the rind, through the food chopper, using the coarsest plate; this saves time and lard. The rinds are placed in the oven and tried out. I always pad the floor thickly with old newspapers when working with meat; it is then little trouble to clean up after a hard day's work of this kind.

Plain Eiderdown Cap

This cap requires from four to five skeins of wool, according to size. Use a large bone hook and begin with a chain of four stitches. Join in a ring.

First Group—Pull the loop on the needle out to about three-quarters of an inch in length, throw the wool over the needle and take up another loop in the ring; pull the wool through all the loops and chain one.

Second Group—Wool over and pick up a stitch, wool over, another loop in the ring; pull the wool through all the loops and chain one. Repeat the second group until there are seven groups in the first round. In the second round make fourteen groups of stitches. In the third round do not increase the groups. The fourth round should be doubled again, making twenty-eight groups. If the hair is done up very closely to the head so many are not needed. This is where one must use their judgment, and, if a a smaller head size is required, increase the groups accordingly. Make the fifth round without increasing, but if you want a still larger cap than made by the twenty-eight groups, increase in the sixth round; after that do not increase any more. Make as many rounds as desired, leaving either three or four rounds for the turned-up brim.

They may be made of two colors. One skein is usually all that is needed to make a band about the cap at the lower edge, then add just one row or a scalloped edge of the main color used as a finish.

MRS. GILBERT.

Helpful Hints for the Home

The juice of a raw onion will remove the poison when applied to the sting of insects.

To get rid of rats and mice, smear the entrance of their holes with tar and unslaked lime.

Cane-seat chairs that have sagged may be tightened by washing in hot soapsuds and leaving to dry in the open air.

In picking young ducks, rub powdered rosin through the feathers just before scalding, and pin feathers won't bother you in the least.

SARAH E. LYTLE.

A LAMP FREE

To try in your home is the remarkable offer of the Sunshine Safety Lamp Co., 119 Factory Bldg., Kansas City, Mo. It is a new portable gasoline lamp that gives 300 candle power at a cost of one cent a night. For homes, stores, halls, churches. It has no wick, no chimney, is absolutely safe, and a child can carry it. It gives such universal satisfaction they will send it to anyone in America on free trial. Simply send name and address.

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THOUSANDS of persons are DREAMING and PLANNING to own a LITTLE FARM someday. Are YOU them? A HOME with a grove, truck farm, and poultry yard in FLORIDA means INDEPENDENCE. Success is easier than failure. Let us help you to locate right. Illustrated booklets and "Facts About Florida," free.

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Highest Prices for Furs

We buy any quantity—every kind. Send today for prices and shipping tags sure.

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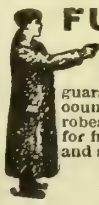
FUR COAT, $12.50



We tan the hide and make your coat for only $12.50. Complete coat (we furnish hide), $18.00. A square deal, all work guaranteed. We are pioneer tanners of this country of cattle and horse hides for coats, robes, rugs, harness, lace, leather, etc. Write for free booklet of information on handling and shipping hides; also price list.

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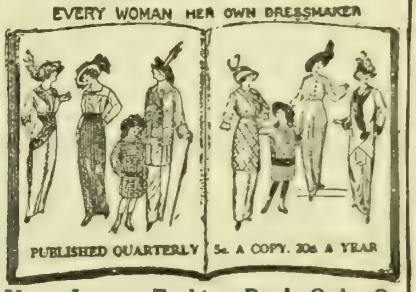

Very Latest Fashion Book Only 2c

Read This Very Special Offer.

FOR the benefit of our readers who use patterns, we publish four times a year the well-known fashion book, "EVERY WOMAN HER OWN DRESSMAKER."

The Spring Fashion Nember is ready February 1.

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The price is 5 cents a copy or 20 cents a year, "EVERY WOMAN HER OWN DRESSMAKER" tells how to make Coats, Waists, Skirts, Costumes, Aprons, Dressing Sacques, Underwear, Baby Clothes. Clothes for Boys and Girls, etc., etc. Every woman who uses patterns or does sewing at home should buy "EVERY WOMAN HER OWN DRESSMAKER" four times a year. Besides telling how to make clothes it illustrates and describes hundreds of the newest styles for Ladies, Misses and Children.

OUR SPECIAL OFFER—IF you use patterns, or if you order any pattern shown in this or any other issue of our magazine, we will send you the very latest issue of "EVERY WOMAN HER OWN DRESSMAKER" for 2c. Just send your address and 2c. to Pattern Department Twentieth Century Farmer, Omaha, Neb.

Half a Million

People Are Making Chicken Profits with Johnson's Old Trusty Incubator—This is because the Old Trusty was invented by an engineer who knew chickens. It's made of finest materials in Johnson's own factory where *top notch* results are obtained at *lowest cost*. Huge output, brings the price of Old Trusty within the reach of anyone. Saves you about $5.00.

This Year's Price Based on 100,000 Sales

Write at once for Johnson's price to your station—freight paid. Get started making poultry profits this year. For many years Johnson advertised his price "less than $10"—this year it is still less than $10 delivered east of Rockies. Only a trifle more clear to Pacific Coast. And Johnson ships **promptly**, ready to use.

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Mail a Postal NOW

Get the Old Trusty Catalog—read the chicken chapters. Learn about the famous construction of the Old Trusty. Address

Johnson, Incubator Man
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Save 75¢ to $1.25 On Every Hatch

THE X RAY

Incubators have heating plant **underneath** —in the middle.

1 gallon oil from start to finish.

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Send for Free Book

Others take five gallons and have to be filled every day. X-Ray saves $4.00 to $6.00 a season. Saves work, too, and gets far better results. Heat evenly distributed. Automatic trip regulates flame. X-Ray Brooder also centrally heated. Shipment direct. Send for Free Book No. 58. We pay the freight.

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$7.35 LOWEST PRICE YET FOR BIG 155 EGG INCUBATOR

Set Up Ready For Use

Think of it! The old reliable Progressive 155-Egg Incubator for $7.35. Money back with 8 per cent interest if not satisfied. Wonderful bargain! *Only incubator with hundreds of dead air cells.* Copper hot water boiler, double disc regulator, deep nursery, double doors, egg tester, safety lamp—*every big feature*—all for $7.35 freight prepaid E. of Rockies. Incubator and Brooder ordered together, $9.85. Send your money now, or, if you want more facts, write for our Big Free Book.

155 CHICK

PROGRESSIVE INCUBATOR CO.
Box 207 Racine, Wis.

FARM FENCE

11½ cts. a rod for a 26 in. high fence; 17 1-4c. a rod for 47 inch high stock fence; 28 1-2c a rod for a 60-inch heavy poultry fence. Sold direct to the farmer on 30 Days Free Trial. Special barb wire, 80 rod spool, $1.40. Catalog free.

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26-inch Hog Fence,.....14c.
41-inch Farm Fence,....21c.
48-inch Poultry Fence....22½c.
80-rod spool Barb Wire, $1.40

Many styles and heights. Our large Free Catalog contains fence information you should have.

COILED SPRING FENCE CO. Box 124 Winchester, Ind.

Making the Farm Poultry Pay

Timely Talks by Ida M. Shepler

WHILE national poultry values have been high for the last two years, they have decreased nearly 50 per cent in some localities over the values of 1910 and 1911. Before that time there had set in a great rush to buy incubators and go into the business on a worth while scale. It paid, as the yearly list in dollars and cents showed, but why did the enthusiasm stop short, and just at a time when prices were getting in line to stay on a paying basis far above work and feed expended? It must be just a little lapse to get a stronger start.

* * *

By far the greater number of poultry farms are small. There are a few large enterprises that pay, but the failure of so many of these get-rich-quick poultry plants has driven the poultry keeper into a consideration of the business on a smaller scale, and now small incubators, small backyard, intensive poultry raising, is gaining ground. The farmer, in the main, has come to be the big man in the business. He it is who has taken the place of those great enterprises who installed mammoth incubators, bought thousands of chickens, then failed because they did not know you must begin gradually with incubators and chickens, and learn as the flock increases, and learn from your mistakes.

* * *

The incubator has done more than any one other factor to make chicken raising profitable, general and a pleasure. When there were no incubators it was a disgrace to talk about chickens. The incubator has set chicken raising on a moneyed basis, and therefore raised it to a gold pedestal. No disgrace to talk chicken these days. To be the owner of a fine, paying thoroughbred flock gives you an added interest to people. The incubator holds the credit for all this widespread interest in profitable poultry today. Think of the small and nondescript poultry flocks of twenty-five years ago, and notice them on the middle state and western farms today. Nothing small or mixed about many of them today.

* * *

They tell of a man over in England as long ago as fifty years, who made several millions during his lifetime in chickens, but he is just one to tell of. For the average lot there is no millon in chickens, and it is useless to go putting such ideas into people's heads. For the farmer it is just one good way to add to his income. The more he raises, the better stock in this line he keeps; the more he studies the needs and care of his flock and the more appliances he puts in to aid its increase, the more dollars he adds to that income. When you talk this way you are talking sense.

Uneven Distribution of Eggs

The recent high price of eggs has caused the Farmers' union to conduct an investigation into the poultry conditions of the nation, and Peter Radford, lecturer of the National Farmers' union, gave out the following statement concerning conditions in Texas:

"We market 65 per cent of our egg crop in April, May and June, although the consumption of eggs runs very nearly even throughout the entire year. The American farmer today is paying the middleman the pricely sum of $38,600,000 per annum for storing and selling his eggs. This sum of money would build and equip sufficient storage to care for the agricultural production of the nation The value of the nation's egg production during a decade is equivalent in value to all the farm property in Texas; would build a city the size of St. Louis and would pay the national debts of Spain, Japan and the United States combined.

"The poultry yard census of continental United States taken by the federal government shows that the farmers of this country gather approximately 1,591,311,000 dozen eggs per annum, which sell at a farm price of $306,688,960, and a retail price of $545,289,000. These eggs, according to the market reports, are marketed about as follows:

Month.	Dozens.
January	47,739,000
February	63,652,000
March	65,000,000
April	302,349,000
May	318,262,000
June	270,432,000
July	79,565,000
August	143,218,000
September	111,311,000
October	79,565,000
November	47,739,000
December	64,152,000

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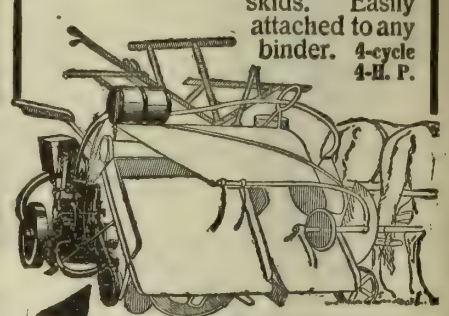

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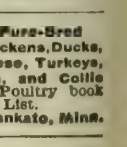

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e be placed in the breeding pen. tality is a necessary element in ur flock; without it the birds will generate in a short time.

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(CONTINUED FROM PAGE FOUR.)

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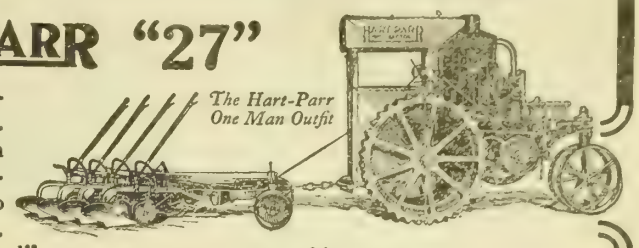

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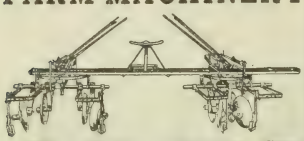

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C. E. BROOKS, 1936 State St., Marshall, Michigan

Steaming Through the Panama Canal

By Frank G. Carpenter

TIVOLI HOTEL, ANCON, Panama—Am writing this letter at the close of a long day's journey through the Panama canal. I have traveled over it from the Atlantic to the Pacific, and today I rode more than thirty-five miles in a steam launch through the Culebra cut and over the windings of the channel in Lake Gatun. Rear Admiral H. H. Rousseau of the canal commission furnished the launch, and he was in command of the party, consisting of Mr. W. H. Mullins, the Costa Rican manager of the United Fruit company, the managing editor of one of the New York dailies and several others. It was early in the morning when we started out from Gamboa, and it was long after noon when we ended our trip at the locks at Gatun, having spent eight hours in steaming in and out of the great channel which, within a few months from now, will be traversed by the steamers of the united oceans.

Other Visits to Canal

I have visited the canal again and again in the several stages of its making. I saw it late in the '90s, when the French were in charge, and again in 1905, when our first chief engineer, Mr. Wallace, was dragging the old French machinery out of the jungle and setting our first steam shovels to working. I have been on the ground several times during the administration of Colonel Goethals, when more than 40,000 men were employed, and I have seen the mighty dredges and the two score of steam shovels, each of which does the work of 500 men, gouging out the beds of the oceans and lifting the rock from the great cut through the Andes.

The work has been so great that it has dwarfed all past undertakings. It has changed the makers of the pyramids to pygmies, and has made the great Chinese wall seem no bigger than the rail fence round your farm. But I shall not write of the immensity of the construction. That has been pictured again and again. This letter deals with the canal at its completion, when the evidences of the labor and brains which have cost the United States more than $300,000,000 have been largely buried by the waters of the Chagres. It deals with the great waterway as it looks now and much as it will look for all time to come.

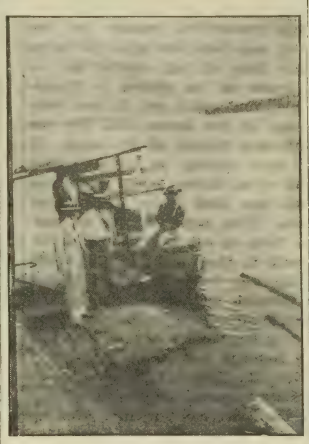
Looks Thousand Years Old

All the pictures you have seen of the canal have represented it as a mighty ditch through the mountains. It has been ragged and rough, and has looked as though it were gouged out over night. Now that the water is in, the canal seems to be a thousand years old. The secretary of war when he was here the other day could not realize that the green sides of Culebra had been made by steam shovels. It seemed to him like a natural valley, and he said it looked to him like the banks of certain rivers in Maine. The tropical vegetation has already covered the sides of the cut, and in time every bit of rock will be as green as the mountains which slope back from the canal. The vegetation now reaches almost to the water, and there are vines which hang down and bathe themselves in the channel. There are enormous masses of green in Gatun lake, and the Gatun dam is fast putting on a coat of emerald green. Within a few years the canal will be lined by masses of tropical vegetation from one end to the other. It will be like a great botanical garden, and will be the scenic canal of the world.

I have gone through the Suez canal. It is a ditch through the desert, with ragged gray towns here and there. Now and then one sees a caravan of camels moving along on the banks, and there are sometimes mirages in the air overhead. Otherwise, everything save the canal itself is thirsty and dry. Here at Panama everything is the greenest of green. There are palm trees and fern trees, wild bananas and all the plants of the jungle.

Best Pilot Gets $90

But let me take you with me on our trip of today. Our steam launch makes about nine miles an hour and we have



Our Steam Launch—Admiral Rousseau in Center, Mr. Carpenter at Left, Pilot at Prow

Fritz Marti as pilot and guide. He understands Lake Gatun and the canal from one end to the other. He is far better posted than the man who took the first tug through the locks into the lake and tried to cross to Culebra. This man drifted about this way and that and finally lost himself in the Trinidad river, from where he was brought back by an exploring party into the channel. Marti is one of the characters of the canal zone. He was a foreman of the biggest dynamite gang, and at one time was blown thirty feet into the air. When he came down on the rocks it was thought that all of his bones had been broken. He recovered, however, and is now receiving $90 a month as the best pilot of the canal commission.

Soon Among the Slides

We leave Gamboa and ride over the spot where the dam was thrown down when Lake Gatun was let into the cut. We soon come to the slides and see the dredges at work. In some parts of Culebra there has been considerable motion during the last few weeks, and we see fresh masses of clay and rock which have rolled down, hiding the green. Most of these slides do but small damage. They enter only the sides of the channel, and the dredges have no trouble in cleaning them out.

A little further down we come to Empire, where some of the greatest slides begin, and farther still to Cucuracha, the slide of the cockroach, where the earth has been moving for the last thirty years. That slide covers forty-seven acres, and at one time it was moving down the mountain at the rate of fourteen feet a day. There is another slide which covers seventy-five acres, from which enough earth and rock have been taken to equal a great column 300 feet square and higher than the Washington monument.

Immense Quantities Removed

The slides altogether have now covered an area of 251 acres. They have ranged in area from one acre to seventy-five acres and their mass is inconceivable. Two hundred and fifty acres would make a good sized farm, and the volume of earth is estimated by the tens of millions of cubic yards. Already enough slide material has been taken out of the canal to make a wall as high as a two-story house and more than three feet in thickness, reaching from Boston almost to Chicago, and by the time the canal is completed we shall have dug out from the slides alone, a mass equal to a half dozen pyramids as big as the biggest in Egypt, with still some earth to spare.

Admiral Rousseau tells me that there is no doubt that the time of dangerous slides is rapidly coming to an end. There has been a diminution of them since the water came in, and the breaks or the humping up of the bottom of the canal have altogether disappeared. We have now forty feet of water in Culebra cut and we shall have forty-five shortly after the first of January. If it were not for the Cucuracha slide vessels drawing thirty-eight feet could now go through the canal. This is the draft of the Olympic and the Mauretania and vessels of that class, but they draw that much only when heavily loaded, and they are seldom so loaded.

Around Lake Gatun

Turning our launch toward the Atlantic, we steam back through the cut and out into the lake of Gatun. This sheet of water is an artificial one. It has been made altogether by the Gatun dam, which runs across the outlet and between two great hills about twenty-four miles away. The lake is supplied by numerous little rivers, of which the greatest is the Chagres. It has been steadily rising for more than a year, and its surface is now over eighty feet above the level of the ocean. The water has spread out over the valleys, and the lake now covers an area as large as 1,000 eighty-acre farms all patched together.

Coming from Gamboa, we first enter the valley of the Chagres. This is narrow near the end of Culebra cut, but it soon widens out to a half mile or more, winding in and about among the hills that are beautifully green. There are palm trees growing on the edge of the water, and we see them standing out against the sky, on the tops of the hills.

Farther out on the lake we sail about the shores of beautiful islands, and we now and then pass floating islands, consisting of tropical swamps which have been lifted from their foundations by the water and are carried by the winds here and there over the lake. Some of these islands are of several acres in area, and they rise and fall with the waves made by our launch as we steam by.

On some of the floating islands are birds, and on one I saw an iguana, the giant lizard of this part of the world, which is as big as a cat and whose meat tastes like young chicken. Some of the islands have bamboos upon them, and upon some are beds of papyrus, similar to the famous bulrushes of Egypt, in which the cradle of the baby Moses was laid.

During our journey we attempted to go down to Bohio, to the spot where the French built their locks, but a floating island had closed up the entrance and we had to turn back.

Dead Forests in Lake

Among the queer features of Lake Gatun are the dead forests that are to be seen wherever the waters have risen and covered the land. Many varieties of tropical trees will not stand firm embedded in water, and such have died as the lake has risen. There are some valleys covered with dead thickets, and in places there are so many dead trees that it makes one think of the Dismal swamp. Some of these trees are as white as the bones of a skeleton, and are naked of bark. Others are already loaded with orchids of many varieties. Some have only their tops out of the water, and we now and then see a green palm, the trunk of which is in the bed of the lake and only the leaves showing out. The palms seem to last longest, and there are many buried to the roots of their branches, the latter looking like bunches of gigantic ferns on the bed of the lake.

We often bump against logs as we move through the canal channel. The trees rot quickly and a great part of the lake is now covered with floating timber. This will be gathered together and rafted to the spillway, before the canal is in active operation. It will there be rolled over the dam and go down to the ocean.

Another striking feature of Gatun lake is the floating plants which cover its waters. There are great beds of water lettuce and masses of water hyacinths floating about as well as spots where a green plant like a scum covers the surface. The water-lettuce has very short roots, and it will not impede navigation. The hyacinths are different. Some of their roots are ten and twelve feet in

length; and they will have to be destroyed before the canal is in use.

Life in the Lake

There are many alligators in parts of Lake Gatun, although most of them are small. Still they are so dangerous that the natives will not go swimming in the lake, and they are very careful to keep out of their way while fishing along the banks of the lake and it may be that a few may be found upon the islands. We see many wild birds and among others the white heron, from which the aigrettes for our ladies' hats come. There are also wild ducks, and several pelicans fly up as we ride about among the floating islands. At the rising of one of these huge, heavy-throated fowl, one of our party quotes the slangy and rather coarse limerick concerning it:

A wise old bird is the pelican.
His pouch holds as much as his belly can.
He can stow in his beak enough food for a week.
I don't see how in the h—ll he can.

Just now, however, the pelicans which have been getting their food from Gatun lake are in a bad way. The decaying vegetation is creating gases in the water which are destroying the fish, and this, added to the paint which is washing off of the lock gates, has sent hundreds of dead fish and reptiles over the spillway. Of late the fish mortality has been decreasing, and when the water is cleared of dead trees, as it will be within a short time after the lake assumes its normal level, the number of fish will rapidly increase.

Scenic Marvel of World

The big steamers will be several hours in crossing Lake Gatun, and I predict that the beauties of the voyage will be such that it will make this place one of the scenic marvels of the world. The tropical islands, with their palms and bamboos, their great fern trees and their magnificent forest giants, bound together with the lianas, will be in plain view. The lake, which is now slightly muddy from the vegetation and the floods, will then be as clear as crystal, and the tourist will look over a mirror of silver at the emerald wonders of the tropics. Off to the south as he nears the Gatun dam he will see a range of mountains which some claim to be a part of South America. It is, in fact, the beginning of the Andes, which are here like ant hills in comparison with the giant volcanoes which wall the western side of that continent.

As the ships cross the lake travelers will have a good sight of the dam and the locks. The dam is already becoming grass grown, and it will be little more than a great mound or windrow of earth holding back the water. At the left hand is the spillway, consisting of ten great black steel grates which move up and down between structures of concrete. This spillway is in the shape of the segment of a circle. It has an iron walk on the top. One does not realize its immensity until he comes close to it, but then it is very impressive.

There is a good-sized island right in front of the dam, and in going from the spillway to the locks on the opposite side we sail between the island and the dam. The dam has a wide approach or channel between concrete walls and the ships go from this right into the locks.

Around the Locks

During my stay at Gatun some of the locks were empty and some were filled, so that I had an excellent opportunity to see how they looked. They are enormous vats which rise in three great steps from the level of the Atlantic to above the eighty-five-foot level of Lake Gatun.

Everything connected with the locks is of the most massive description and still the machinery is so delicate that a child could operate them. The great gates, which are in fact mighty double doors of iron, swing like the folding doors of an old-fashioned country barn. They move as smoothly as though they were as light as feathers or so many sheets of newspaper. Nevertheless, one of the doors or leaves of the larger gates is seven feet thick and so heavy that it would take 1,500 horses to haul it if it were broken up and put on two-horse wagons.

When these gates are shut they do not require to be locked or fastened in any way to keep out the water. They just come together, and that so tightly that a piece of metal thinner than the silky hair of your baby girl or one less than one four-thousandths of a foot thick could not be wedged in between them. There is not a drop of water that oozes through. There are ninety-two doors or leaves of this kind in the locks, and they weigh altogether about 60,000 tons, which would be a good sized load for 120,000 horses, or enough to load a two-horse wagon train thirty-eight miles in length.

We Steam Through Culebra Cut

"Lights Along the Shore"

The most characteristic feature of the canal locks to be seen as one looks at them over the water are the many columns of concrete ending in gigantic arms which hold the electric lights, making the workings as bright by night as by day. These pillars of light run along on both sides of the locks, and in the center they form an avenue that would be an ornament to any park or to any city upon earth. There is some talk of planting palms between the lights, but this is doubtful, as their shade might obscure the lights.

The electricity which supplies these lights, and also those for the whole canal, comes from the hydro-electric plant now building. This will be operated in connection with the fall of the water from the level of Gatun lake to the spillway floor, a height about that of a seven-story house. The generation is by great turbines, and enough of a current will be produced to not only light the canal and work the locks at both ends, but to furnish force and power for the mighty machine shops, docks and other equipment at the terminals. The transmission line which will carry this current from one side of the canal to the other is now in the course of erection. The wires will be hung to posts of structural steel resting on concrete bases and running across the railroad track, high above the cars. There will be enough electricity generated to move the trains of the Panama railroad, and if necessary this line can be used for that purpose with but slight additional expense.

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One of the Range Lights

Largest Tree in United States

The largest tree in the United States is said to be the "mother of the forest," a giant redwood in the Calaveras big-tree grove in California. It is supposed to contain 140,619 board feet of lumber. There are, however, many claimants for the honor of being the "largest tree" and the "oldest tree," and these claims, according to foresters, cannot always be verified.

SAVE-THE-HORSE
(Trade Mark Registered.)
BOOK FREE

Why We Make a Contract to Cure

Mr. W. C. FRALEY, 502 Fisher St., Salisbury, N. C., Mar. 27, '13, writes: I used 2 bottles and cured two horses and one pony of bone spavin two years ago and they are sound as a dollar.

FOUR YEARS AFTER—STILL SOUND

Mr. H. G. PUTNAM, dealer in Coal, Danvers, Mass., Oct., 6, '13, writes: Four years ago I sent for Save-the-Horse for thoroughpin and made a cure. The horse has done a good day's work almost every day since on coal wagon.

WE ORIGINATED the plan of treating horses Under Signed Contract to Return Money if Remedy fails. You risk nothing by writing; it will cost you nothing for advice and there will be no string to it.

OUR LATEST Save-The-Horse BOOK is our 18 Years' Discoveries—Treating Every Kind Ringbone—Thoropin—SPAVIN—and ALL—Shoulder, Knee, Ankle, Hoof and Tendon Disease—Tells How to Test for Spavin; how to locate and treat 58 forms of LAMENESS—Illustrated.

OUR CHARGES for Treatment ARE MODERATE. But write and we will send our—BOOK—Sample Contract and Advice—ALL FREE to (Horse Owners and Managers—Only).

TROY CHEMICAL CO. 16 Commerce Ave., Binghamton, N. Y.

Druggists everywhere sell Save-The-Horse WITH CONTRACT, or we send by Parcel Post or Express paid.

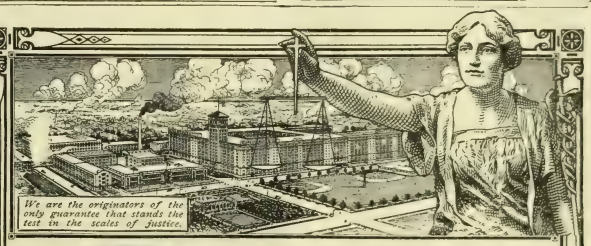
BEST TAN

We can guarantee "Best Tan" because there is no guesswork in our business. Our laboratory and chemist enables us to treat each hide specially to its needs, and to make it soft, pliable and durable. Get your hide "Best Tanned"

Fashions Free

This catalog shows the latest styles in furs. Another book "A Trip Through a Modern Tannery" illustrates how "Best Tan" is made, and why it is best.

GLOBE TANNING CO.,
231 East 1st St., Des Moines, Iowa.



Solid Comfort Vehicles

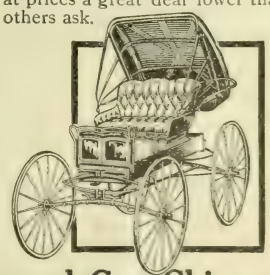
GREATER values than we have ever before been able to offer are shown this year in our complete line of Solid Comfort Vehicles as illustrated and described on the vehicle pages of our General Catalog.

Our *Leader*, illustrated below, is the biggest selling buggy ever manufactured. More than 50,000 are in daily use. But we offer equal values in other buggies, surreys, runabouts and spring wagons. Every vehicle we sell is guaranteed to give perfect satisfaction always. Our enormous vehicle business enables us to furnish the fullest measure of quality, style and workmanship, at prices a great deal lower than others ask.

Our price for the splendid buggy illustrated below is **$61.90.** It has triple panel auto seat, genuine leather upholstering, highest type body construction, triple braced shafts, best wheels made, full wrought fifth wheel, real long distance self oiling axle. Shipped from a warehouse near you.

If you want to read the complete description of this and many other vehicle bargains, turn to the vehicle pages of our big General Catalog. Compare the quality and prices with others and remember the guarantee we give you.

If you haven't our big General Catalog, simply say "Vehicles—65T69" on a postal card and mail to



Sears, Roebuck and Co., Chicago

Cheap Farm Power!

Heider Tractor Runs on Gasoline, Motor Spirits or Kerosene

We have solved the fuel problem successfully. A simple device permits the use of either gasoline, motor spirits or kerosene at all speeds and puts our tractor in a class by itself. A gallon of kerosene runs the Heider Tractor as long as a gallon of gasoline, develops same power, thereby doing the same work at less cost than any other tractor.

Save 50% of your farm operating expenses

Heider Tractor.

Does the Work of 8 Horses and Costs Less

Increase your farm profits with this modern farm horse. It takes the place of eight horses and one extra man. Will do any kind of field or belt work at the lowest possible cost. The Heider Tractor is the pioneer light tractor; is no experiment, weighs only 5,000 pounds. Its 4-cylinder motor, light weight, great power, variable speed, simple operation, economical fuel consumption, make it the best, most practical, all-purpose, one-man tractor manufactured.

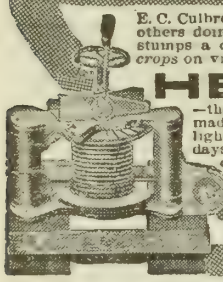
Get the Facts About Tractor Farming--- Write for FREE Catalog

Our free book proves by actual figures that you save money by selling your horses and buying a Heider Tractor. Tells how to make your farm pay more. Don't delay, write at once.

Heider Manufacturing Company, 220 Main Street, Carroll, Iowa.

Biggest Stumps Pulled For 4c Each—In 5 Minutes!

E. C. Culbreath, Johnston, S. C., does it. Thousands of others doing it. Why not you? Pull an acre of stumps a day. Double the land value—grow *big crops* on virgin soil! Get a



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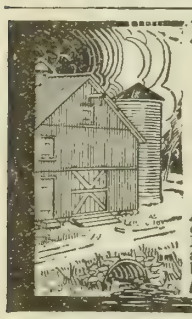
—the only all steel, triple power stump puller made. More power than a locomotive. 60% lighter, 400% stronger than cast iron puller. 30 days' free trial. 3 year guarantee to replace, free, castings that break from any cause. Double safety ratchets. Free book shows photos and letters from owners. Special price will interest you. Write now. Address

Hercules Mfg. Co., 155 22d St., **Centerville, Iowa**



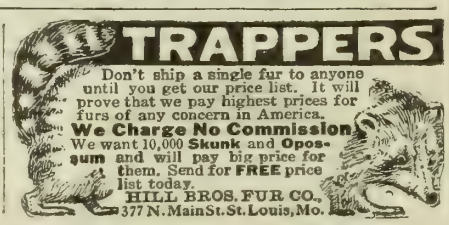
Fireproof Your Farm Buildings by Using

APOLLO ROOFING

APOLLO Roofing and Siding Products are highest quality, full weight, easily applied, reasonable in cost and durable. Sold by weight. Made from the well known APOLLO Best Bloom Galvanized Sheets, and sold by leading dealers everywhere. Write to-day for our free booklet "Better Buildings," containing plans and full information.

AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

THIS SEASON WE SHIP "FROZEN LAKE SUPERIOR HERRING," in special made wooden boxes, keeping the fish clean and fresh. We ship only when we can rely on weather. Price $3.50 per 100 lbs.; 500 lbs. or more, $3.25 per 100 lbs. Enclose money order and state Railway. JOHN DEGERSTEDT & COMPANY, Box 532. Two Harbors, Minn.



TRAPPERS

Don't ship a single fur to anyone until you get our price list. It will prove that we pay highest prices for furs of any concern in America.

We Charge No Commission

We want 10,000 **Skunk** and **Opossum** and will pay big price for them. Send for **FREE** price list today.

HILL BROS. FUR CO.,
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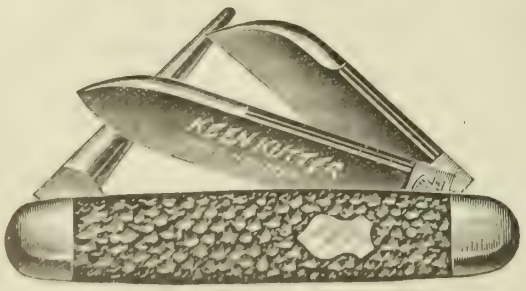
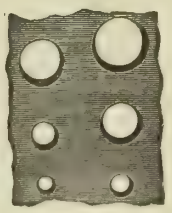
When writing to advertisers on this page please mention this paper.

Do You Know the Value of a KEEN KUTTER Pocketknife?





The name, "KEEN KUTTER," stamped on every blade, is a positive guarantee of its unexcelled quality.

The regular selling price of this knife is $1.50. Ask any dealer; he will tell you the same.

This particular knife is designed for the special use of farmers, stockmen and sportsmen, on account of the Leather Belt Punch Blade for making various-sized holes in leather for buckles, rivets, belt lacing, etc.

WE WANT YOU TO HAVE ONE

Send us $1.50 for a year's subscription to THE TWENTIETH CENTURY FARMER and we will send you the KNIFE FREE.

The Twentieth Century Farmer, Omaha, Neb.

Our Readers' Exchange

This department is for the use of our readers. Let us hear from you. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. All communications must be signed, not necessarily for publication, but for the use of the editor.

Alfalfa on Hilly Land

N. C. J., Parker, S. D.: Have read your valuable paper as long as I have been farming, and every week it becomes more interesting to me, especially on the alfalfa question. I would like your idea or the idea of your readers on the following question: I have in the corner of my land a piece of pasture which has never been broken up. The size is about five acres. It is quite hilly—in fact, almost too steep to break up with a plow. Now what I would like to know is, could I sow sweet clover right in this prairie and get a good stand? If not, when could I sow alfalfa after being broken up? I would try this if there is not any other way. I want to make a hog pasture from this patch if I can get a good stand of sweet clover or alfalfa here. The ground is black soil, with a little gravel mixed in with it. It has a yellow subsoil. Would appreciate it very much if you and your readers would give advice in regard to the above.

Editor's Note—Your pasture proposition seems to be one surrounded with difficulties and demands extra labor and considerable risk if you attempt to seed it in the ordinary way. Were we so situated we would practice a little experimentation in view of getting alfalfa or sweet clover to grow on this piece of land, which you design for hog pasture. There have been some very successful results in disking sod and sowing alfalfa and other tame grasses. As a trial and to evade washing, which is a very serious thing to check or doctor up on hilly land when once started, we would use a small disk that can be handled on this ground and double-disk as early as possible and sow the sweet clover and alfalfa in this disked ground as early as seed is ordinarily sown in your locality in the spring. It should get the benefit of the spring rains and opportunity of all the advantages for germination possible so as to root properly before any dry, hot weather interferes. If this trial failed, we would repeat it in the latter part of August.

It is not only possible, but altogether probable, to get both these grasses to grow by this process. Nebraska has hundreds of acres where alfalfa is growing in pasture fields. Some of these were sown on the sod and no system of cultivation used; others were disked after sowing and some before sowing. We would not risk plowing up and cultivating hillside lands in order to get the usual seed bed for sowing alfalfa. The alfalfa is a persistent grower whenever it gets into the soil. Sweet clover will grow any place with or without a chance. One need not expect the growth or stand on this land at first that would naturally follow smooth, well cultivated land.

Catalpa Trees and Stock Raising

P. J. H., Dixon County, Nebraska: Can you please tell me through your paper whether catalpa trees will do well on low, marshy land? The land is along the Logan bottom. I would like to know where is the best place to raise and feed cattle hogs and sheep. Please give full explanations for any certain place being best according to facts that you have.

Answer—Catalpa trees do well on inundated bottom lands that are rich in fertility. As far as soil goes, yours is probably suited for raising this variety of tree, but the catalpa is a southern tree and would be likely to winter kill as far north as you are. Experiments in raising catalpas in Minnesota and northern Iowa have not been very successful, although in southern Iowa and Nebraska they do well.

There is no best place for raising all the different kinds of stock you name. There are successful stock raisers in all parts of the country, from Canada to Texas and from Maine to California. Success in the stock business depends upon the man far more than upon the locality. If you want to go into the stock raising business, your present location is as good as any. You no doubt know the land and its capacity for raising the various feed crops you would need. Any place that is suited to raising corn and alfalfa is a good stock country. You are also on a railroad and not far from the South Omaha or Sioux City markets, to which you may ship your products without very large transportation charges.

Nebraska Sanitary Board to Meet

We, the undersigned, do protest against the adoption of the regulations and rules which the Veterinary association is trying to have adopted in regard to the distribution and use of hog cholera serum in the state of Nebraska.

B. S. MILLER.
O. M. BLEVINS,
SILAS MILLER.

Gresham, Neb.

Editor's Note—Fully 2,000 farmers and hog raisers have sent in their protests to members of the Sanitary Live Stock board. The board will hold a meeting at the state capital before taking final action on the rules and regulations asked by the Veterinary association. Representatives from the Veterinary association and farmers and live stock men are to be in attendance. The editor of this paper will attend and give our readers a report of the proceeedings.

Cream Station Agent's View

Cream Buyer, Nebraska: In looking over your valuable paper I saw an article entitled "Shipping Cream Direct," by "F. J. S." With your permission, I would like to answer the same. I have been in the cream business for about ten years and I have watched it closely. I sample and test cream and have more trouble with the man that brings a poor grade of cream than with those that test 35 or better.

Now, the writer seems to be unable to decide which to do—ship direct or sell to the local man. I take it that he believes his man to be honest with him, and I believe most men are so, but I believe that the creameries do have a limit to what they can pay for cream, and we all know that a large company can pay more than a small one, for they can keep their men

work all the time, where a small one nnot.

But as to direct shipments, I will say at it don't pay in my town. I have ven it a test by weighing and sampling d testing for the farmer so he would ow just what he could get for his eam at the station, and then he can ll if it pays to ship direct. Then there another side to it. The farmer don't ways have a ten-gallon can of cream, d he can sell any number of pounds cream at the station, if it is not more an six or seven pounds, and get his eck for it and go home, but he has to ve a can full before he can ship direct. f course, the station agent is always ad to take a small amount and do the me work for it as if he had eighty unds instead of eight.

Now I would like to say that it is a od thing for the producer to have the cal station to buy the cream. If the ation was gone it would not pay to ship enty or twenty-five pounds, and they ould have to make butter, and then the erchants would get overstocked and e price would go down to 12 or 15 cents er pound, while it is now 25 cents in my wn, and the merchants sell all they can r 25 cents and take 17 cents for the alance. That is the case here.

We middlemen like to pay all we can nd we want all we can make to live on. ust now the commission on cream anges from 1½ to 2 cents per pound for utter-fat, and the station furnished. here is a shrinkage in the cream each me it is handled. Now cream is 32 ents, commission 2 cents, and 1 cent for tation expenses, making the cream 35 ents as it leaves the dairy at the rail-oad station. At the average, there are enty-six to thirty pounds butter-fat in ighty pounds of cream; express is 30 ents more, so you can see that the sta-on is paying as much as the creamery at is trying to get you to ship direct. What will you do if you want to sell ream all the time? Sell to your local an. He is between you and the express ompany and the creamery.

I think that most of the companies are air; still, with thousands of cans and atrons all over the state, they are liable make mistakes and get your cream ixed. Then if you happen to be at the ation some day and see one of your ans of cream tipped out of a truck and pilled, and it is worth $7 at least, you ill have to go to the railroad agent and ake a complaint, and it will be six onths or a year before the agent gets round to it, and then you will have to ake perhaps half the price.

In every town there are from two to ve stations. If one creamery is getting nice lot of cream, along comes another reamery man and says, "This man is etting too much. We must get some of at cream." He knows that they pay e same, but he will start up a station nd run it at a loss to the man or his ompany—it don't matter much which—ist so he gets the station started. There ught to be a law to stop putting in so any stations. You know that any man at wants to buy cream will get some—erhaps not enough to make a living, but nough to bust the other man, and still e next creamery will try to do the same ing. I tell you the man at the station ill do what is right by you if you will ay by him, and if he makes a mistake e is there to make it good.

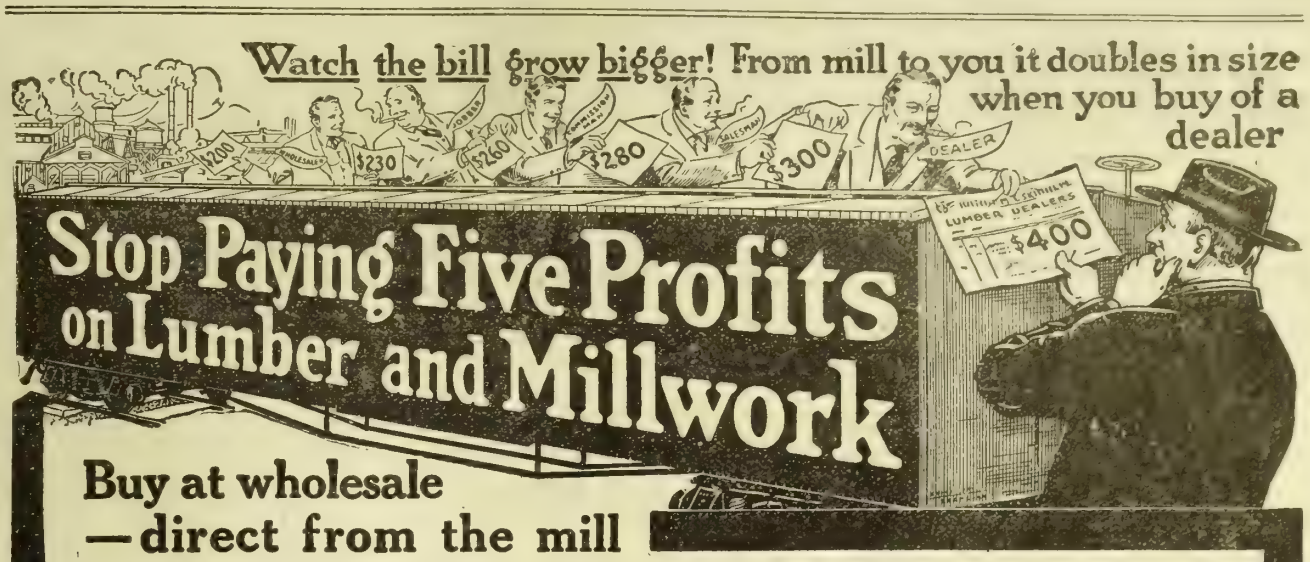
Note—We are glad to print this iew of the situation. The cream tation agent no doubt suffers as uch by the duplicating of stations s anyone else, but is this an argu-ent against shipping direct? There re several things in this letter that will not hurt the cream shipper to ink about. The statements are vidently correct, but what about e conclusion drawn?

Relation of Pruning to Spraying

"As we go about our pruning of e fruit trees, let us keep in mind at all phases of orchard work are ery closely related. Especially is is true in regard to pruning and praying," says George M. List of the Colorado Agricultural college.

"The failure to control the cod-dling-moth, leaf-roller, San Jose scale and other insects in many cases can be traced to the lack of pruning or poor pruning. It is impossible to reach with the spray all parts of the tall, thick, brushy trees that are found in many orchards. Almost invariably the most damage is done by these various insects in the center or top of such trees where the spray does not penetrate. Annual and systematic pruning should be practiced with one of the main objects in view, that of shaping the tree so all parts can be easily reached with the spray."

More than 120,000,000 board feet of timber was given away free by the government last year to settlers and miners living in or near the national forests.



Stop Paying Five Profits on Lumber and Millwork

Buy at wholesale —direct from the mill

Pay your local dealer $400 for lumber, and $200 of your hard-earned money goes to the middlemen you see pictured above. The mill sells its output to the wholesalers, the wholesalers sell to the jobbers, the commission men and their salesmen buy of the jobbers and sell to the dealers. They all get a good big profit. The local dealer may be a fine fellow, but he's sure to get a big profit off the lumber he sells you. Even if he sold at what it *costs him*, you'd still be paying those four other middlemen who don't add one penny's worth of value to the lumber. You're bound to pay far too much for lumber, if you buy from the lumber yard. But there's no need to do it any longer. We enable you to

Save as high as 60%— and get better lumber, too

Our plan is simple. First, we sell you direct—that means one profit instead of five for you to pay. Second, our direct price to you represents one small profit over *producing cost*. We not only run saw mills, but control the forests. We fell and log the timber, and manufacture it into highest grade lumber. No one else in all America is offering you the chance to buy lumber at such a wonderfully low cost.

Immediate shipment — quick delivery

We keep millions of feet of lumber in pile, and big warehouses full of millwork—ready for shipment. Shipments go out within 24 to 48 hours after order is received. Seven great railways rush our shipments to our customers. They reach destination within an average of two weeks' time. Now's an ideal time to order while there's snow on the ground for easy hauling. We'll furnish free, enough roofing to keep lumber perfectly dry.

Satisfaction absolutely guaranteed

You can't lose in dealing with us. We prepay the freight. We allow you to inspect the lumber before you accept. Even then you are protected by our guarantee which says, "We guarantee better material, grade for grade, than trust or combine standards" (the standard the local dealer goes by.)

Send your bill of materials for prices delivered your station

We ship everything complete for building; lumber, sash, doors, shingles, millwork, hardware and paint. Send us your carpenter's bill of materials for complete estimate of cost delivered your station. If you haven't arrived at the point of having bill of materials gotten up, write anyhow for our catalog and general price list. Maybe we can help you plan your building. You are welcome to the services of our architects. Mail the coupon today.

HEWITT-LEA-FUNCK CO.
460 Union Ave., Seattle, Wash.

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Please send the following: (*Be sure to write plainly*)

[ ] Catalog and General Price List of Lumber and Millwork.
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Name _____

Street or R. F. D. No. _____

Post Office _____ State _____

Business _____

GET THE FACTS
Save as high as 60% on a clear fir silo

by buying of us at one profit, above manufacturing cost.

Seattle Silos are made of famous Puget Sound fir from our own forests and worked in one of our six great mills; for our one-piece silo staves we use only the choicest timber. Close and straight grained. Free from sap and large knots; wonderfully durable.

Seattle Silos
have patented swinging doors

These doors are quick detachable; no lifting; easily swing in or out; door bars form strong ladder from which, by our original arrangement, hoops are easily tightened.

Send coupon for folder. On a single silo we can probably arrange to give you practically carload shipment price. To one farmer in each township we have a very special offer. Write today. Use the coupon opposite the hand.

Hewitt-Lea-Funck Co.
460 Union Ave., Seattle, Wash.

BARGAIN DAY ON CUTS

You can buy any cut in the Twentieth Century Farmer for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as we have only one of each kind. Address,

TWENTIETH CENTURY FARMER, Omaha, Neb.

Young Herd Sired by Beau Mischief, Winner at 1913 International.

"BY THEIR FRUITS YE SHALL KNOW THEM."

Herefords Extraordinary

AT AUCTION

At Cambridge, Neb., Jan. 28, 1914

70 Head - 40 BULLS 30 FEMALES - 70 Head

These cattle have been selected with the most discriminating care. Every animal is a good one, and among them are a number of outstanding individuals that are good enough to show in any company. Twelve head of the bulls are by the great **Beau Mischief**, and every one is of herd heading character. The balance are by Princeps A, Parsifal and Sensation. They are bulls for the most discriminating breeder, and also big, rugged, heavy boned fellows for range service.

The females will consist of cows with calves at foot, and heifers bred and open. One of these is **Mischief Maker 36th**, first-prize heifer at the International this year and one of the best heifers in America. Her equal will not be sold this year. Her dam, **Germania 2d**, by Princeps, is included, due to drop calf about sale time, to same bull. These are only a few of the attractions. They must be seen to be appreciated. See field note for further information. Catalogues are ready and may be had by addressing,

MOUSEL BROS., Cambridge, Neb.

Auct., Col. E. D. Snell. **G. E. Hall will represent this paper.**

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Krueger's Good Duroc Offering

With this issue of the Twentieth Century Farmer we are starting the sale advertising of Gus Krueger of Beemer, Neb., who will sell Durocs at his farm near that place on February 4. In the beginning we want to say that this is, in our opinion, the best offering that Mr. Krueger has ever put up for sale. In the first place, he will have twenty-five head of yearling and tried sows that would constitute a mighty nice sale offering of themselves. In addition to these, he will have ten head of very choice spring gilts. This stuff is in the best of breeding condition and have been fed on a balanced ration that insures their going out and making good for those who buy them. The attraction of the sale and, for that matter, one of the best sows to be sold this year, is Bessie Wonder, a daughter of Wallace's Wonder out of a Billie K., Jr., dam. In point of individual makeup, this sow is hard to fault, possessing abundance of scale, a strong arched back, good bone, right up on her feet, a good, heavy ham and just as smooth as a ribbon. She has every qualification to make her a prize winner if she had been shown in the proper condition. Together with this, look at her breeding. It is of the very best. She is bred to the great boar, Colonel Chief, one of the best big boars in service in the west today. Another splendid sow in the offering is Red Beauty by Sensation Wonder and out of a granddaughter of Junior Jim. This is the kind of a sow you need not be afraid to send a bid on. She also is bred to Colonel Chief. There are four fall sows, litter sisters, by Prince Muncie Col. and out of a daughter of Commodore Lad, and all bred to Colonel Chief, that are almost like peas in a pod. They have plenty of size, quality and smoothness, good bone and feet, and are good enough to go into any man's herd. These are only a few of the good things. Remember that everything in this offering is immune from disease, and this should be a big item at the present time. Fifteen head of this offering is bred to Colonel Chief. Colonel Chief is by Chief's Colonel second and out of a dam by Prince of Colonels. Chief's Colonel was by King of Colonels and King of Colonels by old Prince of Colonels. We want to say right here that we believe any of these good sows, bred to this boar, would be a mighty valuable asset in any man's herd. The balance of this offering is bred to A Professor and Golden Model by Golden Model fourth. Both boars are of recognized merit. Write for catalogue and arrange to attend this sale. If you cannot do so and wish something in the offering, send your bids to G. E. Hall of this paper and they will receive fair treatment.

A Dependable Duroc Offering

To those who have attended the Duroc-Jersey sales of Robert Leisy of Wisner, Neb., in the past, it is not necessary for us to make known the character and class of the hogs that will go into his sale to be held at that place on February 5. It is a generally well known fact that he comes about as near putting up the right kind of an offering in the right kind of way as any man in the business in Nebraska, and whenever he puts an animal into a sale, that animal is guaranteed to be just as represented in the catalogue or the purchaser gets his money back. This is the kind of a guarantee that really does guarantee. The line-up of stuff he has for this sale is an especially good one from start to finish. It will consist of five tried sows, seven fall yearlings and twenty-eight spring gilts—forty head in all. They are in first-class breeding condition—not overloaded with fat, but carrying enough flesh to suit the average buyer. The five tried sows are all good ones and have proven themselves good breeders right in this herd. They are sired by Uneeda Crimson Wonder, B. & L.'s Wonder, Crimson Chief and Krueger's Chief Perfection. One of the best sows is Pritchard Lady, by Krueger's Chief Perfection and out of the dam, Advancer Girl 2d. This sow is the dam of the top boar in Mr. Leisy's fall sale and also the best spring gilt going in this offering. Another good sow is Magnolia Blossom, by Uneeda Crimson Wonder and out of a dam by Belle's Crimson Wonder, this making her a line bred Crimson Wonder sow. She was bred to Colonel 2d to farrow March 14. This sow is the dam of Wonder Lad, one of Mr. Leisy's herd boars. Fall gilts are a straight, clean lot, all being sired by a son of Proud Colonel Boy and bred to Colonel 2d. Spring gilts are sired by Critic B., Colonel Tippy, Prince Muncie Colonel, Golden Model 15th, Model Boy, R. L.'s Model, Lincoln Chief 2d, Dusty Crimson, Echo Crimson Wonder, Sioux Wonder and J. S.'s Model. One of the best gilts that we have seen for some time is No. 40 in the catalogue. She is by J. S.'s Model out of Pritchard Lady and bred to Colonel 2d for early farrow. In this connection, we want to say something about the herd boars in service in this herd. They are Colonel 2d by Proud Colonel Junior by Proud Colonel and out of the dam Wonder's Beauty by Crimson Wonder Again, Wonder Lad by Crimson Wonder 10th, and out of a Uneeda Crimson Wonder dam, High Chief by Invincible Chief and out of the dam Golden Model Girl by Golden Model 15th. Here is a variety of breeding that is hard to beat, and a sow bred to any one of them is bound to be a profitable investment. Remember, everything in this offering is immune and was immune two months before the time that they were bred. Get your name on Mr. Leisy's mailing list for a catalogue and arrange to attend this sale. If you can not do so, send your bids to G. E. Hall of this paper and they will be taken care of. Kindly mention the Twentieth Century Farmer when writing.

A Great Duroc Offering

Henry Stuthman of Pilger, Neb., is starting his advertising for his bred sow sale in this issue of The Twentieth Century Farmer. We take pleasure in calling attention to this sale for the reason that Mr. Stuthman is going to offer a class of hogs that are good enough to command the attention and patronage of any breeder in the country. We looked this herd over a few days ago and must say that we are more than surprised to note the advancement that it has made during the last few months. Mr. Stuthman had just separated the hogs he is going to sell and placed them in one lot the day before our calling on him. It seemed to us we had not in a long time seen a better lot than were to be found right here. They are in the very best of condition and will go out and make good for the purchaser without a doubt. He has been very careful in the matter of rations and has seen to it that they took plenty of exercise, as well as having access to all the fourth cutting of alfalfa that they wanted. There will be forty five head in the offering, consisting of ten tried sows, fifteen fall gilts and twenty spring gilts. The tried sows are by Melina's Wonder, Red Jim, Wallace's Wonder, Red Chief Wonder and Golden Model 4th. The fall gilts are all by Melina's Wonder, with the exception of one and she is by Valley King, the champion boar of two states. Spring gilts are by Melina's Wonder, Crimson Wonder Select, Colonel Tippy and B. & G.'s Wonder. These sows are bred to Sweet Rose's Wonder, a son of the great brood sow, Sweet Rose 2d, and sired by B. & G.'s Wonder; Chief's Model by Chief Invincible by Invincible Chief and out of a Golden Model 15th dam; Crimson Wonder Select by Crimson Wonder Again and out of a Chief Select dam. Just look this combination of blood lines over and see if it isn't mighty hard to beat. We will have more to say about the individual makeup of this offering in our next issue. In the meantime get your name on Mr. Stuthman's list for a catalogue, for you will be standing in your own light unless you make arrangements to attend this sale. In the event that you can not do so, send your bids to G. E. Hall of this paper, and they will be taken care of. Kindly mention the Twentieth Century Farmer when writing.

Champion Durocs at Auction

We spent some time last week in looking over the offering of Duroc-Jersey bred sows to be sold on February 3 at Wisner, Neb., by Clarence Wallace at that place. Mr. Wallace's name is too well known to need any particular mention on our part. The character of hogs he has been raising and the winnings he has been making at the leading fairs have caused his herd to be known throughout the corn belt. The offering he is going to make at this time is a very remarkable one. Remarkable in the first place in that one of the leading attractions will be Fancy Advance 2d, the grand champion sow at the Nebraska state fair this year. This great sow is bred to Golden Model 4th, giving the purchaser a combination

(CONTINUED ON PAGE TWENTY)

RED POLLED CATTLE

RED POLLS

Bulls and heifers for sale. Prices reasonable. Quality the best. Satisfaction guaranteed. Write your wants or call.

W. F. SCHWAB, Clay Center, Neb.

DUROC-JERSEY HOGS

SCHWAB'S DUROC-JERSEYS

A choice lot of spring and fall boars for sale; sired by Buddy K 4th, Wide Awake, Gold Bond, W. L. B.'s Perfection, Cremo and others. Also bred sows. Priced worth the money.

GEO. W. SCHWAB, Clay Center, Neb.

DUROC BRED SOW BARGAINS

Sows for sale sired by I Am Crimson Wonder 5th, Crimson Advancer, C. H.'s Crimson Wonder and Critic Col. 2nd. Bred mostly to Crimson Duke by Crimson Wonder Again.

ERNEST FOWLIE, - HICKMAN, NEB.

HOLSTEIN-FRIESIAN

Purebred Registered

HOLSTEIN CATTLE

To promote general prosperity and their own business, bankers in many parts of the country are buying pure-bred Holsteins by the carload and selling them on time to the farmers of the community.

Every year it becomes clearer that with large-sized cows the cost of milk and butter production can be brought down to a point that makes dairying profitable.

A herd of pure-bred Holsteins is an investment that combines safety with large dividends.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 159. Brattleboro, Vt.

JERSEY CATTLE

The Jerseys

Pay Dividends on $500 Per Acre Land

On the northwest coast of California there is a rainfall of from 50 to 100 inches per year. There land is worth $500 per acre, but grade Jersey herds are paying interest and dividends on that land, averaging 400 lbs. butter fat per year.

Moral: Grade up your herd by getting a pure-bred Jersey sire from a producing dam.

Get facts about Jerseys from

THE AMERICAN JERSEY CATTLE CLUB

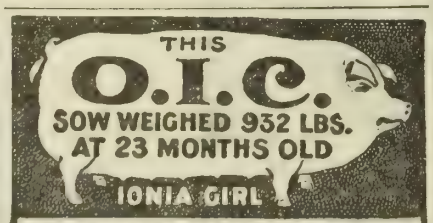
324 W. 23d St., New York, N. Y.

WINELAND FARM JERSEYS

Bulls of serviceable age for sale, sired by Duke Raleigh by Noble of Oakland. Also a number of choice heifers bred to freshen soon. I can suit you in both quality and price.

H. C. YOUNG. Lincoln, Neb.

O. I. C. HOGS



I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN** RFD79 **Portland, Mich.**

POLAND-CHINA HOGS

POLAND-CHINA OPPORTUNITIES

Big, smooth, heavy boned, easy feeders. Spring males, by the noted **Wayside Jumbo.** Write me. I have what you want.

FRED WILLE, Columbus, Neb.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

POLAND-CHINA HOGS

IMMUNE POLAND-CHINA GILTS

We have a splendid lot of spring gilts for sale, sired by Blue Valley and Blue Valley's Orange by Big Orange. They have been given the double treatment and are immune from disease, and all bred for early spring farrow. Satisfaction guaranteed.

THOMAS F. WALKER & SON, Alexandria, Neb.

HORSES

America's Famed Horse Districts

This particular district, famed for Percherons. The Chandler herd is known for draftiness, substance and bone. Big bunch reg. studs for sale, yearlings to fours, with weight and finish equal to French. From imported ancestry on both sides and well grown. Grown here simply means surest foal getters and farmer's prices. Just East of Omaha.

FRED CHANDLER, Rt. 7, Chariton, Iowa.

CARPENTER'S DUROC OFFERINGS

Forty-five Head of Top Sows and Big Growthy Spring Gilts to be Sold at Auction

At Fontanelle, Neb., Feb. 2, 1914

The offering will consist of fifteen tried sows and thirty spring gilts. Some of the attractions will be Critic Belle, the dam of Prince Critic; three daughters of this sow, sired by Wallace's Sensation, and three spring gilts, sired by Prince Critic. These are only a few of the good ones. Fifteen head are sired by Prince Critic, ten head by Wallace's Sensation and the balance by Model Boy, Fancy Wonder and Golden Model 4th. They are bred to Carpenter's Golden Model, Ivan's Golden Model, Wallace's Sensation and Blue Ribbon Model, Jr. This is one of the top offerings of the season. They are right in every way, and for size, bone, quality and smoothness they are certainly right among the tops. Write for catalogue at once to

E. H. CARPENTER, Fontanelle, Neb.

AUCT.—Col. E. Z. Russel. FIELDMAN—G. E. Hall.

Parties Attending Sale Will be Met at Nickerson on Morning of Sale.

A Great Duroc Offering

Forty-five Head of Tried Sows, Fall Yearlings and Spring Gilts, All Bred for Early Farrow, Will be Sold at

Pilger, Neb., Feb. 6, 1914

This is a select draft from the herd of Henry Stuthman, and there is not an undesirable individual in the offering. They have an abundance of size, are in fine condition and have been fed on a balanced ration, including plenty of alfalfa.

They are sired by Melina's Wonder, Red Jim, Wallace's Wonder, Red Chief Wonder, Golden Model 4th, Crimson Wonder Select, Col. Tippy, B. & G.'s Wonder, Valley King and others. They are bred to Sweet Rose's Wonder, Chief's Model and Crimson Wonder Select. See field note for further particulars. For catalogue address

HENRY STUTHMAN, PILGER, NEB.

AUCT.—Col. Fred Reppert. FIELDMAN—G. E. Hall.

Fancy Advance 2d

Champion Duroc-Jersey Sow at Nebraska '13

Is Included in the Forty Head of Matured Sows Going in the Sale of Clarence Wallace

At WISNER, NEB., FEB. 3, 1914

Attractions—SIX WALLACE'S WONDER SOWS, including Fancy Advance 2d, a grand champion sow bred to Golden Model 4th, a champion boar. These six sows are as good as ever produced on this farm. NINE GRANDDAUGHTERS OF WALLACE'S WONDER AND SEVEN DAUGHTERS OF GOLDEN MODEL 4TH.

Twenty-seven head are bred to Golden Model 4th, five to Prince Muncie Col., and fourteen to Col. Chief.

There is more scale represented in this offering than any we have ever made in the past. If you are looking for the big, smooth, prize winning kind, write for catalogue to

CLARENCE WALLACE, Wisner, Neb.

AUCT.—Col. Fred Reppert. FIELDMAN—G. E. Hall.

Remember, Everything on This Farm is Immune from Cholera.

Registered Holstein-Friesian Cattle AT AUCTION

In Sale Pavilion, So. Omaha, Neb., Feb.3, '14

100 HEAD All Ages and Both Sexes 100 HEAD

There will be 65 head of cows and heifers, milking or soon due, by such sires as Sir Pontiac Rag Apple Korndyke 49334, Pontiac Soldene Butter Boy 39473 and others of equal merit. Also 25 heifers and heifer calves, among them being several grand-daughters of King of the Pontiacs.

10 BULLS, ready for service, mostly out of A. R. O. dams and the right kind.

Everthing is tuberculin tested. For catalog, address

HENRY GLISSMAN, Station B, Omaha, Neb.

Krueger's Immune Duroc Offering

At BEEMER, NEB., FEB. 4, 1914

25 Yearling and Tried Sows and 10 Spring Gilts

Fifteen head are bred to Col. Chief, one of the largest boars in service in the state. If you want something really good get a sow bred to this great boar. Twenty head are bred to A Professor or Golden Model.

Some of the attractions—BESSIE WONDER, tried sow by Wallace's Wonder, bred to Col. Chief; RED BEAUTY, by Sensation Wonder, bred to Col. Chief; four fall sows, litter sisters, by Prince Muncie Col., all bred to Col. Chief. The very top blood lines of the breed are represented in this offering. Individually, they will speak for themselves.

Catalogues are ready and may be had by writing

GUS KRUEGER, Beemer, Nebraska

AUCT.—Col. Fred Reppert. FIELDMAN—G. E. Hall.

HORSES

WOLF BROS. ALBION, NEB. BOONE COUNTY.

ANNOUNCE THE ARRIVAL OF THEIR

NEW IMPORTATION OF PERCHERON and BELGIAN STALLIONS and MARES

We are showing without doubt the best lot of imported stallions and mares we ever owned, which together with our American-breds will make a grand lot for you to select from. They are the big, heavy-boned, drafty kind, with plenty of style and action. They must be seen to be appreciated. Come and look them over and we know you will be pleased. A certificate of soundness given with each animal. We invite correspondence.

Leisy's Immune Durocs

At PUBLIC SALE

Forty head of big, smooth, heavy boned sows and gilts of choicest breeding, grown and developed under conditions that insure their future usefulness as breeders. Every one immuned two months before being bred. To be sold at

Wisner, Neb., Feb. 5, 1914

The offering will consist of five tried sows, seven fall yearlings and twenty-eight spring gilts. They are sired by Uneeda Crimson Wonder, B. & L's Wonder, Crimson Chief, Krueger's Chief Perfection, Proud Col. Boy, Critic B., Col. Tippy, Prince Muncie Col., Golden Model 15th, Model Boy, R. L.'s Model, Lincoln Chief 2d, Dusty Crimson, Sioux Wonder and others. They are bred for early farrow to COL. 2D, by Proud Col.; WONDER LAD, by Crimson Wonder 10th, and HIGH CHIEF, by Invincible Chief. For catalogue address

ROBERT LEISY, Wisner, Neb.

AUCT.—Col. Fred Reppert. FIELDMAN—G. E. Hall.

Percherons, Belgians and Shires Imported and Homebred Stallions and Mares, ranging in age from coming two-year-olds to matured ages. We have a lot of two and three-year-old stallions weighing from 1900 to 2100 pounds; among them a fine lot of pasture-raised stallions—the kind for the western breeder. A fine lot of mares for sale. Always have stock for sale—never sold out. Write for prices, descriptions, etc.

NORTH & ROBINSON CO., - Grand Island, Neb.

FRESH IMPORTATION OF HEAVY BONED, BIG

BELGIAN STALLIONS

just received. You should see them. Eighty Belgians and Percherons on hand. A carload of good mares (both breeds) for sale now at prices that will move them. Some first class jacks also for sale.

W. L. De CLOW, Cedar Rapids Stallion and Jack Farm, Cedar Rapids, Iowa.

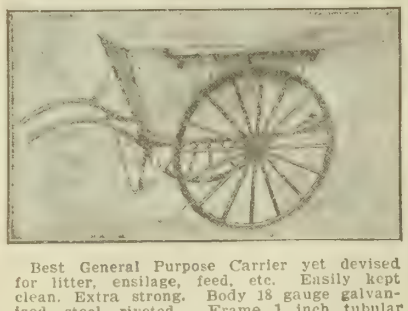
JACKS AND JENNETS.

Eighty large-boned, black Mammoth Jacks, 15 to 16 hands standard, guaranteed and priced to sell. The kind all are looking for. Also good, young Percheron stallions. Reference, five banks of Lawrence. 40 miles west of Kansas City on Santa Fe and U. P. R. R.

AL. E. SMITH, - - LAWRENCE, KAN.

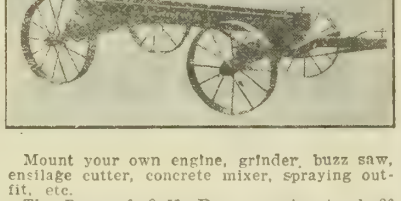
Farmers, Feeders, Dairymen Use

BROWN SANITARY STABLE TRUCK



Best General Purpose Carrier yet devised for litter, ensilage, feed, etc. Easily kept clean. Extra strong. Body 18 gauge galvanized steel, riveted. Frame 1 inch tubular steel, 36 inch Sarven wheels, fenders. Capacity 12½ cubic feet. Weight 235 pounds. Price $32 50. Costs nothing to install this system—no track, no wire rope, no lifting device, never out of repair. Order one for your farm.

Brown Steel Team Truck



Mount your own engine, grinder, buzz saw, ensilage cutter, concrete mixer, spraying outfit, etc.

The Brown 6—8 H. P. gas engine truck 26 and 30x4-inch tire metal wheels, 1⅝-inch cold rolled steel axles, reinforced with 3-inch I beam, 6-inch channel skids, team tongue. Weight 400 lbs. Price $32.50.

The Brown 10—12 H. P. gas engine truck, 26 and 30x4-inch tire metal wheels, 1 15-16-inch cold rolled steel axles, reinforced with 4-inch I beam, 6-inch channel skids, team tongue. Weight 480 lbs. Price $35.00.

If equipped with battery box and foot board $5.00 extra. Don't confuse these splendid trucks with cheap grades on the market.

The Brown 4—6 H. P. gas engine truck, 12 and 14-inch metal wheels, tubular steel axles, adjustable bolsters. Weight 175 lbs. Price $7.00.

The Brown gas engine set, 9-inch cast wheels, tubular steel axles, hand tongue. Weight 50 lbs. Price $3.50.

All prices f. o. b. Omaha.

Write today. Let us know your needs.

THE BROWN TRUCK MFG. CO.

Omaha, Nebraska

Shetland Pony FREE

Many other prizes—bicycles, cameras, watches, tool chests, gold rings, bracelets, pocket knives, etc. Full information and big premium list Free. Write me Today.

E. T. MEREDITH, 251 Success Bldg., Des Moines, Ia.

Sand Vetch The Hardiest Forage Crop and Greatest Fertilizer

Our hardy Sand Vetch will grow anywhere, regardless of heat, cold or drought. Especially good for sandy, dry land. Crops range from 6 to 10 tons per acre. Excellent feed for growing animals or milch cows; 25 per cent more valuable than any other fertilizer. Send for free catalog.

Griswold Seed Co., 155 So. Tenth Street, Lincoln, Neb.

MARKET PLACE

MISCELLANEOUS

CHICKS DEAD IN SHELL? LATEST methods of incubation will stop it—25c postpaid. Edw. K. Stockfeld, Lincoln, Neb. Route 6.

VIOLIN FOR SALE CHEAP. SENT on trial. Write Miss Bertha Mardiss, Route 5, Rosedale, Kan.

SPOTS—BOOK CONTAINING SEVEN chapters on Dry Cleaning, Spotting, Laundering, Water-proofing, Fire-proofing, Restoring and Setting Colors, and many other household wrinkles. Price, 25c; no stamps. Address Lander Cleaning Works, Box 112, Lander, Wyo.

PATENTS

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

LAND ROLLERS

FREE CIRCULAR ON NEWLY PATented surface packer, mulcher, pulverizer, clod smasher and rain preserver. Keller Land Roller Co., Kearney, Neb.

AGENTS WANTED

WANTED—LOCAL AGENTS IN NEbraska and western Iowa $5 to $7 per day to hustlers; no others need apply. Address Dept. 4, 202 West St., Ioa, Kan.

Review of Live Stock Market

By A. C. Davenport

DURING the last month or more of the old year the cattle market was decidedly in the dumps. There did not appear to be anything especial the matter with it, but there was a woeful lack of snap and energy to the trade. Prices were more or less unsatisfactory during the greater part of the time and weakness was the chief feature of a market that ought to have been characterized by strength in order to make the feeders of the cattle any money.

With the coming of the new year the market has assumed a very much brighter aspect, and there is a much better feeling at present writing than was the case ten days ago. The market has really been behaving in a very satisfactory manner as viewed from the seller's standpoint, which means that there has been a broadening out of the demand and a stiffening of values. This improvement has been in accord with predictions previously made in these columns and is not at all surprising to the bullish contingent among cattle traders.

The bulls were claiming weeks ago, when the country in a panic of fear was sacrificing its cattle, that there was not the slightest occasion for alarm. They believed that the supply of cattle in the country was not sufficiently large to any more than satisfy the consuming demand for beef, and that if owners would exercise a little good judgment in the matter of shipping so that the cattle would be strung out and not all come to market at the same time, reasonably good prices could be maintained. As a lack of confidence in the future appeared to have seized upon a large percentage of the feeders, bullish arguments were of no avail in stopping the heavy shipments of cattle during the latter part of November and early in December. This free movement of cattle to market, however, made it still more probable that prices after the holidays would show improvement. This improvement has already taken place as noted above.

Temporary Decline Probable

All markets are very apt to react a little after a sudden and sharp advance, and cattlemen would not be at all surprised if recent advances were followed by somewhat lower prices for a short time to come. As a matter of course, such a reaction is possible as a result of temporarily large receipts that might be induced by recent advances. The feeling on the market, however, is generally good and the great majority of cattlemen are inclined to be bullish in their views, most of them believing that present prices, barring occasional low spots, will be well maintained and possibly improved upon as the season advances. Receipts have been only moderate at leading market points, the six largest markets showing a falling off for the first eight days of the year of 35,000 head as compared with the corresponding period last year.

Improvement in Hog Market

Hogs have kept pace with the improvement shown by the cattle market and they are, generally speaking, around 30c higher at present writing then they were at the close of the old year. The market on hogs was by no means in bad shape during December, and the improvement that has taken place during the last ten days has brought the price up to a very satisfactory point. It has been very apparent from day to day that packers have wanted the hogs. Stocks of provisions are liberal, but for all that packers have been free buyers, giving the market a splendid tone. As a matter of course buyers have fought advances, but in spite of that the market, as noted above, has rapidly worked to a higher plain.

The immediate future of hogs is a little uncertain. There is a feeling in some quarters that prices have advanced most too rapidly to be permanent, and a little reaction would surprise no one. It would, however, occasion a good deal of surprise if prices were to break and remain down any great length of time as the majority of operators are bullish in sentiment. Quality of hogs coming to market has shown great improvement in the last week or ten days, but receipts have been very fair. In fact, eleven markets since the beginning of the year show an increase of 36,000 head as compared with the corresponding period of last year, but a falling off of over 250,000 head as compared with the same period in 1912.

Good Outlook for Sheep

No one could ask for a better sheep trade than has prevailed during the last week or ten days, but it might be well to remember that sheep and lambs have been bringing good prices all the season, considering the large receipts at most market points. Prices have recently shown sharp advances, tops within the last week having reached the highest point touched since the early part of last year. The majority of sheep men continue taking a hopeful view of the future.

As mentioned before in these columns there is a feeling that lambs, barring occasional temporary breaks, will continue selling about where they are, while sheep, owing to an assumed shortage in supply, might be expected to reach a somewhat higher range of prices. Thus far this year receipts have been very moderate, the six largest markets of the country showing a loss of 35,000 head during the first ten days of the year. As a matter of course that is not a sufficient decrease to materially effect the market, but it indicates that there is no great anxiety on the part of holders to unload.

Should State Board of Agriculture Be Reorganized?

(CONTINUED FROM PAGE NINE.)

and referred to the committee on finance, ways and means.

About the same time house roll No. 350 was introduced by Representative T. M. Scott. This bill created a publicity bureau in the office of the secretary of the State Board of Agriculture. It provided for an appropriation of $20,000.

Bill Killed in the Committee

The active opposition to the Welfare commission bill was from persons interested in Secretary Mellor's publicity bill. It was killed in the finance, ways and means committee, but was finally resurrected and reported to the house. It passed with only three votes against it. The appropriation was cut from $25,000 to $5,000 for the biennium.

The purpose of this commission is to act in an advisory capacity in corralating the various state surveys and to use the data furnished by these surveys in securing the greatest development of the resources of the state; also to gather annually the statistical facts with regard to the production in the state and to make public and to publish the facts ascertained, and through the medium of publicity promote the development of the resources of the state.

This law is framed so that the commission can do something of permanent worth for the development of the state. Nebraska should have something besides "blue sky" publicity.

Why should Secretary Mellor be allowed to spend $5,000 annually to duplicate a portion of the work of the Public Welfare commission?

Governor Moorhead says Nebraska has too many boards. It looks like the governor might be right about it.

Breeders' Notes

(CONTINUED FROM PAGE TWENTY-ONE)

of blood lines that is unexcelled. Another remarkable feature of this offering is the fact that out of the forty-three head there are forty head of yearling and tried sows, and in the aggregate they represent more pounds than any one bunch of sows we have ever seen go through a sale ring, and we firmly believe that no man in the breeding business in the west is producing a class of hogs combining so much scale and quality as is Mr. Wallace. When we were looking over his herd the other day, we just simply stopped and wondered how he did it. These sows are every one immune for the reason that every one of them has passed through the disease. Twenty-seven head of these sows are bred to Golden Model 4th, fourteen head to Colonel Chief, and the balance to Prince Muncie Colonel. Among the attractions are six Wallace's Wonder sows, including Fancy Advance 2d. These six sows are as good as have ever been sold from this farm. Other attractions are nine granddaughters of Wallace's Wonder and seven daughters of Golden Model 4th. If you are looking for the type of hog we have described above, with size, bone and quality, you will not be disappointed in this offering. As to blood lines there are none better. Write for catalogue at once, mentioning the Twentieth Century Farmer. In case you can not attend the sale, send your bids to G. E. Hall, of this paper, and they will be given proper attention.

Carpenter Sells Durocs Feb. 2.

Ernest H. Carpenter of Fontanelle, Neb., will hold his annual sale of Duroc-Jersey bred sows at his farm near that place February 2. Mr. Carpenter is going to put into this sale a lot of sows and gilts that are the equal of anything that will be sold this season in most ways. The offering will consist of fifteen tried sows and thirty spring gilts. The tried sows will include Critic Belle, the dam of Mr. Carpenter's herd boar, Prince Critic. This boar is the sire of quite a few of the individuals going into the sale, and a careful inspection of his get will show that he is a breeder of great merit. Critic Belle will also have three spring yearling sows in the sale, sired by a son of Chief Sensation Jr., that are especially good ones. The balance of the tried sows are by a son of Chief Promoter and a son of Crimson Wonder Again. About fifteen head of the spring gilts are by Prince Critic, ten by Wallace's Sensation and the balance by Model Boy, Fancy Wonder and Golden Model 4th. In regard to these gilts we want to say that they are as growthy a lot as we have seen so far this season. They have good bone, plenty of quality and are right up on their feet, and you can make no mistake in sending a bid on any of these sows, bred to one of Mr. Carpenter's good herd boars. The boars that these sows are bred to are Carpenter's Golden Model by Golden Model 4th; Wallace's Sensation by Sensation 2d by Wallace's Wonder; Blue Ribbon Model Jr., by Blue Ribbon Model by Golden Model 2d, and Ivan's Golden Model, a litter brother to Carpenter's Golden Model. These sows have been fed a balanced ration all the way through and have been made to take plenty of exercise. In buying from this herd you are not only sure of getting something of the right blood lines and with individual merit, but also something that will go out and make good in your own herd, simply because it has received the right kind of care and attention in its development. Parties from a distance will be met at Nickerson on day of sale. Catalogues are ready and may be had by writing Mr. Carpenter. G. E. Hall will represent this paper and will take care of any bids sent by parties, who cannot attend. Kindly mention Twentieth Century Farmer when writing.

Beau Mischief Hereford Sale

We desire to call attention for the last time to the sale of Hereford cattle to be held at Cambridge, Neb., on January 28 by Mousel Bros., the well known Hereford breeders of that place. This in all probability will be one of the greatest Hereford sales to be held in the west this winter. It will consist of a class of cattle that are seldom found in any one offering, taking them as a whole. The offering will be strong in the blood of Beau Mischief, one of the greatest breeding bulls of the breed, and there will be International prize winners and other individuals of prize winning merit, both in the line of cows and females, as well as bulls of herd heading character. Besides these there will be a splendid lot of bulls that are suitable for the man who wants them for range purposes. Look up their ad elsewhere and make arrangements to attend this sale. It will be a feast worth while to the lover of Hereford cattle, regardless of whether he wants to buy or not. You will be welcome on sale day just the same, and we feel sure you will feel repaid for your trouble by attending. If you are really in the market for something good, here is an opportunity that will not be afforded you for some time to come. Write for catalogue and arrange to attend this sale. Kindly mention The Twentieth Century Farmer when writing.

Holstein-Friesian Sale

On Tuesday, February 3, at the sale pavilion at South Omaha, Neb., Henry C. Glissman, the well known breeder of Holstein-Friesian cattle of Omaha, Neb., will hold his annual sale and will have a line-up of stuff that should attract the attention of any man who is in the market for something good in this line. The offering will consist of 100 head of cattle of both sexes and all ages. There will be sixty-five head of cows and heifers milking or soon due. These females are by such sires as Sir Pontiac Rag Apple Korndyke 49334, Pontiac Soldene Butter Boy 38473, and others of equal merit. There will be twenty heifers and heifer calves, a number of them being granddaughters of King of the Pontiacs. There will be ten head of big, strong, lusty bulls, mostly out of A. R. O. dams and the kind that everybody is looking for. All these cattle have been inspected and tuberculin tested. Write for catalogue at once and arrange to attend this sale. Kindly mention the Twentieth Century Farmer when writing.

POULTRY

Baby Chicks

BABY CHICKS—TEN VARIETIES—Annual incubator capacity, 100,000. Eggs for hatching from vigorous, farm-ranged birds. Write your wants. Maplewood Farm, Exeter, Neb.

Ducks

201 INDIAN RUNNER DUCKS. AYE Bros., Box 3, Blair, Neb.

112 PEKIN DUCKS. AYE BROS., Box 3, Blair, Neb.

200 ROUEN, INDIAN RUNNER, MUSCOVY ducks, Silver-Laced Wyandotte cockerels and Toulouse geese. Fred Kuera, Clarkson, Neb.

ROUEN DUCKS. THE BIG KIND. Write James Cassell, Fremont, Neb. R. 3.

Geese

42 TOULOUSE GEESE. AYE BROS., Box 3, Blair, Neb.

Langshans

FOR BLACK LANGSHAN COCKERels try Jake Hetrick, Wahoo, Neb.

296 BLACK LANGSHANS. AYE Bros., Box 3, Blair, Neb.

FULL-BLOOD BLACK LANGSHAN cockerels for sale. C. C. Cunningham, Kennard, Neb.

CHOICE BLACK LANGSHANS—MAE Curtis, Lyons, Neb.

Leghorns

SINGLE-COMB WHITE LEGHORN cockerels for sale, $1 to $1.50 each; pullets, $1 each. Q. F. Lambert, Palmer, Neb.

ROSE COMB BROWN LEGHORN Cockerels, Indian Runner Ducks. Otto Frahm, Fort Calhoun, Neb.

MY ENTIRE FLOCK CHOICE ROSEcomb White Leghorn cockerels, $1 each; hens, $8; pullets, $10 dozen. Kaveney Bros., Linwood, Neb.

ROSE-COMB BROWN LEGHORN cockerels; no better bird, $1 each; eggs, $1 setting. Olga Hayek, Linwood, Neb.

123 SINGLE-COMB BROWN LEGhorns. Aye Bros., Box 3, Blair, Neb.

50 SINGLE-COMB BROWN LEGHORN cockerels, scoring from 90 to 96, $2 each. Hawkeye View Farms, Selma, Iowa.

456 SINGLE-COMB WHITE LEGhorns. Aye Bros., Box 3, Blair, Neb.

SINGLE-COMB WHITE LEGHORN and White Rock cockerels; Leghorns, $1, six for $5; Rocks, $1.25. Mrs. John Weber, Litchfield, Neb.

SINGLE-COMB WHITE LEGHORNS. Pearl Usher, Eustis, Neb.

Orpingtons

SINGLE-COMB BUFF ORPINGTONS, Indian Runner ducks. Peter Brehm, Harvard, Neb.

355 BUFF ORPINGTONS. AYE BROS., Box 3, Blair, Neb.

PRIZE-WINNING, SINGLE-COMB Buff Orpingtons. Mrs. Cook, Eddyville, Neb.

SCOTT'S FAMOUS CRYSTAL WHITE Orpingtons—breeding stock and eggs for sale. B. F. Scott, Rising City, Neb.

BUFF OR WHITE ORPINGTONS—From prize-winning stock, bred for layers. Catalogue free. Frank Lewis, Gibbon, Neb.

Plymouth Rocks

211 WHITE ROCKS. AYE BROS., Box 3, Blair, Neb.

BARRED ROCK COCKERELS—Scored, unscored. Mrs. George W. Schulz, Yutan, Neb.

BARRED AND WHITE ROCK COCKerels for sale, $1.50 to $2.50 each. Mrs. J. A. Shoestall, Elwood, Neb., Gosper Co.

CHOICE BARRED ROCK COCKERELS shipped on approval. George Franklin, Axtell, Neb.

BUFF ROCKS, YEARLINGS — ONE exhibition cock, $10; two cocks, excellent breeders, $5 each; five hens, exhibition breeders, $2 each. Scott Covalt, Council Bluffs, Ia.

SPECIAL SALE — LARGE WHITE Rocks, Indian Runner drakes, extra quality. Mrs. Hans Greve, Central City, Neb.

BARRED PLYMOUTH ROCK COCKerels and pullets; heavy bone, narrow barred; show birds specialty; satisfaction guaranteed. G. W. Feuerstein, Fremont, Neb.

POULTRY

Plymouth Rocks

417 BARRED ROCKS. AYE BROS., Box 3, Blair, Neb.

BARRED ROCK COCKERELS FOR sale. Mrs. Owen Kaveney, Central City, Neb.

IVER S. JOHNSON, STANTON, NEB., ran a ten-word poultry ad in each of our December 27 and January 3d issues. Each ad cost 50c. On January 7 he wrote: "Stop that ad. of ours about Rock cockerels. Am all sold out. That ad. was a wonder."—166,331 subscribers who read the paper; that's the reason. This page will sell those cockerels quick. Put this salesman to work for you. Send a trial order today—5c a word. Twentieth Century Farmer, Omaha, Neb.

Poultry Photographs

POULTRY PHOTOGRAPHS—WE BUY good, clear photographs of poultry, chicks, poultry houses, incubators in operation, taking off hatches, etc. We pay up to $1 each. Keep your camera snapping and sell your pictures to us. Write us about it. Twentieth Century Farmer, Omaha, Neb.

Rhode Island Reds

222 RHODE ISLAND REDS. AYE Bros., Box 3, Blair, Neb.

SINGLE-COMB RHODE ISLAND Red cockerels, hatched from trap-nested hens. Thompkins strain. Otto Timm, Bennington, Neb.

SINGLE COMB REDS—FIFTY COCKerels bred from Omaha, Sioux City, Lincoln, Davenport winners, $3 up. Scott Covalt, Box O, Council Bluffs, Ia.

FOR SALE—RHODE ISLAND PULlets, both combs, $1.50 each; one rose-comb cockerel, scored. Q. F. Lambert, Palmer, Neb.

PRIZE WINNING ROSE COMB Rhode Island Red Cockerels, $2 to $5 each; good color. Glen Wilson, Blair, Neb.

Turkeys

MAMMOTH BRONZE TURKEYS—Both sexes, big-boned birds; Light Brahma cockerels, good ones. Frank A. John, Bedford, Ia.

WHITE HOLLAND TURKEYS, White Pekin ducks, White African Guineas, Single-Comb Brown Leghorn hens and cockerels, Anconas; first-class stock. Edward E. Dooley, Selma, Ia.

BONNIE VIEW BOURBON RED AND White Holland turkeys. Mrs. N. W. Burbank, New Sharon, Iowa.

FOR SALE—BOURBON RED TURkeys. Mrs. W. C. Ware, Fairbury, Neb.

BLUE RIBBON BRONZE TURKEY toms, $4 each; hens, $3. W. J. Jones, Pawnee City, Neb.

FOR SALE—THOROUGHBRED MAMmoth White Holland turkeys. Mrs. C. May, Garfield, Kan.

Wyandottes

THREE HUNDRED WHITE WYANdotte cockerels from the best blood in America. Large, vigorous, pure white birds. Oscar L. Bock, Council Bluffs, Ia.

348 WHITE WYANDOTTES. AYE Bros., Box 3, Blair, Neb.

SILVER-LACED WYANDOTTE COCKerels—selected, healthy, well marked birds—$1.50 each. H. Dasenbrock, Leigh, Neb.

Poultry Remedy

CURE SICK CHICKENS WITH Germikil. Catalogue and sample free. Aye Bros., Box 3, Blair, Neb.

Miscellaneous

SPECIAL ATTENTION WILL BE given poultry ads in the February 7 issue. Why? It is the big, special poultry number. Best number of the year for poultry advertisers. Your ad should be in it. Let us tell you about it. Poultry Department, Twentieth Century Farmer, Omaha, Neb.

POULTRY CATALOGUE FREE. AYE Bros., Box 3, Blair, Neb.

SINGLE COMB WHITE, BUFF AND Brown Leghorn Cockerels for sale; also Rocks, Wyandottes, Orpington and Reds. Prize winning stock. L. P. Harris, College View, Neb.

MONEY TO LOAN

6 PER CENT LOANS ON FARMS, orchard lands, city resident or business property to buy, build, improve, extend or refund mortgages or other securities; terms reasonable; special privileges; correspondence invited. Dept. L, 749 Henry Bldg., Seattle, Wash., or 618 Commonwealth Bldg., Denver, Colo.

LANDS

Arkansas

387-ACRE RICH CREEK BOTTOM farm; 80 cultivation, balance timbered—$15 acre. Sessions Co., Winthrop, Ark.

Arizona

$250 AND A LITTLE TIME WILL GET 320 acres of rich, level valley land in southeastern Arizona that will grow two crops per year, or six cuttings of alfalfa. Ideal climate; on good railroad, close to new town; 60,000 mining people to feed near; pure water for domestic use, 60 to 150 feet; artesian water for irrigation, 300 to 500 feet. For particulars write L. B. Scott & Son, 1126 City National Bank Bldg., Omaha, Neb.

California

IN THE HEART OF THE SACRAmento Valley. Buy land now at farm prices. Land that has three railroads, all rural conveniences, schools and churches of all denominations; land that raises small grain, alfalfa, beans, all vegetables, oranges, peaches, prunes, nuts and berries. Buy land that is worth having, and where life is worth while. Write us for list of satisfied buyers, excursion rates and literature. W. T. Smith Co., 815 City National Bank, Omaha.

Canada

SOUTHERN ALBERTA YIELDS Enormous crops of wheat, 20 to 45 bushels, flax 10 to 20 bushels, potatoes 300 to 700 bushels and other crops in proportion. The wonderful nutritious grasses and forage crops make stock raising most profitable; besides, the climate is tempered by the Chinook winds, so that very little shelter is needed in winter. Plenty of rain, splendid water, fine drainage and abundance of cheap coal near. We own and will sell to actual settlers any of our 50,000 acres of level, rich, dark chocolate soil land lying along the railroad near Lethbridge for a small cash payment and easy terms on balance. These lands are very cheap, considering their quality and location. For other information write Helgerson Land Co., Lethridge, Canada, or H. L. Helgerson, Omaha, Nebraska, Gen'l Delivery.

Delaware

FARMS—GOOD LAND, CLOSE TO best markets; genial climate. Free pamphlet. Address State Board of Agriculture, Dover, Delaware.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

CASH FOR YOUR FARM OR BUSIness. I bring buyers and sellers together. Write me. Established 1881. Frank P. Cleveland, 1315 Adams Express Building, Chicago, Ill.

Louisiana

LOUISIANA FARM—100 ACRES IN cultivation, 100 acres practically ready for cultivation, 200 acres in pasture, 240 acres leased in pasture, all under hog fence, on Texas & Pacific main line railroad; has railway switch on place; nine good tenant houses, one storehouse, one 90-foot barn—has never been overflowed; will sell for $10,000; cash $1,500, balance 8½ years annual payments, 7 per cent interest. Address R. W. Wier, Houston, Texas, owner.

Minnesota

100 CHOICE FARMS IN THE GARden spot of southern Minnesota, where corn is king. Price, $60 per acre and up. Prices advancing rapidly. Come now. Free list. The Paffrath-Schmit company, Springfield, Minn.

NORTHERN MINNESOTA—THE greatest natural cattle section; no drouths; alfalfa, clover, corn and potatoes are principal crops. Prairie or timber. Free information. We have no land for sale. Write W. R. Mackenzie, Immigration Building, Minneapolis, Minn.

MINNESOTA—600 ACRES, WELL IMproved; 450 plow land, 100 meadow, 50 river pasture; modern, 13-room house; large basement barn; full set modern buildings; 5 miles city of 15,000; best corn, clover and stock land; $60 per acre. Absolutely no trades. Complete leaflet description mailed. Other Minnesota farms. Write W. C. Murphy, Foley, Minn.

Oregon

$600 CASH PUTS YOU ON 40 ACRES irrigated land at Ontario, Oregon; all cleared, plowed and ready for crop. Alfalfa averages seven tons, corn eighty to one hundred and twenty bushels per acre. Exceptionally fine fruit district. Long terms, low interest rate. Write owners, Oregon & Western Colonization Co., 536 Paxton Bldg., Omaha, Neb.

LIVE STOCK

Holstein Calves

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

HOLSTEINS — WE HAVE A FEW nicely marked, high-grade Holstein calves, either sex. Write for information and prices. Crossdale Stock Farm, Sextonville, Wis.

MAGAZINES

FREE FOR SIX MONTHS—MY SPEcial offer to introduce my magazine, "Investing for Profit." It is worth $10 a copy to anyone who has been getting poorer while the rich richer. It demonstrates the real earning power of money and shows how anyone, no matter how poor, can acquire riches. Investing for profit is the only progressive financial journal published. It shows how $100 grows to $2,200. Write now and I'll send it six months free. H. L. Barber, 472, 28 W. Jackson Blvd., Chicago.

SEEDS

GARDEN AND FLOWER SEEDS. Aye Bros., Box 3, Blair, Neb.

PURE KHERSON OATS. AYE BROS., Box 3, Blair, Neb.

SURPLUS SEED CORN CAN PROFITably be advertised in this department. Write for rates. Twentieth Century Farmer, Omaha, Neb.

SEED CORN FROM THE SEED CORN center of the world. Aye Bros., Box 3, Blair, Neb.

SEED CORN, IMPROVED LEAMing, $1.50 per bushel, shelled; select ears, $2.50, f. o. b. John Butcher, Valley, Neb.

ALSIKE CLOVER AND TIMOTHY, $5 per bushel. Aye Bros., Box 3, Blair, Neb.

ALFALFA SEED—DAWES COUNTY, non-irrigated alfalfa seed, cane, millet and sweet clover seeds; baled alfalfa hay, all cuttings. Prices and samples free. Schwabe Bros., Chadron, Neb.

SWEDISH SELECT OATS. AYE Bros., Box 3, Blair, Neb.

WHITE FLOWER SWEET CLOVER seed, Red Clover, Alfalfa and Timothy seed. Aye Bros., Box 3, Blair, Neb.

HELP WANTED

THE AUTOMOBILE BUSINESS PAYS $25 to $50 weekly. We teach you how. Write for our free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

WANTED—A MAN TO SOLICIT SUBscriptions for The Twentieth Century Farmer; salary, $42 a week. Address Circulation Manager, The Twentieth Century Farmer, Omaha, Neb.

MEN AND WOMEN WANTED FOR government jobs; $65 to $150 month; vacations; steady work. Parcel post and income tax mean many vacancies; common education sufficient; "pull" unnecessary. Write immediately for free list of positions now available. Franklin Institute, Dept. C 94, Rochester, N. Y.

SALESMEN FOR HIGH-CLASS TObacco factory; experience unnecessary; good pay and promotion for steady workers. Complete instructions sent you. Piedmont Tobacco Co., Box T-27, Danville, Va.

GOVERNMENT FARMERS —Make $125 monthly. Free living quarters. Write Ozment, 53-F, St. Louis, Mo.

COMMISSION MERCHANTS

HIGHEST PRICES PAID FOR butter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

SCHOOLS

A FULL, UNLIMITED SCHOLARSHIP in Boyles Business College, Omaha, Neb., at a discount. Good for either shorthand or business course. An excellent opportunity for some ambitious young person. Largest and best equipped business school in the west. Position guaranteed. Get our price on this scholarship before you decide you can't afford to go to school this winter. Twentieth Century Farmer, Omaha, Neb.

DOGS

COLLIES—SEND FOR LIST. W. R. Watson, Box 501, Oakland, Ia.

GREATEST
Cream Separator Offer

Imported direct from Belgium

The Melotte—the wonderful Melotte—the great French-Belgian Separator—the prize winner all over Europe—now to be shipped anywhere in the U. S.—and on the most sweeping introductory offer. The **best** of all separators in Europe or America—**yours** on this **Rock-Bottom** free trial offer. The Melotte introduced a year ago swept the country even with the duty on. Those who knew cream separator values were glad to pay it. Now you pay the same price you would pay in Belgium, plus only $1.75 for water freight.

This is positively the first bona fide, no-money-down offer ever made on any cream separator. No manufacturer of any cream separator ever dared make such a startling proposition before. All others who have ever pretended to offer you a free trial or to send their separators without any money down have taken care to get something out of you first. **But we don't want anything.** Your simple request brings the great Melotte direct from Chicago to your farm so that it can prove its absolute superiority there against any cream separator ever made, by any manufacturer.

Free Duty Cuts $15.25

The high tariff has been cut right off—the great Melotte comes in absolutely free of duty! **You win! The American farmer can now get the world's best—the grand prize-winner of all Europe—at a price $15.25 lower than ever before.**

For the first time in the history of cream separator selling in America the price of this famous imported French-Belgium machine is cut. No duty now. The free tariff enables us to make a cut to you which gives you the one opportunity you have been waiting for to get the world's greatest machine at the price of an ordinary separator.

You cannot compare any other separator to the Melotte—the latest and most improved in design, construction and operation. The tariff and patent arrangements have kept it off the American market. Now it is here and sold on the most liberal free trial offer ever made.

The Melotte bowl hangs down from a single perfect bearing and spins like a top. It will continue spinning for half an hour after you stop turning crank unless you apply brake. Patented self-balancing bowl is entirely automatic. You can't get it out of balance and so perfect is the balance that it is impossible for it to vibrate and affect the skimming efficiency like other separators. The bowl chamber is made of special cast iron, porcelain lined with white bath tub enamel. The Melotte is easiest to clean, perfectly sanitary and will last a lifetime.

Absolutely guaranteed for 15 years.

Sent Without a Penny Down —30 Days Free Trial

Your simple word that you would like to see this cream separator in your own barn or dairy house brings it to you instantly. We send you the Melotte without a bit of quibbling or hesitancy. We neither ask nor want you to send a penny. We don't want a cent of your money. You set it up, give it a thorough test with the milk from your own cows. We give you a free trial that IS a free trial in every sense of the word. It is a free trial because we don't ask you to pay us any money down—there is no C. O. D.—no lease nor mortgage. You keep your money right in your own pocket.

Some people PRETEND to give you a free trial, but they ask you to give them your money first. We are not afraid to let our separator speak for itself. Test the Melotte Cream Separator in every way, watch your profits go up, watch the increase of the amount of cream, then, if you do not believe that you ought to have a cream separator, just send it back at our expense. If, however, you decide to keep the genuine Melotte, we will allow you to keep it on extremely easy

Monthly Payments

These monthly payments are so small that you will hardly notice them. You only pay out of your increased profits. You don't need to be without a cream separator when you can have the separator right in your dairy house while you are paying for it. In reality you do not pay for it at all. It pays for itself.

That is what we want to demonstrate to you. We want to demonstrate and prove beyond all peradventure that the Melotte Cream Separator *does* pay for itself. Only a few months' use of a Melotte Cream Separator and you will be satisfied that this statement is **absolutely correct.** A few months and the separator has paid for itself. It does not cost you a penny because the increased amount of cream has paid for the machine. We don't want to tire you here with a long discussion of how our cream separator is made. You can best understand this if you will let us send you our free catalog.

Wonderful Record of The French-Belgian Melotte

Half a million Melottes are in daily use all over the world. Recognized as the world's best separator. The Melotte has won over 180 International prizes. One Melotte has been running at Remincourt, Belgium, the equivalent of 54 years' of actual work without appreciable wear. Think of it! Every part is made at the factory at Remincourt, Belgium, by French and Belgian mechanics, and comes just as it is packed in foreign factory.

The reasons for its superiority are plain. The bowl hangs down and spins as though running in oil, It can't get out of balance. There is nothing to get out of alignment and wear out bearing. The bowl-chamber l ned with special indestructible white enamel. The Melotte runs like new after ten years' use.

World's Grand Prize Winner

Here are a very few of the hundreds of grand world's prizes the Melotte has won. The entire list would cover this page:

1888—Brussels—International Exhibition — Progressive Prize.
1894—Medal of Higher Merit.
1895—Vienna—First Prize
1897—Brussels—World's Exhibition. First Prize.
1898—London—First Prize..
1900—Paris Gold Medal and First Prize.
1903—London Gold Medal and First Prize.
1904—St. Louis—First Prize.
1906—Milan—First Grand Prize.
1907—Amsterdam—First Prize.
1911—Brussels—Grand Prize and First Gold Medal

Valuable Book, "Profitable Dairying," Free

Just ask for this book and it will be sent to you. It is free! Place your name on the coupon, cut it out and mail it at once. Then we will send you our great free book, "Profitable Dairying," telling you everything about cows and dairying, butter and cream—how to feed and care for cattle, how to make them more valuable than they are now, how to make more money than ever before out of your cows. This book is written by two of the best known dairy scientists in the country—Prof. B. H. Benkendorf, Wisconsin Dairy School Agricultural College, Madison, Wis., and K. L. Hatch, Winnebago County Agricultural School, Winneconne, Wis.

Send the Free Coupon Now —Today
Don't Delay

CUT OR TEAR OFF ALONG THIS LINE

Henry B. Babson, Agt. in U. S., Dept. 4501 19th St. and California Ave., Chicago

Kindly fill in the coupon and we will send you free and prepaid our book "Profitable Dairying," by prof. G. H. Benkendorf and Prof. K. L. Hatch, the Wisconsin Dairy Experts. He will also send you our Free Melotte Self Balancing Bowl Cream Separator Catalog, explaining our no-money-down and easy monthly payment offer on Melotte Cream Separators.

Your Name .....

Address .....

.....

.....

No. letter necessary just sign and mail the coupon at once TODAY

Send the Coupon Today —It Brings Free Book

We will also send Our Free Catalog, describing fully the Melotte Self-Balancing Bowl Cream Separator and telling all about our liberal terms. Find out about these terms anyway, even if you don't expect to buy a cream separator *just now.* Remember—no money down, free trial and easy payments on the greatest European separator—and we let the separator tell its own story. You see with your own eyes why we can afford to guarantee this separator for 15 years. The most sensational offer ever made in connection with a cream separator. Our catalogue tells all about it. Don't delay. **Sign the coupon right now!**

Henry B. Babson, Agt. in the U. S.
19th Street and California Avenue
Dept. 4501 CHICAGO, ILL.

Test With Other Machines

Before you decide to buy any Cream Separator arrange to test a MELOTTE along side of the machine you now think is the best separator in America. We want you to do this. Then there can be no doubt in your mind as to whether you are really getting the best machine. This is the only way to buy a cream separator. Then it will not be necessary to take anybody's word.

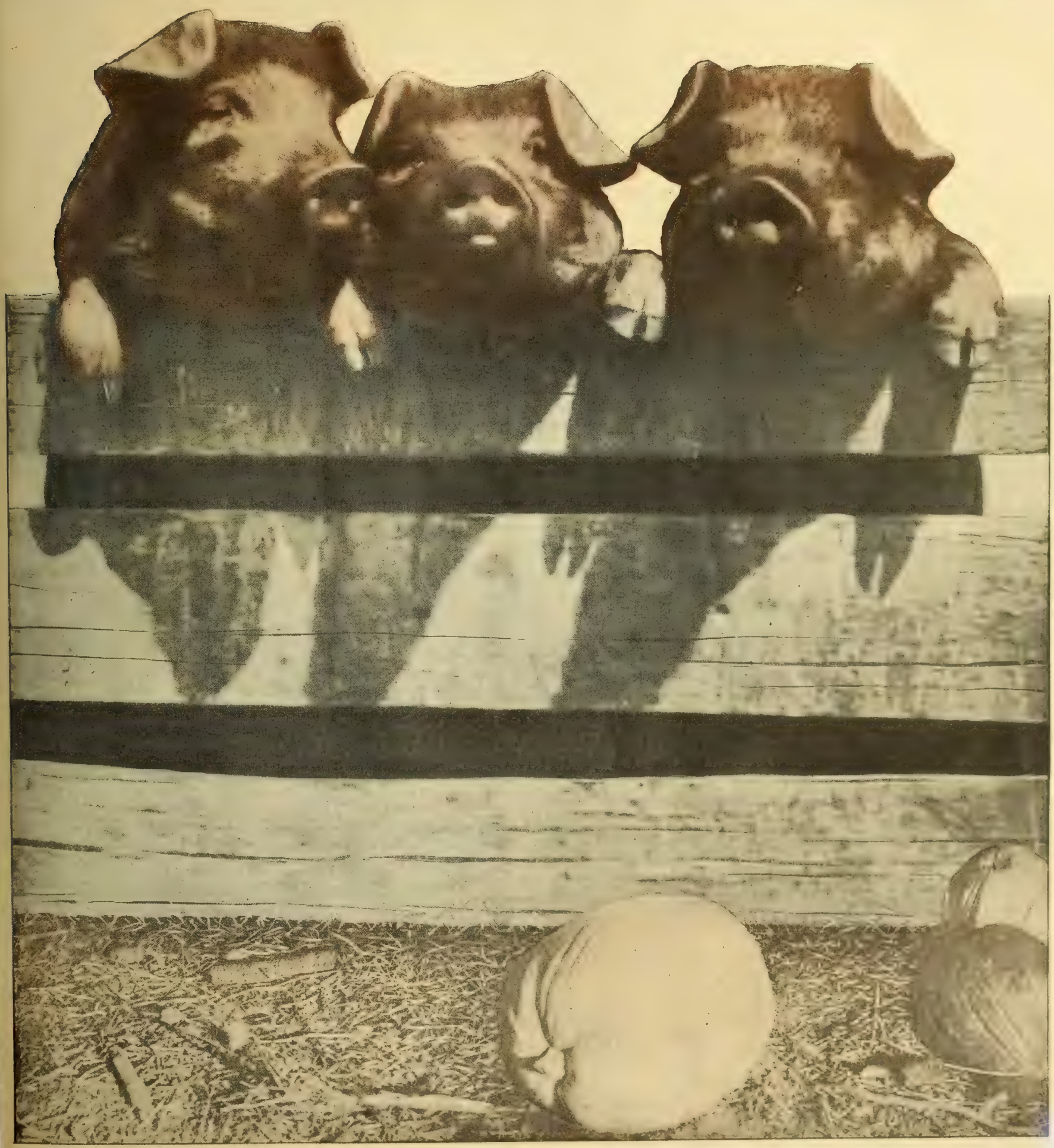
You'll know which machine turns easiest—which machine is the best made. You'll know which skims the closest. You'll know which will make you the most money.

Write to us about the MELOTTE and the MELOTTE FREE TEST today. We are the sole factory representatives in America.

TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, January 24, 1914 | Number 685



Prattle of the Youngsters

A Painful Process

Sunday School Teacher—If you are a good boy, Willie, you will go to heaven and have a gold crown on your head.

Willie—Not for mine, then. I had one of them things put on a tooth once.

New Invention

Miss Wilkins, the primary teacher, was instructing her small charges.

"Name one thing of importance that did not exist a hundred years ago," said the teacher.

Ralph Franklin, an only child, who was seated in the front row, promptly arose and answered:

"Me." Harper's.

Unnecessary Information

Mother—Now, Freddie, at the party when asked if you'll have something, you must say, "Yes, thank you;" and if you don't want it, you must say—

Freddie—Don't bother, ma, I don't expect to refuse anything.

Condemned by United States

"Tommy, your subscription for the boys' paper has expired. Shall I renew it for you?"

"Don't care, dad, but it isn't as good as it used to be."

"What do you mean—are the stories not as good?"

"Everybody says it's no good—even the postoffice calls it 'second-class matter.'"

Unfair Division

From the bed room of the twin boys came the mingled sound of loud weeping and hearty laughter, so father went up to investigate.

"What's the matter up here?" he inquired.

The joyous twin indicated his weeping brother. "Nothing," he chuckled, "only nurse has given Alexander two baths and hasn't given me any."

Pertinent Query

A pair of engaged lovers had spent some time on the moonlit veranda. Presently the young lady bade her visitor goodby and, on her way up to bed, stepped into the nursery to kiss her beloved little nephew.

"Auntie," inquired the sleepy but devoted urchin, his arms around her, "why don't you make Mr. Dick smell like your perfume 'stead o' smelling like his baccy?"

A Puzzle Explained

The teacher was giving a lesson in mathematics and English combined.

"A fathom," she said, "is a nautical word used in defining distance. It means six feet. Now I want some little girl to give me a sentence using the word fathom."

Instantly a hand shot up in the rear of the room.

"Well, Mary, you may give your sentence."

Mary stood up proudly.

"The reason flies can walk on the ceiling," said the observant child, "is because they have a fathom."—Youth's Companion.

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Special Sheep Number Next

FROM now on for a few numbers, each issue of the Twentieth Century Farmer will be largely devoted to some particular topic of interest to the man on the farm. Our next issue will be a sheep number, containing two articles of interest to any man who has sheep on his farm. They are written by an experienced sheepman and illustrated by fine photographs. The winter feed of the flock is one of the subjects treated, and is important at this time. The sheep-killing dog has been the subject of much discussion and some legislation; it should be the subject of further legislation, and the laws should be not only made, but enforced. This subject is treated in a comprehensive manner.

Although this is the sheep number, it will not be confined entirely to discussions on this one subject. The second article of the soil series begun in this number will appear and will doubtless be read with interest by those who want to conserve the fertility of their land. All the regular departments will have their places as usual, making this number not only interesting to the sheepman, but to the farmer who has no sheep as well.

Bright and Breezy

Father's Ultimatum

The father of a large family of children was trying hard to read the evening paper.

"What's that terrible racket in the hall, Martha?"

"One of the children just fell downstairs."

"Well," he replied, turning over another page of the paper, "you tell the children if they can't fall downstairs quietly, they'll have to stop it."—Lippincott's.

Going Cheap

Some time ago a man was awakened in the night, to find his wife weeping uncontrollably.

"My darling!" he exclaimed, "what is the matter?"

"A dream!" she gasped. "I have had such a horrible dream!"

Her husband begged her to tell it to him in order that he might comfort her. After long persuasion she was induced to say this:

"I thought I was walking down the street and I came to a warehouse where there was a large placard, 'Husbands for sale.' You could get beautiful ones for $7,500, or even for $6,000, and very nice looking ones for as low as $500."

The husband asked innocently:

"Did you see any that looked like me?"

The sobs became strangling.

"Dozens of them," gasped the wife, "done up in bunches like asparagus, and sold for $2 a bunch."

Certainly Was

There had been an explosion in a powder mill, and the proprietor, who was away on a pleasure trip, hurried home to make an investigation.

"How in the world did it happen?" he asked the foreman of the mill, as he viewed the wreck. "Who was to blame?"

"Well, you see, sir," replied the foreman, "it was this way. Bill went into the mixing room, probably thinking of something else, and struck a match in mistake. He—"

"Struck a match!" exclaimed the proprietor in amazement. "I should have thought that would be the last thing on earth he'd do!"

"It was, sir," was the calm rejoinder of the foreman.

Poor Doctor!

A certain doctor, who is, on his own frank admission, "the ugliest man in four counties," has a keen sense of humor, which enables him to enjoy many real and unconscious reflections upon his facial deficiencies. Once, after he had arrived too late to succor a poor woman who had been killed in a factory, the local newspaper published an ambiguous account of the case, which the doctor, with grim appreciation, preserved. Having first described how the woman had come by her injuries, the paragraph went on to say:

"Strong hopes were entertained of saving her life until Dr. P— arrived; but these hopes, unfortunately, proved ill-founded, for the moment the doctor showed his face within the door the poor woman fell back with a gasp and expired."

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Fertility of the Soil and How to Maintain It

Article I---How Soils Are Made Fertile

USUALLY, when we think of soils we think of them as a finished product; that is, we consider them as something that was made and completed when the Creator commanded that there should be light, and that man now has no more power or influence over their making than he had over the making of light or of rocks and mineral ore. We seem to think that God made the soils in the beginning, and that all we can do now is to farm them.

The writer contends that this is a very mistaken idea. Strictly speaking, soils are not a finished product; they are constantly undergoing changes. As a general rule, if they are unmolested by man, they are constantly making those changes that will increase their fertility. This is true in the forests and in the prairies. If they are unmolested in any way, their fertility is constantly increasing, no matter how heavy the growth of trees or grass may be each year. If the soils are tilled by man—if they are molested by man—as a rule they are constantly decreasing in fertility. I am safe, I think, in saying that almost no soil in the west or southwest that has been farmed ten years is as fertile as it was the first year it became thoroughly fit for cultivation after it was broken up. The reason for this is because the soil is constantly undergoing changes; therefore it is not a finished product. It may either increase or decrease in fertility.

We simply speak of this to show the farm reader, or rather impress upon the farm reader, that soils are not a finished product, but that they have been left for him to improve as the circumstances may demand. If the farmer looks upon this question in the light that the soil may be improved, or that soils may wear out if the proper attention is not given them, he will use more care in his attempt to maintain their fertility. If he knows how nature makes soils and how she maintains their fertility, he will know how to go about it to maintain the fertility of his soil, if it is sufficiently rich, and how to build it up if it is worn out. Let us see how nature makes soils.

Formation of Soils

Before we take the formation of soils into consideration we should know what soils are. We are told that soils are the top stratum of the earth's crust in which the plant has root and obtains the greater part of its food. While the above is the most common definition of soil, it does not explain the composition of the soil. If we know of what soils are composed, we have gone a long way in learning how they are formed.

Soils are the union of two materials—the organic and the inorganic. By organic matter we mean the decayed plants, animals and animal excrement. When well decayed it is called humus. By inorganic matter we mean the decayed rocks and minerals. These materials are usually called mineral elements. Without organic matter there can be no soils that will produce profitable crops. The clay bank is an illustration of this fact. There is an abundance of inorganic matter there, but crops will not grow and make profitable yields, because there is not the proper amount of humus or organic matter. Without inorganic matter in the soils there can be no crops. The manure heap and the peat hog are illustrations of this fact. Crops cannot grow and make profitable returns on them, because there is an absence of mineral matter.

To produce most anything in the world it requires the union of two things. To make the ear of corn it requires the union of the pollen and the stigma; without this union the ear will not "fill." To produce the infant it requires the union of male and female. To make the something we call fertility of the soil it requires the union of the acquired organic matter and the latent inorganic matter; without this union we cannot have fertile soils. It has been by affecting this union that nature has made the soils.

Beginnings of Plant Life

Ages ago this earth was a molten mass. There was, of course, no form of life, either plant or animal, in existence. In time the surface of the earth cooled into solid rock. As the substance beneath the earth crust cooled the crust itself cracked and broke into pieces. As the cooling continued moisture entered into the cracks and crevices, dissolving many of the smaller portions into finer particles. Finally the surface was so cool that freezing in certain seasons of the year was possible. The moisture in the rocks expanded by freezing, broke them into smaller pieces and particles. All the forces of nature seemed to be at work pulverizing the rocks. In due time there appeared certain forms of plant life. Perhaps the first was some of the mosses and lichens that grew upon the rocks and particles of rocks, but obtained their food principally from the atmosphere. Their growth may have been very small, but it was ample to pave the way for other and higher forms of life that were to follow. After a while dead portions of them became mixed with the finer particles of the rocks and a little soil was made in which a higher form of plant life could grow and mature. These grew, died, fell back to the earth, and in the decay of their leaves, branches and stalks more organic matter was given to the inorganic matter, enabling other plants that made a heavier growth to come into existence. Finally, plants producing seed and trees producing heavy leaves and fruit began to grow.

After Plants, Animals

After the first forms of plant life appeared, the lower forms of insects came into existence. These died and their bodies were mixed with the leaves and stalks of the plants and returned to the soil to increase their supply of organic matter. Later higher forms of insect life appeared, and finally birds and animals were present. During these years, or ages rather, the excrement and dead bodies of these numberless insects, birds and animals were returned to the soil, with the leaves and stems of plants and trees, till we find the soil rich enough to produce cultivated crops for man.

This formation of soil was going on in every crack and crevice on the mountain side and hill slope. When a rain descended all these particles of newly formed soil were washed into a valley or ravine below, forming a plain or field of soil capable of producing a forest or prairie and in which the highest forms of animal life had their being. These animals lived on these plains and in these forests, consumed the vegetation and gave their manure back to the soil. Finally they died and their bodies decayed and returned to the dust from whence they came to increase the amount of organic matter. Man himself is no exception to the rule, for he, too, has ever lived under the divine sentence, "Dust thou art, and unto dust shalt thou return." This sentence may have been pronounced to punish an erring man, but the return to the dust of that which came from the dust has been the means of making soils and maintaining their fertility after they have been made.

What is the Soil?

Of what are soils composed? They are the union of organic matter or humus and inorganic matter or mineral elements. How were they made by nature? By the constant returning to the original soil everything that came from the soil or was produced upon the soil. If a plant, tree or animal died it returned to the ground, making the soil a little richer than it was before the plant, tree or animal lived.

The formation of soil did not cease with the creation of the world. Soils are now being formed around us on every hand with a greater rapidity than they were at any time before man became a factor on this world. Let the farmer neglect to cultivate one corner of his field and without delay nature begins to produce a crop of weeds. Thousands of insects appear and live upon these weeds and cast their insect excrement upon the neglected soil. In due time both insects and plants die and give their bodies back to the soil, where they decay and increase the supply of organic matter. The increase of organic matter increases the fertility of the soil. In clover and timothy meadows soils are being made and fertility increased in this very way. In the pasture where the animals are kept the formation of soil is even more rapid than in the timothy meadow.

Layers of Earth

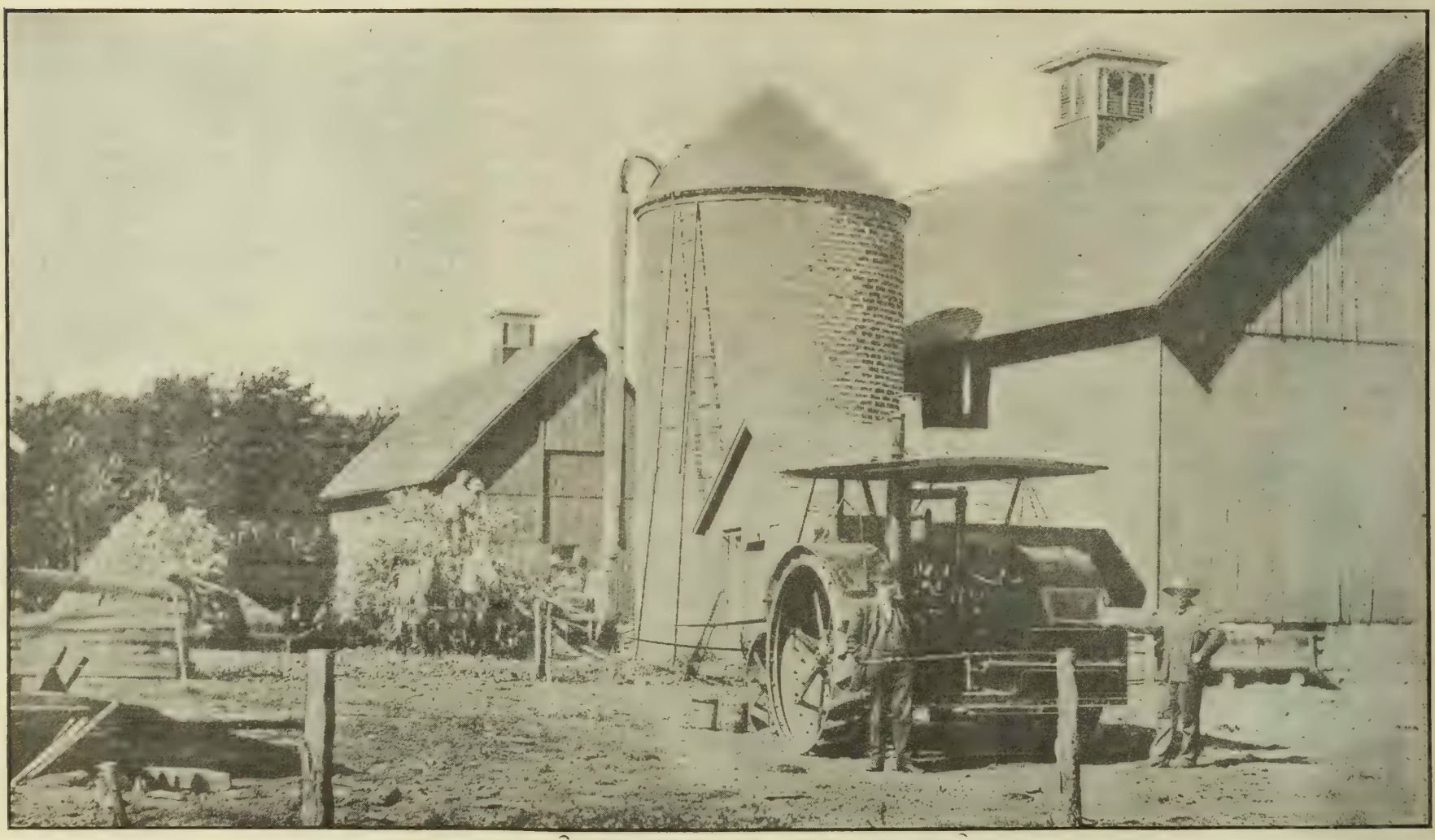
If a farmer will take a spade and dig down into the forest or meadow, he will see how soils are now being formed. The first layer he will notice is purely of vegetable matter. In the most cases this layer is very thin, but it is there nevertheless. The next layer is a mixture of

organic and inorganic matter. This layer is the soil proper and may vary from one inch to eighteen inches in thickness. Beneath this is the subsoil, which consists almost entirely of inorganic materials. In other words, it is decayed rocks. Under this is found, usually, the rocks from which the subsoil is made. Of course, there are exceptions to this, but it is the general rule.

The reader can see that all there is to the formation of soils is the application of organic matter to the inorganic. Nature has done this by growing crops and producing insects and animals, and when these die they are returned to the soil. If man wishes to build up his soil and maintain, if not increase, its fertility, he must keep the supply of organic matter or humus ample. This can best be done by growing those crops that will return a great deal of their growth to the soil and by keeping enough animals on the farm to eat up at least all the hay and forage, and a great deal of the grain produced and to return all of the manure produced by these animals to the ground that grew the crop. If it is nature's way to return the crops grown on the soil to that soil and to keep animals, birds and insects also on these soils for their excrement and bodies when they die, it should be the aim of the farmer to return as much of the crop as possible to the ground, and to keep animals that will produce a great deal of manure. If crops are grown that will return a great deal of organic matter to the soil, and animals are kept that will produce a great deal of manure, and that manure is returned to the soil, the supply of organic matter will be maintained, as well as the fertility of the soil.

The forest and prairie, as said before, are examples of how soils are made. No matter how heavy the growth of grass or trees may be, the fertility of the soil in which this growth is made is constantly increased; in fact, the heavier the growth the more fertility there is returned to the soil. The falling of the leaves, the death of the year's growth of grass and the thousands of insects, birds and animals that excrete fertility and finally die, pay back to the soil more of the materials that make soils rich than were needed to produce the growth. This is nature's way: Pay back to the soil as much or more than is needed to produce the growth made upon the soil, whether that growth be plant or animal life. CHESLA C. SHERLOCK.

Twentieth Century Labor Saver on Farm



William McCutcheon of North Dakota Uses His Tractor to Fill the Silo

WILLIAM M'CUTCHEON lives at Rugby, N. D. He likes to be shown, which makes it plain that he is closely related to you and me and all other Missourians. It is easy to show a man who is without prejudice; that is, if you have anything to show. But a man with prejudice—aye, there's the rub.

Mr. McCutcheon held certain prejudices. He is a big farmer—big enough to be manager of the North Dakota Grain and Land company—but he was not big enough to see the advantages of a twenty horsepower tractor. He not only did not have faith in it, but he even got out his little hammer and joined the anvil chorus against the tractor. When at last he was persuaded to give it a trial he made it plain that he was not to pay a penny until he had been shown—until his prejudice was completely pried loose. The farmer ever has been slow to take up a new idea; but once he is convinced, he sticks like glue. Mr. McCutcheon has been convinced. Here is his story, written to the dealer from whom he purchased the tractor:

"You guarantee that it will do the work of twelve horses; without the least hesitation would we guarantee it to do the work of fifteen, and a little more than that. It is and has been plowing for us and hauling three gang plows. The third plow is twenty feet from the engine. That, of course, means hard lugging, yet it has done it all the time, even when the ground was so dry that the wheels would not hold. It is making twenty miles a day—the same as our teams make plowing along side of it. We are using five horses on the gangs, and till our recent rains should have had six on a plow. The engine seems to use two and a half gallons of gasoline an acre. We call it three gallons to cover the cost of other oils; then, figuring the men's wages and their board, our cost for plowing is 75 cents an acre. With our feed crop failure, 'tis not at all hard to appreciate the advantage in not being obliged to take care of horses when they are not working. The engine is working on mile lands. We lack just one foot in the day's work of making seventeen acres. The man that runs this outfit has never before operated a gasoline engine. He gets along nicely."

The country is filled with McCutcheons—doubtful, but being convinced. "Overtime" at the factories where tractors are made tells stories of thousands who have been shown. The gasoline tractor is the labor saver of the farm. The farmer has suffered from too much work, and the time has come when, with increased acres to supply the increasing demand for foodstuffs, the man on the farm must shift the burden to machines that can better carry it and save his time and strength.

But the tractor does more than pull a gang of plows. It pulls the reaper and mower, drives the thresher, draws wagonloads of grain to market, fills the silo and does other things. And, better still, it saves the farmer the hard work that wears him out and makes him old before his time.

The reaper was the great agricultural stride forward of the nineteenth century; the tractor is the great agricultural stride forward of the twentieth century.

Where Alfalfa Would Not Grow and Why

Being the Experiences of Certain Farmers Who Tried to Grow Alfalfa and Failed

By A. C. Hartenbower

"I HAVE failed!" This expression of disappointment is so often made by the farmer after his first attempt to grow alfalfa. If the recital of failure were rarely heard, or if it came from certain sections, it would be a matter of no more than local interest, but when it comes annually from thousands of farmers, in various sections of the country, it demands more than a passing notice. Especially is this true when we consider that these failures are often confessed by farmers who have been successful in growing other farm crops, or when the failures come in sections which have proved their adaptability for producing alfalfa. Which shall we blame for these failures, the farmer, the soil or the seed? What cause lies behind these wasted efforts, this useless expense and loss of time? The actual experiences of four farmers have been chosen for consideration from many such experiences which have been brought to my attention, as they are representative of the most general reasons for failure to grow alfalfa under varying conditions

Seed Bed Too Open

Mr. W. planted his alfalfa seed in soil which he had plowed and harrowed immediately before seeding early in the spring. In fact, he had always practiced late spring seed-bed preparation for all the crops that he had grown on his farm. He did not realize that alfalfa requires more careful seed-bed preparation than almost any other crop that the farmer grows; not only because the seeds are small and delicate, but also because the crop, when once established, must remain in the same field for a number of years in order to be profitable. Mr. W.'s seed bed was open and loose; the alfalfa seeds when planted were surrounded by air spaces instead of soil particles. Thus capillarity could not supply sufficient moisture either to give a complete germination to the seeds or to start the young plants into vigorous growth. Many seeds sprouted, it is true, but because of lack of moisture and the consequent inability to obtain food supplies, they soon died. Mr. W. could not understand why he had failed to obtain a good stand of alfalfa, because this field had always been kept free from weeds, had a large supply of mineral plant foods and a reasonable amount of decaying vegetable matter. The fact that it was good bottom land and had produced, year after year, good crops of corn or oats, still further puzzled him.

But Mr. W. asked questions and learned that he himself was at fault; further, that proper seed-bed preparation would, in all probality, assure him of a good stand. Alfalfa is one of the hardest crops to get started. The ground must be plowed at least one month before planting. Medium deep plowing has been generally found best. Harrowing should be done immediately after plowing where fall seeding is practiced, and this should be kept up at intervals of every ten days to two weeks until planting time. These harrowings will serve to compact and pulverize the soil, making a seed bed wherein every seed will be surrounded on all sides by soil particles and insuring sufficient moisture to sprout the seeds and give the young plants a good start. If the field is not exceptionally clean, the seeding of alfalfa should be put off until it is.

Mr. W. tried preparing his soil in the above way. He invested in good seed and carefully planted the crop. The seed germinated promptly and made a good stand. The fact that this particular field of alfalfa was planted two years ago last fall, and that the production has been above normal, with no signs of diminishing, proves that his first failure was due to poor seed-bed preparation. How many thousands of farmers have failed in their first attempt to grow alfalfa because they have half prepared their seed beds?

An Alfalfa Seed Bed Must Be Compact, Well Pulverized and Moist

Production is Above Normal, with No Signs of Diminishing

Bought Cheap Seed

Mr. Von B. is a hard working, frugal farmer, not too well blessed with this world's goods. He had always devoted most of his efforts to wheat and oats, but from time to time, as he saved small amounts of money, he had purchased a few hogs. He soon learned that he must have pasture for these animals if he would procure any reasonable profit from keeping them. Some of his neighbors were growing alfalfa for hog pasture, and since they had obtained exceptionally large returns from each acre used for this purpose, Mr. Von B. naturally decided to plant this crop. Two of his neighbors decided to plant alfalfa the same season. According to the example set in previous years by their successful neighbors, they began work on their prospective alfalfa fields in sufficient time to give them properly prepared seed beds.

In order to reduce the comparatively high cost of seed for planting each acre of alfalfa, they decided that Mr. Von B. should purchase the seed for all three and thereby procure a slight discount. In a newspaper Mr. Von B. read the advertisement of a firm, about 200 miles distant, having alfalfa seed for sale at a lower price than he could purchase it locally. To him alfalfa seed was alfalfa seed, and, following his frugal instincts, he decided to purchase from the distant firm, because he saw no reason why he should pay the higher price at home. All three carefully planted the seed procured in their well prepared seed beds and watched anxiously for the first plants to come through. Few alfalfa plants came, but the field was green with young growths which quickly developed into strong, vigorous weeds. Each soon realized that he had obtained a good start of Russian thistle and other noxious weeds on his farm. It soon became apparent that the slight stands of alfalfa were entirely being taken by the weeds, and that the fields would have to be plowed up in order to prevent the spread of the noxious weeds among their other crops. Naturally, their disappointment was keen, and they carried their disappointment to their neighbors.

Best is Cheapest in End

Mr. Von B. realized that the weeds were the result of his so-called "cheap" alfalfa seed purchase, and he so expressed himself to one of his neighbors who had been successful in growing alfalfa under the same soil conditions. Mr. Von B. asked his neighbor how he had been assured of a good stand of alfalfa, with no weeds, in his carefully prepared, clean seed bed. His neighbor informed him that he had always purchased the best seed obtainable near home, regardless of the price. But before doing so he always sent a sample of the seed he contemplated buying to the state experiment station, where it was tested free of charge for purity and germination. This was the first time that Mr. Von B. had heard of this practice. His neighbor further told him that on two occasions he had been tempted to purchase cheap seeds, but after sending a sample of each of the seeds for testing, the reports had shown such a low percentage of germination and such high percentages of weed seeds and other impurities that he realized the higher-priced seeds were a great deal cheaper in the end. Furthermore, the experts at the experiment station had advised him to purchase his alfalfa seed near home, or to purchase alfalfa seed which had been grown under the same condition of soil and climate. To Mr. Von B. the paying of the highest price for home-grown seed was a new phase of frugality.

Mr. R. Z. was careful to avoid mistakes in seed-bed preparation and in seed purchasing when he planted a five-acre field of alfalfa for pasturing his hogs. He procured an excellent stand in his fall-planted field. The following spring the young plants grew luxuriantly—so luxuriantly, in fact, that he fenced in the field and turned his hogs into it to pasture. There was where he made his mistake. The alfalfa was soon ruined, and the second season after planting but few plants remained in the field.

In sections where alfalfa can be seeded in the fall, it is a good practice to plant then, so that the following season two or three cuttings of alfalfa hay may be normally procured, whereas with spring seeding very seldom are cuttings obtainable that season. As a general rule, alfalfa should not be pastured the first season after planting, because the root system is not sufficiently established to maintain the plant growth when the plants are continually and closely eaten down. More than this, but little pasturing should be given the alfalfa the second season. In any case, when alfalfa is used for pasture it should not be pastured too heavily, and the live stock should be kept off the field when the ground is wet.

Mr. C. failed because his soil was not inoc-

(CONTINUED ON PAGE SEVENTEEN)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance....$1.50
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75

REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.

CHANGE OF ADDRESS—Both old and new address must be given.

ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING—Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.

COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Making each acre of 300 acres produce $500 is the object of an experiment now being planned at the branch experimental station at Hays, Kan. The land is to be leased in small tracts to students, and the produce is to be canned and preserved by the young women and then sold.

To kill the skunk or not to kill him! This is a question that is agitating the experts these days. The government is now telling us that the skunk destroys the eggs of many harmful insects, mentioning the grasshopper, wasp, white grub, cutworm and others. We also know that he destroys the eggs of the hen whenever he can get them. It is up to the farmer on whose farm the eggs are produced to decide whether the skunk does more harm than good. Why not let the chickens eat the bug eggs?

In Tennessee there is a co-operative lamb club, composed of nearly eighty farmers. This club has been in operation for thirty years and is entirely successful. Prior to April 1 members of this club are allowed to dispose of lambs at private sale, or in any way they please. On this date a meeting is called and stock taken of the lambs on hand, after which no member may sell any animal. Shipments are made in June and July, the June shipment being "firsts" and the July shipment "seconds." There are other co-operative lamb clubs in Tennessee handling altogether from 600 to 2,500 lambs each year.

It Pays to Have Good Mothers

The selection each season of the choice young females of the herd as a reserve for the breeding supply is a necessity, if advancement and improvement in quality is the purpose of the breeder. There are in all herds and flocks of full bloods or grades a few animals of superior quality as mothers. It is this motherly instinct and nursing qualities that should be taken into account in the selection of the breeding animals. One good brood sow that will properly suckle a large litter of pigs and grow them up to the weaning age, strong and healthy, is worth several uncertain ones.

It is not always a profitable practice to turn off the tried and reliable breeders in any kind of stock before their places are satisfactorily filled by younger ones. There are usually a few animals in each herd that have proven themselves superior as mothers. Reserve these and keep them in the breeding division until there is something better produced. It is just as easy and just as profitable to select sows for milk production and motherly instinct and qualities as it is to select cows for profitable dairy use. The breeder who neglects this feature in his breeding tears down faster than chance will build up.

In breeding any kind of animal the qualities best suited to their perfect development should be encouraged and improved upon. The mother animal who is a light milker will exert an influence on her offspring that will disclose this fact in their condition and growth. It is not within the province of the common farmer and stock raiser to furnish foster mothers to nurse all the young of his pure-bred animals. As the lack of motherly instincts and constitutional qualities appear in the herd consign them to the feed lot or dispose of them where they may be prepared for the slaughter. It is folly to keep an unprofitable animal on the farm or one barely able to pay its board when money earners may be had by simply exercising a little care and judgment in selection.

The cultivation of these qualities in the mother animal is a present-day feature of breeding with many of our best pure-bred breeders, and so impressively have they implanted their efforts in this respect that the raising of large litters and the development of nursing qualities in the mother have abundantly rewarded them. A little attention directed to the heredity tendencies of these mother animals will soon be made visible in the herd.

Million Bushels of Corn

The scare heads in the daily papers that accompany the announcement that over 1,000,000 bushels of Argentine corn have been shipped into the United States since the duty was taken off, and as a result prices are lower, need not be received as an alarming evidence that this country will in the immediate future be forced out of corn growing. That this foreign product is selling 4 to 5 cents per bushel lower than American corn in the Chicago market is no evidence that it is a very strong competitor. That manufacturing industries in this country demanding corn have been engaged in buying and importing this southern product, is no evidence that there will not be room at home and abroad for all that our farmers can produce. That one factory is reported as having contracted for 5,000,000 bushels is no occasion for alarm that the country will be overstocked with corn.

This activity in corn looks quite encouraging for future production, and emphasizes the need of greater effort in corn growing for 1914. Certainly it will help our factories a little to get a supply to keep the machinery of their plants in operation, which in turn will help trade in this country where there is now a shortage of merchantable corn.

We fail, however, to see any serious occasion to lament over a little shipment of a few million bushels of corn into our markets. Nebraska, with its ten-year average annual yield of approximately 200,000,000 bushels of corn, would in one year's crop satisfy this Argentine exportation to its full producing capacity, which for 1912 was only 200,000,000 bushels. The ten-year average of Iowa or Illinois will exceed the largest yield Argentina ever produced.

It is not probable that this country will ever experience another such corn crop failure in the heart of its big corn-producing area as has been recorded in 1913. It is true that the corn-producing district of the central west has been somewhat handicapped from not having its usual yield of corn to be used in the feeding industry.

Cold Storage Capacity

The cold storage capacity of Omaha is rapidly increasing. Owing to the already large facilities and the new building being done this year by the Omaha Cold Storage company and the People's Ice and Cold Storage company, the capacity by next year will be over 1,100 carloads. Chicago Dairy Produce, in a recent issue, comments on Omaha's cold storage facilities, giving some interesting statistics. Omaha creameries last year produced over 20,000,000 pounds of butter. Dealers shipped over 5,000,000 fowls and handled most of the 48,000,000 eggs that were produced in Nebraska. Apples are also becoming an important feature in this industry.

Crop Prospects for 1914

The agricultural prospects for 1914 could not be improved upon for this time of the year. There have never been better soil conditions, in reference to moisture, and this seems to prevail over a very large area of agricultural country. The winter wheat districts have no complaint to enter, except in some sections where the Hessian fly has been reported on hand and ready for its work as soon as conditions open up to admit of its activities.

There is a very optimistic forecast for the general crop outlook for 1914. Plans are being made for a larger acreage of cultivated crops. Alfalfa acreage will be increased. The prices for alfalfa hay have given this crop a boost which will mean more alfalfa for the commercial hay trade. It has been scarce, high priced and hard to find in the markets. The farm price over large producing districts has been $8 to $10 and occasionally higher.

Live stock of all kinds has never had a better chance up to the middle of January. There has been but little cold weather in the Missouri valley, no zero weather as yet, and stock of all kinds have never been in better flesh and better health at this date. Hogs, with the exception of the one disease—cholera—have had remarkable opportunities for growth and development. The hog grower seems to be relying upon the serum treatment as the only salvation for this end of the live stock industry. The hog grower has hope now that the control of this disease is not far distant, and realizes that he must become an active participant in the fight that is to be waged against contagious animal disease of all kinds.

Winter Wheat Pastures

Reports from the winter wheat districts, especially Nebraska, Kansas, Missouri, Oklahoma and Texas, speak of the fine prospects, the excellent autumn growth of the wheat plant, and the use of the wheat fields for winter pasture. One writer says: "Besides looking favorable for a bumper crop, the wheat fields are furnishing winter feed for about all the stock we have. Cattle are in fine flesh where they have the wheat pasture."

These conditions are reported where the dry weather was the most damaging last summer and where the pastures were burned out. Cottonseed cake is sometimes used in connection with the green wheat pasture, and puts on flesh equal to the best summer pasture. The weather has been very favorable over these winter wheat states during the fall and up to the present time for pasturing stock. Winter storms are, however, to be reckoned with, and storm protection provided for in cases of emergency. The northwest storms, accompanied with snow, are the only features of winter weather that disturb winter grazing over the greater portion of this district. Winter grazing of the wheat fields has become a source of profit with the wheat growers, and this crop is now looked upon as a means of double revenue to the farmer who has stock to winter.

Agricultural Fair Bureau

The establishing of an agricultural fair bureau, whose duty it would be to study the exhibition interests of agricultural fairs of all forms of organization and compile information of the progressive fair work of the country into bulletin reports for distribution to the various county, district and state fairs, would no doubt result in a system of education that would be highly profitable to fair managers.

State associations of county, district and state fair managers have proven of great interest and profit in those states where such organizations have been effected. These associations have been handled upon a very economical basis, and the national association would be upon the same system of delegate representation from these state associations, but represent states instead of counties. In order to encourage county fair organization in the states, each state could be given delegate representation in the national association in proportion to its number of county fairs.

It is the organization and the discussion of agricultural interests that proves of greatest educational advantage to the people. The county fair needs more encouragement than it is receiving in most states. It needs a more liberal county and state aid. It needs a larger money appropriation from the county, and it needs a stronger state endorsement from the state fair than most states are now giving. This, however, would be one of the results of national organization of the state associations of county fairs. An interchange of information as to how county and state support is provided in these various states would soon wake up legislative demands, and a more uniform and liberal system of support would result.

The county fair is the natural and legitimate support of the state fair, and the state fair is the opportunity for every legitimate industry of the state to exhibit its products of soil or factory. The first principle of organization of the county fair should be to represent the county in its leading resources at the state fair.

Uncle Sam's Tasters

The man who stands behind a soda fountain selling soft drinks soon learns from the replies to his query, "What flavor, please?" that there is a great difference in the tastes of people. In experiments recently conducted the Department of Agriculture learned that all milk users would not be satisfied with a uniform flavor of milk.

The experiments were conducted to ascertain the correctness of the theory of some dairymen that the feeding of crushed oats to cows would improve the flavor of milk. Six cows were used in the experiments, and the various kinds of rations were fed to them. In all fifty opinions were passed on the various samples of milk from these cows. Of these sixteen showed a preference for the milk from cows fed on crushed oats: twenty-five preferred that from the bran and corn ration, while nine expressed no choice. At the conclusion of this series of experiments the department decided in favor of bran and corn as producing the finest flavored milk. This was not even a majority opinion, for only one-half the judges favored this flavor.

About the only thing conclusive shown by these experiments is that people differ in taste.

Office on the Farm

There is no more important feature for the successful operation of the farm than the office. Every farm needs a system of accounts kept, with records of transactions of every nature pertaining to purchases, sales, etc. It is impossible for anyone to satisfy himself and those with whom he does business by merely keeping his accounts on the stub of a bank checkbook. There are hundreds of farmers who depend on their bank book to tell how their business stands from year to year.

The checkbook, of course, tells to whom money was paid and may tell what for. By preserving these checks and stubs these transactions may be traced in date, amount, to whom issued, etc. The money received cannot be traced so readily, but must be had from some sort of a memorandum for details outside of amounts received and deposited. This is a short and careless plan some persons have adopted who do not do much business or care about details in money matters.

The office should be in some convenient room, with outside entrance if possible, so that anyone about the farm can have access without disturbing the household or making unnecessary work for the housekeeper. Keep a set of books showing the entire transactions of the farm—what purchased and what sold, and each recorded under their proper headings. A very plain system is best to start with, and when this becomes a source of interest and satisfaction a more detailed method may be adopted. It will soon become a pleasure to refer to these accounts of what certain fields produced in certain years, what the sales of the various crops and kinds of stock were during certain years, with the prices received, etc.

There are scores of little features of memoranda that such a system of accounts may introduce and carry that will be of great interest to refer to, besides the vital statistical record that may be had from these accounts that are evidence of all your business transactions, purchases, sales, cash, credit, etc.

Each farm should have an office, with a small library of farm books, farm papers, seed catalogues, catalogues of stock sales, supply of writing materials, envelopes, letterheads with name and address of the proprietor, so that letters, if not delivered, will be returned to the sender. This office can be used as a place to meet the farm help and talk over and mature plans for work in advance, which is a necessity for the successful management of the farm. There is no limit to the use that such an office may serve on the farm, and no one will appreciate it more than the housewife and family.

How to Make Hogs

Hogs are made from little pigs. It is only necessary to get the pigs and turn them into the alfalfa pasture with the old brood sow and give them a little swill and a little shelled corn each day and they will make themselves into hogs. This seems to be such a simple process, since the Nebraska experiment station, five or six years ago, discovered the formula, that it is a wonder every hog grower in the United States is not using this plan, because it is the easiest and cheapest way to do it.

This discovery, which is credited to the Nebraska experiment station, was not exactly original with the experiment station, as about half of the hog producers in the state had been engaged for years before growing alfalfa and hogs on the same farms, and seemingly to the entire satisfaction of all concerned. But it had been left for the Nebraska experiment station to formulate a ration, or combination of corn and alfalfa, that would work out to the greatest advantage of the farmer and hog grower.

It was this systematic and scientific feed proposition that has led to the growing of more alfalfa all over the country as a hog pasture and hog feed than any single experiment ever conducted in the interest of hog growing. It has been five years since this alfalfa and corn feeding test was made, and it is still being printed and reprinted, demonstrating that a real good thing is never lost to the distributer of agricultural information.

In 1912 the United States imported 13,750,000 bushels of potatoes. This was unusual, and was due to the short crop of 1911. Ordinarily our imports amount to something over 1,000,000 bushels. Since 1900 we have imported 37,000,000 bushels and exported 16,000,000 bushels. Most of the potatoes imported come from the British Isles, and of late they have been bringing with them potato scab and other contagious potato diseases. The remedy for this seems to be the encouragement of the potato industry in this country, many parts of which are admirably fitted to grow this important crop.

Only 27 per cent of the tillable land of the United States is actually under cultivation. In other words, for every 100 acres that are now tilled about 375 acres may be tilled when the country is fully developed.

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The Spreader with the Beater on the Axle

Easy to load. Only hip high to the top and still has big drive wheels. Less than half the usual lifting.

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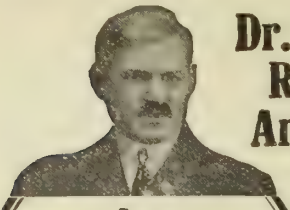

Dr. David Roberts Answers

Are Your Cows Slinking Their Calves?

Some Vital Questions.

What causes it? A germ in the mother's blood causes abortion.
Does it spread from one cow to another? Yes, usually through the herd bull.
Is that the only way? No, infected stables cause it.
Can it be stopped? Yes, by hypodermic injection, washing the genital organs and disinfecting the stables.
Will any ONE medicine prevent abortion? No, because the germ must be met at every turn and no one medicine can do it. Dr. David Roberts' **Anti-Abortion** medicine overcomes the germs in the mother's blood; **Antisepto** overcomes the germs in the genital organs; **Disinfectall** overcomes the germs in the stables. In this manner the germ is met at every turn and it is absolutely impossible for abortion to exist in a herd where this simple treatment—applied by yourself—is used.
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What will it cost to treat my herd? The price of a good calf. Write Dr. Roberts, telling him how many cows, heifers and bulls you have in the herd. He will answer you promptly. Address

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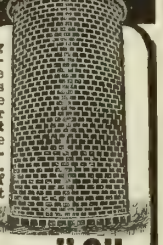
HOW TO BUY A SILO—



USE the same judgment buying a silo that you would in purchasing machinery about the farm, and you'll get a silo that is **fire-proof** and **frost-proof**—one that will not **rot, rust, warp** or **crumble**—one that needs no **paint** or **trouble-making hoops**—one that is **wind-proof, strong, durable**—one that will **last forever.** If you buy a silo that lacks one of these particulars, you will regret your purchase.

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—built of patented, hollow, curved, vitrified clay blocks (patented under Pat. No. 5,038,467) is the only silo that can claim all the above advantages. Besides these features, our blocks make a silo strong enough to place Water Tank on top, providing practical fire protection for all buildings on the premises. The value of this cannot be over-estimated.

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As good as New Milk at half the Cost.

100 pounds makes 100 gallons of Perfect Milk Substitute.

Send for pamphlet, **"How to Raise Calves Cheaply and Successfully Without Milk."**

At your Dealers or

Nebraska Seed Co., OMAHA NEB.,

Shetland Ponies for Children

These Little Animals Are Easy to Raise

ACROSS the blue ocean from America and some distance to the northward of Great Britain lies a group of little islands known as the Shetlands. Upon the wind-swept, desolate hills of these islands originated the Shetland pony as we have him today. Suffering the rigors of winter upon scant food and practically without shelter, has given these miniature horses a hardiness that is unsurpassed by any other animal. When brought to regions of more moderate temperatures and more abundant feed the size is increased appreciably in but a few generations. Hardiness may be lessened under these conditions, but still seems to remain ample for service.

No child ever had a better companion among dumb animals than a Shetland pony. They are the children's ponies and seem to be especially adapted to this use. Possessed of gentle disposition, quiet temperament and a high degree of intelligence, these ponies prove to be as careful of their young master's or mistress' safety as if it were their own offspring they were fostering.

A Shetland means more to a 7-year-old child than the pleasure of riding and driving. It stirs up an inherent fondness for animals. It is very seldom that a person sees a child abusing his or her pony. Much more often will you see them quietly slipping sugar out of the bowl or whispering secrets in the shaggy ears of their pets. The association encourages the innate love of children for animals. Too often a youngster gets the habit of kicking or abusing animals merely because they cannot talk.

A few ponies are tricky, but these are the exception. Often when the youthful rider slides off the rounded back and alights in an awkward mass under the pony's body, we wonder what will be the result. Generally the pony waits patiently for his master to extricate himself, though occasionally a bit of green grass will cause him to sidestep a few paces to await developments.

At the English and Scotch stock shows one sees many Shetlands on display. The British rule prevents a pony which stands over forty-two inches from competing for prizes. Ponies below this height do not exceed 350 pounds in weight very often and frequently weigh less. American show yards are somewhat more lenient as to size. Several state fairs permit ponies under forty-eight inches to enter, but most are limited to forty-six and some to forty-four inches. A criticism is often made that Shetlands are too small. It is true, a child soon outgrows a forty-two-inch pony, but by that time he is old enough to handle a pony of larger type and breed. The Shetland is the small child's pony and is valued accordingly. In our ring shows judges pin the ribbons on the small, low-set pony, where other points are equal. With abundance of feed and the mild climates of the central states, breeders find it difficult to keep the size of their ponies uniformly small.

No Child Ever Had a Better Pet

Her Pony Just Won the Prize

Color and Type

At the European shows one only sees black ponies. At the American shows there are to be seen specimens representing almost every color and mixtures thereof known to horsemen. The spotted pony has been the best seller with certain classes of trade, though more modern preferences seem to lean to

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SEE for yourself how smoothly this *roller-bearing* Crop Maker Fanning Mill runs, day in and day out. Put it to work at *any* fanning mill or grading machine job—see how it automatically cleans, separates and grades any grains or grass seed and then, if you don't say it is a great service and money-making machine, ship it back at our expense. The

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I give a lot of new sorts for trial with every order I fill. A Grand Big Catalog Illustrated with over 700 engravings of vegetables and flowers. Send yours and your neighbors' addresses. **FREE**

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Irish Potatoes

Ten thousand acres of Irish potatoes will be planted this month in our district in Florida. These potatoes will go to market in April and early May and bring returns unhoped for by the northern farmer. The potatoes will be followed by a crop of corn and the corn by a crop of hay. By this rotation, the land will be improved and not impoverished. Green forage and fattening crops for hogs and cattle are had the year round. Conditions for dairying ideal.
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40 ACRES solid to Superb, Progressive, Americus and other best everbearers. Get acquainted offer for testing. Send us 10c for mailing expense, and we will send you 6 high quality everbearing plants (worth $1) and guarantee them to fruit all summer and fall, or money refunded. Catalogue with history **FREE** if you write today.

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good, solid colors. Showyard judges do not allow color to affect their rating, although buyers will often make liberal allowance for a fancy-colored pair of ponies.

There is some little difference as to the type of Shetland, but most authorities concede that he should be a miniature draft horse, with coach horse style and action. Several years ago a Hackney breeder judged the ponies at Des Moines. He went pretty strong for the high action and sometimes placed a pony up that lacked muscling and middle. This brought considerable criticism. The next year's judge sacrificed action somewhat in getting his ideal low-down, blocky type. Be that as it may, the Shetland should be wide and heavily muscled, with a deep body and rugged constitution. Action is quite important with these little fellows, and they should be able to scamper down the road at a comparatively lively rate.

Winners in Get of Sire Class at Des Moines in 1913

Faults Found in Shetlands

Like all animals, they have certain faults of conformation which are quite characteristic. A tendency to be "cow-hocked" in the hind legs is noticed in many specimens. Some carry the hind legs well straightened and placed squarely, but these are in the minority. A badly dished face just below the eyes characterizes large numbers. This gives a rather unsymmetrical appearance to the head. A tendency toward short, steep rumps is gradually being overcome. Likewise, the swayed back, formerly so much in evidence among pony herds, has been straightened of recent years. Other minor faults might be mentioned as quite commonly found in specimens of the breed.

In justice to the ponies, a few of their good attributes should be pictured after enumerating their faults. Endurance is present to a very marked degree. A little pony will pull a buggy, containing a man, up and down hills all day and come into the barn at night with more life left than most driving horses put to the same test. The hardships which the breed withstands in the native islands insure endurance to a high degree. Another item of no small importance in this day of high-priced feed is economy. Ponies will rough it through on what might otherwise go to waste. If one is situated to raise them, there is no more profitable business. It is a poor pony that will not sell for $100 as a 3-year-old, and the feed bill on them up to that age is very small.

Intelligence is present in these little fellows in a very high degree. Some of them seem to be almost human in their reasoning. Coupled with this, a gentle disposition gives a combination of sterling merit for the youngsters' playmate. The famous colt, Julius Caesar, owned by Dr. Diers of Seward, Neb., shows intelligence to a remarkable degree. He not only adds, subtracts and divides figures, but also says his prayers, blows out the light and goes to bed before an audience.

H. J. GRAMLICH.

Co-operation was the only subject discussed at a recent dairy meeting in Minnesota. Papers were read giving the history of a number of successful co-operative associations, one of the most notable being that of the Jewish Farmers' Agricultural Aid Society, which is founded on the principles of the German co-operative institutions, and solves problems of marketing and rural credits for its members.

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mean a dish of crisp, golden-brown

Post Toasties

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This delightful food made of choice Indian corn—flaked and toasted—is ready to serve direct from the package.

Just the thing for breakfast, lunch or supper, winter or summer.

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If our 30 or 40 H. P. is too large for your requirements, you should investigate our 20 H. P. It is of the same design, weighs 8,500 pounds, will pull six 14-inch bottoms, and will develop sufficient power in the belt to operate a 30-inch separator. It is not too little or too big, but is a happy medium between the two extremes, and can be operated economically on any size farm.

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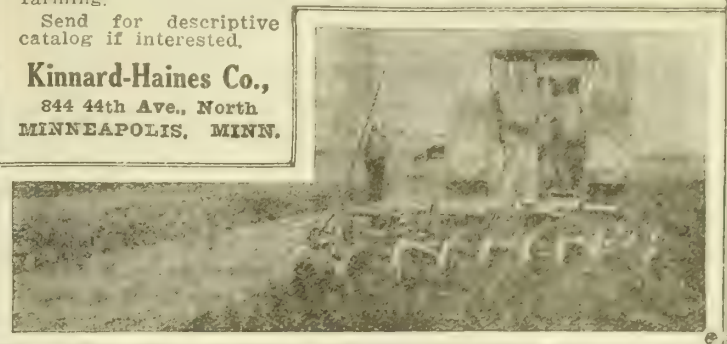

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SPECIAL DOZEN OFFER } Three Wealthy, three N. W. Greening, two Hibernal, two Anisim, two Beach's Crab. These twelve trees, 4 to 5 feet stock—strong, healthy and well rooted, extra fine trees, not prepaid, for only..... $2.00.

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It is a 14-size, thin model, German-silver nickel-plated case, open face, Arabic dial, with red minute numerals around outer margin, "pull-out" stem set, and is guaranteed a first-class time-keeper.

The unique location of the compass in a recess formed in the top of the watch crown obviates all necessity for increasing the thickness of the case or distorting the appearance of the watch to accommodate the compass, and at the same time the compass is far enough removed from the steel parts of the movement to prevent its being deflected thereby.

Every Boy Scout should have one.

Make up your mind to get it today.

Address,

Twentieth Century Farmer
OMAHA, NEB.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Dickcissel

A little brown bird sat on a fence wire,
And he sang me a song full of glee;
From his black, spotted throat there poured note after note,
And this is the song he was singing to me—
"Dickcissel! Dickcissel!

The sky is so blue, the sun is so bright,
Who could help but be happy today?
There's a soft, scented breeze from the blossoming trees,
From orchards abloom with the sweetness of May—
Dickcissel! Dickcissel!"

I laughed at the bird as he swung on the wire;
With a pert little glance, off he flew.
As I went on my way adown roads green with May,
There followed me still the soft song that I knew—
"Dickcissel! Dickcissel!"

The Dickcissel

His other name is black-throated bunting, and he is a cousin of the indigo bunting, which we told you was often confused with the bluebird. He looks something like a sparrow, only that he has a pale-yellow breast, with a black patch on

Dickcissel

his throat. His wife looks even more like a sparrow, for she lacks the yellow breast and black patch. Their song is not very pretty, but it sounds cheerful, and they keep it up constantly. One wonders how they find time to eat as much as they do, for they seem never to stop singing.

One day last summer a farmer said to me, "What are those little yellowish birds? There are hundreds of them in my potato fields and I believe they are eating the potato bugs." That is just what they were doing. We watched them quite a while, and they did not seem to be a bit afraid of us, but went on singing and eating potato bugs, without paying any attention to their visitors.

At one time, it seems, these birds were very common in the eastern states, but they are quite rare now except in a few localities. Perhaps it is because their pretty blue eggs are placed so low in the grass and bushes that their enemies can get them; perhaps it is because they are killed by people who mistake them for English sparrows. However it is, the dickcissel is getting scarcer all the time. You will find him mentioned in very few bird books and not a great deal seems to be known about him. But I know he lives in the Nebraska and Kansas fields, for I have seen him there. Watch for him on your farm, especially among the potatoes. THE EDITOR.

(Prize Story)

My Horse

By Marshall Macklin, Aged 11, Hale, Mo.

I live on a farm and have a horse, which I call Fred. My father gave Fred to me when he was about 2 years old, which was three years ago. I broke him to work and ride.

About one year after my father gave him to me he disappeared one evening. He went to the haystack which was in the pasture and made a hole in one side large enough to hide himself in, and then could not get out. I hunted for him one whole day and could not find him. The next morning I hunted again, but some of my playmates came in the afternoon and we went to the haystack to play. In our play we found the horse and got our pitchforks and dug him out. I was so glad we found him.

(Honorable Mention)

My Doggie and I

By Lizette Dunkelman, Aged 12, Bancroft, Neb.

Once upon a time, when I was a little girl of 3 years, Santa Claus, the dear old thing, brought me the dearest little white dog you ever saw. He had such bright, intelligent eyes—made of shoe buttons. They shone with such friendly good will that I loved my doggie with all my heart. He had a cute, curly tail, too, that curled up over his back.

One day I sat on the floor playing with him. I grabbed him by the tail and waved him around and round. He got dizzy and all at once he jumped right into the fire. He got badly burned before mamma rescued him. He had a hole burned in his poor side and the sawdust dribbled out. But that didn't make any difference. I loved him just the same, and my friends and I played with him from day to day. His pretty coat that had been so white took on a very dingy color. As he grew older he became more feeble and at least there came a day when we laid him gently in a cigar box and buried him under a rose bush, and there his poor bones rest today.

Billy's Annoyance

By Katherine Erpalding, Aged 15, Pringle, S. D.

Billy was a canary bird. He could sing louder than anybody else and felt proud of his position as the best singer in the house. Whenever anybody started to sing he would commence to warble. His notes would swell higher and higher until they were heard far above those of his opponent.

One day Billy had a surprise. Something that looked like a big box with an irregular front was brought into the room in which Billy's cage hung. Pretty soon one of the girls came forward and seated herself in front of the peculiar box and it began to sing. Billy was dumbfounded for a moment, but, gathering his forces together, he tried to drown the usurper. But in vain. He screeched until his throat grew sore, but the other played on none the worse. Poor Billy gave it up at last, and everybody laughed. What were they laughing for? He could see nothing funny. Instead, he felt crestfallen to think he had been defeated for the first time in his life.

Billy soon learned that his victor was called a piano, but what it was and how it made such nice music was a problem he never solved, though he grew to be a wise old bird.

Additional Stories

Leonard Lauson, Ong, Neb.; Geraldine and Gladys Liston, Elmwood, Neb.; Margaret I. Curbaugh, Elwood, Neb.; John Pettit, Bignell, Neb.; Alice Edna Schuler,

(CONTINUED ON PAGE SEVENTEEN.)

Picture Contest No. 10

Write a verse of four lines about this picture. Each of the two children writing the best verse about this picture will receive a book as a prize. Make your verse bright and original. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all given consideration, as well as the quality of the verse, in awarding the prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than February 28. The winners in the present contest will be announced in the next issue.

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6451—Boys' Russian Suit—No garment has yet been found to replace the Russian suit, and this example is one of the most practical. It fastens at one side and along the shoulder. The high neck has either a standing collar or a low, turn-down one. The sleeves have just a trifle of fullness at the shoulder and are laid in tucks at the wrist or gathered into a band cuff. Bloomers are worn with the blouse and are given in the pattern. The pattern No. 6451 is cut in sizes 2, 4 and 6 years. Medium size requires 2⅝ yards of 36-incn material.

6397—Ladies' Shirt-Waist—All the new shirt-waist models give the soft effect, as does this one. It has a shoulder yoke, which is a continuation of the back, and gathered fronts, closing with a box plait or without it, and with an open neck, trimmed with an ornamental collar. The sleeves, plain at the shoulder, are gathered into a cuff at the wrist. They may be either short or long, as preferred. The pattern No. 6397 is cut in sizes 34 to 42 inches bust measure. Medium size requires 3¾ yards of 27-inch material.

6409—Child's Dress—This dress is of sacque cut, with a panel front, the closing being at one side of it. A wide collar trims the neck. The sleeves are of bishop design and may be long or short, while the ornamental sash need not be used unless desired. Plaid and striped cheviot or serge, challie and gingham, linen and poplin will all be suitable for this dress. The pattern No. 6409 is cut in sizes 2, 4, 6 and 8 years. Medium size requires 1¾ yards of 36-inch plain material and ⅞ yard of 36-inch plaid goods, with 2¼ yards of ribbon.

12-3-52—Two-Inch Scallops—Three yards of scalloping and four corners are given in the pattern. It is sufficient for a 27-inch square centerpiece or a pair of short sash curtains. Without the corners it is suitable for petticoats, aprons and children's dresses.

6289—Ladies' Maternity Gown—In this gown there is no attempt at even making the semblance of a dress. The inner body lining can be laced at the darts and down the front, and the outer portion, with its short empire bodice and skirt with double box plaits in front and back, will give as much as is needed for comfort and looks. The pattern No. 6289 is cut in sizes 34 to 42 inches bust measure. Medium size requires 6⅜ yards of 36-inch material, ⅝ yard of 22-inch allover and 1⅛ yards of 36-inch lining.

6373—Ladies' Dress—This stylish one-piece dress has a vest in the new style and the sides of the bodice mark each side of it. There is a wide collar across the back, continuing along the edges of the front of the blouse. The plain sleeves are set in without fullness. Attached to this blouse there is a four-gore skirt, opening in the center of the front. The pattern No. 6373 is cut in sizes 34 to 42 inches bust measure. Medium size requires 4⅛ yards of 44-inch material, with ⅝ yard of 18-inch goods for vest.

6418—Ladies' Skirt—An excellent tailored design, suitable for use with a separate coat or as part of a costume, is shown in this model. It is a two-gore skirt, with raised waistline, plain in front and slightly gathered across the center of the back. It is made of velveteen, cheviot, novelty plaids and the like. The pattern No. 6418 is cut in sizes 22 to 30 inches waist measure. Medium size requires 2⅝ yards of 36, 44 or 54-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Life, to be worthy of a rational being, must be always in progression; we must always purpose to do more or better than in the past times. The mind is enlarged and elevated by mere purposes, though they end as they begin, by airy contemplation. We compare and judge, though we do not practice.—Samuel Johnson.

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We can guarantee "Best Tan" because there is no guesswork in our business. Our laboratory and chemist enables us to treat each hide specially to its needs, and to make it soft, pliable and durable. Get your hide "Best Tanned"

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This catalog shows the latest styles in furs. Another book "A Trip Through a Modern Tannery" illustrates how "Best Tan" is made, and why it is best.

GLOBE TANNING CO.,
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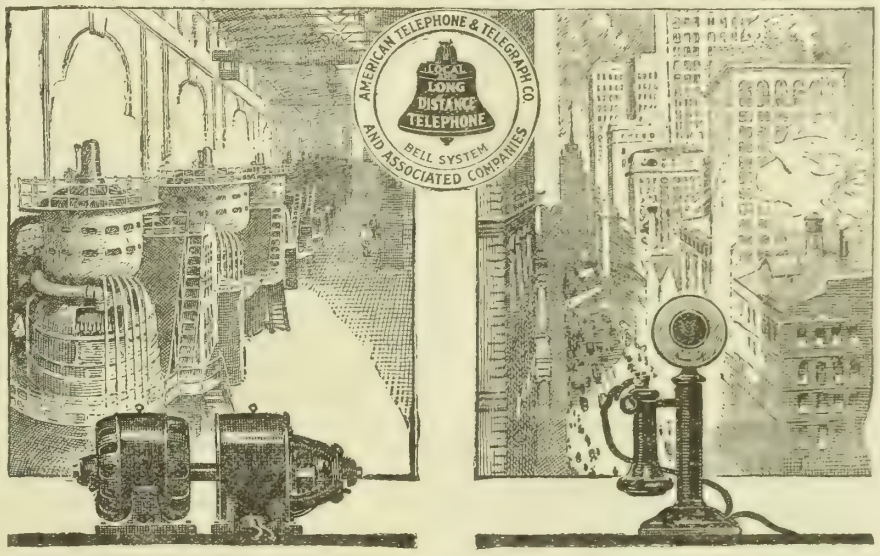


The Energizer of Business

IN a metropolitan powerhouse there must be generators large enough to furnish millions of lights and provide electrical current for thousands of cars and factories.

Each monster machine with the power of tens of thousands of horses is energized by an unobtrusive little dynamo, which is technically known as an "exciter."

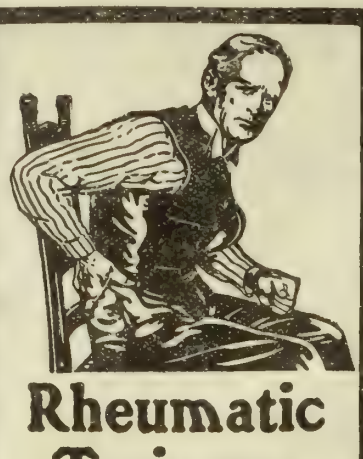
This exciter by its electric impulse through all the coils of the generator brings the whole mechanism into life and activity.

A similar service is performed for the great agencies of business and industry by the telephones of the Bell System. They carry the currents of communication everywhere to energize our intricate social and business mechanism.

United for universal service, Bell Telephones give maximum efficiency to the big generators of production and commerce.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy *One System* *Universal Service*



Rheumatic Twinges

yield immediately to Sloan's Liniment. It relieves aching and swollen parts instantly. Reduces inflammation and quiets that agonizing pain. Don't rub—it penetrates.

SLOAN'S LINIMENT

Kills Pain

gives quick relief from chest and throat affections. Have you tried Sloan's? Here's what others say:

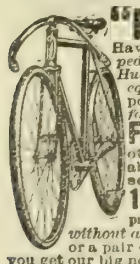
Relief from Rheumatism
"My mother has used one 50c. bottle of Sloan's Liniment, and although she is over 83 years of age, she has obtained great relief from her rheumatism."—*Mrs. H. E. Lindeleaf, Gilroy, Cal.*

Good for Cold and Croup
"A little boy next door had croup. I gave the mother Sloan's Liniment to try. She gave him three drops on sugar before going to bed, and he got up without the croup in the morning."—*Mr. W. H. Strange, 3721 Elmwood Ave., Chicago, Ill.*

Neuralgia Gone
"Sloan's Liniment is the best medicine in the world. It has relieved me of neuralgia. Those pains have all gone and I can truly say your Liniment did stop them."—*Mrs. C. M. Dowker of Johannesburg, Mich.*

At all Dealers. Price 25c., 50c. & $1.00
Sloan's Instructive Booklet on Horses sent free.
DR. EARL S. SLOAN, Inc., BOSTON, MASS.

Beacon Burner FREE
FITS YOUR OLD LAMP.
100 Candle Power Incandescent pure white light from (kerosene) coal oil. Beats either gas or electricity. **COSTS ONLY 1 CENT FOR 6 HOURS** We want one person in each locality to whom we can refer new customers. Take advantage of our Special Offer to secure a Beacon Burner **FREE.** Write today. AGENTS WANTED.
HOME SUPPLY CO., 57 Home Bldg., Kansas City, Mo



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10 DAYS' FREE TRIAL We ship on approval, *freight prepaid*, anywhere in U. S. *without a cent in advance.* **DO NOT BUY** a bicycle or a pair of tires from *anyone* at *any price* until you get our big new catalog and *special prices* and *a marvelous new offer.* A postal brings everything. *Write it now.*
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GERMAN NURSERIES & SEED HOUSE (Carl Sonderegger)
24 GERMAN BLDG. BEATRICE, NEB.

Of Interest to Our Women Readers

In Her Low Chair

In her low chair—I see her now as when
She bent to lift me to her knee, and then
Kissed the hurt finger well, and dried
my tears,
Or soothed some poignant baby griefs or
fears.

At bye-low time she held and rocked me
there,
Crooning sweet sleep-time songs—in her
low chair,
Until her brooding face grew but a blur,
And waking visions changed to dreams
of her.

A child grown larger, still with woes to
heal,
In the dim hush of dusk I used to kneel
By her low chair, for that dear sympathy
Never in all these years withheld from
me.

Ah, wings of night that lend her for a
while,
Ah, blessed dreams that bring her face,
her smile,
Lo, I shall wake at length to find her
where
She waits to kiss the hurts—in her low
chair.

—Anna Spencer Twitchell.

Our Home Chat

So many accidents happen to little children that one cannot help but wonder why the mothers are not more careful and more sensible in taking care of them. In a recent issue of a western newspaper we noticed the following headlines on the front page: "Child Meets Death Playing About Washtub," "Little Girl, Aged 4, is Burned to Death," "Didn't Know It Was Loaded, but It Was," "Little Boy Found Drunk," "Four-Year-Old Girl Drank Whisky and is Dying," "Soothing Syrup Kills Baby." Everyone of these stories told of carelessness on the part of the mother. It may take time to put tubs of water, matches, loaded guns and whisky bottles out of the baby's way, but it is certainly worth the time, if one wants to keep the baby. The last tragedy of these was the worst of all, for it was not merely a sin of omission, but of commission. Surely no one is so ignorant in this day and age as not to understand the danger of soothing medicines for little children. Aside from the deaths, for which they are responsible, are the idiots, criminals and drug habitues caused by their use.

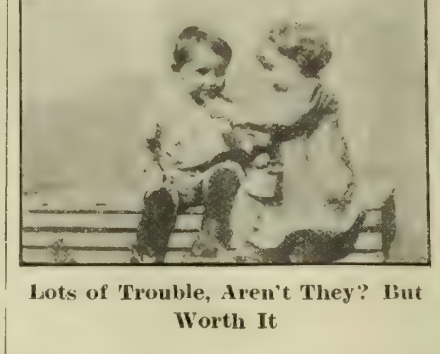
As if there were not enough natural dangers into which baby may fall, the manufacturers of food and candy are ready to feed them poison. We are printing on this page a little article inspired by the doings of our national bureau of chemistry, which is doing good work as far as it goes. One would think that no man could be so heartless as to manufacture and sell candy that would cause suffering and possible death to little children, but since there are people so lacking in common humanity, it is certainly our duty not to aid them by distributing their products.

Scarcely a day passes, but there are two or three headlines such as the above appearing in the pages of our dailies, and often they come by sixes and sevens, as in this case. Mothers read them and breathe a prayer of thankfulness that it was not their baby, but frequently it might have been just as well if fortune had not been with them.

THE EDITOR.

Selling Poison to Babies

Hawley & Hoops of New York



Lots of Trouble, Aren't They? But Worth It

sell what is known as "penny goods"; that is, the kind of candy purchased by the little tot who has been given a penny to spend. Ten different specimens of Hawley & Hoops' penny goods were seized by the officials of the bureau of chemistry and analyzed. All of them were found to be adulterated with arsenic and most of them contained shellac. All of them were being sold as chocolate candies, yet the officers reported that some did not even have the predominating flavor of chocolate. In every case the firm pleaded guilty. In nine out of the ten cases no penalty was imposed, the court suspending judgment. In the tenth case a fine of $50 was imposed. The case in which a fine was imposed was the one, and the only one, in which the company had not merely sold a poisonous product to little children, but had misstated the net weight of the package in which the arsenic-containing candies came! In commenting on this specimen of the care the government takes of the children, the Journal of the American Medical Association says: "To the legal mind, apparently, the rights of property have always seemed of more importance than human life. Selling to little children as chocolate candy a mixture containing arsenic and shellac is, apparently, in the eyes of the law, a trivial offense. But selling to a dealer a package marked five pounds that really contained only four pounds fourteen and five-eighths ounces, that is a crime!"

Concerning School Lunches

Some people have a rule that their children must eat the food that is given them without a chance to express their own tastes in any way. We would not infer that children dictate in this matter. If they crave rich and unhealthy food, there is need of wisdom and firmness. But the wishes of the children are as worthy of attention as are the tastes of the older members of the family. Not only do tastes differ, but the system of one may require a different choice of food from another and different seasons of the year bring a desire for a change. Following are some suggestions for the school lunch basket that may serve to vary the monotony:

Lunch Biscuits—Add one-half teaspoonful of soda, dissolved in a little warm water, to one cupful of sour cream; add this to two cups of whole-wheat flour; use one-half teaspoonful of salt, two tablespoonfuls finely chopped almonds. Mix quickly and lightly. Roll out half an inch thick, cut with a small biscuit cutter, bake in a moderately hot oven for twenty minutes. Break in half after they are cold and butter well.

Quickly Prepared Sandwiches are made from left-overs. Canned salmon or sardines, chipped beef or boiled ham make a good filling. A teaspoonful of mayonnaise improves the mixture immensely. Chopped chicken or lamb are especially appetizing, while small pickles sliced and used as a filling with grated cheese or hard-boiled eggs are relished by most children.

Johnnie's Cookies (and rightly they are named);
If they are gone in a jiffy, no one can be blamed.
Take one cup of sugar, a half cup of lard;
Cream these together, add two eggs and beat hard;
One scant teaspoonful of soda, now put in cup,
Add a mite of hot water, and now 'twill foam up.
Sift three cups of flour and place in a bowl;
Mix smoothly and swiftly, and then neatly roll.
If the dough is too soft, a little flour add.
I'll assure better cookies your children ne'er had.

MRS. GILBERT.

WONDERED WHY
Found the Answer Was "Coffee"

Many pale, sickly persons wonder for years why they have to suffer so, and eventually discover that the drug—caffeine—in coffee is the main cause of the trouble.

"I was always very fond of coffee and drank it every day. I never had much flesh and often wondered why I was always so pale, thin and weak.

"About five years ago my health completely broke down and I was confined to my bed. My stomach was in such condition that I could hardly take sufficient nourishment to sustain life.

"During this time I was drinking coffee, didn't think I could do without it.

"After a while I came to the conclusion that coffee was hurting me, and decided to give it up and try Postum. When it was made right—dark and rich—I soon became very fond of it.

"In one week I began to feel better. I could eat more and sleep better. My sick headaches were less frequent, and within five months I looked and felt like a new being, headache spells entirely gone.

"My health continued to improve and today I am well and strong, weigh 148 pounds. I attribute my present health to the life-giving qualities of Postum."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum now comes in two forms:

Regular Postum—must be well boiled.

Instant Postum—is a soluble powder. A teaspoonful dissolves quickly in a cup of hot water, and, with cream and sugar, makes a delicious beverage **instantly.** Grocers sell both kinds.

"There's a Reason" for Postum.

The Old Way Was a Good Way

All the grain came out when the straw was beaten with a pitchfork. We have built the same principle into the Red River Special Thresher. The Red River Special *beats it out.*

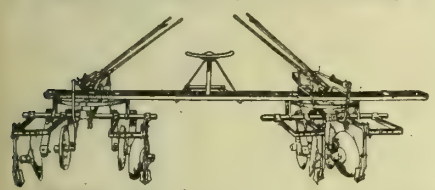
Hire a Red River Special

And Save Your Thresh Bill

William Marsh, and six other farmers of Langdon, North Dakota, say: "It beats all the grain out of the straw and saves time and thresh bills for the farmer." Insist upon having a Red River Special. Your thresherman will be glad to get this machine if you tell him you want it to do your work. You have the privilege of specifying the machine. It's your grain. Look for a man who owns or will buy a Red River Special—the only thresher that *beats out the grain.* Write us for "Thresher Facts."

Nichols & Shepard Company
(In continuous business since 1848)
Builders of Threshers, Wind Stackers, Feeders, Steam Engines and Oil-Gas Tractors
Battle Creek, Michigan

FARM MACHINERY



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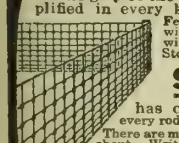

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THE BROWN FENCE & WIRE CO.
Department 69 Cleveland, Ohio

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

SPRING hatches are usually the worst hatches of the year, and the reasons are several, chief of them being the chilling of the eggs both before and after gathering. If the life germ be very strong in the egg, the chances are for it to withstand a moderate amount of chilling, but if only of normal strength, lying in the nest a whole day under a constant chill, or in a cold room just for one night, means a germ weakened in most cases beyond the power of recuperation. Because of the porous condition of the shell, cold air enters rapidly, and because of the watery solution between the shell and inner contents, the solution in which floats the germ, its chances for dying from cold are entirely too great to take any risks either in the nest or a cold room when saving for hatching purpose While I have had tolerably good hatches from eggs kept at a nearly equable temperature of 50 degrees, I am surer of good results if the temperature of the room in which the eggs are kept is not allowed to go below 60. Also, eggs kept for hatching purposes must not be kept where wind can blow on them, or where damp can reach them, or where they can be shaken.

If the setting eggs are dirty, it will not hurt them to be washed, provided a cloth is laid over them to absorb moisture or keep from chilling. Really, I have often wondered why so much stress be laid upon keeping eggs from water if they are kept warm and soon dried. I have had fine hatches from nests made out in the weeds that often caught gusts of rain; but this, of course, would be in warm weather.

***

On a Zero Day

I have known eggs to chill past all recovery in one hour on a zero day. In winter I set no eggs not taken from the nest at most one-half hour after being laid. I know this means watching, but I feel that it is worth the time. This close gathering in of the eggs is done on the coldest days. There are mild days in winter, and there are places where the nests are well protected from cold On these days, and in these protected spots, the egg gathering can be put off to three times a day. Often the days will be so mild through March that I have left the egg gathering to twice a day, then would come a sudden blizzard, and should the gathering of the eggs on this day be continued as before, poor hatching eggs would be the report later on this lot. Often the chilled germ will try to develop, but, like a long kept egg, it does not begin to develop in the proper time, and this means a chick not ready to hatch when the strong-germed chicks are coming out, and they roll it about until it dies.

***

Turning the Eggs

While eggs have hatched without ever being turned, yet it seems a law of chick incubation that the majority of eggs do best if turned over at least once every day or so before incubation, and, after set, from two to six times a day keeps them livelier if pushed over or about. And while it is all right to place the different colored eggs of one breed together, it is usually poor policy to place the eggs of different breeds together, especially of the small, white-egged breeds and the big, dark-shelled egg breeds. I have seen Brahma and Leghorn eggs set together. The white-shelled eggs seemed thinner of shell and brittle. The little birds came stepping out before I could hear a peep in the brown-shelled Brahma eggs, and it was a lucky hatch if the extra heat developed by the Leghorns and their crowding on the other eggs did not kill every Brahma. The longer you work with an incubator the surer you are to find that it isn't policy to set two breeds together, as the eggs of some breeds require more heat, while others require more moisture.

As nearly as possible, have the eggs of uniform size. Once in a while a fine, big hen of a large-sized, egg-laying breed will lay a small egg, and this egg will hatch a big, strong chick. I have had that kind, but more often than not the egg too small for the breed or too large will either hatch a poor, undersized chick for the one or a monstrosity, if one at all, for the larger egg. Quite often the too large eggs for the breed are sterile and do not hatch, and, as there is yet no way of telling whether an egg is fertile or not before it has been set on four or five days, the better plan is to make a careful selection of all eggs intended for brooding, selecting perfectly shaped eggs as nearly as possible. A misshapen egg may contain a misshapen bird, and an egg as large at one end as another may have a limited air cell. Dark spots on an egg, and even the little ridges that may appear on one end of an egg shell, seldom hurt an otherwise good-shaped egg, but always hold every egg between yourself and the light when selecting, and discard all eggs that show thick and thin spots in the shell, for nine out of every ten of these eggs are infertile.

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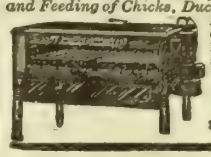

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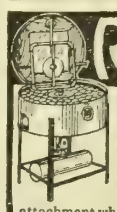

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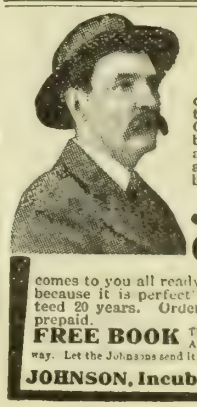

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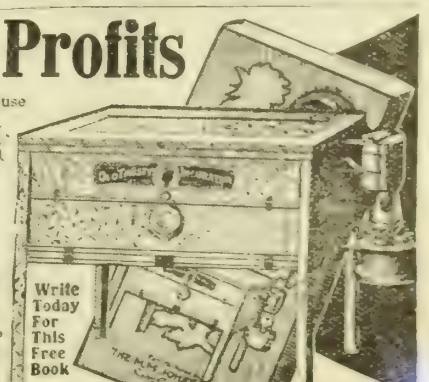

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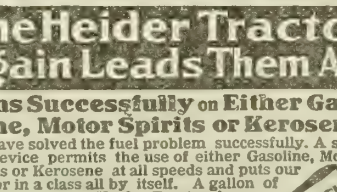

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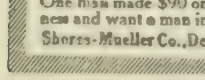

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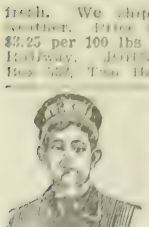

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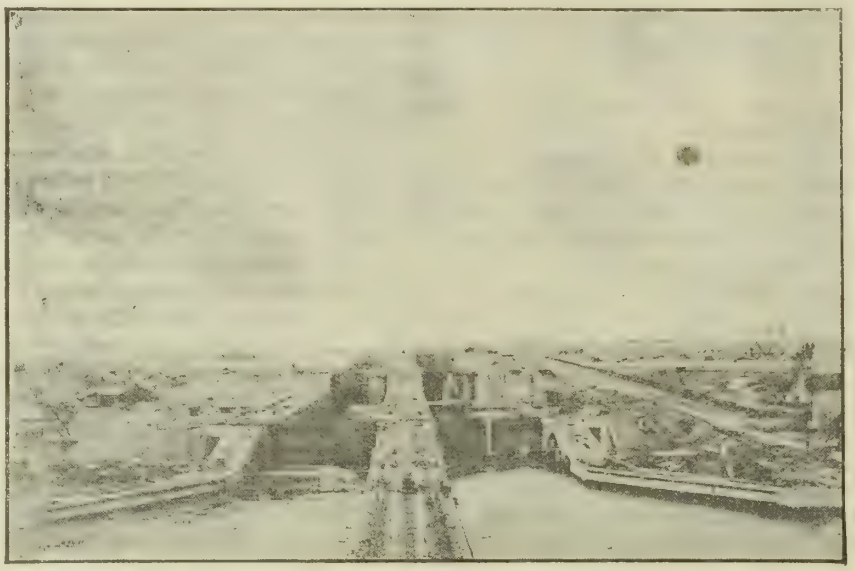
Completing the Great Panama Canal

By Frank G. Carpenter

WASHINGTON HOTEL, Colon, Panama, Jan. 17—The Panama canal is practically completed. The waist of the new world has been sliced in two at the middle, and North America and South America have been changed from peninsulas to islands. With the exception of the gates of the locks, there is now a clear stretch of water from ocean to ocean, and within a month or so after this letter is published the mighty steamers of the Atlantic and the Pacific will be climbing up and down this waterway from one great ocean to the other.

It is difficult to realize that the great job is almost done. Still, this conviction fills the air, and with it comes the thought that the people of the future will never appreciate the enormous labor and cost of the work. That for which we have spent hundreds of millions of dollars is now under the water. The Culebra cut looks much like an ordinary river flowing between the banks of living green, and Lake Gatun seems to have been there since the subsiding of the waters of Noah's flood. The only real work going on in the canal just now is the dredging of the channel at Culebra and the putting on the frills at the locks. The centers of industry have been transferred from the canal itself to the terminals, where docks, machine shops and warehouses of enormous dimensions are being constructed.



Water Steps at Gatun, Showing How Ships Will Climb from Atlantic Level

Balboa Busy

About the busiest part of the isthmus, compared to that of the past, is Balboa, the new port on the Pacific. Here they are excavating the mighty dry dock which will hold the largest ships that float the seas. They are constructing foundries and machine shops, covering acres, and are putting up mammoth planing mills that are already filled with lumber from Puget sound and our eastern coast. At this point there are tens of thousands of men working. Trains of cars go flying along loaded with spoil as they did in the days of the active excavation of Culebra. A large force is erecting the framework of structural steel and glass, and farther out near the ocean they are building the piers and docks at which the steamers will lie. These piers will be 1,000 feet long and have slips 300 feet wide in which ships can anchor.

The new railroad across the isthmus has been completed. It winds its way around the enlarged Lake of Gatun and takes the passenger far away from the line of the canal. It is now run by oil-burning engines, and in passing from one side of the isthmus to the other one travels through a tropical garden without cinders or dust. From the Pacific end of the railroad, about half way across, the structural steel arms of a great transmission line have been put up on both sides of the track. These arms are, I judge, thirty feet high. They are bolted to cement columns and are joined by bridges running across the track from post to post far overhead. On each end of these bridges are appliances for carrying the cables of copper wire that will convey the current of electricity generated by the overflow of the Gatun dam. The electric plant for this current is now being installed, and the buildings are almost completed. They are made of concrete and steel.

All Power Electric

At this electric plant there will be developed by the water falling on turbines a force of 6,000 kilowatts, which will be sent by cables to the locks, to the range towers and to the other electric light plants.

The current will be strong enough to furnish all the power needed for operating the canal, for lighting the towns at either end and also for the great machine shops, foundries and other works connected with the canal. The electric cranes of the docks and piers will be moved by it and there will be enough electricity left to keep all the rolling stock of the Panama railroad in action. The transmission line to which I have referred runs above the tracks and it is so constructed that a trolley could easily be connected with the bridges that join the steel posts. If an extensive transportation business should develop, which is not expected, the road will be electrically equipped.

The movement of the vessels through the locks will be by electricity, and they are now putting up buildings in the top of the center walls from where the current will be controlled.

In each of these buildings one man can sit and direct every operation, in the taking of a vessel through from the ocean to Gatun lake or from the lake down to the sea. He can open the gates or close them by throwing a switch and can cause the water to rise or fall by the press of a button.

Cleaning Up the Works

The machinery of the locks is now almost all in shape and it will take but a short time to polish the whole and leave it complete. The men will soon be removing the debris, and within half a year these mammoth constructions of concrete will look like monuments of marble cut out with a chisel. Today one can walk along the tops of the locks through an avenue lined with concrete columns of wonderful architectural beauty. They uphold the lights of the locks, which will make the whole structure as bright at midnight as it is at midday. On each side of these columns are the cog-railroad tracks upon which the towing locomotive will run, and between them is another railroad for moving machinery back and forth. Each vessel will have four locomotives to move it from one lock to another. Two will go ahead to pull and two behind to hold back, so that the vessel may be steady, while moving. These towing locomotives will run on a level, except when passing from lock to lock, at which time they climb heavy grades. In coming back they take another track, made especially for the return of the cars after the towing.

Great Office Building

I shall not attempt to describe the locks nor the methods by which the ships are taken through the canal. The most interesting thing just now is the work going on at the terminals. I have written something of that on the Pacific side. One of the striking features there is the red skeleton of the administration building that is now going up. This stands high up, on the slope of Ancon hill, looking out over the Pacific ocean. The canal is in plain view at the right. At present the structure is only a framework of steel, but this will be clothed in concrete blocks and plastered with stucco. The roof will be of dark red tiles and the floor space will cover almost two acres. The cost of the building will be $375,000 and it will be devoted entirely to offices and for storage of the records.

Not far from this building has been laid out a town site where the employes of the canal will live. They will have houses of concrete formed after the same style as the administration building, and their little city will be modern and artistically planned. It will have all the conveniences for tropical living. The houses will have wide porches and every opening be covered with a mesh of fine wire. The principal public buildings will face a central avenue, and this will be covered by a continuous roof to keep out the sun and the rain. The town will have its tennis courts, base ball fields and bandstands, as well as its clubhouses, concert hall, hotel and schoolhouse.

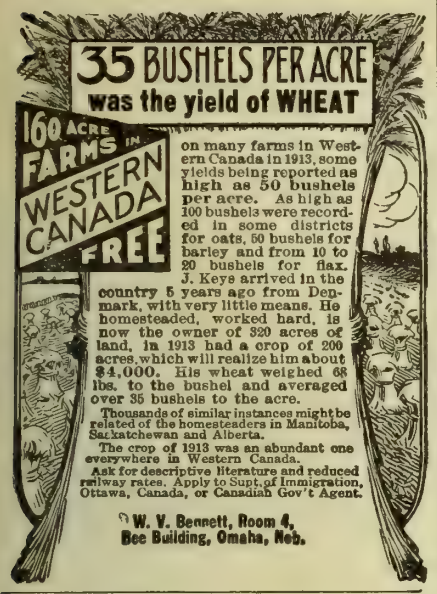
There will be other settlements at the Gatun locks, and also at Miraflores and Pedro Miguel, as well as at Cristobal, at the Atlantic end of the canal. The present structures at these points will probably be left for some time to come, but they will eventually be replaced by buildings of concrete. Most of the other towns along the line of the channel will be taken down, and their building materials will be shipped to other places as needed. At present the towns along the channel remind one of a Japanese village. Their houses have the same somber black and white character, and they are quite as airy and roomy.

New Docks Almost Ready

As I came into the Bay of Limon on the steamer Tenadores, from the Island of Jamaica, last week, I could see the great Toro breakwater, which has been extended out from the Atlantic end of the channel. This is more than two miles in length, and it has a lighthouse at the end. There will be another breakwater on the opposite side of the channel, and the ships will sail into docks of steel and concrete, so made that the railroad cars can come close to the ships. As it is now, we landed at Cristobal, not far from the statue of Columbus, and only a few feet from the cars, and we could see the men at work on the new docks. At Balboa there will be almost a half mile of uncovered docks in front of the repair shops, and at both terminals there will be electric cranes on the piers and floating cranes in the water.

Storage for Supplies

The government has not yet begun to build its great warehouses and the depots for fuel and oil. It will probably retain the cold storage plants now in use, as it will carry on a great commercial business here in supplying foods and all sorts of supplies to the steamers. The coaling docks will be enormous. The Navy department wants 100,000 tons kept on hand at the Atlantic terminus for its own use, and there will be another great coaling station at Balboa. The Cristobal coaling station will hold 290,000 tons, and the one at Balboa more than half that amount. This coal will be stored in basins of concrete and one-half of it will be left under water and untouched except in time of war. The other half will be for the steamers which pass



on many farms in Western Canada in 1913, some yields being reported as high as 50 bushels per acre. As high as 100 bushels were recorded in some districts for oats, 50 bushels for barley and from 10 to 20 bushels for flax. J. Keys arrived in the country 5 years ago from Denmark, with very little means. He homesteaded, worked hard, is now the owner of 320 acres of land, in 1913 had a crop of 200 acres, which will realize him about $4,000. His wheat weighed 68 lbs. to the bushel and averaged over 35 bushels to the acre.

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through the canal and for our government vessels. There will also be tanks for fuel oil at both terminals, and these will be connected by great pipe lines, which will run across the isthmus, with pumping stations so that the oil can be transferred from one to the other.

As to the commercial aspects of the case, the government is instituting these supply depots for the protection of the ships which will go through the canal and also for the force Uncle Sam will keep on the isthmus. It has been successfully carrying on a similar business during the construction. It has run the big Tivoli hotel at a profit, which last year amounted to $53,000, and it has served food to the men on the work at what is practically cost prices. In one year the commissary department gave out 2,000,000 meals at 30 cents each and in the height of the construction it was doing a business of about $7,000,000 per annum. During that time it supplied about 70,000 people wtih food and household necessities. I believe the commissary was run at a profit and have no doubt but that the coaling and supply business can be made to pay its own way.

I have asked Colonel Goethals something about the operating force which will be required to run the canal. He puts the limit at 2,500, but in addition to this there will be a force of from 6,000 to 8,000 troops kept here at the various stations of the fortifications and other defenses.

Matter of Fortification

The matter of fortifying the waterway is one that the officials here refuse to discuss. They will not allow photographs to be made near the forts and so far but little accurate information has been given outside that in the proceedings of congress of what will be necessary to protect the canal.

The evidence, however, is that the work is going on rapidly. The Pacific islands have been cut into shape and the work of installing the big guns at the Atlantic entrance will soon be under way. Congress has already appropriated more than $2,500,000 for the fortifications and it has been decided to erect them on the islands of Flamenco, Perico and Naos, out in the Pacific, facing Balboa, and on Toro point and on Margarita island in the Atlantic. There also will be forts on the mainland. There will be a coast defense camp on the Naos breakwater not far from the shore, and there will be other camps scattered over the isthmus along the line of the canal.

The land forts will be so made that the locks will be amply protected and so that any invading army could be kept away from them in case of war. As a protection against invasion the whole of the canal zone is to be made a military reservation. The greater part of this is a jungle which along the edges of Gatun lake and at the approaches thereto is composed of swamps filled with trees so bound togther with lianas that it would be impossible for troops to make their way through them except with axe and saw. Anyone going over the line of the Panama railroad can see how difficult it would be for an army to advance through this jungle under fire, or to make any kind of an attack on the locks.

Some Real Guns

The plans so far include the use of the largest of the disappearing guns on the island fortifications and also of big guns and mortars on the shore. At Fort Grant, which is the general name given to the fortifications on Perico, Flamenco and Naos islands, there will be one sixteen-inch gun and six fourteen-inch guns, besides a number of six-inch guns and howitzers. The biggest of the guns will carry a projectile weighing a ton, or as much as two horses could haul on a wagon for a distance of over twenty miles at a shot, and they will be so delicately hung that they can be aimed as accurately as the mountaineer aims when he shoots out the eye of a squirrel with his rifle.

Another feature of the fortifications will be searchlights with reflectors as big around as cart wheels. There will be fourteen of these, each five feet in diameter. They are being made at a cost of $20,000 apiece, and the lights thrown by them will reach as far as the range of the guns. Indeed, the electric lighting of the isthmus, including the searchlights, is one of the wonders of the construction.

Safe from Birdmen

Speaking of the defense of the locks, I recently asked Colonel Goethals whether they might not be destroyed by charges of dynamite dropped from flying machines. He replied that the dynamite would have to be carefully located to do any damage and that such a thing was impossible. Colonel Goethals says that the dynamite charges would have to be placed between the gate and the lock in such a way that the man would need to be on the ground to do it and that if a dynamite charge were dropped from a flying machine upon the locks or on the lock walls, it could not do much damage. It would have to be placed behind the locks to be effective. Indeed, everything of this kind has been carefully considered in the protection and fortification of the canal. The work is very comprehensive and it will include the caring for 20,000 troops in case of war. I am told that the chief experts of our army and navy believe that the arrangements will be ample to protect the canal.

(Copyrighted, 1914, by Frank G. Carpenter.)

Nemaha County Poultry Show

The initial Nemaha County Poultry Show, held at Auburn, Neb., December 22 to 25, was a decided success, and plans are under way for a bigger show next year. Carl Dare of Des Moines, Ia., hung the ribbons to the satisfaction of every exhibitor. R. A. Neitzel, Falls City, with a 95-point White Rock pullet, won the grand sweepstakes cup for best bird in the show. Abe Forney, Pawnee, with a 92-point Partridge Wyandotte, won cup for best cock bird. A. D. Dort, Pawnee City, with Buff Cochin scoring 93¼, won cup for best hen. F. Vrtisa, Pawnee City, with single-comb Red, won cup for best cockerel. F. P. Majors, Peru, with single-comb Red scoring 92¾, won cup for best pullet. G. Stinger, Nebraska City, with single-comb Reds scoring 182½, won cup for best pen. The biggest winners in their respective classes were: Blue Andalusians, J. Oswald, Falls City; Buff Cochins, A. D. Dort, Pawnee City; Cornish Indians, B. J. Brissey, Auburn; Black Langshans, Frank Daily, Auburn; White Langshans, T. L. Cummings, Howe; single-comb Brown Leghorns, C. L Dort, Auburn; single-comb White Leghorns, G. Coulters, Auburn; single-comb Black Minorcas, B. J. Brissey, Auburn; Buff Orpingtons, J. J. Oswald, Falls City; White Orpingtons, F. P. Majors, Peru; Barred Plymouth Rocks, G. M. Lechliter, Auburn; Buff Rocks, Mrs. Isaac Williams, Wymore; White Rocks, R. A. Neitzel, Falls City; Black Polish, Earl Smiley, Beaver Crossing; rose-comb Rhode Island Reds, T. R. Haynes, Auburn; single-comb Rhode Island Reds, F. P Majors, Peru; Golden Wyandottes, George Blessing, Auburn; Silver Wyandottes, Robert Perry, Auburn; White Wyandottes, C. L. Beckner, Nebraska City; Partridge Wyandottes, Abe Forney, Pawnee City; Golden S. Bantams, Em. Avey, Auburn; Indian Runner ducks, Robert Perry, Auburn; English Runner ducks, Robert Perry, Auburn; White Indian Runner ducks, C. L. Dort, Auburn; Buff Orpington ducks, Mrs. Henry Voegle, Falls City; White Chinese geese, Milburn Ball, Auburn; White Holland turkeys, T. L. Cummings, Howell.

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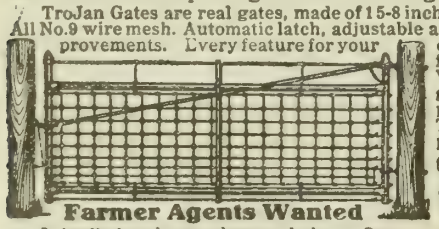

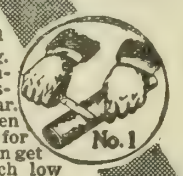

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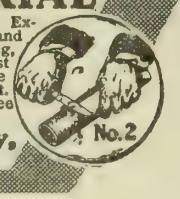

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Disinfecting After Hog Cholera

F. L. S., Colorado: I have moved to a place where there was hog cholera one year ago, and I am cleaning all hog houses and pens, and wish to know if flooding these places will drown the germs. How long will a germ live?

Answer—Hog cholera germs cannot be drowned, and flooding would do little or no good. Spray your hog houses and pens with a good hog dip. After this has dried take slaked lime with which you have mixed some crude carbolic acid and put it on hot. Put the freshly slaked lime on by the bucketful and then take a broom and see that it penetrates every crack and corner. All the ground on which the infected hogs have been running should be plowed. This is important. It is not known how long a cholera germ lives, but it is quite certain that under favorable conditions it lives from one season to another. It is not well to take chances.

Measuring Hay and Grain

A. C. H., Columbus, Neb.: Please give me rules or tables that will apply to measuring hay in ricks or long stacks, also in round stacks. Also a rule for figuring the number of bushels in round or square corn pens that have the shuck on and where it is shucked—something that will apply to the farmer and feeder.

Answer—For finding number of tons of hay in stacks, multiply the length in yards by the width in yards, and the result by half the height in yards, and divide the product by 15.

For circular stacks, multiply the square of the circumference in yards by four times the height in yards and divide by 100. The quotient will be the number of tons.

To find the quantity of shelled corn in a crib, measure the length, breadth and height of the crib inside the rail in feet; multiply them together and divide by 2. The result is the number of bushels inside the crib. For ear corn divide by 4 instead of 2.

To get the contents of a circular bin, get the diameter in inches and multiply it by itself; multiply the product by .7854, and multiply this product by the height in inches. This will give the solid contents in cubic inches. As there are 2,150 2-5 cubic inches in a bushel, divide by this number. This will give shelled corn. Ear corn would shell to about half this amount.

At this season of the year the corn has usually settled, so that there would be a little more corn than earlier. Of course, these figures are merely approximate.

Windmill Waters Orchard

L. L., Joliet, Ill.: The enclosed slip (article about underground waters) was taken from your paper of January 10 and speaks of a matter of vital interest. It is plain to me that there is good land lying just out of reach of the irrigating ditches, with good underflow, which might be made valuable by the addition of a little water. Everyone who has had experience can estimate the cost of raising this water, and knows that no power is so cheap and reliable for this work as wind power when one wants it for house use and a few head of stock.

I have figured out, and have a good deal of experience to back this estimate, that one sixteen-foot windmill, properly set up, will raise water from fifty to seventy-five feet to irrigate an orchard of 1,000 trees, either in sandy loam or clay ground. There is some difference in the amount of water required by different soils.

One might ask, How is this to be done? What proof have you of its success? In reply, would say that there is an orchard in Kansas which was set out over twenty years ago. The party who set out this orchard dug a trench to lay a pipe to a watering tank about twenty rods distant from his windmill at the house. This farmer, like many others of that day, had no love for hard work, but was ingenious in inventing ways of avoiding it, so he thought he would set a row of apple trees in the ditch before he filled up over the pipe. He bought fifty trees and set one row in this ditch. The first year these trees began to bear they bore more than double any other row in the orchard. He lived on this farm about ten years after these trees began to bear, and informs me that in many dry years this row of trees bore more and better fruit than all the rest of the orchard.

Now the question is, was it the ditch he dug or the moisture from the pipe which was caused by the condensation when cold water was being pumped through? In taking up a section of this pipe he found that the roots of the trees had followed the pipe instead of running away from it.

This set me to thinking that a small amount of water at the right place and time will do a lot of good. I have known a number of cases that went to prove this same thing.

My plan for irrigating trees would be to run a one and one-fourth-inch galvanized pipe along the head of the orchard, with "T" branches of three-quarter-inch pipe under every row of trees, laid just low enough to be out of the way of the plowing, with a brass plug or two in the pipe under each tree, with a hole in the plug about one-sixteenth of an inch to let out the water. These plugs are screwed into the pipe and must be on the under side when in the ground in order to prevent the roots growing into the holes and stopping them up. These brass plugs can be bought for about 1¼ cents, and the pipe can be punched the right size and tapped for about 1 cent each. The punching and tapping should be done when the pipe is laid.

There should be a cock at each row of trees to shut the water off if desired. If possible the water should be let in from the high ground and should run down through the rows by the force of gravity.

Editor's Note: We are glad to receive this article, which appears to be very practical. It would be worth trying in many sections of the middle west, where the soil is good for trees, but rainfall not very plentiful.

Property Safer than Lives

Seventy thousand Americans have left Mexico since the fighting began, and only 5,000 remain to guard $900,000,000 of American capital invested there. The Americans might be spoiled if they remain, but their property is mostly in the form of mines, well underground, and will be just as good, if not better, after the cleanup.

Concrete for Roadmaking

Concrete roads from town to town! Will the future bring us something like this? Experience has already proved to us that properly made concrete roads, culverts and bridges are practically indestructible. At a recent good roads exhibition a reinforced concrete arch for roadway work and an ancient brick arch 6,500 years old were compared. The brick arch had been dug from the dust of ages in Babylonia, where it was buried fifteen feet deep. The concrete arch was built for modern roads and has been tested to stand a strain of 1,000 pounds to the square foot, and may stand twice that much. At last we are beginning to compete with the road-makers of many centuries ago.

Where Alfalfa Would Not Grow and Why

(CONTINUED FROM PAGE FIVE)

ulated. His alfalfa grew off well, but he soon noted that the plants did not have a healthy color—they were greenish yellow instead of dark green, such as they should have been on the medium rich soil in which they were growing. Mr. C. obtained 200 pounds of soil from a field which he knew was inoculated; or, in other words, from a field in which the alfalfa roots were covered with nodules. He applied this broadcast and harrowed it in immediately with a spike-tooth smoothing harrow. The dark color soon came to the plants and within a short period the roots were covered with nodules. It is true that most of the soils in the west are inoculated with the specific bacteria which inhabit the nodules found on the roots of alfalfa plants. Where sweet clover grows as a weed in waste places, the grower may feel sure that the soil is inoculated.

There have been many failures of alfalfa that have come under my observation which have not been the result of poor seed-bed preparation or of inferior seed, but of lack of cultivation. In many of these cases the stand obtained has been above the average. Grasses and weeds come up in alfalfa fields, and, unless some method of cultivation is used, oftentimes these soon crowd out the alfalfa plants. One of the most effective tools for use in cultivating alfalfa is a spike-tooth smoothing harrow. When used once each spring, or better, after each cutting of the alfalfa for hay, weeds and grasses are kept down and moisture is maintained. The spike-tooth harrow is recommended because it accomplishes the desired results without cutting up or otherwise injuring the growing alfalfa plant crowns or roots.

The experiences of the farmers noted serve to bring out prominently some of the causes of failure in the first attempts to grow alfalfa. Under average conditions, however, there is no particular reason why failure should come to any farmer in those sections where alfalfa has been successfully grown, if proper attention is given to preparing the seed bed, purchasing and planting the seed and in cultivating the crop after a successful stand is obtained. But some failures are bound to come. To those who fail in their first attempt, no advice is better than that of—"If at first you don't succeed, try, try again."

Big Demand for Wild Hay

The demand for the wild hay of Nebraska continues to increase, rather than diminish, and indications are that the hay ranchers of Rock, Cherry and other counties up along the Elkhorn river valley will be able to dispose of all their surplus stocks.

Right now the Northwestern is handling out of the Elkhorn valley something like 500 carloads of wild hay daily, the greater portion of it going into Kansas and Missouri, while many of the shipments go as far south as Oklahoma.

Our Young People

(CONTINUED FROM PAGE TEN)

Decatur, Neb.; Mabel Mae Hinds, Concord, Neb.; Alice Goebel, Riverton, Neb.; Bernard Schrad, Petersburg, Neb.; Bessie Morgan, Verdel, Neb.; Edwin Hoppe, Jansen, Neb.; Grace Helen Morgan, Henderson, Ia.; Floy Sedlock, Neola, Ia.; Marie Peterson, Hancock, Ia.; Josephine Hoeye, Waukee, Ia.; Laurinda Kemper, Lakin, Kan.; Grace Barry, Atchison, Kan.; Evelyn Layland, Audubon, Ia.; Esther Lawrence, Silver Lake, Kan.; Mabel Steward, Quenemo, Kan.; Dick Dunlap, Sapulpa, Okl.; Viola Franklin, Gracemont, Okl.; Theodore E. Orr, Vici, Okl.; Ethel Crozier, Afton, Wyo.; Gordon McCready, Buckhorn, Wyo.; Erla Florence Peterson, Alamosa, Colo.; David Ferguson, Idaho; Joe Wagner, Greenview, Ill.; Helen Norcross, Central Point, Ore.; Edna and Walter Crosby, Deming, N. M.; Wilhelmina Schulze, Warrentown, Mo.

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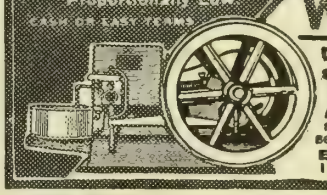

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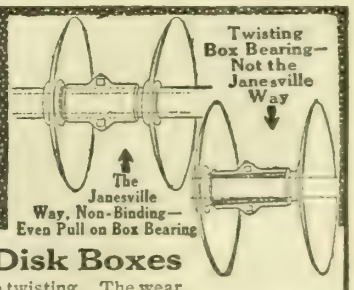
This paper will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises.

The Inside Facts On Light Draft in a Harrow



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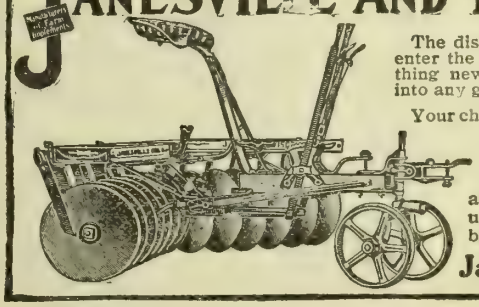
There are only two harrows made that do not bind in the disk boxes while the harrow is at work—the Janesville and the Budlong.

Here is the point that effects the draft: Study Fig. 1 to the right—the Janesville way. This is the true position of the disk box while at work. No side strain—no twisting. The wear on the spool is equalized—oil gets to all parts—the bearings last longer. One man used a Budlong 23 years before he replaced his first set of bearings. It's easy to see what this means for light draft. All the good features known in harrow building are built into Janesville and Budlong Harrows.

JANESVILLE AND BUDLONG HARROWS Have many features that no other can offer



The disks are hung in the machine so that they enter the ground like plow points. This is something new in harrow construction. They will cut into any ground in condition to be harrowed.

Your choice of steel or wood bearings. All bearings are interchangeable, and we will replace any chilled bearings proving defective within life of the machine. All sizes—concave—plow cut—spading or cut-out disks, one or two levers, with or without tongue trucks and transports.

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is an instrument that goes on the crankshaft of your separator. Its dial tells you when you are operating your separator exactly correct so as to get every bit of cream out of your milk.

Nobody can turn any separator at the right speed *without* the Stewart Speed Indicator. One dairyman with 20 cows lost $524.10 in a year just because he guessed at the speed. Another, owning 8 cows lost $18.50 *in one month* by guessing.

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Please send me, free, all your literature on Cream Production and the book about the Stewart Speed Indicator for Cream Separators.
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Because our production makes it possible for us to sell [illegible] at a great saving, [illegible] guaranteed Empire Silo. Write us for our free catalog and low prices on Silos (one piece hoops.) By the way, the best hunters from which a Silo can be made. Our own "Hint Book" explaining [illegible] Silo construction.

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Kindly mention Twentieth Century Farmer when you write to advertisers.

Winter Care of the Brood Sows

Variety of Feed Necessary to Produce Strong Pigs

IN A previous issue we spoke of the importance of exercise for the brood sow to get her in condition for farrowing. In this article we want to take up the subject of feed.

Most of our farmers have some or all of their alfalfa and clover fields fenced hog tight, so that the sows have gotten some of the much needed green feed. We can expect weather conditions from now on to be such that we will have to supply all their feed.

We are expecting the sow to produce bone and muscle in the litter. In order to do this she must necessarily be fed something that will produce these results. First and foremost, we must take into consideration what we must feed and then the cost. The variety to fill the bill is available to the corn belt farmer and generally he is raising them on his farm. If not, the sooner he does raise what is necessary, the better net profits he will show.

To balance the corn ration we have oats, wheat, alfalfa, clover, shorts, oil meal, tankage, etc. Of these, without a doubt, alfalfa is the cheapest. It is easy to supply the sow with a sufficient quantity in the summer, but the question is, how will she consume and digest a sufficient amount during the winter? Alfalfa is generally fed in small racks in the hay. A sow will eat very readily of this hay, but will not get enough to balance her ration.

We would suggest a trial of the following method: Get your alfalfa hay as nearly as you can in the form of meal, grind it if you have a grinder, if not, chop it with a fodder chopper, setting it to chop the hay as finely as possible, or, better yet, take the old-fashioned way we used to thresh our beans, a flail on the barn floor. By using well cured hay the leaves will fall off readily by a good flailing, and then you have just what you want, the leaves with no stems.

In the morning put into a barrel a sufficient amount of hot water (about half full), to thoroughly soak four or five bushels of the prepared hay, mix thoroughly, cover with a sack or blanket, and leave until the next morning. Add to this about three-fourths of a bushel of shorts, a gallon of oil meal, and salt to taste, then sufficient warm water to make a thick slop. Feed this and you will be surprised how much alfalfa will be eaten in this way.

Don't feed the same thing day after day, it will get to be an old song and you will find that the sows will not be eating with the relish they should. A feed of oats occasionally will be appreciated. When feeding oats don't feed it in piles on the ground, or in troughs where the sows can get it readily in quantities, scatter it thinly on a hard surface, so that it will be picked up a little at a time, and in this way masticated and digested. An occasional feed of finely ground wheat is a good change. This may be fed dry in the troughs or fed in the form of slop. The most important thing is plenty of pure water all the time. Some feeders have the mistaken idea that sows do not require any water when they are fed slop. Do not be deceived in this way. If you want your sow to do well and produce a good litter for you, always remember that she must have pure water and plenty of it.

Fitting Live Stock for the Fair

Exihibitors Get Experience in Ordinary Feeding

IT is some time before our next state fairs and stock shows are held, but none too soon for the man who is expecting to show his live stock next fall to begin to give the matter some consideration. The man who expects to show aged bulls and boars should now have them gaining nicely in flesh, depending on the feeding quality of the animal, age, etc. Many a good breeding animal is practically ruined as a breeder by being too rapidly fleshed in order to get him into show condition.

Scrutinizing judges, such as we have at our state fairs, are paying particular attention to the mellowness of our animals. An animal shown in a mellow, smooth condition denotes feeding quality. You cannot get your aged animal well fitted in a short time. Start early and go slow. By doing this you will not only have a much better fitted animal, but you will not be nearly so liable to destroy the breeding qualities.

Each state fair brings many new breeders as showmen, oftentimes with splendid individuals poorly fitted, landing entirely outside the money. If the same animal had been in the hands of an experienced showman he might have carried away the blue ribbon. In most of these cases the animal has been pushed along too rapidly, making him rough, hard and uneven.

We believe there is no plan whereby the inexperienced man can get such valuable information as he can by fitting one or more animals and taking them to our great state fairs. You can go and be a visitor and learn many things, but if you are directly interested as a competitor for the much prized ribbon, you will look more closely, and find out if possible why you didn't win, and in what particular your animal was lacking.

The man who year after year fits his stock for the show, gives the matter of feeding and care-taking the best of attention. He studies closely what effect this or that feed has on the animal he is feeding, knows the kinds and mixtures of grains that produce the best results, and knows their cost. This perhaps unconsciously makes him a better feeder of his general farm stock, and fits him to get the best results from the grain fed to his fattening animals.

We feel that we can't too strongly urge young men, starting in the breeding business to fit a few of their best animals, and show them at their next state fair. Many of our farm boys have become good farmers and successful breeders largely because it was their good fortune to have had the privilege of visiting their state fair and there learning by observation the pleasure and profit to be derived from raising pure-bred live stock.

New Yorkers Like Apples and Butter

An average of twenty carloads a day, or a total of 2,212,870 barrels of apples, were received in New York City during 1913.

During 1913 New York City consumed 150,465,480 pounds of butter, valued at $64,700,000.

Sale Dates

Hereford Cattle

January 28—Mousel Bros., Cambridge, Neb.

February 19 and 20—Nebraska Hereford Breeders' Association. Sale at Grand Island, Neb., Robert Mousel, Cambridge, Neb., manager.

April 15 and 16, 1914—Breeders' Combination sale at South Omaha, W. N. Rogers, McCook, Neb., manager.

Holstein-Friesian Cattle

February 3 and 4—H. C. Glissman, Station B, Omaha, Neb. Sale at South Omaha.

Aberdeen-Angus Cattle

April 1 and 2, 1914—Charles Escher, Botna, Ia. Sale at South Omaha, Neb.

Duroc-Jerseys

February 2—E. H. Carpenter, Fontanelle, Neb.
February 3—Clarence Wallace, Wisner, Neb.
February 4—Gus Krueger, Beemer, Neb.
February 5—Robert Leisy, Wisner, Neb.
February 6—Henry Stuthman, Pilger, Neb.
February 9—O. E. Green, Genoa, Neb.
February 9—J. J. Kane, Wisner, Neb.
February 10—F. B. Nelson, Lindsay, Neb
February 11—M. O. Froistad, Newman Grove, Neb.
February 18—George W. Schwab, Clay Center, Neb.
February 21—E. E. and N. T. Youngs, Lexington, Neb.
February 26—J. J. Kane, Wisner, Neb.
February 27—Blackburn Bros., Royal, Neb.
February 27—O. G. Smith & Son, Kearney, Neb.
March 2—L. J. Kuzel, Clarkson, Neb.

Poland-Chinas

February 10—W. J. Eavey, Geneva, Neb.
February 11—D. C. Lonergan, Florence, Neb.
February 20—A. E. Rich, Creighton, Neb.
February 24—Jacob Dietsch, Boone, Neb.
February 28—O. J. McCullough, Clarks, Neb. Sale at Central City, Neb.
March 6—William Ferguson, Scribner, Neb.

Hampshire Hogs

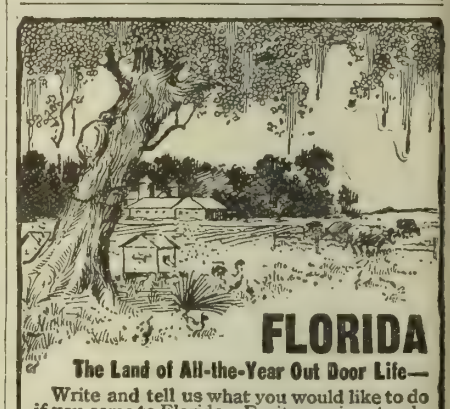
March 14, 1914—Roy Fisher, Winside, Neb. Sale at Wayne, Neb.

Shorthorns

February 27—J. C. Hardman & Son, Valley, Neb.
March 11—E. H. Cosgrove, Farnam, Neb.
March 25—A. C. Shallenberger, Alma, Neb.

Clydesdale Horses

February 27—J. C. Hardman & Son, Valley, Neb.



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The Land of All-the-Year Out Door Life—

Write and tell us what you would like to do if you come to Florida. Fruit growing, trucking, poultry, bee keeping, stock raising, dairying a winter home or business or professional openings, as well as some lines of manufacturing, and we try to assist you to get the right location. Your success means our success and the success of the community in which you live. Illustrated booklets and "Facts About Florida" sent free on application.

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Our lands in Putnam county, Florida, are real farm lands. The staple crops are corn, oats, rye, hay, cane, potatoes, etc., the difference being however, that two and three crops are grown on the same land the same year and by proper rotation the land is improved. No one crop country can begin to compare with it.

Seeing is believing. We want you to view our lands. We believe we have the best land investment in the United States.

Write at once for full particulars.

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Don't guess about them — try them. Thousands use Empire Steel Wheels because they have tried them and find them far better than high wooden wheels. Save your horses by making pulling through soft fields and over muddy roads easy. Make sure of no breakdowns. Eliminate repair bills. Empire Steel Wheels do these very things. Try them. We'll make it easy for you on our plan. FREE 30 DAYS TRIAL

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Real Fresh Frozen Lake Superior Herring, from our own Fishery, special for family use; $3.60 per 100 lbs. in box. Newsalted $3.50 100 lbs. keg. ELLINGSON & HANSON, Duluth, Minn

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R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO.

Fancy Advance 2nd

Grand champion sow at the Nebraska State Fair in 1913. This great sow will be sold in the sale of Clarence Wallace at Wisner, Neb., on February 3. She is bred to a champion boar.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Immune Duroc Offering

The fact that an offering of pure-bred hogs is immunized from cholera should attract more than passing attention from breeders and farmers at this time, for when the buyer can rest assured that the animal he buys is safe from this dreaded disease he can certainly feel that he is eliminating a great deal of the danger attendant upon breeding pure-bred hogs. In this issue of Twentieth Century Farmer we are starting an advertisement for Mr. M. O. Froistad of Newman Grove, Neb., who will offer forty head of immune Durocs in his sale to be held at that place on February 11. This offering will consist of thirty-five spring gilts and five yearling and tried sows. Among the good things in the yearlings is one by Belle's Wonder and bred to a son of the celebrated Colonel Gano. This sow was the first-prize junior yearling at the Boone county fair last year. Other good things in the offering are three spring gilts by B. & L.'s Wonder, three by Red Chief Wonder, five by Valley Prince by Valley King. There are also twenty-three head by M. & O.'s Chief Select by Chief Select, and among them are a number of very good ones. These sows are bred to Big Gano, Echo Wonder, Cremo and Colonel Mascot. In this connection we want to say a few words about Big Gano. He is a son of the celebrated Colonel Gano and very much resembles his illustrious sire in general makeup and conformation. He is a well balanced hog, with great length, good, strong, arched back, good bone and right on his feet. If this lad keeps coming on as he should, we predict that he will make a very creditable showing next fall. Not only that, but one of these choice sows bred to him should prove a valuable asset in any man's herd. If you are looking for the right kind, bred right, and immune from disease, write for catalogue and arrange to attend this sale. G. E. Hall will represent Twentieth Century Farmer and will handle any bids that may be sent to him by parties who cannot attend.

Kane's Choice Duroc-Jersey Offering

An offering of Duroc-Jerseys which will interest breeders, stockmen and farmers will be the one held by J. J. Kane at the Kelso barn, Wisner, Neb., on Monday, February 9. Mr. Kane will sell forty-five head in this offering, and the blood of the noted Invincible Chief and Golden Model 15th will be very strongly represented. Invincible Chief is a boar that has done Mr. Kane a great amount of good. He has sired lots of size, good depth of body and strong, heavy bone. There will be fifteen sows in the sale by him and a number will be bred to him. One of the attractions in the offering will be the sow Uneeda Rose, a daughter of Uneeda Crimson Wonder. She is an excellent individual and will be mated with Select Improver, a good son of Chief Select 2d. Other sows of special importance in this offering are Model Liz by Colonel Tippy, Wonder Rose 2d by Golden Model 4th, Belle Viewfield by Proud Tip Ear, Invincible Maid by Invincible Chief. Some of these are mated with Invincible Chief, others with Select Improver and a number with the show boar Wonder's Colonel by Proud Colonel Junior, out of the dam Wonder's Beauty by Crimson Wonder Again. He is a March 16th pig, good cherry color, that has been used to good advantage by Mr. Kane. This will be an offering that should appeal to stockmen looking for practical stuff. Mr. Kane has been successful in his breeding operations and it is because he has the class of stuff that will raise good, big, strong litters, retaining plenty of quality. Arrange to attend this sale on Monday, February 9. If you cannot attend this offering, send bids to G. E. Hall, who will represent this paper.

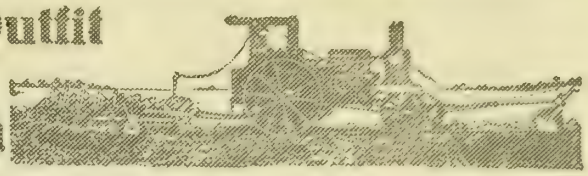
W. L. DeClow Heard From

We are in receipt of a letter from W. L. DeClow of Cedar Rapids, Ia., in which he makes mention of having received another importation of Percheron stallions and mares. We think this will be of interest to our readers. Here is what he says: "On January 5 I received another importation of Percheron stallions and mares. They arrived in fine condition

(CONTINUED ON PAGE TWENTY)

These sows are among those to be sold in the Duroc-Jersey sale of Robert Leisey at Wisner, Neb., on February 5. They look like the right kind, don't they?

Try This Outfit On Your Own Farm



If it doesn't do the work, it's our outfit, not yours. We sell Avery Tractors and Plows **on approval.**

We don't want any man to keep on farming with horses or mules because he doubts Tractor Farming.

So we offer to **prove** Tractor Farming with Avery Outfits—**on your own farm.**

We can make this proposition safely because we have behind us the experience of thousands of farmers who are today making big successes with Avery Outfits.

AVERY "ONE-MAN" OUTFITS

"Light-Weight" Tractors and "Self-Lift" Plows

One Avery owner writes—"I bought the tractor so my boys could farm the new way as I expect there will be as much change in a few years as there was from the old reapers to the binders."

He's absolutely right. Tractor power is cheaper than horse or mule power. Tractor Farming also means bigger crops.

You can run an Avery Outfit all alone. The Avery plow is a "Self-Lift." Pull a cord at the end of the furrow. Power from the plow wheel raises or lowers the plows.

Avery Tractors are the lightest-weight Tractors considering their draw bar pull. They don't waste fuel or power. They don't pack the ground to injure crops. The simplest tractors built.

Five sizes—8-16 to 40-80 H. P. They fit any size farm—large, medium or small.

Learn About Tractor Farming and the Avery Sold on Approval Plan

Our new book "Tractor Farming" tells why and how to farm with tractor power. Our 1914 Tractor and Plow Catalog explains Avery Trial Plan, Low Prices, Strong Guarantees and Avery Construction. Write, telling how many acres you farm and how many horses you use and get both books FREE. Address

AVERY COMPANY, 1976 Iowa St., PEORIA, ILLINOIS

Also manufacturers of Avery Gas Farm Trucks, Undermounted Steam Traction Engines and "Yellow-Fellow" Grain Threshers.

SAVE MONEY

by writing for our 32-page money-saving grocery catalog. You save on every pound of sugar, coffee, spices, drugs, etc. Write now.

ROSENBLUM, Wholesaler,

16th and Burt Sts., - Omaha, Neb.

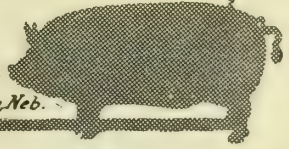
GRAIN BELT BRAND

Vegetable Hog Potash

Don't starve your hogs to remove worms; try this: Send for sample of our product, then select six growing pigs, feed them all the grain, oil meal, tankage and milk they can eat, then place before them in dry trough sample of Hog Potash and see how they eat it. Worms cannot live where it is fed regularly. Sold at prices of good salt. Send today for sample and descriptive circulars.

Agents wanted in unoccupied territory.

Manufactured by



UNION STOCK YARDS COMPANY South Omaha, Neb.

DUROC-JERSEY HOGS

SCHWAB'S DUROC-JERSEYS

A choice lot of spring and fall boars for sale; sired by Buddy K 4th, Wide Awake, Gold Bond, W. L. B.'s Perfection, Cremo and others. Also bred sows. Priced worth the money.

GEO. W. SCHWAB, Clay Center, Neb.

DUROC BRED SOW BARGAINS.

Sows for sale sired by I Am Crimson Wonder 5th, Crimson Advancer, C. H.'s Crimson Wonder and Critic Col. 2nd. Bred mostly to Crimson Duke by Crimson Wonder Again.

ERNEST FOWLIE, - HICKMAN, NEB.

O. I. C. HOGS

THIS **O.I.C.** SOW WEIGHED 932 LBS. AT 23 MONTHS OLD

IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN** RFD79 Portland, Mich.

JERSEY CATTLE

WINELAND FARM JERSEYS

Bulls of serviceable age for sale, sired by Duke Raleigh by Noble of Oakland. Also a number of choice heifers bred to freshen soon. I can suit you in both quality and price.

H. C. YOUNG, Lincoln, Neb.

HOLSTEIN-FRIESIAN

Purebred Registered **HOLSTEIN CATTLE**

Do you consider dairy farming a real business, a man's job or simply a side issue? Are you keeping high-producing Holsteins or just cows?

A good Holstein is little short of a perpetual motion milk-making machine, that while in milk uses her food for milk production and when dry stores up body fat to be converted into milk fat as soon as she freshens. She will earn 50 per cent on the cost of her feed.

Why not keep this kind?

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro, Vt.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

POLAND-CHINA HOGS

POLAND-CHINA OPPORTUNITIES

Big, smooth, heavy boned, easy feeders. Spring males, by the noted **Wayside Jumbo.** Write me. I have what you want.

FRED WILLE, Columbus, Neb.

RED POLLED CATTLE

RED POLLS

Bulls and heifers for sale. Prices reasonable. Quality the best. Satisfaction guaranteed. Write your wants or call

W. P. SCHWAB, Clay Center, Neb.

IMMUNE POLAND-CHINA GILTS

We have a splendid lot of spring gilts for sale, sired by Blue Valley and Blue Valley's Orange by Big Orange. They have been given the double treatment and are immune from disease, and all bred for early spring farrow. Satisfaction guaranteed.

THOMAS F. WALKER & SON, Alexandria, Neb.

KANE'S "INVINCIBLE CHIEF" — "GOLDEN MODEL 15TH"

Offering of Immune Duroc-Jersey Bred Sows

Sale to Be Held in Kelso's Barn

Wisner, Neb., Monday, Feb., 9, 1914

45 HEAD

There will be fifteen sows in this offering by Invincible Chief and twelve by Golden Model 15th, others by Uneeda Crimson Wonder, Col. Tippy, Golden Model 4th, Proud Tip Ear, B. & G.'s Wonder, Chief Invincible, Chief Select 2d and Wonder Model. Offering will be bred mostly to WONDER'S COL. by Proud Col. Jr., out of a Crimson Wonder Again dam, the show boar which Mr. Kane purchased from Mr. Widle. Others bred to SELECT IMPROVER by Chief Select 2d, INVINCIBLE CHIEF AGAIN by Invincible Chief and INVINCIBLE CHIEF. For catalogue, address

Mostly Tried Sows and Yearlings. Some Choice Gilts.

J. J. KANE, Wisner, Neb.

COL. N. G. KRASCHEL, Auct. G. E. HALL, Fieldman.

VALLEY KING *Grand Champion Boar at Iowa and Nebraska*

45 Head of yearling and tried sows and spring gilts, either sired by or bred to this great boar, will be offered in the Duroc-Jersey sale of F. B. NELSON at

Lindsay, Neb., Feb. 10, '14

The offering will consist of 12 big, smooth, tried sows, all bred to VALLEY KING, 19 fall gilts and several spring gilts sired by him. Others in the offering are sired by Critic B, Golden Model 3d, Golden Model 4th and Chief Select 2d. 20 head are bred to VALLEY KING and the balance to Red Chief Wonder 2d by Red Chief Wonder and F. B.'s Wonder by B. & L.'s Wonder. Here is an opportunity to get right into the blue blood of the breed, backed up by individual merit that is of the best. For catalogue address

F. B. NELSON, Lindsay, Neb.

Auctioneer—Col. N. G. Kraschel. Fieldman—G. E. Hall.

Froistad's Durocs Are Immune

40 Head of the top sows and gilts from his herd will be offered for sale at his farm adjoining

Newman Grove, Neb., on Feb. 11, '14

The offering will consist of 35 spring gilts and 5 yearling and tried sows. They are a strong, smooth, growthy lot, representing such sires as B. & L's. Wonder, Red Chief Wonder, Valley Prince, Belle's Wonder, M. O's. Chief Select and others. These sows are bred to BIG GANO, a splendid son of Col. Gano, ECHO WONDER by Belle's Wonder, CREMO and COL. MASCOT. Here is a chance to get in and get something good. Furthermore, you can know they are immune from cholera. Better write for catalogue at once to

M. O. FROISTAD, Newman Grove, Neb.

Auctioneer—Col. N. G. Kraschel. Fieldman—G. E. Hall.

HORSES

America's Famed Horse Districts

This particular district, famed for Percherons. The Chandler herd is known for [illegible] substance and bone. Big bunch reg. studs for sale, yearlings to fours, with weight and finish equal to French. From imported ancestry on both sides and well grown. Grown here simply means surest foal getters and farmer's prices. Just East of Omaha.

FRED CHANDLER, Rt. 7, Chariton, Iowa.

Sold 31 Boars!

Last Wednesday, Henry Stuthman, Pilger, Neb., wrote us:

"During the last two months when you carried my 1-inch card I have sold 31 head, and this right after my public sale when nearly every one was supplied. You can depend on my business next year."

Even after his public sale, each ad sold **four boars—less than 50c for each sale!** Write Mr. Stuthman and have him verify it.

An immense circulation and the service of an expert field manager makes this possible.

Rate card mailed you upon request.

TWENTIETH CENTURY FARMER

LIVE STOCK DEPARTMENT,
OMAHA, NEB.

Breeders' Notes

(CONTINUED FROM PAGE NINETEEN)

and comprise the best lot of ton Percheron stallions I have seen for years; they average better in size and quality all through and indicate that a marked improvement in the Percheron is taking place among the French breeders, as well as in America. These are especially improved in straight, wide backs, and long, broad, deep hips, in good heads and necks, with bold, upstanding, wide fronts, showing an over-abundance of style and finish, with big, square-standing feet. My buyer, Mr. Rockwell, who has bought for me almost constantly since 1902, writes that this importation comprises the largest and heaviest-boned ones that he has been able to see in Europe this season. I also received a consignment of Belgian mares on the same date, ranging in age from 2 to 4 years, which I am offering at ridiculously low prices. I also have the major portion of my August importation of Belgians that were purchased in the Belgian shows. This places me in a position to show customers as fine a bunch of horses to select from as can be found anywhere. I am endeavoring this season to make prices within reach of all. I most especially urge the farmers of our country to invest in good imported mares, as I believe this is the solution of the horse-breeding industry in this country.—W. L. DeClow, Cedar Rapids Stallion and Jack Farm, Cedar Rapids, Ia."

Valley King Offering

Breeders of Duroc-Jerseys will no doubt be interested to know something about the sale offering of F. B. Nelson at Lindsay, Neb., on February 10. In the strictest sense of the word, this will be a Valley King offering, and anyone conversant with Duroc history knows what this means. Valley King, it will be remembered, was an outstanding winner of grand championship, both at the Iowa and Nebraska state fairs. Not only this, but he is the natural product of a line of breeding that is considered to be of unequaled excellence among Duroc breeders in general. Mr. Nelson is going to offer forty-five head in this sale. There will be twelve head of tried sows, all bred to Valley King; there will be nineteen head of fall gilts sired by him, as well as a number of extra good spring gilts. There will be twenty head in this sale bred to him, all told. So it will be seen that the offering will afford an opportunity for the most discriminating buyer to obtain exactly what he wants. Besides those sired by Valley King, there will be others by such well known boars as Colonel Muncie, Critic B., Golden Model 3d, Golden Model 4th and Chief Select 2d. Those in the offering not bred to Valley King are bred to either Red Chief Wonder 2d by Red Chief Wonder, or F. B.'s Wonder by B. & L.'s Wonder. We sincerely hope that those of our readers who are wanting something really good in the way of a bred sow will make it a point to attend this sale. Mr. Nelson is one of those breeders who really does things, and he has an offering this year that is worthy the support of anyone who loves a good Duroc. Write for catalogue at once, mentioning Twentieth Century Farmer. If you cannot attend the sale yourself and wish to buy something, if you will send your bids to G. E. Hall of this paper they will be properly cared for.

Dependable Duroc Offering

One of the really first-class offerings of Durocs to be sold this season is that of Henry Stuthman at Pilger, Neb., on February 6. At this time Mr. Stuthman is going to offer for sale ten tried sows, fifteen fall gilts and twenty spring gilts. The tried sows are by Melina's Wonder, Red Jim, Wallace's Wonder, Red Chief Wonder and Golden Model 4th. The spring and fall gilts are by Melina's Wonder, Valley King, Crimson Wonder Select, Colonel Tippy and B. & G.'s Wonder. There are certainly a lot of good things in this offering. Among these is a gilt out of the great sow Sweet Rose 2d and sired by the great show and breeding boar B. & G.'s Wonder. This gilt is bred to Chief Model for an early litter. One of the choicest fall gilts is by Melina's Wonder and out of a Red Jim sow. This gilt is bred to Crimson Wonder Select for a first of March farrow. These are only a few of the good ones. We just want to say that this offering will speak for itself on sale day and that any man who wants a strictly first-class sow and cannot find what he wants in this offering, both as to breeding and individual excellence, must be hard to please, indeed. Write for catalogue and make arrangements to be on hand sale day. If you cannot do so and wish to buy something, send your bids to G. E. Hall of this paper and he will give them his careful attention.

Carpenter Sells on February 2

This is the last call for the sale of Duroc-Jersey bred sows to be held at Fontanelle, Neb., February 2, by Ernest H. Carpenter of that place. Mr. Carpenter is going to sell thirty gilts, seven fall yearlings and eight tried sows in this sale. Taken as a whole, they are a very choice lot, indeed. The offering is in first-class condition, and as to size we will say that the spring gilts are just about as growthy a lot as will be sold in any offering this year. One of the attractions of the sale is the tried sow Critic Belle, the dam of Mr. Carpenter's herd boar, Prince Critic. She is bred to Wallace's Sensation for a March 2d litter. Droopy A. 2d is another good sow going in the sale. She is the dam of the four best boars in Mr. Carpenter's last fall sale, and has always been a producer of some of the best stuff on the farm. The gilts in this offering will average around 300 pounds. Look up Mr. Carpenter's ad. elsewhere in this issue and arrange to attend this sale. Parties from a distance will be met at Nickerson, the first station north of Fremont, on the day of sale, on either the Burlington or Northwestern railroad. G. E. Hall will represent this paper and will be glad to take care of any bids that may be sent by any person who cannot attend this sale in person. Kindly mention Twentieth Century Farmer when writing.

Wallace's Great Offering

Clarence Wallace of Wisner, Neb., will sell forty head of yearling and tried sows at his farm near that place on March 3. We must ask the indulgence of readers of Twentieth Century Farmer if we seem over-zealous in our remarks regarding the general makeup of this offering, for we sincerely believe that it is one that will stand the test under any recommendation we may give it. One of the features of this sale is the fact that it will contain the grand champion sow at Nebraska in 1913, Fancy Advance 2d, bred to a champion boar. As will be remembered, this sow was sired by Wallace's Wonder, and there are five other sows in the sale, sired by the same boar, that are each and every one good enough in every respect to go into any herd in the land; in fact, Mr. Wallace made the remark to us while we were there that he considered these six sows to be as good as anything he had ever offered for sale. Besides these six sows there will be nine granddaughters of Wallace's Wonder and seven daughters of the splendid breeding boar Golden Model 4th. Twenty-seven head of the offering are bred to Golden Model 4th and the balance to Colonel Chief and Muncie Colonel. Everything in this offering is absolutely and unqualifiedly cholera proof, for the good and sufficient reason that they have every one passed through the disease at least two different times. If you are looking for the very best obtainable in Duroc breeding and general makeup, write for catalogue and arrange to attend this sale. If you cannot do so, send your bids to G. E. Hall of this paper and mention Twentieth Century Farmer when writing.

Durocs that Make Good

No Duroc breeder in northern Nebraska has made more rapid strides during the last few years than Robert Leisy of Wisner, Neb. Mr. Leisy at this time has one of the top herds of the state, both in the matter of breeding and also from an individual point of view. He has been a most discriminating buyer of the very best individuals in the leading sales of the country, and has evinced a keen insight into the science of mating and breeding, and as a result he has built up a herd that takes rank with the best. In the first place, he is an exceptional caretaker and has the faculty of growing his stuff out in the very best possible shape and in a way that enhances their future usefulness as breeders. He is going to sell forty head in this sale, which will be held at his farm near Wisner on February 5. The offering will consist of five tried sows, twenty-eight spring gilts and seven fall yearlings. Fall yearlings are all by Proud Colonel Boy by Proud Colonel. The gilts are by Critic B., Colonel Tippy, Prince Muncie Colonel, Golden Model 15th, Model Boy, R. L.'s Model, Lincoln Chief 2d, Dusty Crimson, Echo Crimson Wonder, Sioux Wonder and J. S.'s Model. Tried sows are by Uneeda Crimson Wonder, B. & L.'s Wonder, Crimson Chief and Krueger's Chief Perfection. These sows are bred to Wonder Lad, Colonel 2d and High Chief, a son of Invincible Chief. It will readily be seen that here is a blending of the best blood lines of the breed. An important fact in connection with this offering is that every animal in the sale, and every animal on the farm for that matter, is immune from disease, and every sow going in the sale was immune at least ninety days prior to the time of being bred. Better write for catalogue at once, mentioning Twentieth Century Farmer. G. E. Hall will represent this paper and will handle bids of parties that cannot attend in person.

Krueger's Immune Durocs

Twenty-five yearling and tried sows and ten spring gilts is the quota to be offered in the Duroc-Jersey bred sow sale of Gus Krueger of Beemer, Neb., on February 4. This will be the best offering that Mr. Krueger has ever presented to the public. They are a splendid, growthy, uniform lot and have been fed on a balanced ration that should insure their going out and doing good in the hands of other breeders if given ordinary care. One of the principal herd boars in service in this herd is Colonel Chief by Colonel Chief 2d by Colonel Chief by King the Colonel by Prince of Colonels. His dam was Lady Princess by Prince of Colonels, thus making him a line-bred Colonel hog. He is a boar of great scale, well balanced, with good, strong back and deep body, and in every respect is the kind that will command the interest

(CONTINUED ON PAGE TWENTY-TWO)

CARPENTER'S DUROC OFFERINGS

Forty-five Head of Top Sows and Big Growthy Spring Gilts to be Sold at Auction

At Fontanelle, Neb., Feb. 2, 1914

The offering will consist of fifteen tried sows and thirty spring gilts. Some of the attractions will be Critic Belle, the dam of Prince Critic; three daughters of this sow, sired by Wallace's Sensation, and three spring gilts, sired by Prince Critic. These are only a few of the good ones. Fifteen head are sired by Prince Critic, ten head by Wallace's Sensation and the balance by Model Boy, Fancy Wonder and Golden Model 4th. They are bred to Carpenter's Golden Model, Ivan's Golden Model, Wallace's Sensation and Blue Ribbon Model, Jr. This is one of the top offerings of the season. They are right in every way, and for size, bone, quality and smoothness they are certainly right among the tops. Write for catalogue at once to

E. H. CARPENTER, Fontanelle, Neb.

AUCT.—Col. E. Z. Russel. FIELDMAN—G. E. Hall.

Parties Attending Sale Will be Met at Nickerson on Morning of Sale.

A Great Duroc Offering

Forty-five Head of Tried Sows, Fall Yearlings and Spring Gilts, All Bred for Early Farrow, Will be Sold at

Pilger, Neb., Feb. 6, 1914

This is a select draft from the herd of Henry Stuthman, and there is not an undesirable individual in the offering. They have an abundance of size, are in fine condition and have been fed on a balanced ration, including plenty of alfalfa.

They are sired by Melina's Wonder, Red Jim, Wallace's Wonder, Red Chief Wonder, Golden Model 4th, Crimson Wonder Select, Col. Tippy, B. & G.'s Wonder, Valley King and others. They are bred to Sweet Rose's Wonder, Chief's Model and Crimson Wonder Select. See field note for further particulars. For catalogue address

HENRY STUTHMAN, PILGER, NEB.

AUCT.—Col. Fred Reppert. FIELDMAN—G. E. Hall.

Fancy Advance 2d

Champion Duroc-Jersey Sow at Nebraska '13

Is Included in the Forty Head of Matured Sows Going in the Sale of Clarence Wallace

At WISNER, NEB., FEB. 3, 1914

Attractions—SIX WALLACE'S WONDER SOWS, including **Fancy Advance 2d**, a grand champion sow bred to **Golden Model 4th**, a champion boar. These six sows are as good as ever produced on this farm. NINE GRANDDAUGHTERS OF WALLACE'S WONDER AND SEVEN DAUGHTERS OF GOLDEN MODEL 4TH.

Twenty-seven head are bred to Golden Model 4th, five to Prince Muncie Col., and fourteen to Col. Chief.

There is more scale represented in this offering than any we have ever made in the past. If you are looking for the big, smooth, prize winning kind, write for catalogue to

CLARENCE WALLACE, Wisner, Neb.

AUCT.—Col. Fred Reppert. FIELDMAN—G. E. Hall.

Remember, Everything on This Farm is Immune from Cholera.

Registered Holstein-Friesian Cattle AT AUCTION

In Sale Pavilion, So. Omaha, Neb., Feb.3, '14

100 HEAD All Ages and Both Sexes 100 HEAD

There will be 65 head of cows and heifers, milking or soon due, by such sires as Sir Pontiac Rag Apple Korndyke 49334, Pontiac Soldene Butter Boy 39473 and others of equal merit. Also 25 heifers and heifer calves, among them being several grand-daughters of King of the Pontiacs.

10 BULLS, ready for service, mostly out of A. R. O. dams and the right kind.

Everthing is tuberculin tested. For catalog, address

HENRY GLISSMAN, Station B, Omaha, Neb.

Krueger's Immune Duroc Offering

At BEEMER, NEB., FEB. 4, 1914

25 Yearling and Tried Sows and 10 Spring Gilts

Fifteen head are bred to Col. Chief, one of the largest boars in service in the state. If you want something really good get a sow bred to this great boar. Twenty head are bred to A Professor or Golden Model.

Some of the attractions—BESSIE WONDER, tried sow by Wallace's Wonder, bred to Col. Chief; RED BEAUTY, by Sensation Wonder, bred to Col. Chief; four fall sows, litter sisters, by Prince Muncie Col., all bred to Col. Chief. The very top blood lines of the breed are represented in this offering. Individually, they will speak for themselves.

Catalogues are ready and may be had by writing

GUS KRUEGER, Beemer, Nebraska

AUCT.—Col. Fred Reppert. FIELDMAN—G. E. Hall.

Leisy's Immune Durocs

At PUBLIC SALE

Forty head of big, smooth, heavy boned sows and gilts of choicest breeding, grown and developed under conditions that insure their future usefulness as breeders. Every one immuned two months before being bred. To be sold at

Wisner, Neb., Feb. 5, 1914

The offering will consist of five tried sows, seven fall yearlings and twenty-eight spring gilts. They are sired by Uneeda Crimson Wonder, B. & L.'s Wonder, Crimson Chief, Krueger's Chief Perfection, Proud Col. Boy, Critic B., Col. Tippy, Prince Muncie Col., Golden Model 15th, Model Boy, R. L.'s Model, Lincoln Chief 2d, Dusty Crimson, Sioux Wonder and others. They are bred for early farrow to COL. 2D, by Proud Col.; WONDER LAD, by Crimson Wonder 10th, and HIGH CHIEF, by Invincible Chief. For catalogue address

ROBERT LEISY, Wisner, Neb.

AUCT.—Col. Fred Reppert. FIELDMAN—G. E. Hall.

HORSES

WOLF BROS. ALBION, NEB. BOONE COUNTY.

Percherons, Belgians and Shires

OUR NEW IMPORTATION OF PERCHERON, BELGIAN AND SHIRE STALLIONS AND MARES has arrived. They are the best we have ever owned. We also have a splendid lot of American breds. They are the big, heavy-boned, drafty kind, with style and action. Come and look them over. We know you will be pleased.

A Certificate of Soundness Given With Each Animal. We invite correspondence.

Percherons, Belgians and Shires

Imported and Home-bred Stallions and Mares, ranging in age from coming two-year-olds to matured ages. We have a lot of two and three-year-old stallions weighing from 1900 to 2100 pounds; among them a fine lot of pasture-raised stallions—the kind for the western breeder. A fine lot of mares for sale. Always have stock for sale—never sold out. Write for prices, descriptions, etc.

NORTH & ROBINSON CO., - Grand Island, Neb.

FRESH IMPORTATION OF HEAVY BONED, BIG

BELGIAN STALLIONS

just received. You should see them. Eighty Belgians and Percherons on hand. A carload of good mares (both breeds) for sale now at prices that will move them. Some first class jacks also for sale.

W. L. De CLOW, Cedar Rapids Stallion and Jack Farm, Cedar Rapids, Iowa.

JACKS AND JENNETS.

Eighty large-boned black Mammoth Jacks, 15 to 16 hands standard, guaranteed and priced to sell. The kind all are looking for. Also good, young Percheron stallions. Reference five banks of Lawrence. 40 miles west of Kansas City on Santa Fe and U. P. R. R.

AL. E. SMITH, - - LAWRENCE, KAN.

Review of Live Stock Market

By A. C. Davenport

NO ONE could ask for a better market for cattle than has prevailed during the last week or ten days. The buying demand has been broad and cattle have moved with greater freedom than for a number of weeks back. The market in fact has been in a most healthy and, from a sellers' standpoint, satisfactory condition. In almost all respects it has been just the opposite of what was experienced by cattlemen during December. Almost every day has been characterized by a snappy trade that always tends towards higher prices. Under this influence the market has gradually advanced and is anywhere from 25c to 50c higher than it was a month ago.

The general improvement in cattle selling conditions has by no means been confined to one market, but has been general over the whole country. To be sure, receipts have not been so large, but the decrease at the six largest markets amounts to only 50,000 head for the year to date as compared with the corresponding period of last year, and that certainly is not large enough to have any real influence on the market. However, it tends to strengthen cattlemen in the belief that supplies of cattle are likely to show a decrease as the season advances, and in that way the falling off in present receipts as compared with last year may have considerable influence.

Cattlemen at the big market centers have been acquiring increased confidence in the future of the market, and nothing has occurred as yet to cause them to change their opinion.

Hogs Highest Since October

Hogs have been steadily working higher and the market during the last week has averaged the highest of any time since early in October of last year. As a matter of course prices have fluctuated up and down, but the ups last week had decidedly the best of it, and the same was true of the previous week. The advance has by no means been in the nature of a surprise, as the bulls were expecting something of the kind to occur early in the year. Now that a very substantial improvement has taken place the more conservative of the crowd are inclined to regard present prices as about as high as can be expected for some little time to come.

Thus far this year the receipts of hogs at the six largest market points show a decrease of 50,000 head as compared with the first half of January last year. On the other hand, eleven markets show an increase for the year of 80,000 head as compared with last year, but a decrease of 450,000 head as compared with the same period in 1912. It will thus be noted that the receipts of hogs, taking the country as a whole, have not proven excessive thus far and if the country is going to experience any very heavy runs for January and February, as predicted by some, it is time they were materializing. As a rule nearly everyone agrees that after February light runs are to be anticipated.

Lambs Selling Well

Sheep and lambs thus far have proven very satisfactory actors so far as sellers are interested. The receipts at the six big markets have shown a falling off of only 30,000 head for the first half of January. At the same time the consuming demand has been good and the market from day to day has continued in a healthy condition. Prices of late have not shown very much change. It is a noteworthy fact, however, that the demand is so good that as often as large receipts cause a slump in values, just as soon as there is a let up in the run prices immediately spring back. In other words, lambs on the basis of Omaha have been moving very freely around $8.00, but as often as they get a little above that figure and owners begin letting them come a little too freely the price drops down, but speedily springs back to about the $8.00 mark or better as soon as the run lightens. Sheep at most points have been scarce most of the time, although there have been fully as many if not more ewes than some were inclined to anticipate.

The way the market has been acting of late most sheep men are not expecting any very great change in the price list in the very near future.

There is one feature of the trade that, while not as yet attracting much attention, nevertheless promises to have a distinct bearing on the future, and that is the wool question. A lack of confidence in the future of the wool market has undoubtedly scared out a good many buyers who have been in the habit of taking on a large number of sheep and lambs late in the winter with the idea of holding them until shearing time before letting them go to the packers. This demand for shearings has in years past been a great support to the market, absorbing the poorly finished stuff and taking care of the surplus on days of heavy runs, thus preventing an oversupply of killers. The elimination of this demand could hardly fail to be keenly felt later in the season, but, as a matter of course, it is still too early to tell anything definite along that line. Several things might happen to bring about a change; even the wool market might advance to a point that would make the buying of shearing stock look like a good proposition.

Breeders' Notes

(CONTINUED FROM PAGE TWENTY)

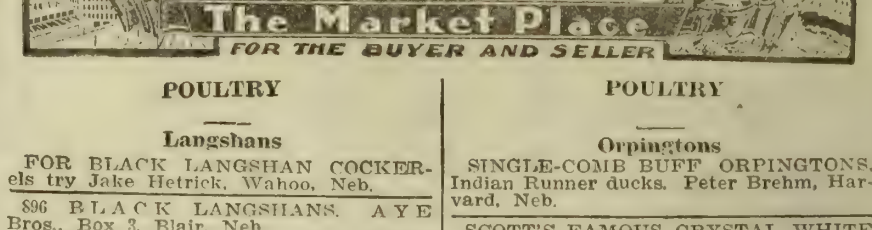
of the breeders of today. In our opinion, one of the good sows to be offered in Mr. Krueger's sale bred to this boar would be a good proposition for any breeder. Fifteen head in the sale are bred to this boar. The balance are bred to A Professor and Golden Model by Golden Model 4th. The tried sows going in the sale are by Wallace's Wonder, Sensation Wonder 2d, B. & L.'s Wonder, Belle's Crimson Wonder, Red Chief Wonder, Colonel Morgan and Sensation Wonder. The yearling sows are all by Prince Muncie Colonel, and they are a good lot. The spring gilts are by A Professor, B. & L.'s Wonder and Fancy Wonder. Write for catalogue and arrange to attend this sale. The offering will certainly speak for itself. If you cannot attend, send your bids to G. E. Hall of this paper and they will be carefully handled. Kindly mention Twentieth Century Farmer when writing.

Horse Breeders' Sale

The sixteenth annual sale of the Horse Breeders' Association at Bloomington, Ill., will hold forth at that place on January 27, 28, 29 and 30. There will be 460 head of imported and American-bred Percheron, Belgian, Shire and Clydesdale stallions and mares, with sixty head of Shetlands and twenty trotting bred horses, coming from over 100 consigners, among these being the best importers and breeders in the United States. These sales are an event in the horse world of America each year, and the lineup of the coming sale is in every sense the best that it has ever been. These sales are he ldin a large colliseum that is well heated, and every comfort of the buyer is well looked after. Write to the Bloomington Horse Breeders' Association, Bloomington, Ill., for a catalogue giving further details of the individuals making up this offering. Kindly mention Twentieth Century Farmer when writing.

Holsteins at Auction

We hope that everyone of our readers who is interested in Holstein cattle will keep in mind the sale of H. C. Glissman to be held in the Union Stock Yards sale pavilion on February 3. Mr. Glissman is going to sell 100 head of all ages and both sexes in this sale. There will be sixty-five head of first-class cows and heifers, many of them milking, the balance soon to freshen. These are sired by such bulls as Sir Potiac Rag Apple Korndyke, Pontiac Soldene Butter Boy and other bulls of equal merit. There will also be twenty-five head of especially good, well marked heifers and heifer calves, a number of these being granddaughters of the great King of the Pontiacs. The offering will contain ten bulls, all of serviceable age, mostly out of A. R. O. dams. This annual sale of Mr. Glissman's is an established affair, and his offering each year and the quality of cattle he puts forth are ample evidence of the fact that he is bringing out the right kind. Everything in this sale is tuberculin tested and a certificate of health is given with each animal. For further information address Henry C. Glissman, Station B, Omaha, Neb.



POULTRY

Langshans

FOR BLACK LANGSHAN COCKERels try Jake Hetrick, Wahoo, Neb.

896 BLACK LANGSHANS. AYE Bros., Box 3, Blair, Neb.

FULL-BLOOD BLACK LANGSHAN cockerels for sale. C. C. Cunningham, Kennard, Neb.

CHOICE BLACK LANGSHANS—MAE Curtis, Lyons, Neb.

WHITE LANGSHAN CHICKENS, White Pekin ducks, White African Guineas, White Holland turkeys. Write for prices. L. T. Cummings, Lakeview Farm, Howe, Neb.

Leghorns

ROSE COMB BROWN LEGHORN Cockerels, Indian Runner Ducks. Otto Frahm, Fort Calhoun, Neb.

MY ENTIRE FLOCK CHOICE ROSEcomb White Leghorn cockerels, $1 each; hens, $8; pullets, $10 dozen Kaveney Bros., Linwood, Neb.

ROSE-COMB BROWN LEGHORN cockerels; no better bird, $1 each; eggs, $1 setting. Olga Hayek, Linwood, Neb.

123 SINGLE-COMB BROWN LEGhorns. Aye Bros., Box 3, Blair, Neb.

456 SINGLE-COMB WHITE LEGhorns. Aye Bros., Box 3, Blair, Neb.

SINGLE-COMB LEGHORN PULLETS for sale from winners at Omaha, Neb.; State Fair, Nebraska State Show, etc., $1 to $2.50 each. Cockerel which won first at Auburn for sale at $4; also cockerel which was in second pen at $3.50. Clark L. Dort, Auburn, Neb.

ROSE-COMB BROWN LEGHORN cockerels, 75c each. Ben Wachter, Herman, Neb.

SINGLE-COMB WHITE LEGHORN cockerels, $1.50. Mrs. L. Schellhorn, Chester, Neb.

Minorcas

SINGLE-COMB BROWN MINORCAS and Rose-Comb Rhode Island Reds; good cockerels that have been scored. Booking egg orders now. Write for prices. Benj. J. Brissey, Auburn, Neb.

Orpingtons

WHITE ORPINGTONS—COCKERELS, $1.50 to $4; 1-year-old cock direct from Kellerstrass last March, $10 to first party sending money with order. H. E. Eells, Falls City, Neb.

PRIZE-WINNING, SINGLE-COMB Buff Orpingtons. Mrs. Cook, Eddyville, Neb.

355 BUFF ORPINGTONS. AYE BROS., Box 3, Blair, Neb.

We are the largest operators in
REAL ESTATE
in Chicago

If you want to sell or exchange your farm, send us complete description, with price.

H.O. Stone & Co.

76 W. MONROE ST.
ENTIRE FOURTH FLOOR.

Plants Free

Griswold's "BEAUTY" Fall Bearing Strawberry

Griswold's "FIND" Everbearing Raspberry.

Both are vigorous growers; yield early; excellent in flavor—good keepers picked. Write for catalog and details of great offer.

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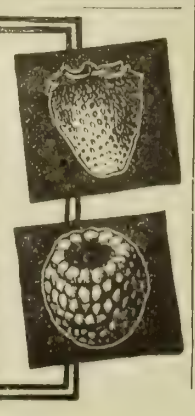

POULTRY

Orpingtons

SINGLE-COMB BUFF ORPINGTONS, Indian Runner ducks. Peter Brehm, Harvard, Neb.

SCOTT'S FAMOUS CRYSTAL WHITE Orpingtons—breeding stock and eggs for sale. B F. Scott, Rising City, Neb.

BUFF OR WHITE ORPINGTONS—From prize-winning stock, bred for layers. Catalogue free. Frank Lewis, Gibbon, Neb.

ROSE-COMB BUFF ORPINGTON cockerels for sale. Amos Toyne, Adaza, Iowa.

Plymouth Rocks

211 WHITE ROCKS. AYE BROS., Box 3, Blair, Neb.

BARRED AND WHITE ROCK COCKerels for sale, $1.50 to $2.50 each. Mrs. J. A. Shoestall, Elwood, Neb., Gosper Co.

CHOICE BARRED ROCK COCKERELS shipped on approval. George Franklin, Axtell, Neb.

PARTRIDGE ROCKS (NOFSTGER strain), cockerels and cocks for sale. Booking orders for eggs every day. Write F. Schmidt, Fairmont, Neb.

BARRED ROCK COCKERELS—"Thompson's Ringlets" direct; also choice Silver Campines and Buff Orpingtons. All birds shipped on approval. Archdale Farm, Fremont, Neb.

BARRED PLYMOUTH ROCK COCKerels and pullets; heavy bone, narrow barred; show birds specialty; satisfaction guaranteed. G. W. Feuerstein, Fremont, Neb.

BARRED ROCKS—55 COCKERELS, 60 pullets; magnificent thoroughbreds, heavyweights, narrow barring. Free booklet, low prices. Hazeldell Yards, Essex, Ia.

417 BARRED ROCKS. AYE BROS., Box 3, Blair, Neb.

BIG BUFF ROCKS, GOOD ENOUGH to win four firsts at big Nebraska shows; grand layers. Mrs. Isaac Williams, Wymore, Neb.

WHITE ROCKS—EGGS FROM ANY Auburn and De Witt winners at $2.50 per 15. Satisfaction guaranteed. R. A. Neitzel, Falls City, Neb.

FISHEL STRAIN WHITE PLYMOUTH Rock cockerels; prices reasonable. Eggs in season. Mrs. J. Lampert, Wahoo, Neb.

Rhode Island Reds

222 RHODE ISLAND REDS. AYE Bros., Box 3, Blair, Neb.

ROSE-COMB RHODE ISLAND RED cockerels, $1 and $1.50 each. H. K. Bixler, McCook, Neb.

SINGLE COMB REDS—FIFTY COCKerels bred from Omaha, Sioux City, Lincoln, Davenport winners, $3 up. Scott Covalt, Box O, Council Bluffs, Ia.

FINE ROSE-COMB RED COCKS AND cockerels, $2 to $3 each; hens and pullets $1.50 each, $15 per dozen. Lyle Dexter, Blair, Nebraska.

ROSE-COMB RED EGGS FOR hatching; setting, $1; hundred, $5. T. R. Haynes, Auburn, Neb.

SINGLE-COMB RHODE ISLAND RED cockerels, $2 up; Barred Rocks, $1.50 up; Fawn and White Runners, $5 a trio. Mrs. J. P. Rhea, Arlington, Neb.

Wyandottes

THREE HUNDRED WHITE WYANdotte cockerels from the best blood in America. Large, vigorous, pure white birds. Oscar L. Bock, Council Bluffs, Ia.

348 WHITE WYANDOTTES. AYE Bros., Box 3, Blair, Neb.

VIGOROUS WHITE WYANDOTTE cockerels, $1. Mrs. Mary Dwyer, Arden, Neb.

Turkeys

MAMMOTH BRONZE TURKEYS—Both sexes, big-boned birds; Light Brahma cockerels, good ones. Frank A. John, Bedford, Ia.

WHITE HOLLAND TURKEYS, White Pekin ducks, White African Guineas, Single-Comb Brown Leghorn hens and cockerels, Anconas; first-class stock. Edward E. Dooley, Selma, Ia.

BONNIE VIEW BOURBON RED AND White Holland turkeys. Mrs. N. W. Burbank, New Sharon, Iowa.

FOR SALE—BOURBON RED TURkeys. Mrs. W. C. Ware, Fairbury, Neb.

PURE-BRED BRONZE TURKEYS—Toms, $5; hens, $3. Nisley Bros., Lexington, Neb.

POULTRY

Ducks and Geese

201 INDIAN RUNNER DUCKS. AYE Bros., Box 3, Blair, Neb.

112 PEKIN DUCKS. AYE BROS., Box 3, Blair, Neb.

200 ROUEN, INDIAN RUNNER, MUSCOVY ducks, Silver-Laced Wyandotte cockerels and Toulouse geese. Fred Kucera, Clarkson, Neb.

ROUEN DUCKS, THE BIG KIND. Write James Cassell, Fremont, Neb. R. 3.

42 TOULOUSE GEESE. AYE BROS., Box 3, Blair, Neb.

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POULTRY CATALOGUE FREE. AYE Bros., Box 3, Blair, Neb.

SINGLE COMB WHITE, BUFF AND Brown Leghorn Cockerels for sale; also Rocks, Wyandottes, Orpington and Reds. Prize winning stock. L. P. Harris, College View, Neb.

POULTRY—47 LEADING VARIETIES—pure-bred chickens, ducks, geese, turkeys; also Holstein cattle—prize winners. Oldest poultry farm in northwest. Stock, eggs and incubators at low prices. Send 4 cents for catalogue. Larkin & Herzberg, Box 51, Mankato, Minn.

CHICKS DEAD IN SHELL? LATEST methods of incubation will stop it—25c postpaid. Edw. K. Stockfeld, Lincoln, Neb. Route 6.

CURE SICK CHICKENS WITH Germikil. Catalogue and sample free. Aye Bros., Box 3, Blair, Neb.

BABY CHICKS—TEN VARIETIES—Annual incubator capacity, 100,000. Eggs for hatching from vigorous, farm-ranged birds. Write your wants. Maplewood Farm, Exeter, Neb.

POULTRY PHOTOGRAPHS—WE BUY good, clear photographs of poultry, chicks, poultry houses, incubators in operation, taking off hatches, etc. We pay up to $1 each. Keep your camera snapping and sell your pictures to us Write us about it. Twentieth Century Farmer, Omaha, Neb.

CHOICE COCKERELS FOR SALE—All varieties of Plymouth Rocks, Wyandottes, Rhode Island Reds, Orpingtons, Leghorns, Hambergs, Brahmas, Langshans, Minorcas. Also ducks and geese. Write for catalogue No. 11, Logan Valley Poultry Farm, Wayne, Neb.

SPECIAL POULTRY NUMBER FEBruary 7—teeming with vital poultry articles. Be sure your ad. is in it. Scores of breeders used it last year with big results. A Stanton (Neb.) man wrote us: "Stop that ad. of ours about Rock cockerels; am all sold out; that ad. was a wonder!" A Columbus (Neb.) man wrote us: "It is the same old story—Twentieth Century Farmer brings more orders than others combined." Prepare your ad. for this special issue. The rate is 5c a word. Send it today.

HELP WANTED

THE AUTOMOBILE BUSINESS PAYS $25 to $50 weekly. We teach you how. Write for our free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

WANTED—A MAN TO SOLICIT SUBscriptions for The Twentieth Century Farmer; salary, $42 a week. Address Circulation Manager, The Twentieth Century Farmer, Omaha, Neb.

MEN AND WOMEN WANTED FOR government jobs; $65 to $150 month; vacations; steady work. Parcel post and income tax mean many vacancies; common education sufficient; "pull" unnecessary. Write immediately for free list of positions now available. Franklin Institute, Dept. C 94, Rochester, N. Y.

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GOVERNMENT FARMERS WANTED --Make $125 monthly. Free living quarters. Write Ozment, 39-F, St. Louis, Mo.

WANTED—LOCAL AGENTS IN NEbraska and western Iowa—$5 to $7 per day to hustlers; no others need apply. Address Dept. 4, 202 West St., Ioia, Kan.

MONEY TO LOAN

6 PER CENT LOANS ON FARMS, orchard lands, city resident or business property to buy, build, improve, extend or refund mortgages or other securities; terms reasonable; special privileges; correspondence invited. Dept. L, 749 Henry Bldg., Seattle, Wash., or 618 Commonwealth Bldg., Denver, Colo.

LANDS

Alabama

A SUNNY SOUTH STOCK FARM—At a little over $7 per acre to close up an estate. It's worth a great deal more. It was appraised at $25,000 four years ago and will grow all Iowa or Nebraska crops and fruits very much better. There are 2,465 acres, 1,500 cultivatable and balance timbered; running water and fine pasture the year round; ¼ mile to the station, 6 miles from a county seat of 1,500 people. Another of 2,225 acres equally as good. Bargain. Refer to any business man here. Write E. E. Secor, the Iowa Land Man, Selma, Alabama.

Arkansas

387-ACRE RICH CREEK BOTTOM farm; 80 cultivation, balance timbered—$15 acre. Sessions Co., Winthrop, Ark.

California

IN THE HEART OF THE SACRAmento Valley—Are you interested in dairying? You want land that will make you money; think this over. Our cows produce $10 per month each; one acre will support one cow. Creameries collect every other day. Green feed all the year round. Poultry raising is very profitable; eggs and poultry are always in demand and bring top prices. Let us place you right, at right prices and on right terms. Names of satisfied purchasers, literature and excursion rates and dates on application. W. T. Smith Co., 815 City National Bank, Omaha.

Canada

GET A FARM HOME ON THE NEW Trunk. Line railroad, with a station nearby, in southern Alberta, a few miles north of the United States border and a little east of Lethbridge, where enormous crops grow and stock raising is most profitable. Food for stock costs little and water is fine. The climate is so tempered by the chinook winds that it's never very hot or excessively cold, so little shelter is needed. No healthier country for either people or animals anywhere. We own and offer at a sacrifice price 50,000 acres rich, level prairie in farms to actual settlers, not speculators. Small cash payment down and easy terms on balance gets one. Reference, the Merchants Bank of Canada, Lethbridge. Write today, complete free information, to Helgerson Land Co., Lethbridge, Canada, or H. L. Helgerson, Omaha, Neb., Gen'l Delivery.

BUY ONTARIO IRRIGATED LAND, all cleared and plowed, and take off crop the first year. A few hundred dollars will start you—corn, alfalfa and hogs will do the rest. Write owners, Oregon & Western Colonization Co., 536 Paxton Building, Omaha, Neb.

Colorado

LOOK! LISTEN! OWNER MUST sell half section choice farm land near town. Big crops. Value, $6,000; take $4,000. R. Shook, Akron, Colo.

Delaware

FARMS—GOOD LAND, CLOSE TO best markets; genial climate. Free pamphlet. Address State Board of Agriculture, Dover, Delaware.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

FARMS WANTED—We have direct buyers. Don't pay commissions. Write, describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

Minnesota

NORTHERN MINNESOTA—THE greatest natural cattle section; no drouths; alfalfa, clover, corn and potatoes are principal crops. Prairie or timber. Free information. We have no land for sale. Write W. R. Mackenzie, Immigration Building, Minneapolis, Minn.

280-ACRE FARM, 35 MILES FROM Minneapolis, 1½ miles from a good railroad town; part under cultivation, balance meadow and pasture land; good soil; good 8-room house, worth $3,000; barn, granary, corn cribs, cattle sheds, machine sheds, etc.; 14 cows, 20 head of steers and heifers, 3 horses, hogs, chickens, complete set farm machinery, buggies, wagons, sleds, 50 tons of hay, 1,200 baskets corn, 150 bushels mixed grain, 175 bushels potatoes; in fact, everything on the farm goes except the furniture. Price, $12,000, one-half cash. Schwab Bros., 1028 Plymouth Bldg., Minneapolis, Minn.

BUY MINNESOTA LAND—18,000 acres, Carlton county, from $12.50 to $15 an acre. Easy terms to homeseekers. Agents wanted. V. Malm, Zimmerman, Minn.

LANDS

Nebraska

FOR SALE—85-ACRE FARM, ALMOST level, all broken; $300 worth improvements; fine well, 78 feet deep; ¼ mile from school, on telephone-mail route; valley land; 9 miles northeast Minatare, Scott's Bluff county. This place under government irrigation ditch, laterals all made. Price, $1,650. Tom Cole, Minatare, Neb.

WANTED—FARM ALREADY stocked, on shares; or ranch. Write W. M. Hinkley, Elba, Neb.

North Dakota

STOCK RANCHES—ANY SIZE TRACT $2 per acre down, balance 19 years, interest 6 per cent. Land adapted alfalfa, corn, other small grains, dairying, live stock. Good pasture, hay, markets, churches, schools, transportation. Excellent water, 15 feet. T. L. McDonald, Towner, N. D.

Wisconsin

WE OWN 30,000 ACRES OF UNIMproved farm land in Clark county, Wisconsin; $18 an acre; small down payment, long time on balance, interest 6 per cent; good soil, fine climate, good water; land easily cleared; close to railroad, schools, churches, cheese factories and creameries and free rural delivery routes; telephone. County and state roads run through entire tract. Write for our booklet, "Your Great Opportunity." Good agents wanted; commission guaranteed. Lake States Land Company, 405-6 Commerce Bldg., St. Paul, Minn.

UPPER WISCONSIN—BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

Wyoming

A SNAP—GOOD IMPROVED CATTLE ranch for sale in northern Wyoming, near forest reserve; plenty water and range; 200 acres under ditch, all improved, $17.50 per acre. Must sell. Liberal terms, low interest. Address Ranch Box 634, Cheyenne, Wyo.

SEEDS

A CUSTOMER OF OURS HAS ABOUT two cars of very best, early-maturing, white variety seed corn, biggest yielder in the state; has made 80 bushels; this year made double neighboring yields. Investigate and secure some of this carefully selected, shelled and guaranteed seed corn. Price, f. o. b. Eddyville, Neb., $2 per bushel. Eddyville State Bank, Eddyville, Neb.

1,000 BUSHELS PURE IOWA SILVERmine seed corn, 95 per cent germination test; excellent seed—$1.50 per bushel, shelled and graded. P. M. Richardson. Slater, Mo.

GARDEN AND FLOWER SEEDS. Aye Bros., Box 3, Blair, Neb.

FOR SALE—IOWA SILVER MINE Seed Corn—Until March first, only $1.50 per bushel. Michael Bielmaier, Bonesteel, S. D.

PURE KHERSON OATS. AYE BROS., Box 3, Blair, Neb.

SURPLUS SEED CORN CAN PROFITably be advertised in this department. Write for rates. Twentieth Century Farmer, Omaha, Neb.

SEED CORN FROM THE SEED CORN center of the world. Aye Bros., Box 3, Blair, Neb.

FOR SALE—WHITE WILSON SEED corn and Oderbrucker seed barley. Chas. E. Wirt, Lewiston, Minn.

BLACK HILLS ALFALFA SEED—Hardiest known. Send 40 cents for large sample and prices. Lewis C. Verplast, New Underwood, S. D.

1,000 BUSHELS OF SEED CORN FOR Sale—80 cents; grown on low land; 250 bushels or more of fine seed in this lot; fine germination; big Golden Eagle and some Iowa Silver Mine. S. A. Brooks, Gracemont, Okl. R. R. 3.

ALSIKE CLOVER AND TIMOTHY, $5 per bushel. Aye Bros., Box 3, Blair, Neb.

ALFALFA SEED—DAWES COUNTY, non-irrigated alfalfa seed, cane, millet and sweet clover seeds; baled alfalfa hay, all cuttings. Prices and samples free. Schwabe Bros., Chadron, Neb.

ALFALFA SEED DIRECT. FOR farmers' price and sample write J. L. Maxson, Buffalo Gap, S. D.

SEEDS

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GENUINE RED RIVER EARLY OHIO seed potatoes; per bushel, $1.25; prompt delivery. C. J. Beekman, Blair, Neb.

SEED CORN FOR SALE—SEND FOR our seed corn pamphlet, Seed Corn Honesty. A breeders' calendar free. E. P. Myrland & Sons, Onawa, Ia.

WHITE FLOWER SWEET CLOVER seed, Red Clover, Alfalfa and Timothy seed. Aye Bros., Box 3, Blair, Neb.

SOME EXCELLENT IOWA GOLDmine, Silvermine, Early Yellow Rose and Calico seed corn, $1.75, shelled, tips and butts off; $1.50 per bushel on the ear. Write me. William Khol, Clarks, Neb.

MISCELLANEOUS

A FULL, UNLIMITED SCHOLARSHIP in Boyles Business College, Omaha, Neb., at a discount. Good for either shorthand or business course. An excellent opportunity for some ambitious young person. Largest and best equipped business school in the west. Position guaranteed. Get our price on this scholarship before you decide you can't afford to go to school this winter. Twentieth Century Farmer, Omaha, Neb.

IDEAS WANTED—MANUFACTURERS are writing for patents procured through me. Three books with list 200 inventions wanted sent free. Advice free. I get patent or no fee. R. B. Owen, 75 Owen Bldg., Washington, D. C.

MEN FOR ELECTRIC RAILWAY motormen and conductors; fine opportunity; about $80 monthly; experience unnecessary; no strikes; state age. Address Y-396, T. C. F.

MAKE $30 TO $60 WEEKLY SELLING our new 300 candlepower gasoline table and hanging lamp for homes, stores, halls, churches; no wick, no chimney, no mantle trouble; costs 1c per night; exclusive territory; we loan you sample. Sunshine Safety Lamp Co., 1591 Factory Bldg., Kansas City, Mo.

LACES, REAL LINEN, IMPORTED, sent to you by mail. Save money. Write for free samples. Import House for Specialties, 1321 E. 56th St., Chicago.

FREE FOR SIX MONTHS—MY SPEcial offer to introduce my magazine, "Investing for Profit." It is worth $10 a copy to anyone who has been getting poorer while the rich richer. It demonstrates the real earning power of money and shows how anyone, no matter how poor, can acquire riches. Investing for profit is the only progressive financial journal published. It shows how $100 grows to $2,200. Write now and I'll send it six months free. H. L. Barber, 472, 28 W. Jackson Blvd., Chicago.

VIOLIN FOR SALE CHEAP. SENT on trial. Write Miss Bertha Mardiss, Route 5, Rosedale, Kan.

AGENTS—NOVELTY KNIVES AND razors are lightning sellers; 100 per cent profit; exclusive territory; goods guaranteed. Novelty Cutlery Co., 218 Bar St., Canton, O.

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

FREE CIRCULAR ON NEWLY PATented surface packer, mulcher, pulverizer, clod smasher and rain preserver. Keller Land Roller Co., Kearney, Neb.

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

100 SHAVES FOR $1, INCLUDING ONE Jiant Junior safety razor and 12 blades, guaranteed to give perfect satisfaction or money refunded. Every man can use one. Send stamps or money. Extra blades 45 cents per dozen, postpaid. Roushkolb Bros. Co., Cleveland, Ohio

LIVE STOCK

Holstein Calves

FOR THE NEXT 30 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17. crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

DOGS

COLLIES—SEND FOR LIST. W. R Watson, Box 501, Oakland, Ia.

Overland

$950

Completely Equipped. f. o. b. Toledo

1914—A Bumper Overland Year

FOUR years ago the Overland passed into the hands of its present owners. During this same time many other automobile manufacturers have come and gone—flared up and out. But our progress has not only been phenomenal, but strong and healthy. Each year our sales have increased by millions. In the last four years we have accomplished *more*, done a *larger* business and given the farmer *more* car for *less* money than any other automobile manufacturer in the world.

All this is a matter of record.

This is going to be our banner year. We are producing 50,000 cars, and the largest portion of this great output is going to the American farmer.

Farmer's Now Using 65,000 Overlands

The farmer consumes more automobiles and more Overlands than all the rest of the world put together. Today 65,000 Overlands are giving satisfactory service on American farms and ranches. And if ever an automobile must "deliver" it's on or around the farm.

One of our largest western distributors has contracted for 5,000 Overlands. This is significant and typical of the west. He would take *more* if we could supply them.

Like as not your nearest neighbor owns an Overland. Ask him. He'll tell you of its all around ability and economy.

We repeat, 1914 is going to be our bumper year. Never before has the farmer shown such keen appreciation of the Overland as he is doing right now. Never before has he so thoroughly realized that we are actually giving more car for less money than any other manufacturer in the business.

And why not?

Larger In Every Respect—But Lower In Price

Look at the car—read the big specifications—see the low price.

A wheel base as long as on most $1200 cars.

A motor as large and as powerful as the power plant in most $1200 cars.

A car as large, roomy and comfortable as most $1200 cars.

Tires as large as you find on the average $1200 car.

Electric lights—even under the dash—deep upholstery, an unusually heavy frame, a large steering wheel, Timken and Hyatt bearings, three-quarter floating rear axle, a jeweled Stewart Speedometer—all the same identical features you find on the average $1200 car.

The body is designed with graceful cowl dash and flush U doors with concealed hinges. Everything right up-to-date.

The car is finished in that magnificent dark Brewster green, trimmed with polished nickel and aluminum. It could not be made prettier. It could not be made more striking if it cost $3000.

Our price $950—Others Must Charge $1200

To duplicate this car any other factory would have to charge you $1200 and more. Our price $950—because we are the largest producers and can effect the greatest number of manufacturing economies. And you save the difference.

This is the car everyone is demanding. See it before you buy. See how economical it is on gas, oil and tires.

Get in touch with the nearest Overland dealer. There is one near you.

Write us for a handsome 1914 catalogue. Please address Dept. 107.

Read The Big Specifications

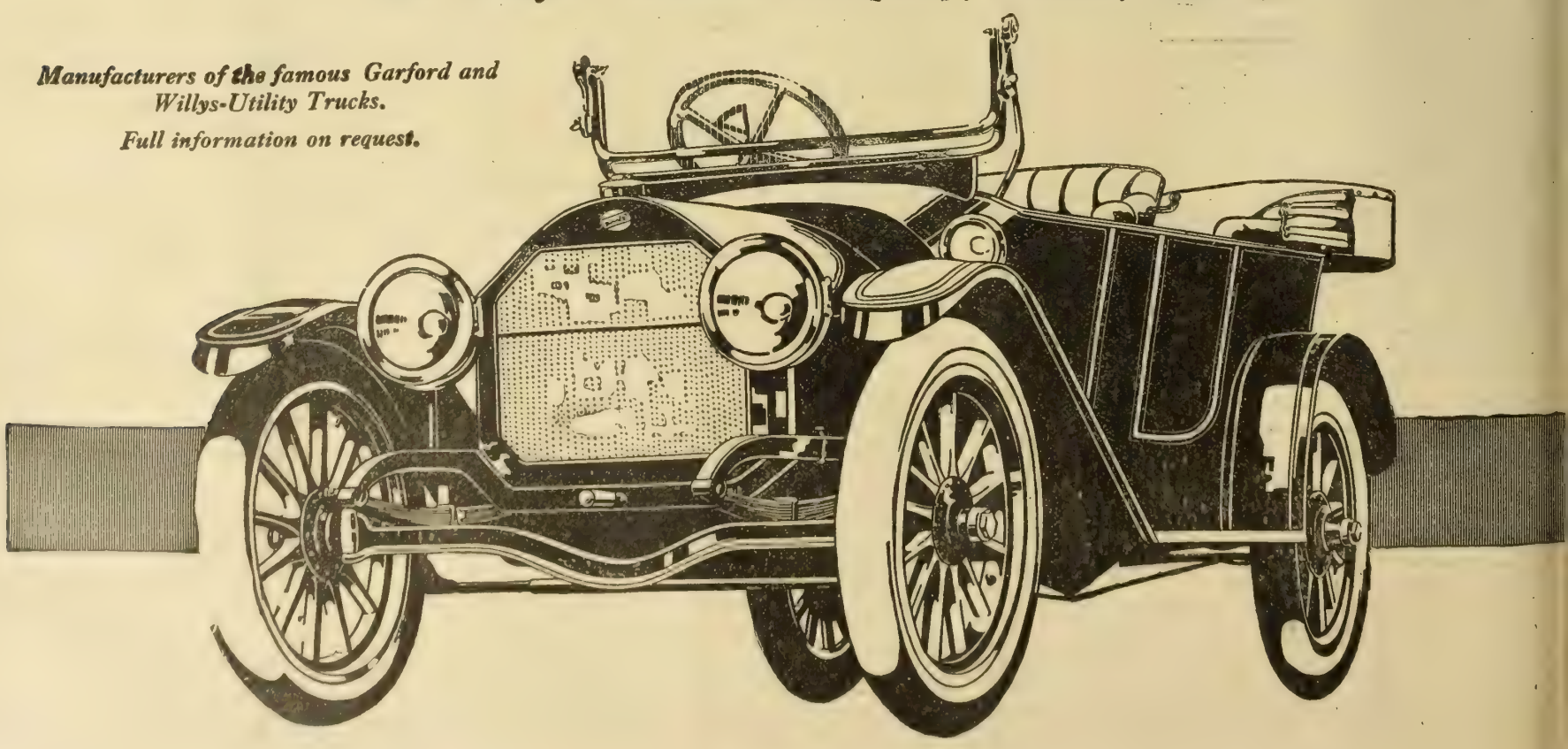
- Electric head, side tail and dash lights
- Storage battery
- 35 horsepower motor
- 114-inch wheelbase
- Three-quarter floating rear axle.
- 33 x 4 Q. D. tires
- Cowl dash
- Brewster green body, nickel and aluminum trimmings
- Deep upholstery
- Mohair top, curtains and boot
- Rain-vision, Clear-vision windshield
- Stewart speedometer
- Electric horn
- Flush U doors with concealed hinges

With electric starter and generator $1075—f. o. b. Toledo

The Willys-Overland Company, Toledo, Ohio

Manufacturers of the famous Garford and Willys-Utility Trucks.

Full information on request.



TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, January 31, 1914 | Number 686

Prattle of the Youngsters

rules Captain John Smith had for the Virginia colony?

Girl—One was that if a man did not eat he need not work.

As Fussy as Mother

"How do you like your new teacher, Tommy?" asked a visitor.

"I don't like her at all," replied the little fellow. "She's just as fussy as my mother is."

Learned His Lesson

It was in a school that one of the boys would persist in saying and writing "I have wrote."

To cure him of this he was set the task of writing 100 times the words, "I have written," after school hours.

The teacher went home and forgot the boy for a time. On hurrying back she found he had left this note on her desk:

"Dear Teacher: I have wrote 'I have written' a hundred times, and I have went home"—American Boy.

Rising and Setting Sun

There was a little boy who began to keep a diary. His first entry was: "Got up this morning at 7 o'clock." He showed the entry to his mother, and she, horror-stricken, said:

"Have you been to school? Got up, indeed! Such an expression! Does the sun get up? No, it rises!"

And she scratched out "Got up at 7" and wrote "Rose at 7" in its place. That night the boy, before retiring, ended the entry for the day with the sentence: "Set at 9 o'clock."

Picked Too Short

"Why, Rebecca," said mother, "that dog isn't yours! You've no right to bring him home!"

"W-well, mamma," pleaded Rebecca, "he was jest not belonging to anybody—like the flowers! I can pick flowers and keep 'em, wild ones, and the doggy was jest like—like the flowers, and I came along, and—and sort of—picked him."

Here the dog, turning around, displayed a noticeable lack of tail—a bobbed-off, rabbit-like stump. Whereupon Rebecca's quiet brother Paul spoke up unexpectedly.

"You—you didn't pick a very long stem," he said.

Appropriate Texts

"Now, boys," said a Sunday school teacher, "I want each of you to subscribe something toward the mission of the Cariboos. I shall hand the box around, and, as each of you will contribute, you will, I hope, say some appropriate text. Now, Charlie, show a good example."

A ruddy-faced urchin stepped forward, dropped in his coin and observed:

"It is better to give than to receive."

Then another contributed a copper.

"Waste not, want not."

This was ruled somewhat out of order, but it was fairly capped by a third [illegible] penny with extreme reluctance, for, as he dropped it into the [illegible]

"A fool and his money are soon parted."

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Of Interest to Poultry Raisers

THE next issue of Twentieth Century Farmer will be a special poultry number. There is probably no farm within the territory covered by our circulation that has not at least a few chickens or ducks. There should not be at any rate, for the poultry brings in a nice little income at all seasons if properly managed. Many of the farms throughout the middle west have large flocks of well bred birds. To any owner and breeder of poultry, whether on a large or small scale, our next issue will be of interest. We will have articles written by people who have not only mastered the theory of successful poultry raising, but who are actual owners of money-making flocks of fowls. We will have a story of a successful poultry farm that will be an inspiration to any man or woman who is in the business for profit, as most of the poultry raisers are. Our cover design will show a handsome prize-winning White Rock cock, and there will be some excellent photographs illustrating the various articles and showing high-grade birds.

As usual in our special numbers, the subject of poultry, while the main topic, will not comprise the whole of the paper. There will be other matters of general interest to the farmer and his family. We feel sure that you will watch for our next issue with interest, and that your interest will be [illegible]

Bright and Breezy

At Best

"Well, did them picture people get moving pictures of everything on the farm?"

"Everything but the hired man," said Farmer Heck. "They couldn't ketch him in motion."

Wanted the Recipe

When a traveling street fair recently left Albany, Ga., a local merchant was left with a supply of confetti on his hands. As the fair was "playing" a nearby town, he thought of a friend who was interested in one of the concessions and sent him the following telegram:

"Shipping you today 100 pounds of confetti to sell at fair."

In a day or two he had a reply.

"Stuff here," read the telegram: "how do you cook it?"—Everybody's [illegible]

—o—

Obeyed Orders

"Drive like the dickens!" shouted Smith, springing into a taxi. With a lurch the car went forward, and away they went like lightning through the gathering fog. People shouted, policemen impotently held up their hands as the taxi dashed up one street and down another, taking corners on two wheels and threatening destruction on every hand. At last, after half an hour's furious racing, they slowed up and Smith poked his head out of the car. "Are we nearly there?" he asked, breathlessly. The chauffeur turned in his seat and shouted: "Where did you want to go, sir? You have not told me yet."

Not So Crazy

A young English mill worker had a mental relapse, which resulted in his being sent to the county asylum. After he had been there a few weeks he was visited by one of his fellow workers, who came across him in the grounds. "Helloa, Benny!" said the visitor; "how's tha gettin' on?" "Oh, Ah'm goin' on firstrate, thank ye," answered the afflicted one. "Ah'm very glad to hear it, lad," said the visitor, pleasantly. "I suppose you'll be coomin' back to work soon, eh?" "Wot!" exclaimed Ben, while a look of great surprise spread over his countenance. "Leave a big house and a grand garden like this to coom back to work? Mon, dost tha think A'm wrong in my head?"

Poor James!

With an air of melancholy resignation, the truant stopped at the teacher's desk, says a British weekly, and handed her the following note from his mother:

"Dear Sir: Please excuse James for not being present yesterday. He played truant, but you needn't whip him for it, as the boy he played truant with and him fell out, and he licked James, and a man they threw stones at caught him and licked him, and the driver of a cart they hung onto licked him. Then I licked him when he came home, after which his father licked him, and I had to give him another for being impudent to me for telling his father. So you need not lick him until next time. He thinks he will attend regular in future."

THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Nebraska Sanitary Board Adopts Rules

Allow Farmers to Use Hog Cholera Serum and Producers Can Sell No Products that Are Not Tested

THE publicity given by the farm papers to the rules and regulations presented by the veterinarians to the Nebraska Live Stock Sanitary Board brought about a conference reresentative of all interested parties, at Lincoln, January 14-15. This conference was made up of representatives of the Improved Live Stock Breeders' Association, State Swine Breeders' Association, the Farmers' Co-operative and Educational Union, the legislative committee of the Nebraska Farmers' Congress, a number of individual farmers, the State Veterinary Medical Association, the hog cholera serum manufacturers, Dean E. A. Burnett and Dr. J. H. Gain of the experiment station and editors of five agricultural papers. All these interested persons met in a conference January 14, in which the matter was thoroughly discussed, and everyone had a hearing. Senator J. A. Ollis, president of the Nebraska Improved Live Stock Breeders' Association, was made chairman, and F. G. Odell secretary.

Differences and Misunderstandings

Before the conference could get down to business some of the differences and misunderstandings had to be cleared up. The veterinarians claimed that they had been put in a false position. Dr. J. S. Anderson of Seward spoke in their behalf. He said that it was not true that their association, through the adoption of the proposed rules and regulations, was trying to put the control of the manufacture and use of hog cholera serum and virus into the hands of the veterinarians. He stated that the officers of the veterinary association had been asked by the Sanitary Board to offer a tentative set of rules and regulations, which they did. Dr. Anderson also said the farmers should not judge the veterinary profession as a whole by their experiences with disreputable veterinarians and quacks.

J. H. Bulla, chairman of the Live Stock Sanitary Board, assumed full responsibility for asking the veterinarians to draft the set of rules and regulations which have been in controversy. He said the Sanitary Board did not intend to adopt them if they were not satisfactory to the live stock interests. Mr. Bulla felt that the publicity and discussions in the farm papers had done an injustice to the members of the Live Stock Sanitary Board, as well as veterinarians.

Rules and Regulations Adopted

Section 1. After January 1, 1914, no person will be authorized or appointed to do inspecting or testing of live stock for interstate shipment who is not qualified to practice veterinary medicine under the laws of this state. Every person so commissioned will be required to take an oath of office.

Section 2. No live stock shall be permitted to be shipped into this state unless the same shall be accompanied by a waybill showing the identity of the consignor, consignee, and the several common carriers handling such shipment. Every shipment of live stock so made shall also be accompanied with a certificate in conformity with the regulations imposed by the bureau of animal industry of the United States Department of Agriculture, setting forth that each animal so shipped is free from contagious or infectious disease. Such certificate must be signed by a qualified veterinarian, licensed to do inspection within the state where such shipment originates. In the case of horses this certificate shall certify the mallein test, and in the case of cattle the tuberculin test. A certified copy of every such certificate shall immediately be filed with the State Live Stock Sanitary Board of Nebraska. Provided, that this rule shall not apply in the case of animals destined for immediate slaughter. Provided further, that in the case of shipment of horses or cattle into this state for other than breeding, work or dairy purposes, an affidavit shall be executed in duplicate by the owner of such animal setting forth the purposes for which such shipment is made. Such affidavit shall show the origin and destination of said shipment. The original affidavit shall be mailed immediately by the owner to the state veterinarian and the duplicate attached to the bill of lading.

Section 3. Producers of veterinary biological products that are administered, offered for sale or exchange within the state of Nebraska must possess an uncancelled license issued by the United States bureau of animal industry, in accordance with B. A. I. order No. 196, or a permit from the Live Stock Sanitary Board of the State of Nebraska. The requirements of said board shall be in accordance with the rules of the United States bureau of animal industry governing such product.

Section 4. No person who is not a registered veterinarian in this state shall be allowed to administer or demonstrate the use of such vaccines, viruses or any disease-producing biological products that may be dangerous in transmitting or spreading any infectious or contagious diseases. Provided, that this shall not apply to any person wishing to administer anti-hog cholera serum or cholera virus or black leg vaccine to his own stock, or to assist his neighbor.

Section 5. All hogs vaccinated by the simultaneous method shall be confined upon the premises where the vaccination is done for a period of thirty days.

Section 6. Every sale of anthrax vaccine, mallein, hog cholera virus, veterinary tuberculin, anti-rabie serum and all other veterinary biological products within the state of Nebraska by any manufacturer, jobber, wholesale or retail druggist, or any other person, shall be reported to the state veterinarian within forty-eight hours, giving name and address of purchaser and date of sale.

Section 7. All bulls kept for public service, either for a town herd or on the stand, shall have the tuberculin test once each year.

Section 8. By the term "veterinary biological products" herein used is meant vaccines, bacterins, serums, viruses, anti-toxin, bacterio cultures, or any disease producing micro-organism and its products used in veterinary medicine.

Crocker's Conduct Criticised

Some of the speakers criticised F. C. Crocker, who is a member of the State Live Stock Sanitary Board and also president of the Nebraska Swine Breeders' Association. It was claimed that his loyalty to the other members of the Sanitary Board should have kept him from making this matter public. In reply the live stock men said that Mr. Crocker had only done his duty as president of the Swine Breeders' Association in letting the breeders know that these rules and regulations were under consideration so that they might have an opportunity to present their views to the board.

After the atmosphere had been clarified the conference got down to a discussion of the rules and regulations. The hog cholera serum manufacturers offered a new set of rules. These, with the rules already offered by the veterinarians and suggestions from the farmers and live stock men present, were discussed for nearly four hours. It was decided to appoint a committee of ten to draft a new set of rules and recommendations to be presented to the Sanitary Board. The following were appointed: C. H. Gustafson, president of the Nebraska Farmers' Educational and Co-operative Union, Mead; J. H. Ludwig, stock raiser, Norfolk; T. F. Sturgess, editor Twentieth Century Farmer, Omaha; F. G. Odell, Farmers' Congress legislative committee, Omaha; George Junkin, stock raiser, Smithfield; O. E. Davis, editor Independent Farmer, Lincoln; J. T. Dunlap, Nebraska Farm Journal, Topeka; L. S. Herron, editor Nebraska Farmer, Lincoln; J. D. Thrower, serum manufacturer, South Omaha; Dr. J. S. Anderson, chairman State Board of Veterinarians, Seward.

This committee worked over half a day on rules and regulations to submit to the conference, which were adopted, and later in the day presented to the Live Stock Sanitary Board at the state capitol. These rules and regulations were unanimously adopted by the board. They are printed in full on this page.

In considering the rules recommended to the Sanitary Board the

(CONTINUED ON PAGE FOURTEEN)

Caring for Sheep of All Ages in Winter

Breeding Flock, Lambs, Yearlings and Wethers All Require Different Handling and Feed

THE winter care of sheep varies some, depending upon the kind of sheep to be handled. The breeding flock demands special treatment. It would not be profitable or necessary to give the lambs, yearlings and wethers as much attention as the ewes demand in order to get the best results in lamb production. The breeding ewes should be liberally fed and liberally provided with exercise. The exercise throughout the gestation period is very important. More loss of lambs and ewes is incurred through lack of exercise at this period than from all other causes combined. The ewe should be fed and handled to encourage strength and activity. It is not necessary to feed to fatten, but feed to keep the ewe strong and indicating life and energy. Close confinement in barn or shed should be avoided except in stormy weather.

Exercise is Necessary

All sheep barns should be provided with large, roomy yards in which the flock can be turned every day that is dry and fit for stock to be out. They should also have a winter pasture where they could spend a part of each day traveling over it. It is the exercise they get more than the feed they gather that is beneficial. A flock of ewes treated in this way will seldom produce a dead lamb or have any difficulty at this period. This is only an observance of natural conditions and requirements that all live stock handlers know and understand when their attention is called to it.

Lambs of Different Ages—Early, Medium Early and Late

Sheep, if indulged in laziness and inactivity in being penned up in stables and close yards, acquire the habit of stupidity, and when turned out have little inclination to exercise. This is particularly true of the breeding ewes far advanced in gestation. Excessively fat or overfleshed ewes should be avoided. While not as objectionable as the thin, starved ewe, there is more or less risk incurred at lambing to both ewe and lamb. The largest per cent of lambs raised are with ewes between these two extremes.

Nourishment for the Lambs

The milk flow is the important matter in starting the ewe with her young lamb. She should be well supplied from the start, not having an excess, but enough to save using the bottle. Hundreds of lambs are starved from the beginning, receiving little or no nourishment from their impoverished mothers that cannot lend the assistance their motherly instinct teaches them is due to their offspring. There is no mother animal so kind and sympathetic and that has such an abiding affection for her young as the ewe, even when she has failed in being able to appease the hunger of the lamb.

One very important matter to be observed in the handling and housing of the breeding flock is to guard against injury from crowding at the doorways. The doors should be double or wide, so that they will admit of the flock getting through these passages quickly and with as little liability as possible of coming in contact with sharp corners of racks or upright posts. All sharp corners about the sheep lots, yards or stabling should be padded, or, still better, be made rounding, so as to relieve the sudden contact when by some means the sheep become frightened. Quietness, gentleness, kindness, should be the system of government by all sheep handlers. Sheep may be trained to excitement and nervousness, or just the reverse. Some handlers of sheep talk loud, want the sheep to move rapidly, and this soon becomes a part of their efforts. Keep dogs away from the sheep on the farm. They are only serviceable on the road or in handling sheep on the range.

It is assumed that all flock owners understand the importance in comfortable sheds and stables to keep the breeding flock warm and comfortable throughout the winter, spring and inclement weather. It is advisable to breed early and have some lambs come in the latter part of winter or early spring when handling pure-bred sheep and exhibiting at the fair. It is always of advantage to the breeder of pure-bred sheep to have lambs of different ages—early, medium early and late—so that buyers or visitors can see the difference that age will make in lambs coming at different times.

A close record of dates of birth should be kept of all pure-bred disposition to misrepresent. With the common flock it is desirable to stock so that this can be positively stated. The breeder is supposed to know these, and a guess or "dont know" is evidence of carelessness or have the lambs come as closely together as possible. They make a more uniform, even flock and are more easily handled the first year while lambs. The subject of lambs and lambing will be taken up next month, and more definitely handled, in view of giving the flock owner who does not know all about it some of the intricacies of success and failure in the lambing stable.

Scattering Feed Encourages Appetite

The plan of feeding out in the field corn fodder, hay, sheaf oats and such crops as may be scattered over the sod or frozen ground is a good plan, both in securing exercise by the members of the flock and in encouraging appetite. A sled with one horse is a convenient way to haul out such feed to a dry, clean spot in the pasture field, and scatter it so the sheep will not trample it while they gather up such as they relish. This is applicable only to small flocks; large numbers run over and soil the feed.

The stock sheep on the farm, other than breeding ewes, may be required to rustle a little more, and not be so liberally grain fed, and be given a little more of the rough feed rations and kept on a little more economical basis all around. The last year's lamb flock should be given close attention the first winter, as this is the season that they develop

Feeding in the Field is a Good Plan to Encourage Exercise and Appetite

disease, if at all, especially lung worm, stomach and intestinal worms. When lambs of the previous summer show evidences of decline or lack of thrift, they should at once be given the remedial treatment that their symptoms call for, and not permitted to weaken and die.

Give Plenty of Water

There is nothing gained in stinting feed with any kind of stock. It will pay to keep a less number and feed to keep them growing. The water supply is equally important, notwithstanding some persons will tell you sheep can do without water and that it is not necessary to have water where they can go to it at will. Sheep in a feed yard supplied with water will be going and coming. They are like people in respect to water—they are not all thirsty at the same time, and will drink several times each day if within easy access to it.

There is no animal that so much enjoys variety of feed as the sheep; thereby originated the saying, "A change of pasture is good for sheep." A change of hay and some change of the grain feed is desirable, keeping in mind that as nearly as possible the feed value be maintained.

Fertility of Soil and How to Maintain It

Article II--Nine Times Out of Ten the Man Who Robs His Soil Belongs to the "Poor Pay" Class

THERE are two kinds of farmers in every neighborhood. Perhaps I should say there are two kinds of individuals residing on the farm, for one kind are not farmers and should not be spoken of as such.

One kind of these individuals or residents on the farm are the farmers who really farm the soil. By this I mean the farmers who try to keep their soils from wearing out by paying back to them as much or a little more fertility than is removed by the crops. They make an effort to know just what each crop takes from the soil and then by a proper system of manuring and crop rotation they return to the soil what was taken to produce the crops. This kind of individuals are the very best and most successful farmers of every neighborhood. They raise the heaviest crops that remove the most fertility from the soil, yet they understand the natural way of maintaining fertility, and their soils are always rich. You can tell the soil farmer by the appearance of his farm, his buildings, his lots and the stock that he keeps. Everything shows the hand of a man who thinks—the hand of one who attempts to pay for everything he gets, whether that thing comes from his soil or from someone else.

Soil Miners, Not Farmers

The other kind of individuals comprise the majority of farmers in every neighborhood. They farm like the beggar begs—they want to get all they possibly can from the soil without having to give anything in return for it. They are soil miners rather than farmers. They seem to think the fertility of the soil was placed there just like the coal in the earth, to be mined out, and when the supply is exhausted all there remains for the owner to do is to move on to newer sections where the soil has not been mined. These soil miners make no effort to learn what the crops take from the soil and what the best methods are to return what was removed.

If the suggestion is made that they improve their fund of knowledge, they generally reply that they are nothing but plug farmers and do not need any more knowledge than they already have. They raise small crops, yet these small crops, which take but little fertility from the soil, exhaust the soil in a few years until it will not produce profitable crops. You can tell the soil miner by his farm, his buildings, lots and stock as readily as you can tell the soil farmer. Everything shows that he does not think, that he pays no attention to what the soil needs and how to supply those needs with the materials at hand. Nine times out of every ten the man who is considered "poor pay" belongs to the last class. He does not pay his soil what he owes it, and out of force of habit he does not pay his fellows what he owes them.

How to Save Fertility

There are several things the farmer must take into consideration when he sets about to learn how to maintain the fertility of his soil. The first is, what to raise and what not to raise; what to sell from the farm and what not to sell. There are some crops that require less fertility than other crops and still bring the farmer as much money. There are some crops that sell for practically no more than other crops, yet they take from the soil two or three times as much fertility. There are some products that can be produced on the farm which when sold will remove practically no fertility from the soil. However, they can be sold for as much, if not more, than crops that draw heavily on the supply of fertility in the soil.

Make Use of Manure

There are simple means of maintaining the fertility of the soil even if we do grow and market exhaustive crops, like corn, wheat or cotton.

One of these ways is by the application of manure; that is, every second, third or fourth year make an application of manure to the fields cropped. This plan is usually followed by the truck growers who live close to the large towns or cities where the manure is obtained for hauling from the town barns.

For the farmer who farms several hundred acres this method is not practical. The large farmer generally does not produce enough manure on the farm to keep all of the farm in crop and maintain the fertility in this way. If he keeps stock, he must, therefore, have a part of the farm in grass and forage crops. This would make it an impossibility to keep all of the farm in crop at one time.

Another way of maintaining fertility is by a complete rotation of crops. This way is practical for the general farmer. What do we mean by a complete rotation of crops? It is a change of crops for a certain period and returning again to the crops originally grown. We know that if but one crop is grown year after year the time will come when the soil will refuse to produce a profitable yield of that crop. This time comes long before the content of plant food is exhausted. We know that if corn and oats are grown alternately the fifth crop of corn will be heavier than the same crop would have been if nothing but corn had been grown every year. The oats take nearly as much plant food as the corn would have taken, yet the change from one crop to another has the effect of making both crops profitable longer than either crop would be if it were grown exclusively.

A simple change of crops, however, is not a complete rotation. A complete rotation must include crops whose natures are directly opposite to those grown before; that is, if you are growing a deep-rooted crop, you must include in the series a shallow-rooted crop; if you are growing a non-cultivated crop, you must include a crop that will admit of cultivation during part of the season; if you are growing a crop that draws heavily on the supply of fertility, you should include a crop that will return fertility to the soil.

Suppose that corn is the principal crop in a section where the reader wishes to practice a complete rotation. Corn is a deep-rooted, cultivated crop. The reader should grow enough small grain, which is shallow-rooted and non-cultivated, to balance the corn, and enough legumes to return considerable of the nitrogen taken from the soil to produce corn and small grain. In addition to this the farmer should keep enough stock to eat the forage, the hay and the straw produced on the farm, and see to it that the manure voided by these animals is all returned to the soil. If this is done, the question of the fertility of the soil of any farm, no matter how large, will not be a difficult one to solve.

How to Rotate

Let us suppose that the reader lives in the corn belt, where both corn and small grain can be grown. We will suppose that he owns 160 acres of land and wishes to practice a complete rotation that will maintain the fertility of his soil. How should he build a rotation that will do this?

In the first place, we would divide the land into four fields, as nearly equal as possible. One field we would have in clover meadow or alfalfa, another in pasture, another in corn and the fourth in small grain. Next year we would plow up the pasture for corn, turn the cattle into the old meadow for pasture, sow the cornstalks to small grain and clover, and what was in small grain this year would be for meadow next year. If the soil is very poor, we would make this change every year; if not, two crops of corn can be grown in succession, and then one of small grain and another of corn before the change is made. By such a rotation the farmer may expect to raise 100 head of hogs; the farmer in the locality should have at least five acres in fruit; in the pasture he should be able to maintain at least twenty head of cattle, preferably milch cows. In addition to this he should keep six head of mares with which to do the farm work.

By rotating the pasture as well as the crops, the stock are changed from one part of the farm to another, and they apply a great deal of their manure themselves while they are in the pasture. Thus the question of application of the manure is materially reduced while it is fresh and before it has lost any of its fertility.

Experience Proves These Facts

The whole question of how to maintain the fertility of the farm land resolves itself into one thought—maintain the supply of humus in the soil and the supply of plant food will also be maintained. The supply of humus can best be maintained by the growth of clover or alfalfa in rotation with other crops and the keeping of enough stock on the farm to consume all the forage and hay produced and considerable of the grain. If this is done, the fertility of the farm will be maintained. Analyses prove that this contention is true. The experience of practical farmers also proves that it is true. When the common farm crops or the prevailing crops of the section are grown the fertility of the soil can be maintained in the way suggested. Of course, if exhaustive crops, like some of the garden crops, are grown, then the grower will have to resort to the use of commercial fertilizers. But where the common farm crops are grown, nature has provided a way to maintain the fertility of the soil by simple methods and with materials produced on the farm.

CHELSA C. SHERLOCK.

Beecher's Farm Creed

THE famous preacher, Henry Ward Beecher, edited an agricultural paper at one time, and published in it, three-quarters of a century ago, the following farmers' creed, which is a good one for the farmer of today:

"We believe that soil loves to eat, as well as its owner, and ought, therefore, to be liberally fed.

"We believe in large crops which leave the land better than they found it—making the farmer and the farm both glad at once.

"We believe in going to the bottom of things, and therefore in deep plowing and enough of it—all the better with a subsoil plow.

"We believe that every farm should own a good farmer.

"We believe that the best fertilizer for any soil is a spirit of industry, enterprise and intelligence. Without this, lime and gypsum, bones and green manure, marl and guano will be of little use.

"We believe in good fences, good barns, good farm houses, good stock, good orchards, and children enough to gather the fruit.

"We believe in a clean kitchen, a neat wife in it, a spinning wheel, a clean cupboard, a clean dairy and a clean conscience.

"We firmly disbelieve in farmers that will not improve; in farms that grow poorer every year; in starving cattle; in farmers' boys turning into clerks and merchants; in farmers' daughters unwilling to work, and in all farmers ashamed of their vocation or who drink whisky until honest people are ashamed of them."

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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To all points in the United States and Mexico, per annum, in advance....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75

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COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

A tract of ground less than 200 feet square in Chicago has just been leased for a period of 198 years at an average annual ground rent of nearly $75,000. Here is where the Henry George single taxer comes to bat.

There is a great deal said in the stock journals nowadays about how to dress calves, as though that were the ambition of all mankind. It is true that there has been too much interest manifest for several years in the dressing of calves. We are pleased to note there is a change coming over the people. The disposition now is toward the undressed calf. When we get the attention of the farmer centered upon the undressed calf, there will then be undisputed evidence that the meat supply is in a fair way for recovery, and lower prices must follow.

The farmers of Kansas have commenced the organization of seed corn clubs by holding school house meetings, with the result that where old corn of good seed quality can be had, seed is being selected and sold at $1.25 per bushel. The organizations are by townships and carried into the school districts as auxiliary organizations. It is thought that this system will make it possible for all in need of seed to be able to get it early and have plenty of time to test it out before spring. The importance of good seed cannot be overestimated and the necessity of providing it in advance is appreciated by everyone.

Shipments of Tuberculous Cattle

The farmers and the dairy interests of the Missouri valley must be protected against the crooked dealers and breeders who ship cattle into this territory under crooked health certificates. The Nebraska Live Stock Sanitary Board has adopted a set of sanitary rules and regulations, which are printed on page three of this paper. It was the aim and purpose of those who helped to draft these regulations that the rule governing the incoming shipments of live stock would be rigidly enforced against dealers in tuberculous cattle. Some of these dealers have used Nebraska as a dumping ground to get rid of diseased animals which they could not ship into other states. The adoption of rules and regulations will not stop this practice. Whether the farmers and dairy interests are protected depends upon their enforcement, and their enforcement depends largely, if not almost wholly, upon the kind of men selected to do the field work for the board.

Eternal vigilance is required to enforce any law which dishonest men are trying to evade. States that have been trying to stop incoming shipments of tuberculous cattle have learned this. We will cite one case to reinforce what we have said. On June 19, 1913, Governor Carey of Wyoming issued a proclamation as follows:

> All neat cattle originating in the states of Illinois and New York must successfully pass the tuberculin test made by a veterinary inspector of the United States bureau of animal industry—test chart to be issued by inspector, attached to waybill, and a copy sent to state veterinarian in ample time to reach him before arrival of stock at destination. Shipments handled otherwise will be quarantined upon arrival, held sixty days and tested at owner's expense.
>
> All shipments of neat cattle which have originated in the states of Illinois and New York, and which have been shipped destined to other states, must remain therein for a period of not less than six months before they may be inspected and tested for shipment into this state, and then said test with tuberculin for tuberculosis must be made and test chart issued by an inspector of the United States bureau of animal industry before coming into this state. State veterinarian shall be notified ten days prior to date of shipment; otherwise shipment will be quarantined upon arrival, held sixty days, and inspected and tested at owner's expense.

The issuing and publishing of this proclamation did not stop the shipment of tuberculous cattle into Wyoming. It required something more than that, and the state was fortunate in having the requirement—a state veterinarian who is on the job and who has the kind of nerve a real western man should have. This is shown by his official acts. On January 13, 1914, seven months after Governor Carey had issued his proclamation, Dr. B. F. Davis, the state veterinarian, sent out the following letter:

> To Prospective Purchasers of Dairy Cattle: I note on page 6 of the —— for January, 1914, that Mr. James Dorsey of Gilberts, Ill., carries an advertisement offering for sale certain classes of high-grade dairy cattle. I wish to warn prospective purchasers of dairy cattle that this man Dorsey has probably handled more cattle diseased with tuberculosis than any other man in the United States offering dairy cattle for sale. Wyoming has received a number of shipments that originated on his premises at Gilberts, Ill., all of which contained cattle affected with tuberculosis—35 to 55 per cent. At the present time no less than fifteen states have quarantined against cattle that originate in Illinois, as a result of the broadcast shipments of the James Dorsey cattle to neighboring states on fraudulent tuberculin tests.
>
> I trust that prospective purchasers of dairy cattle will be governed by the advice I am giving as a result of personal experience with shipments of cattle that originated on the premises of James Dorsey of Gilberts, Ill.
>
> B. F. DAVIS, D. V. S., State Veterinarian.

Dr. Davis is to be commended for letting the people of his state know these things. If more public officials who are charged with the enforcement of law would follow this policy, they would create a public opinion which would be more potent than resorting to the courts. This paper followed the same policy in dealing with this Illinois dealer.

In the early months of the year 1913, Twentieth Century Farmer carried Dorsey's advertisement. Complaints from some of its readers were received. We wrote him, stating that unless he would agree, over his own signature, not to ship cattle into the Missouri valley territory except in strict conformity with the laws of the several states, we would decline to advertise him further. His reply was evasive and did not contain the assurances required. It consisted in the main of an attack on the reliability of the tuberculin test, and he also pleaded the excuse that he was relieved from responsibility in the matter, since the purchasers of cattle in many cases had made their own selections from his herd. He was assured that the question at issue was not the reliability of the tuberculin test, or whether purchasers made their own selections of cattle from his herd, but simply whether he would agree that he would not ship his cattle into this territory except in conformity with the laws of the several states. Satisfactory reply not having been received, his advertising contract was promptly cancelled.

The Twentieth Century Farmer did not stop here, but in the issue of July 12, 1913, the foregoing reasons why it quit running the Dorsey advertising were printed. This was done as a protection to its readers. The paper had carried the advertising and the reader should know why it was discontinued. It was a matter of public concern.

Coburn Has Resigned

F. D. Coburn, the apostle of western agriculture, the most energetic, persistent and ingenious advertiser and promoter of western agricultural interests and industries that the Missouri valley country has ever known, has announced his resignation as secretary of the Kansas State Board of Agriculture, taking effect January 15, 1914. F. D. Coburn has become an inseparable part of Kansas agriculture; his name is indelibly written in the history of that state by his activity and energetic work in formulating a system whereby the agricultural statistics of Kansas have become a recognized authority for accuracy and timely publication which is not equaled by any other state. As a statistical bureau the Kansas State Board of Agriculture has stood prominently in the front for many years.

Mr. Coburn, while especially employed in emphasizing the virtues and superior qualities of the state of Kansas as a state of great agricultural resources and wealth, was always charitable and considerate in not trying to tear down the good name of a sister state in order to build higher in reputation the advantages of Kansas, or by any unfair methods direct unfavorable attention to a less fortunate crop yield produced by another state.

Coburn has been a loyal advocate of what common expression has been pleased to call "western agriculture." He has always been found on the firing line among the advance guard and ready to defend western agricultural interests. While we regret to hear of his resignation from the activities of the strenuous life he has spent, we join with Kansas in extending to him our cordial greeting—"Well done, thou good and faithful servant. You are entitled to the rest you have so faithfully earned."

Cleaning Seed Grain

There is no more important duty associated with farm work and farm management than the securing of perfectly pure seed—seed all of its own kind that is free from foreign substance, dirt, weed seed, other grain seeds and all imperfections. There is no occasion in these times of seed cleaners and seed graders to sow in seeding for any crop anything but the very best quality of seed.

The difficulties encountered in germination, in the getting of seeds properly planted in the right condition of soil, depth, etc., are certainly a sufficient handicap without introducing the added embarrassments of impure and dirty seed, when this feature is so easily remedied and is entirely in the hands of the one having the direction and management of the farm. Every farm should be supplied with an up-to-date grader and cleaner, because there is no greater money saver for the farm.

It is almost impossible to get seed that will not be greatly improved by running it through the grader and cleaner in your own barn. It is practically a crime to distribute noxious weed seeds on your land to later become a menace and nuisance to your neighborhood. Buy a machine and use it in all your planting.

Fence the Farm

There is no improvement that can be added to the farm that will exceed in direct value and service that of the fence. There is no improvement that comes as nearly being of no value as the old, worn-out, rusted-out, rotted-down, barbed wire and post fence. This style of fence had its day in the years gone by, when lands were cheap and things had to be conducted upon a half finished basis because of a lack of money to buy everything that was desired. But those times and conditions are now past and every man who owns land needs to be looking after his fences.

The present fence demand on every man's farm is security. Instead of fencing the cow out or in the enclosure, the demand is also to fence out your neighbor's pigs and chickens, and the rabbits. Lands are valuable. Farm acres are worth all the way from $100 to $250, and these lands must be made to yield an interest corresponding with the price of land. They must produce crops of some kind in order to do this. These crops must be permitted to grow undisturbed if the best results are to be had.

There are woven wire fences on the market that will fence in or out those small animals that so often become such a nuisance. These are the cheapest fences for small enclosures—for all small tracts or large ones, in fact, because they only vary a little in cost and last for years, serviceable and solid. It pays to fence all the agricultural lands with a tight fence—a fence that is proof against all kinds of trespassing animals, wild or domestic. This is what the country is coming to. The first land owners who adopt the practice will be in the front ranks and get the benefits a little earlier. A good, tight fence is a good investment for the land. A farm thus fenced will sell for several times more than it costs to put the fence on it. There is a sort of irresistible appreciation of a well improved farm, especially in fencing, that enhances values with any buyer who has money to invest.

Winter Demands Winter Care

Winter conditions demand winter care. This applies to the weather conditions mainly in those states and districts of country where feeding is a requirement to carry the live stock through from autumn to spring. It is readily understood by the handler of live stock that weather conditions have much to do with the health and thrifty condition of animals. A mild, moderate winter, with but few storms and no continuous severe cold, is marked by a lighter consumption of feed and a better general condition of health and prosperity among the herds and flocks. Consequently, mild winters are esteemed of great advantage to the live stock industry, and the districts of country where such conditions prevail are looked upon as especially favored in adaptability to stock growing.

The careful, intelligent, systematic handler of live stock prepares for the severe, stormy weather in advance and is able to give his animals the desired accommodations to protect them, in case they need it, in feed and shelter, thus obviating any loss from exposure or subjecting the animals to extremes that may cause disease and loss to follow as a result of exposure. All kinds of animals need protection from the severe storms and excessive cold. It may be only for a day or two, but the shrinkage and loss from exposure is often the turning point with many animals on the farm.

Why is it that in mild winter seasons there is practically no demand for the veterinary, but as soon as a few weeks of severe weather are experienced the inquiries commence to pour in regarding injuries and ailments of stock? Is it due to lack of accommodations and attention to providing the care and feed necessary to supply the extra demand brought about by the inclemency of the weather? Stock left to the same protection, feed and water accommodations in severe, below-zero weather that were afforded them under very moderate temperatures will not do well, and more or less loss and sickness may be expected to follow.

A realization of what is meant by "winter conditions demand winter care" may be had in the changed appearance of the animals in the neglected herds all over the country following severe storms and cold weather, should it be of a few weeks' duration. Make winter provision now, if you have not already done so, for all the animals to be carried over winter on the farm; provide them with extra accommodations to counteract the excessive tax made on the system by the extremes of cold. Stay by the animals in the matter of feed and care during the severe weather. The very unusual light winter experienced over a large district of the central west country can scarcely be hoped to continue without storm and cold throughout the remainder of the feeding season.

Basis of Farm Prosperity

Farm home improvement is the present demand, and is receiving a more liberal share of attention than formerly. In the earlier history of all farming districts of country the custom was to provide rather temporarily for the family until the farm became self-supporting, or until the money-making feature was put upon a solid basis. The live stock that were to be largely the means of giving the farm a basis of money-making were first considered. Barns, stables, sheds and all that was necessary for their comfort and prosperity were supplied them, while the family lived in any kind of makeshift, crowded quarters.

This seemed to be the custom, and it is a pretty hard proposition to argue as unwise from a money-making and economical standpoint. The greatest weakness to be observed was in continuing too long under these cramped conditions, and in adding to improvements for comfort of the stock to the discomfort and injury of the boys and girls, who were in need of more room.

The basis of farm prosperity is the farm home. It matters not how well and how completely everything else is arranged about the farm for the convenience of handling the stock and the crops, things are not going on right if the home is not properly provided for in all its details of convenience and operation. The housewife in many homes on the farm too often has no resource but to use what is provided, even if this provision is very meager compared with the production and income of the farm.

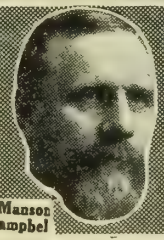
Farm homes are improving, as a general thing, especially where lands have advanced to several times what they were worth a few years ago. But did you ever stop to consider how much more attention is paid to the comfort and sanitary condition of the animals on many farms than to the health and happiness of the family? On many farms the big, red barn, the well built horse stable, the cow sheds and the hog houses are all provided in the most approved modern style before there is a move made to tear down the old, worn, cramped,. dingy house, and in its stead provide the family with the ordinary conveniences of modern improvements of the comfortable home. And then we wonder why the boys and girls leave the farm as soon as they become of age.

There is no well founded argument for this neglect or oversight. It is the result of getting used to the surroundings and not being able to measure the needs and demands of the family from the right standpoint. There is usually a promise that as soon as something else is provided the new dwelling will be next. But too often it comes too late. The boys and girls are gone and their mother has lived out her days. She, too, is gone.

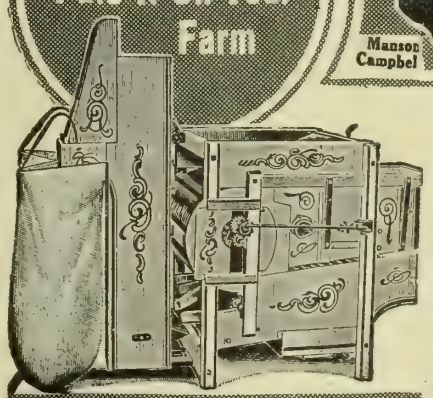
Why is it that towns and cities are filled with boys and girls from the farm? It is because they have become discouraged with farm life and seek other employment, allured by hopes of better living. There would be a great offset from the migration from the farm to the city if the reform of home comforts and home pleasures were set to work in providing more congenial surroundings for the boys and girls. It is not necessary to argue this point with those who have had the experience, and whose experience has taught them the lesson of influence that home comforts exert in making or undoing family ties on the farm and in the home.

It is much better for the boys and girls that the family remain on the farm and that all the modern improvements be added to the home—that the dwelling and all its surroundings be made as attractive and pleasant as those of the city home, than to get the notion of retiring from farm life and moving to the city.

$1.00 Puts It On Your Farm



For $1.00, I Clean and Grade Your Seed Grain



THE CHATHAM Grain Grader and Cleaner

Handles 70 Kinds of Seed Grain and Grass Seed

From Wheat, it takes Wild Oats, Tame Oats, Cockle, Rye and Smut.
Cleans the dirtiest Flax. Has special knocker and skimmer which prevents clogging. (Other machines choke up.)
Takes Dodder, Barn Yard Grass and Foxtail out of Alfalfa and Millet "slick as a whistle."
Takes Buckhorn from Clover.
Sorts Corn for Drop Planter.
Famous BEAN MILL. Handles all varieties, takes out the SPLITS, Clay, Straw, etc.
Handles Peas as well as any Grain or Grass Seed. Removes foul weed seed and all shrunken, cracked and sickly grain. Takes out all dirt, dust and chaff. It is also a bully chaffer. Handles 60 bushels per hour. Gas power or hand power. Easiest running mill.

You can't afford to plant common Seed and take chances on a poor crop, when I am offering to scientifically clean and grade every bushel of your Seed Grain for this spring's planting for **one paltry dollar.**

Here's my proposition, and if you are a smart man you will write me before sunrise tomorrow:

Send me one dollar and I will ship you, FREIGHT PAID by MYSELF, this improved 1914 Chatham Grain Grader and Cleaner, with all equipment. Clean your Seed Wheat, Oats, Flax, Barley, Peas, Beans, Corn, Grass Seed, etc. Then PLANT those fine seed. AFTER you have harvested a bumper crop, pay me the balance of my low price. Not one penny need you pay, except the $1, until next October. And by October YOUR CHATHAM WILL HAVE MORE THAN PAID ITS ENTIRE COST IN INCREASED CROPS. Then you'll have it to work FREE for you the rest of your life.

Your Dollar Returned

I only want the dollar as evidence of good faith—to protect myself from mischievous boys. If after 30 days' hard test, you don't want my "Chatham," send it back at my expense and I will return the dollar

A "Made-to-Order" Machine

Every "Chatham" is practically a *made-to-order* machine, for I send you the exact and proper Screens, Riddles, Hurdles and Sieves to grade and clean every *Grain and Grass Seed grown in your locality.* That's the secret of my success. I would not be the leading maker of Graders and Cleaners if I had tried to make my equipment fit ten million farms. What would you think of a clothing maker whose suits were all one size? Wouldn't it be a *miracle* if he gave you a fit. Yet all makers of Graders and Cleaners, except me, send the same equipment, whether you live in Maine, Ohio or Oregon. They wouldn't do that, if they had my 41 years' experience.

Extra Screens Free

I use, all together, 81 Screens and Sieves. It usually requires 15 to 17 for the average farm. These I select from the 81. After 41 years in the business, I am pretty sure to pick the exact equipment needed on your farm. If I shouldn't, just drop me a line and I'll send your additional requirements. There will be no charge for this.

Samples Graded Free

Maybe you have some Seed Grain that you can't clean or grade or separate. Send me a sample. I will purify it and tell you how you can do it cheaply. No charge for this.

Seed Corn Sorted

My big Corn Sorting Attachment, invented 2 years ago, is a great success. Twelve thousand farmers and many leading Agricultural Colleges are using it. It is the only machine I know of which scientifically sorts seed corn for drop planters.

New Book Ready

Send me no money now—just a Postal, for the finest, most complete Book on Seed Selection I've ever written. After the Book comes, write me what size machine you want and I'll ship it, freight prepaid, on receipt of $1.00. Then clean and grade all your Seed Grain. If you write today, you get my Book by return mail. Address nearest office.

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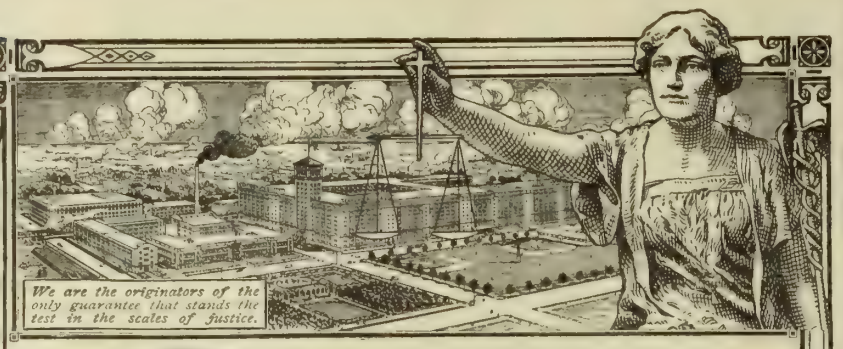


David Bradley PLOWS

SINCE 1832 David Bradley Plows have been the accepted standard of plow excellence. For 82 years they have stood the test of service under all conditions, in all parts of the country.

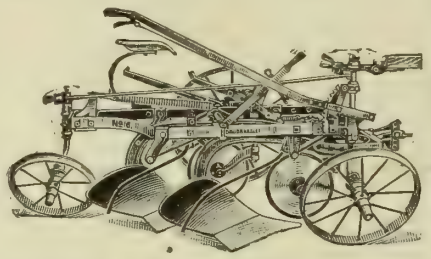
Before we purchased the David Bradley implement factory in 1910, this Bradley No. 6 Gang Plow would have cost you $60.00 or more.

Today, because of economical methods of manufacture and direct from factory dealing, we sell it for **$45.95.** The description of this plow in our big General Catalog or in our new Plow and Implement Book will prove to you its exceptional high quality; the price speaks for itself.

Our guarantee insures your receiving the value and service you have a right to expect.

Many vital improvements in design and construction have kept David Bradley Plows far ahead of other makes. You should know about Bradley Plows as they are *today*.

Whether you want a walking plow, a riding plow, a sulky or gang, you will find it in our big General Catalog, or if you prefer, send for our new Plow and Implement Book which contains descriptions and illustrations of the complete line of Bradley plows, cultivators, harrows, spreaders, planters, etc., besides buggies, wagons, harness, gasoline engines, supplies for dairymen, poultrymen, fruit growers and bee keepers. Just say **"Send me Plow Book No. 65T75"** on a postal card and mail to



Sears, Roebuck and Co., Chicago

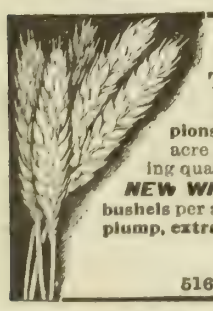
FARMERS' FAVORITE GRAIN DRILLS

Are noted for the accurate sowing of all large and small grains—anything from wheat to bush lima beans, and they put the seed in the ground at an even depth. Don't overlook these important facts.

Farmers' Favorite Drills are made in every style and size—in plain grain and combined grain and fertilizer—from One Horse up.

Send for the Farmers' Favorite Catalogue. Read it and then go to your local implement dealer and insist on seeing the Farmers' Favorite Drill. Remember that this drill is sold under the strongest possible warranty and must be and do ALL we claim.

THE AMERICAN SEEDING-MACHINE CO. INCORPORATED SPRINGFIELD, OHIO U.S.A.



HAVE YOU TRIED } **NEW MARQUIS WHEAT and NEW WHITE DANISH OATS?**

MARQUIS **is the new Canadian Fife Wheat that won the Grand Championship Prize for several years. Many farmers harvested 45 bushels per acre last year. Is early maturing, exceptionally plump and of the finest milling qualities. Much superior to any other spring wheat.**

NEW WHITE DANISH OATS, **we introduced from Denmark — It yielded 65 bushels per acre, is stiff in straw and uniform in maturing. Grain is very large, plump, extra heavy and thin hulled. Write for free Samples and New Catalog.**

FARMER SEED & NURSERY CO.,

516 Third Ave., FARIBAULT, MINN.

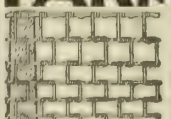
FARM FENCE FROM FACTORY TO FARM

26-inch Hog Fence,.....14c.
41-inch Farm Fence,....21c.
48-inch Poultry Fence...22½c.
80-rod spool Barb Wire, $1.40

Many styles and heights. Our large Free Catalog contains fence information you should have.

COILED SPRING FENCE CO. Box 124 Winchester, Ind.

FARM FENCE



11½ cts. a rod for a 26 in. high fence; 17 1-4c. a rod for 47 inch high stock fence: 28 1-2c a rod for a 50-inch heavy poultry fence. Sold direct to the farmer on **30 Days Free Trial.** Special barb wire, 80 rod spool, $1.40. Catalog free.

INTERLOCKING FENCE CO.
BOX 10 MORTON, ILLINOIS.

Sheep or Sheep Killers, Which?

Kill the Curs or They Will Kill the Sheep

THE sheep-killing dog is the greatest hindrance to the growth of the sheep industry in any state that the sheep owner has to encounter. The wisdom of legislation for the suppression of the dog nuisance stands out prominently in all states that have succeeded in developing the sheep and wool business. It may be plainly stated that no farming state has ever been able to maintain a free and untaxed dog-producing industry and the sheep business at the same time. It has been tried in all states in the union and failed, the useless dog that does not represent any legitimate industry being obliged to give way to the sheep.

There are but few states in the United States whose sheep and wool interests are not represented by millions of dollars. On the other hand, there are but few states that recognize the dog as of any value. The personal property value of the dog is so low in the estimation of the general public that it is confined almost entirely to the friendship or attachment the dog and his master have for each other, and has no market or intrinsic value, such as is found in the mutton chops, leg of mutton or the woolen fabrics that clothe humanity, both rich and poor. As to the relative value of these two classes of animal creation in their relation to man, there is no basis upon which a comparison can be made.

Laws for Sheep Protection

The general principle upon which the dog law is based for the protection of sheep from sheep-killing dogs is a compulsory assessment and enumeration of all dogs in the state. Dogs are valued at a fixed price—usually $1 per head for males of all ages and $3 for females. This assessment is placed in the property tax and collectable as other taxes. Dogs not returned are to be killed, and persons harboring untaxed dogs are liable for their depredations. This dog tax becomes a separate fund to be applied in the payment of damages where sheep are killed or injured by dogs.

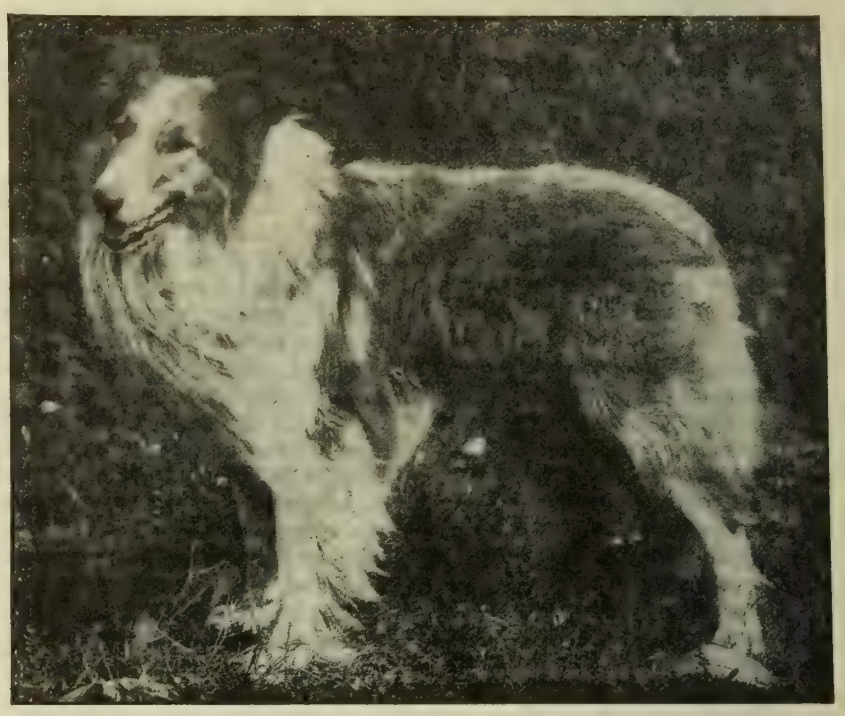
In case the damage to a flock in killed or injured sheep cannot be traced definitely to the owner of the dog, then the appraisement of the damage goes before the township trustees or county commissioners, and if the evidence establishes the claim, it is ordered paid from the dog fund. If the owner of the dog is found, and he is financially responsible, the judgment is settled upon him to pay the damage.

Curs Are Killers

In this operation of the dog tax law, which is in effect in most states, and in all states making any successful effort at sheep raising, the sheep industry is developing and the dog industry is receding, dropping down to a much lower enumeration and developing a much higher quality of dogs. There are more pure-bred dogs with less inclination to kill sheep, and the scrub dog, the low-bred cur dog, is largely a thing of the past. The pure-bred dogs usually found in farming and country districts are the shepherd dogs—Scotch collies or English shepherds—and the hunting dogs, neither of which have a natural tendency to kill sheep. It is the cross-bred dog of mixed blood, or dog of no distinct breeding, that is to be feared. Full-blood dogs are sometimes enticed into wrong doing when young by evil associations.

The young dog is a very close imitation of the boy. He likes company, and his tendency is to imitate the older. Thus an old sheep-killing dog will always have an evil influence upon the puppies of his acquaintance. Keep the dog tied at night until he has established an independent, self-reliant character. The place for the dog is at home. He has no legitimate or reasonable excuse to be on your neighbor's property day or night.

The sheep-killing dog has been



Scotch Collie—a Safe Dog with the Flock

known to do so many smart, deceptive things in connection with his sheep killing that he cannot be classed as an idiot, a crazy-loon or a silly, ignorant fool. On the contrary, the old sheep-killing dog is what might be classed in his line of depredation an expert. He has been known to be at home at bed time, and the first thing in the morning come crawling out from under the porch when his master gets up at daylight seemingly all right after a quiet night's rest. But in the meantime he had been several miles away and engaged in a terrible slaughter of sheep, not always by himself, but frequently with associates. Dogs have been known to engage in this bloody, butchering slaughter of sheep and escape detection for a long

The Cross-Bred or Mongrel Dog is Not to Be Trusted with Sheep

time, owing to their skill in destroying all evidence that might lead to their detection. They have been known to go to a stream of water following their murderous attacks on a flock, wash themselves clean of blood stains, roll in the grass to dry off, go home, and when traced down on suspicion appear to have a clear case of alibi, until some little feature of evidence, such as finding a few fibers of wool between their teeth or a blood stain on some part of their hair that had not been removed, settled the evidence of guilt.

Dogs have been known to go long distances to kill sheep, entirely out of their own neighborhoods, and thus cover up their identity in the work until by some circumstance run down and caught with the evidence still on them. It is not often the case that a sheep-killing dog can be poisoned by using the poison in sheep that he had previously slaughtered. It is the green novice in the business that goes back the next night to get a feed off the sheep he had helped kill. This kind of dog may be trapped or poisoned.

Looks the Part

The sheep-killing dog who has learned the business is very cautious; he has depicted in his countenance the murderer, the burglar and the thief; he skulks around and hides under the barn; he sleeps during the day and travels about at night. The sheep-killing dog is never an active, wide-awake, cheerful fellow. He takes no interest in being out with the teams on the farm; he is not out with his master enjoying the work that a farm dog is supposed to assist in. The cross-bred shepherd with any low order of common dog makes a dangerous dog for the sheep business. The shepherd dog of any family, English shepherd or Scotch collie, has an instinctive tendency to work with sheep, and this in the mixed blood or breeding makes good material to develop the sheep-killing tendency. It is very seldom that such a dog can be trusted with sheep or be trained so as to be valuable on the farm.

Work of the Murderer

The destruction that one or two dogs may accomplish in a small flock of sheep in a few minutes, when the sheep are confined to small pastures of ten or twenty acres, is almost beyond belief. In flocks of less than a hundred there have been 25 to 40 per cent injured and killed, the fatality reaching 15 to 20 per cent. The sheep-killing dog seldom makes any noise while chasing the sheep; his work is earnest and quiet; he does not want to be detected; he usually catches his sheep, kills it, satisfies his appetite, and, if not in company with other dogs, slips away home. He is not silly enough to come back to this same flock for his next assault, but will possibly go in the opposite direction next time so as to avoid detection.

It is not difficult for the old sheep owner, who has frequently seen the work of the sheep-killing dog, to determine whether it was by expert sheep-killing dogs or by a bunch of young greenhorns. The pup or novice will chase the flock and grab any place that he can get hold, usually by the shoulder, side or ham, and the result is great pieces of skin torn loose. The skilled dog usually grabs the sheep by the neck and throat, and does not maim or cripple but a few individuals. The excitement influences the unskilled dog to keep up the chase, grabbing any place seemingly to worry the sheep rather than to kill. To this dog the chase and excitement is the incentive more than blood.

There is a sort of fascination about chasing and killing sheep that the dog, when he has once engaged in it, never forgets, and he never becomes truly penitent and reforms. The cheapest and best reformatory treatment is death and a new dog. Sheep owners should advocate pure-bred dogs and a dog tax. This is the only remedy or system for security in successfully handling sheep on the farm.

Railroads Increasing Trackage

The railroads of the country built 3,071 miles of trackage last year, exceeding the 1912 record by seventy-four miles. Texas and Montana got the bulk of the new construction.

I'll Put Your Stock in a Thriving Condition—Make the Ailing One Healthy and Expel the Worms — GILBERT HESS {Dr. of Veterinary Science, Dr. of Medicine

I urge you to see to it right now that your work horses are put in prime condition fo. spring and summer work, so that when the sun shines they will be rid of their old coat, full of stamina and ready for business. And don't overlook the spring pig crop—the mortgage lifters. Start them off free from disease—free from worms. Be sure, also, that your milk cows are thoroughly conditioned for the long, heavy milking season, and that those with calf are vigorous and fit. Remember, your stock have been idle and on dry feed for the last few months—they're pretty liable to be out of fix—rough in the hair, constipated, troubled with dropsical swellings and stocky legs, but the most common ailment of all, especially among hogs, is worms—worms.

Dr. Hess Stock Tonic

A Splendid Conditioner **A Sure Worm Expeller**

It will tone up your stock, enrich their blood and help to put them in shape for spring. Being both a doctor of medicine and a veterinary scientist, I formulated Dr. Hess Stock Tonic especially as a conditioner. It contains tonics for toning up the general system, laxatives for regulating the bowels, diuretics to remove dropsical swellings and vermifuges that expel the worms. By all means feed Dr. Hess Stock Tonic to your hogs now—it will positively rid them of worms. Feed it to your cows also.

So sure am I that Dr. Hess Stock Tonic will condition your stock, aid their digestion and expel worms that I have authorized your dealer to supply you with all you need, and if it does not absolutely do everything I claim, return the empty packages and get your money back.

Sold only by reliable dealers *whom you* know—I save you peddler's salary and wagon and team expenses, as these prices show: 25-lb. pail $1.60; 100-lb. sack $5.00; smaller packages as low as 50c. Except in Canada, the far West and the South. Write for my new stock book—it's a stunner and it's free.

If not at your dealer's, write direct to

DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Poultry Pan-a-ce-a

A splendid tonic for young chicks. Puts stamina into them—prevents leg weakness, gapes, cholera, etc. It tones up the dormant eggorgans and makes hens lay. It also shortens the moulting period and promotes rapid feather growth. Very economical—a penny's worth is enough for 30 fowl per day. Sold only by reliable dealers—never sold by peddlers. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West. Guaranteed.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks, or, if kept in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans. 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. I guarantee it.

SEEDS & TREES THAT GROW IN YOUR STATE

My 1914 Garden Book is now ready. It is full of instructions and information you need. It will help you in planning your Vegetable Garden and Orchard for next season. Full assortment of Vegetable and Flower Seeds, Seed Corn, Oats, Barley, Millet and Sorghum, Alfalfa, Clovers of all kinds, Grass Seeds, and Minnesota grown Seed Potatoes. Can supply anything you need on your farm or in garden. All my seeds comply strictly with the laws of our state in regard to purity and germination. We also grow a general assortment of Fruit and Forest trees, Grape Vines, Berries, Shrubs, and Roses. Low prices. Best quality only. Write today for my Garden Book.

GERMAN NURSERIES & SEED HOUSE (Carl Sonderegger) 24 German Bldg. BEATRICE, NEB.

400,000 Settlers a Year

Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in Manitoba, Saskatchewan and Alberta.

Lord William Percy, an English Nobleman says:

"The possibilities and opportunities offered by the Canadian West are so infinitely greater than those which exist in England, that it seems absurd to think that people should be impeded from coming to the country where they can most easily and certainly improve their position."

New districts are being opened up, which will make accessible a great number of homesteads in districts especially adapted to mixed farming and grain raising.

For illustrated literature and reduced railway rates, apply to Superintendent of Immigration, Ottawa, Canada, or to the Canadian Government Agent.

W. V. Bennett, Room 4, Bee Building, Omaha, Neb.

Don't Rent Buy farm in famous and fertile region on crop payment plan. RED RIVER VALLEY LAND CO., Fargo, N. D.

Don't Wear a Truss!

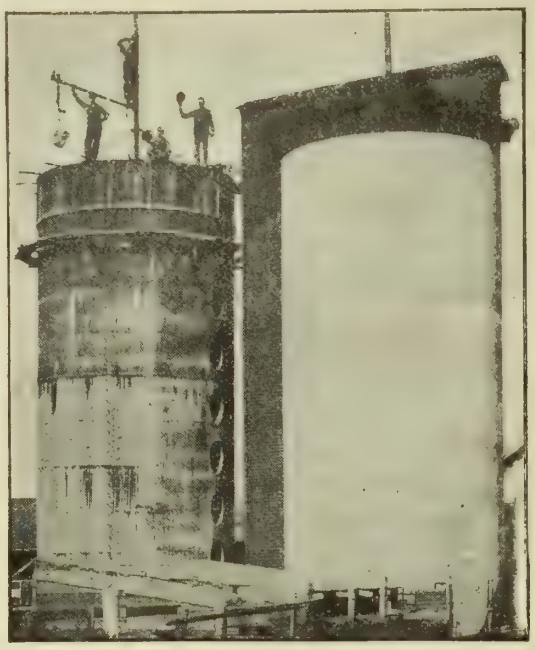
Brooks' Appliance is a new scientific discovery with automatic air cushions that draws the broken parts together and binds them as you would a broken limb. It absolutely holds firmly and comfortably and never slips, always night and day and conforms to every movement of the body without chafing or hurting. I make it to your measure and send it to you on a strict guarantee of satisfaction or money refunded and I have put my price so low that anybody, rich or poor, can buy it. Remember, I make it to your order—send it to you—you wear it—and if it doesn't satisfy you, you send it back to me and I will refund your money. The banks or any responsible citizen in Marshall will tell you that is the way I do business—always absolutely on the square and I have sold to thousands of people this way for the past 30 years. Remember, I use no salves, no harness, no lies, no fakes. I just give you a straight business deal at a reasonable price.

C. E. BROOKS, 1936 State St., Marshall, Michigan

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection

POLK SYSTEM

Built These Two Big Silos



Can YOU imagine as perfect work by any other method? The SILOS are re-enforced Monolithic Concrete, fitted with steam tight steel doors. Can't YOU see the advantage of having the exclusive right to build SILOS like this in your district. Let us sell you one of these machines. You can do just as good work as shown here.

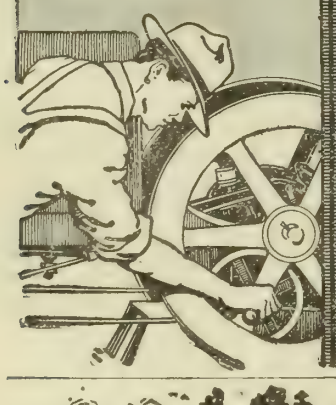
The men in the picture are building their first silo. One of them helping on only one other silo—the other three are working on their first.

We Build Silos anywhere in the state.

Write us for any information about silos, ensilage or silo building.

PLATT & FREES, STATE AGENTS, Red Cloud, - Neb.

From the Instant You Turn Your Engine Over



You must get a sharp, hot spark every time it's needed if you want to get the most power. That's the kind of ignition you can always depend on from a Wizard Magneto throughout the life of the engine.

When you buy an engine insist that it be equipped with a Wizard—there's one for every stationary gas and oil engine. If you own an engine now, a Wizard will increase its power and reliability. Ask your dealer to write us. Insist on a Wizard.

150,000 Wizards used on such engines as:
Fairbanks Morse
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Root & Vander Voort
Waterloo Boy
Stover
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Alamo
Dempster
Field Brundage
New Way

Send for Free Book
"The Happy Engine Owner"

It explains all about ignition and how to remedy most engine troubles.

HERCULES ELECTRIC CO.
2146 N. Western Avenue
Indianapolis, Ind.

WIZARD MAGNETOS

"Ball-Band" Rubber Footwear has Won the Friendship of 8 Million People by Wear and Service

For hard and constant wear, day in and day out, in slops and snow, you need Rubber Footwear made by men who understand your needs. "Ball-Band" Rubber Footwear gives more days' wear for dollars invested.

"BALL (Red) BAND"

RUBBER FOOTWEAR

Look for the Red Ball Sign on the store window. Most dealers show it. Look for it on the goods.

"Ball-Band" Footwear does not wear out until it has made the owner glad he bought "Ball Band." Boots are made with either rubber or leather soles and in the Knee, Storm King, Sporting and Hip lengths. If your dealer does not sell "Ball-Band," write us—we will see that you are supplied.

Write anyway for our Free Illustrated Booklet about "Ball-Band" Rubber Footwear

MISHAWAKA WOOLEN MFG. CO.
337 Water St., Mishawaka, Indiana
"The House That Pays Millions for Quality"

Farmers' Week in Missouri

Good Examples for Other States to Follow

THE meetings of the various agricultural and live stock associations in Missouri were held January 13 to 17, inclusive. This was designated "farmers' week." If the attendance can be taken as a guide in judging the appreciation of these meetings by Missouri farmers, we must come to the conclusion that they are highly appreciated. At these meetings registration is made of all who attend. This year the total was 2,238, as against 1,587 in 1913. Of this number 1,800 were from outside Boone county, as against 1,123 in 1913, showing a larger attendance of farmers from outside the district where the meetings were held as compared with the previous year.

The program was a good one, covering the various subjects of interest to the farmer and breeder. We believe it was too long, too many subjects being taken up in the time allowed, little time being left for the general discussions, from which is generally derived the most good. The arrangement followed in printing the program is to be commended, being so arranged that by just a glance at your watch and the program you could tell just what meeting was being held and the place. We would recommend to the committee who arranges the program for the Nebraska meetings to look over that of Missouri.

Held in connection with these meetings was the second ham and bacon show. This show was not large as far as the number of cuts of meat was concerned, but a great deal of interest was manifested by the farmers in the show. In the same room were instructors to show the visitor how to prepare and smoke his own meat on the farm. A bulletin has been prepared telling the farmer how to do these things, the object being to get the farmer to kill and cure his own meat, thus cutting out the middleman and his profits. The officials in charge were very much pleased with the interest shown. We believe this a matter that should be given more consideration by our farmers just now. Get back to the good old farm smoke house.

At these meetings much attention was given to the eradication of animal diseases, particularly hog cholera, some speakers pointing out in particular the necessity of strict sanitary regulations on the farm. The farm extension department is cooperating with the veterinary department in this line, and very effective work is being done. These officials are backed up with some splendid laws of the state regarding the disposition of the carcasses of dead animals. Other state sanitary boards might get some valuable information along this line by looking over these laws.

We believe the keeping of better live stock on the farms of not only Missouri, but other states, would be encouraged if better specimens of the breeds of some of the live stock were kept on the college farm. The farmer goes to the college herd to see what a standard of any particular breed should be, expecting to find it there. If inferior specimens are kept in the college herd, he may go home thinking his own herd is at least up to standard, if not better, when in fact he may be considerably in the background. We have noticed in different college herds some very poor specimens of different breeds of live stock. Let the colleges try as best they can to be the leaders.

Location of Windbreak

Every set of ranch buildings should be protected by a shelter-belt or wind-break, but of whatever the protection consists it should not be close to building paths or roads used in winter, since the drifts of snow forming to the leeward of such protection will be a great nuisance during the seasons when there is heavy snowfall.

The windbreak should be placed at least 125 feet from roads or buildings, and, if shade is desired, single trees should be grown where wanted. If a shady roadway is wanted, a single row of trees will answer the purpose, and there is slight danger from drifts in this kind of a planting.

C. C. CARPENTER.

FRIENDLY TIP
Restored Hope and Confidence

After several years of indigestion and its attendant evil influence on the mind, it is not very surprising that one finally loses faith in things generally.

A N. Y. woman writes an interesting letter. She says:

"Three years ago I suffered from an attack of peritonitis, which left me in a most miserable condition. For over two years I suffered from nervousness, weak heart, shortness of breath, could not sleep, etc.

"My appetite was ravenous, but I felt starved all the time. I had plenty of food, but it did not nourish me because of intestinal indigestion. Medical treatment did not seem to help. I got discouraged, stopped medicine and did not care much whether I lived or died.

"One day a friend asked me why I didn't try Grape-Nuts food, stop drinking coffee and use Postum. I had lost faith in everything, but to please my friend I began to use both and soon became very fond of them.

"It wasn't long before I got some strength, felt a decided change in my system, hope sprang up in my heart, and slowly but surely I got better. I could sleep very well, the constant craving for food ceased, and I have better health now than before the attack of peritonitis.

"My husband and I are still using Grape-Nuts and Postum."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Lady Icicle

Little Lady Icicle is dreaming in the northland
And gleaming in the northland, her pillow all aglow;
For the frost has come and found her
With an ermine robe around her,
Where little Lady Icicle lies dreaming in the snow.

Little Lady Icicle is waking in the northland,
And shaking in the northland her pillow to and fro;
And the hurricane a-skirling
Sends the feathers all a-whirling
Where little Lady Icicle is waking in the snow.

Little Lady Icicle is singing in the northland,
And bringing from the northland a music wild and low;
And the fairies watch and listen
Where her silver slippers glisten,
As little Lady Icicle goes singing through the snow.

Little Lady Icicle is coming from the northland,
Benumbing all the northland where'er her feet may go;
With a fringe of frost before her
And a crystal garment o'er her,
Little Lady Icicle is coming with the snow.

—E. Pauline Johnson.

The Editor's Corner

"Do the stories have to be about animals?" is one of the questions asked us recently. One might almost think so to read them, but it is not the case. They may be on any subject you choose. The reason most of the stories printed are animal stories, I believe, is because you all have pets, and these pets are always doing interesting things. It is easier to write about things you know all about, so the best stories are generally those concerning your pets.

Another little writer says: "You never answered my letter, so I didn't know whether you received my verse or not." You certainly don't think your editor has the time to acknowledge all the stories and verses that come in, do you? Every month there are nearly a hundred verses sent in and often considerably more than a hundred. You know how many stories come in. The reason we publish the list of "additional stories" is so that you may know whether or not we received your story. If your name is not in that list and your story is not published, you may be sure that it was lost in some way and never reached us.

It is strange that more stories are not lost, so many are carelessly addressed. We have received letters sent to Des Moines, Lincoln and Chicago that found their way back to us because they had "Twentieth Century Farmer" on them, and we have had other letters addressed to "Century" and "Century Farmer" that got to us because they were sent to Omaha, but when you forget the name of the paper and the name of the city both, of course, the postoffice authorities cannot find us. Be careful about the address if you expect them to get the letter here safely.

Another thing you want to keep in mind is that we consider age, neatness and a number of other things in awarding the prizes. Your story or verse may be somewhat better than that of the prize winner, but if you are four or five years older, of course, that should be considered. HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write with ink, on one side of paper only.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department. Twentieth Century Farmer, Omaha, Neb.

Winners in Picture Contest No. 9.

There were over a hundred verses sent in again this time, and they were unusually good, both as to thought and as to meter, spelling, grammar and a number of other things we have to consider in awarding the prizes. I hope you will like the next contest as well and write as many verses about it. The first prize winner this week is not perfect in meter, but nearly so, and for such a little boy we think the verse is wonderfully good. There were so many verses worthy of being printed this time that it was hard to tell which to leave out. Some of you will never know how near you came to getting prizes, or having your verses printed at least. The boys must have liked this picture, for they wrote most of the verses.

(First Prize)

By Clifford Ehrett, Aged 7, Brunswick, Missouri.

Here's Ned and Fred and Daisy,
All making balls of snow;
If I was there for them to hit,
They'd crack my head, I know.

(Second Prize)

By Raymond Ross, Aged 10, Corning, Ia.

Brother Tom and sister Nell and little Baby May
Are out among the snow drifts this jolly winter's day;
Behind the bank of snow they stand, with snow balls round and true;
They're waiting for some passerby. Look out! It may be you!

By Elsie Lillian Coleman, Geneva, Neb.

Snowballing is the best of fun,
When there are only three to one;
But when it turns the other way,
It isn't half the fun to play.

By Marguerite Noble, Aged 14, Texas Creek, Colo.

Come, let us make a fort of snow,
And lots of snow balls, too;
Then throw them at those boys and girls
To see what they will do.

By Helen Harrison, Aged 10, Beemer, Nebraska.

If I were one of these three children, bright,
I'd be in for a snow-ball fight,
And if you did not watch close
You'd get one right upon the nose.

By Elvin Rennick, Aged 12, Wayne, Neb.

Happy are the children
When the snow has come.
Why? 'Cause they can snowball
And have piles of fun.

(Prize Story)

Taking a Dare

By Gussie Hayes, Aged 9, Rupert, Idaho.

One day some boys went down to the river to fish. There were two large boys, aged 15, named Henry and John, and Henry's two small brothers went along. After the boys had fished about an hour, John called Henry off to one side and told him he would have some fun out of Henry's brothers, so Henry said, "All right," and John began by daring one of the boys to take the boat and row across the river, but neither of the boys would do it. So John took the boat and went across and back, and then one of the small boys got in and started across, and was about half way back when the boat upset and threw the boy out. John was horror-stricken. He couldn't swim, and Henry had the rheumatism and couldn't go in the water, so the other small boy jumped in and saved his brother. This shows that it does no good to take up a dare, and does lots of harm sometimes. (This is a true story).

(Honorable Mention)

My Prairie Dog

By Howard Naybor, Aged 12, Post. Texas.

Once I had a prairie dog, as smart as could be. His name was Simon. My sister got him on the plains while on a visit. Simon had two or three holes around the house, and one day I put a rabbit in his hole and then he went in, and my chum grabbed him by the tail to pull him out and pulled part of his tail off. It soon got well, but it was always blunt.

One day he got away and a boy caught him and took him home and chained him up. My friend told me about seeing him in another boy's yard. One day I stopped the boy and asked him where he got the prairie dog. He told me he caught it in a prairie dog town about four miles from Post. One day I passed by the house and looked at the dog, and it was mine, because I knew him by his blunt tail and two places where my mother had scalded him

(CONTINUED ON PAGE TWENTY)

BOY SCOUTS

Look Here!

This Compass Watch is free. No fake about it either — it's really and truly free.

Get your father, mother, or big brother or some neighbor to subscribe for the Twentieth Century Farmer, or renew their subscription for one year at the regular price of $1.00, and we will send you this watch free. It's new and just out and will please you. It is guaranteed to run and keep accurate time.

A Watch and a Mariner's Compass are two indispensable articles to a proper equipment for hunting, fishing, outings, hikes or cross-country runs.

The "PATHFINDER" Watch combines these two necessities without sacrificing the efficiency or appearance of either.

It is a 14-size, thin model, German-silver nickel-plated case, open face, Arabic dial, with red minute numerals around outer margin, "pull-out" stem set, and is guaranteed a first-class time-keeper.

The unique location of the compass in a recess formed in the top of the watch crown obviates all necessity for increasing the thickness of the case or distorting the appearance of the watch to accommodate the compass, and at the same time the compass is far enough removed from the steel parts of the movement to prevent its being deflected thereby.

Every Boy Scout should have one.

Make up your mind to get it today.

Address,

Twentieth Century Farmer
OMAHA, NEB.

Do You Have to be Shown?

I'm told that I have the best quality of seed, give the largest packages and have the most common-sense Seed Book in the bunch. And I'm willing to admit it.

Do you have to be shown?

All right. I live close to the Missouri line and I'll "show" you.

I'll send you the *Seed Book* and a *big package of garden seed*, and you can judge for yourself. NO CHARGE FOR EITHER, and you need not even send the postage unless you wish.

I also have guaranteed Clover and Alfalfa, and all kinds of farm seed at Farmer's Prices. Shall I send you free samples of these also?

HENRY FIELD, Pres.

HENRY FIELD SEED CO., Box 12, Shenandoah, Iowa.

GOOD SEEDS

BEST IN THE WORLD

PRICES BELOW ALL OTHERS

I give a lot of new sorts for trial with every order I fill. A Grand Big Catalog **FREE** Illustrated with over 700 engravings of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Illinois

Strawberries

YIELD $500 to $1200 per acre under the Kellogg sure-crop method. Our beautifully illustrated 64-page book gives the complete Kellogg Way and tells all about the great Kellogg plant farms in Oregon, Idaho and Michigan.

FREE BOOK

R. M. KELLOGG CO.

Box 170, Three Rivers, Mich.

Pure Bred Seed Corn

Picked in September, sure growing, big yielding, Reid's Yellow Dent, Johnson County White, Leaming, Improved Silvermine, and Bloody Butcher, grown by us on Sunnyside Seed Farm which we own and operate ourselves. Send today for the free corn book giving full particulars, prices, etc.

McGREER BROS., COBURG, IOWA.

CLOVER CHEAP

Now Is the Time to Buy

Prices lowest in years. Buy before advance and save money. Get our special low prices and free samples of our Iowa Grown New Crop Recleaned **Tested Clover** and **Timothy** Seed. Also Alfalfa, Alsike, Sweet Clover, all kinds grass seed. 76-page catalog free, quoting all field seeds. Save money by writing at once.

A. A. BERRY SEED CO., Box 107, CLARINDA, IOWA

Latest Fashion Book

2 CENTS POSTPAID.

EVERY WOMAN HER OWN DRESSMAKER

Very Latest Fashion Book Only 2c

Read This Very Special Offer.

FOR the benefit of our readers who use patterns, we publish four times a year the well-known fashion book, **"EVERY WOMAN HER OWN DRESSMAKER."**

The **Spring** Fashion Nember is ready **February 1.**

The **Summer** Fashion Number is ready **May 1.**

The **Fall** Fashion Number is ready **August 1.**

The **Winter**. Fashion Number is ready **November 1.**

The price is 5 cents a copy or 20 cents a year, **"EVERY WOMAN HER OWN DRESSMAKER"** tells how to make Coats, Waists, Skirts, Costumes, Aprons, Dressing Sacques, Underwear, Baby Clothes, Clothes for Boys and Girls, etc., etc. Every woman who uses patterns or does sewing at home should buy **"EVERY WOMAN HER OWN DRESSMAKER"** four times a year. Besides telling how to make clothes it illustrates and describes hundreds of the newest styles for Ladies, Misses and Children.

OUR SPECIAL OFFER—IF you use patterns, or if you order any pattern shown in this or any other issue of our magazine, we will send you the very latest issue of "EVERY WOMAN HER OWN DRESSMAKER" for 2c. Just send your address and 2c. to Pattern Department Twentieth Century Farmer, Omaha Neb.

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

4741—Ladies' Apron—This apron has small sleeves cut in Raglan style, their upper portion extending to the outline of the neck. The fastening is in the center of the back and the apron is fairly full. It is provided with a small patch pocket. Calico or gingham are suitable materials. The pattern No. 4741 is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size requires 5⅝ yards of 27-inch material.

6374—Ladies' Dress—Simple and stylish, this dress has a plain blouse, with a few gathers along the shoulder seams in front and a front closing, leaving the neck open. It is trimmed with a rounded collar. Plain sleeves may be full length or shorter. The two-piece skirt closes at the side seam and is attached to the blouse with the raised waistline. The pattern No. 6374 is cut in sizes 34 to 42 inches bust measure. Medium size requires 4¼ yards of 44-inch material.

5274—Ladies' Kimono—This kimono offers a combination of styles, for the seamless shoulder is used with a little empire waist, while the lower portion is entirely plain. Figured crepe, wash silk, cashmere and similar materials are used for these garments. The pattern No. 5274 is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size requires 6⅞ yards of 36-inch material.

10-11-35 — Whisk Broom Holder — This holder is very practical if equipped with a good whisk broom. Front and back are made of cardboard, covered with embroidered linen, and are joined together at the sides.

4847—Boys' Suit—This Russian suit can be developed in serge, cheviot or broadcloth. It closes at the right side of the front and the trousers can be finished with either legbands or elastics. They are made without a fly. The pattern No. 4847 is cut in sizes 2, 4 and 6 years. Age 4 years requires 2½ yards of 36-inch material.

5127—Ladies' Corset Cover—This corset cover is specially desirable for stout figures, as it is cut in large sizes. It is made tight fitting and the neck and armholes are finished with edging and beading. Lawn, muslin or longcloth can be used. The pattern No. 5127 is cut in sizes 36 to 46 inches bust measure. Size 38 requires one yard of 36-inch material, three yards of beading and three yards of edging.

5496—Girls' Dress — Serge, cheviot or gingham can be used to make this dress, with the collars and cuffs of contrasting material. The dress closes at the front and is made with the body and sleeve section in one. The pattern provides for a removable shield. The pattern No. 5496 is cut in sizes 6, 8, 10 and 12 years. Medium size requires 3⅛ yards of 44-inch material and ⅞ yard of 27-inch contrasting goods.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Our Young People

(CONTINUED FROM PAGE ELEVEN.)

on the back. I took him home with me and he was sure glad to get back.

One day we went visiting and he followed me. While at dinner I heard two tubs fall and went out to see what caused it and found a cat under one of them, but did not think of looking under the other. The next day the lady of the house found my prairie dog under the other tub and he had smothered to death. I felt sorry about losing him and buried him the next day.

The Brown Thrush

By Esther Lawrence, Aged 13, Silver Lake, Kan.

One summer day, three years ago, I was out in the yard on the north side of the house, when I heard something chirping in a vine close to the house. The vine was a Virginia creeper. I couldn't imagine what it was, but I went closer and closer until I was real close to the vine, and saw a nest with little, young birds in it. They were brown thrushes.

Papa went to town that day and didn't get home until late in the evening. When papa got home I told him about finding the nest with the young birds in it. Then he told me to leave them alone, and I did.

The next year they came and built their nest in the same vine, right where they had built it the year before, and we stayed away, and the mother bird would bring them food to eat, while the father bird would stay and watch the little birds from harm. Then the father would go and get some food for the little ones while the mother bird would stay and watch the little birds from harm.

When it was time for all birds to build their nests the brown thrushes came last summer and built in the Virginia creeper, where they had built for the last two years. I hope they will build there again next year, for they are welcome to their old place for building their home.

Additional Stories

Vera Phillips, Bingham, Neb.; Dollie Gladys Doyle, McCook, Neb.; Fern Jenson, Whitney, Neb.; George Berewster, Lushton, Neb.; Emma Lindberg, Silverthorn, Neb.; Ethel Lewis, Burwell, Neb.; Lawrence Bauer, Gilead, Neb.; Cleo Lucas, Anthon, Ia.; Hattie A. Schroersler, West Side, Ia.; Lillian Schuster, Rudd, Ia.; Gladys Conner, Grand Valley, Colo.; Elsie Anderson, Alamosa, Colo.; Marguerite Noble, Texas Creek, Colo.; Walker Wells, Selma, Cal.; Clara Gilder, Anaheim, Cal.; Monroe Randall, Rocky Point, Wyo.; Saloma Vance, Gate, Okl.; Lois Van Alen, Newkirk, Okl.

Of Interest to Our Women Readers

Opportunity

They do me wrong who say I come no more,
When once I knock and fail to find you in ;
For every day I stand outside your door,
And bid you wake and rise to fight and win.

Wail not for precious chances passed away,
Weep not for golden ages on the wane;
Each night I burn the records of the day;
At sunrise every soul is born again.

Laugh like a boy at splendors that have sped;
To vanished joys be blind and deaf and dumb;
My judgments seal the dead past with its dead,
But never blind a moment yet to come.

Tho' deep in mire, wring not your hands and weep;
I lend my arm to all who say "I can."
No shame-faced outcast ever sank so deep
But yet might rise and be again a man.

Dost thou behold thy lost youth all aghast?
Dost reel from righteous retribution's blow?
Then turn from blotted archives of the past
And find the future pages white as snow.

Art thou a mourner? Rouse thee from thy spell;
Art thou a sinner? Sins may be forgiven;
Each morning gives thee wings to flee from hell;
Each night a start to guide thy feet to even.

—Walter Malone.

Our Home Chat

This is a gala time of the year to every woman who is fortunate enough to be able to have a flower garden and wise enough to be able to appreciate the privilege. The garden seed catalogues are pouring in on us, and after the family has gone over the vegetable seed part and selected the big, red, luscious tomatoes, the crisp, crinkly lettuce and parsley, the plump radishes and all the other good things for next summer's eating and canning, the women of the family may turn to the bright cuts of roses and sweet peas and revel in the idea of a flower garden that will be one mass of color and beauty from early spring till the frosts nip the purple asters and the sturdy zinnias.

Every time a seed catalogue comes in the mail I have visions of happy evenings spent beside the big library table, with catalogue, order sheet and lead pencil, figuring on just where this row of sweet peas may be placed to shield them from the hot summer sunshine, what plot of ground will be favored with a riot of climbing nasturtiums tangled over the ground, where the pansies will lift their dainty faces to the sun, what bright spot will be best for the stiff, old-fashioned but gaily-colored zinnias. For the old-fashioned, simple flowers are best, aren't they? And they are easiest to take care of.

The lilacs, syringias, roses, hollyhocks, grow up year after year and take care of themselves to a great extent, not having to be often replaced, but the annuals are a source of pleasant excitement every winter and spring, when the all-important questions have to be decided as to varieties and location.

The little article about interesting our girls in flowers and the seed catalogues which are coming in have set me to dreaming of flower beds and spring sunshine. You women on the farms who have the room for gardens may make these dreams come true, and many of you do this I know, for often a letter comes to this office containing a sweet-smelling pressed flower—a bit of sweetness from some woman's flower garden, which is appreciated and kept until all the color and scent have faded away. HOME EDITOR.

Interesting Girls in Flowers

The woman who did not learn as a girl to love and care for flowers loses much of the joys of life, and the wise mother, knowing this, will somehow find a way to interest her girls in flowers.

One way that a resourceful mother used was to tell her two young daughters that each might plant a bed in her favorite color. Every girl has a favorite color, and loves to wear it, to have it in her room, to see it anywhere and especially in unexpected places. A bed of flowers in the favorite color means a posy of the favorite shade whenever wanted for the hair, a bowlful for the table of the bed room or a bouquet to give away that has the added charm of seeming a personal thing. The two girls saw all these possibilities at once, and many more, when their mother made the suggestion, and, though before they had looked upon flower gardening as merely another and unnecessary form of farm work, they now became enthusiastic, each wanting to vie with the other in proving the superiority of her especial color.

The younger girl chose pink and the older one yellow. Succession of bloom was obtained by planting so that one set of flowers would begin blooming before another had finished. The younger girl planted pink hyancinths, grass pinks, pink poppies, pink sweet peas, pink petunias, pink sweet williams, pink stocks, pink verbenas, pink cosmos and pink asters; the older girl daffodils, yellow pansies, marigolds, yellow sweet peas, coreopsis, yellow nasturtiums, yellow verbenas, yellow stocks, sunflowers and golden glow. When the flowers began blooming the mother let the daughters take turns in decorating the house, and the girls learned much about the artistic arranging of flowers, as well as very much about their culture.

The mother ranked this among her most successful experiments with her children. Through it the house was always brightened with fragrant flowers, the grounds about the house were greatly improved, for the girls' interest soon spread beyond their own flower gardens, and the girls learned both to appreciate the loveliness of a flower and to give it patient and regular care.

Whatever a girl's favorite color—white, blue, pink, red, purple or yellow—she can plant it in her garden, and by a little care in choosing her flowers have the joy of blossoms from spring until frost.

Isn't this an experiment worth any mother's trying?

GERTRUDE ALLEN.

Polish Furniture with Discretion

The prudent housekeeper will be as wary of doctoring her furniture with polish that is recommended to cover all defects as she would be of a patent medicine which is guaranteed to cure every disease. The highly polished surfaces of furniture have often been ruined by a too free use of a so-called polish, which, not having been rubbed dry, has hardened and collected all of the dust before drying, and has caused a dull film to appear over the polished surface.

Cream Nut Cake

Mrs. M., Seward, Neb.: I am a reader of your paper and have for many years enjoyed its pleasures and benefits. Will any kind reader of it give me the recipe for a cream nut cake?

Replying to Mrs. M., the editor gives a recipe for a cream nut cake, which she has used for many years and guarantees as being very good. If any of the readers have different recipes, will be glad to publish them.

One cup of sugar, half cup of butter, half cup of water, two cups of flour, one teaspoonful of baking powder, whites of four eggs. Cream the butter and sugar, add water and when well mixed add flour, in which the baking powder has been mixed. Have the whites of the eggs beaten stiff and fold in last. Flavor. Bake in two layers.

For icing beat up the white of one egg, add about the same volume of water and some flavoring; mix in powdered sugar until the icing is the right consistency to spread on the cake. Chop English walnuts and mix enough of this to spread between the layers. On top ice with the plain white and place half meats close enough together so that when the cake is cut into small squares there will be a half walnut on each one.

Do you note that water is used instead of milk? When there is so much butter used you will find that the water makes the cake lighter than milk.

Your Helpful Friends

Useful animals are entitled to the best of treatment. The horse that hurries to get you to town, to your neighbor's or takes you for a pleasure ride ought to be well fed, well groomed and comfortably stabled. And so should the hard-working horse that helps you to till the soil and gather the harvest.

The gentle cow that gives sweet milk every morning and night deserves your kindest care. Have you ever stopped to consider how much human beings are dependent upon cows for food?

And the faithful watch dog that keeps an ear alert and an eye open through the night to guard you and your home from every danger—is it right that you should neglect him?

Do what you can to make happier the lives of these animals, and you will be better off and happier yourself.

Finger Marks on Furniture

"Aren't the finger marks on my sewing machine discouraging?" worried Mrs. Newlywed.

"Olive oil will remove all traces of finger marks on furniture," answered Mrs. Neighbor.

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RIDER AGENTS everywhere are making big money exhibiting and selling our bicycles. **We Sell** cheaper than any other factory. **TIRES, Coaster-Brake rear wheels,** lamps, repairs and all sundries at *half usual prices.* **Do Not Wait;** write *today* for our *special offer.*
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Above flower collection and one package each Earliest Cabbage, Shorthorn Carrot, Early Market Cucumber, Prize Head Lettuce, Mixed Onion, Flashlight Radish, all for 20c, postpaid, or send 25c and get both collections and our Novelty Red Riding Hood Tomato. Now is the time to send your quarter for these Seeds. Ask for *Big Free 1914 Catalogue*

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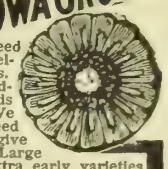
ARMSTRONG'S IOWA GROWN



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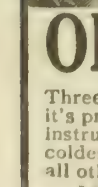
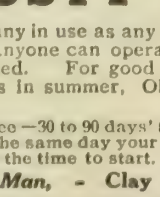


276,000 poultry raisers are making money the Belle City way. They tell you how in my new Book of "Hatching Facts." Free to you. Illustrates in actual colors my



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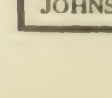

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

IF YOU are contemplating buying an incubator, you want to get in your order early, and not allow indecision as to which incubator will be best for you to buy to keep you dallying until so many orders are in ahead of you that your first incubator hatch will be coming off late. There are so many good incubators on the market that you can scarcely, in this day and time, be cheated in an incubator, as you might have been before incubators were built under lawful supervision, and no incubator can now be put out until it is thoroughly inspected as safe against accident by fire. The rest lies with yourself; that is, all other accidents. All standard incubators are built of good material, and built to last a lifetime with proper care. Lamps are sometimes required to be replaced anew after several years, but this is small cost. Get your incubator to suit your flock. If you keep a flock of 100 or 200 hens, you can make use of a 200 or 300-egg machine, because you can soon fill it with fresh eggs, but if the flock is smaller, grade the size of the incubator accordingly. From 120 to 150-egg space incubator is a handy size for a flock of from sixty to seventy-five hens. Where the flock is small and incubator large, you are usually too long in saving the eggs. The long kept eggs are slower in hatching than the fresh laid, and for two good reasons—the germ needs a longer warming up to buoy up its vitality, and has become dryer and lighter; this hardens the shell.

Questions and Answers

E. M. R., Iowa: I would like to know the cause and a remedy, if there be one, for this trouble in my flock of chickens. I am losing good, healthy hens. All I have lost were laying. They sing around; their heads are red, but I find them dead on the nests, and some fall dead from the roosts. They have a good place to roost, and I think plenty of fresh air. Not one that has died has appeared sick.

Answer—I am sorry, but you can see how impossible it is for me to even try a guess at the reason for your hens dying in this way. When any of the ordinary diseases attack a flock, a few drop dead without noticeable sickness, but not all do this. Apoplexy I judge to be the immediate cause of death, or some drastic poison which the hens get unknown to you, but if apoplexy, one must be given details of feeding, and the look of the organs after death, to tell you what is causing the apoplexy. An old, fat hen or rooster may now and then drop dead of apoplexy after a heavy feed of corn or a fright, but when so many die in this way the reason is serious and deserves a close looking into. Perhaps you are feeding far too heavily on highly condensed, rich food, and the hens, being too fat, burst large blood vessels in the effort to lay. You must write again, and with fuller detail, if I can be of any help to you.

***

H. S., Illinois: I would like to know the meaning of some of the terms often used on your page. For instance, poult, roaster, etc., as well as the age a cockerel or pullet ceases to be either. I am new in the poultry business, but have been interested in its literature for some time. If you were given your choice of milk or beef scraps to feed chickens for eggs, which would you take?

Answer—Poult is a turkey up to its sixth or seventh month of age. It is sometimes called a poult until a year old, though not often. A cockerel and pullet are so termed up to one year old, though some poultry exhibitors insist upon calling the latter a pullet until she has laid a year; this would make her a pullet until she is something near or maybe over eighteen months old. I rather favor this last claim. A roaster is a chicken weighing four pounds or over; a broiler weighs two pounds and under. If I must make a choice between beef scrap and milk, I would certainly take the beef scrap, as it contains many times over the protein contained in milk of equal amount, and yet, despite it, milk mixed with certain other foods often produces as many eggs as the higher protein food—beef scrap. If you will give me a list of poultry terms of which the meanings are hazy to you, I will try to answer.

Nebraska Sanitary Board Adopts Rules

(CONTINUED FROM PAGE THREE.)

conference aimed to do the following things:

That in the matter of interstate shipments every precaution be taken to protect the farmer in the purchase of incoming shipments of live stock against hereditary or contagious diseases.

That in the matter of outgoing shipments where live stock are subject to interstate commerce regulations every convenience possible be afforded the owner of live stock to secure certificates of health from the nearest responsible veterinarian eligible to practice under the laws of Nebraska by making him an authorized inspector for this purpose. This is especially needed in the western part of the state.

That the Live Stock Sanitary Board should reserve power to revoke any certificates issued in conformity with the foregoing regulations where satisfactory evidence shall be shown to the board of misconduct or unfitness on the part of the person so licensed.

That the Live Stock Sanitary Board should do everything in its power to extend the use of serum for the eradication of hog cholera, and to educate the farmers regarding the best sanitary methods for maintaining health in their herds, and the best methods for quarantine regulations when contagious diseases break out. To this end it was suggested that the Sanitary Board employ not to exceed five qualified veterinarians, at the expense of the state, acting under the control of the Sanitary Board; these veterinarians to be available for use in any part of the state for the suppression and control of infectious and contagious diseases among cattle, horses, sheep, swine or other live stock.

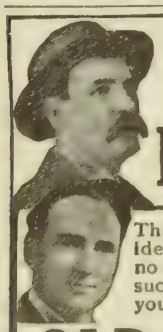
The two most important rules adopted, which are in the interest of the farmer and the hog raiser, are those governing the use and production of hog cholera serum and virus. The farmer is allowed to vaccinate his own hogs and also to assist his neighbor. This leaves it so that hog owners who have had experience and are competent, and want to do the work for themselves and also help others, are not denied that privilege. Equally important, and even more so, are the regulations governing the production of serum. Under the rules adopted, all serum and virus offered for sale in the state of Nebraska must be manufactured and tested according to the rules and regulations of the bureau of animal industry. Every sale must be registered and reported to the state veterinarian.

No farmer or hog man should use virus or serum that has not been tested. From investigations made by this paper, we are safe in saying that not one-tenth of the serum used in the state of Nebraska during 1913 was tested. Under the regulations adopted, no producer, either for the state or commercially, can sell virus or serum in the state of Nebraska unless it has been tested and has a register number. It must be sold in unbroken packages, properly sealed. We would advise every farmer to see to it that the serum and virus to be used on his hogs, either by himself or a veterinarian, meets all the requirements named.

Wisconsin's Live Questions

The livest questions in Wisconsin, according to the University of Wisconsin department of debating and public discussions, are in this order: Woman suffrage, immigration, Philippine independence, rural life, commission government for cities, highway improvement, government ownership of railroads, income tax, motion pictures, Panama canal, and the tariff.

Minnesota has 1,500,000 acres of land open to homestead entry and offers for sale 2,250,000 acres besides.



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This is the famous Old Trusty book that gave half a million people the right ideas for making chicken profits. Let me send it to you, too. We offer you no untried experiments. If the Old Trusty doesn't do its part to make you successful, you trade back. It's the highest grade hatcher made, at a price you can't resist, based on selling 100,000 machines this year. Write me *now.*

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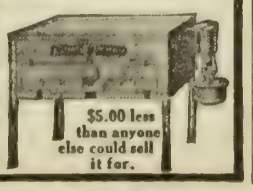
Three or four times as many in use as any other. It's because it's practical—simple. Anyone can operate it. Highfalutin' instructions are not needed. For good average hatches in coldest winter as well as in summer, Old Trusty outranks all other incubators.



I give a 20 year guarantee—30 to 90 days' trial—pay the freight and will ship your hatcher the same day your order arrives. Write today for the book—now is the time to start. Address:

JOHNSON, *Incubator Man,* - Clay Center, Nebraska

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

No Single Tax for Him

S. T. S., Iowa: In a recent issue, W. S. T. , Merna, Neb., writes in regard to the single tax that is demanding so much attention of late. He asks the question, Is it confiscation they want?

I want to say that he has hit the nail right on the head. They prepare to tax all farm land and city lots according to their usefulness, but in every case the farm land would be taxed to a point where no man could maintain a foot of land more than he could work with his hands, and when he could bear his burdens no longer someone would step in and take a chunk of his land without compensation or thanks.

They claim that God made the land to be used by and for the benefit of all people, but God also made more brains in some men's heads than others, and evidently intended that they should use these brains for developing the land in the best possible way for the benefit of the public as well as themselves. We have come to realize that there is a natural law that classifies all men, as well as animals, viz—the survival of the fittest. This law God also installed. If I were a millionaire or a pauper I would not fear the single tax, but neither of these classes are feeding the masses. It is the husky farmer with lots of energy and ambition, who can see big or small rewards in the future for his whole-souled efforts to accomplish something worth while, and it is he who does accomplish things in the direction in which he bends his efforts. It is he who is doing the greatest good for the greatest number. And he is not the man who is advocating the single tax. The single taxer is one of the other fellows; you can bet on that.

I have studied the single tax proposition from A to Z, and there is no real good logic in it. They tell the farmer they are after the large corporation and the millionaire, who do not pay a just tax on their personal property, and they offer the remedy of taking all the tax off. They claim the large corporations will be forced to pay more taxes than they now do by increasing the valuation of the lots on which their buildings stand to an enormous extent. What rot! If all the factories and companies using lots in cities or towns are forced to pay a just tax, or more than they do now by considerable, and the land owners are also compelled to pay a tax that would force them to relinquish their land, what will become of all this increased tax money? They are getting so much money now the government is forced to hire high-salaried officers by the score to get rid of it, to no purpose. It looks as though some of the leading single taxers are looking for a good, fat job running the business of the poor public, who are being starved by the gluttonous farmer. The single tax system would disorganize all business and put capital on the bum. You could not borrow money, for you would have no real security, and if you had money you could not loan it, for the same reason.

It would dishearten ambitious people by placing them on a level with their inferiors. A very successful person helps to elevate the whole community by setting a good example to the rest. The indolent person helps no one, not even himself. The Henry George Association is putting out thousands of books and pamphlets and maintaining newspapers and lecturers, all of which are advocating the single tax. I think it is time the real estate owners and anti-single tax people should voice their sentiments. You may say there is no danger of such an absurd law ever going into effect, but I am not so sure that if it was put to a vote now it would not carry.

***

Single Tax the Solution

J. H., Nebraska: In your last issue, W. S. T. takes exceptions to my ideas in regard to the single tax, yet fails to propose any remedy to correct the abuses under the present system. If W. S. T. were to study the last census he would learn that the number of people living on farms has decreased, even in the richest farming districts, and the number of people living in cities has increased. This is due mainly to higher prices for land, which has raised ground rents and caused people to crowd into a smaller area.

In his condemnation of the tariff he displays a selfish interest in high prices, which is on a par with the trust magnate who howls about closed shops and factories if the tariff on his product is reduced, as the last tariff, in spite of its faults, is the best tariff bill that has ever been put through.

W. S. T. is mistaken about national taxes, as the national government collects no direct tax. Keeping up high prices by means of a tariff is taking from one man, and generally the one who can least afford to pay, and giving to another. The single tax is not a tax on the farmer alone, but on every land owner. All the great corporations and railroad companies are large owners of land, and their holdings would be subject to the single tax. If W. S. T. were to build a good barn or other farm building or invest in good stock, he would be forced now to pay a tax on it, while his neighbor, who might own as much or more land, but did not improve his place or stock, would not be taxed as much. All personal tax is a tax on industry.

If W. S. T.'s land has increased in value, it is the community as a whole that has made it more valuable, and the community has a right to demand part of the unearned increment in the form of taxes. The community protects a man's right of ownership in land, and in return he should use it in such a manner as to make it of the greatest benefit to the people as a whole. The single tax would discourage the holding of land for raise in value as the result of speculation and throw more land on the market, thereby bringing down the price, and would not harm the legitimate farmer in the least, but would thereby remove the speculator.

It is easy enough for someone to figure out on paper how land can be made to pay interest on a high valuation, yet under actual working conditions it is not so easy. The greatest asset of the American farmer is the fact that in the past, because of the abundance of cheap land, he has been enabled to own the land which he tilled, and I do not think

(CONTINUED ON PAGE TWENTY-ONE)

Don't Bury Your Pork Profits Top The Market With Prime Fat Hogs

Every year sees more determined, more intelligent effort on the part of farmers and hog raisers to stamp out the swine plagues that cause such tremendous hog losses amounting to millions and millions of dollars annually.

I want you men to know that I'm in this work too, heart, body and soul, that I've got my shoulder to the wheel and am working just as hard as any of you to make the hog losses from disease a thing of the past.

But, we've got to work **together.** Ultimate success will only come through **prevention.** All recognized authorities agree on that; farm papers, veterinaries, and agricultural colleges are now preaching prevention. I've been advocating **Prevention** for more than 25 years.

You know and **I** know that **low vitality** is responsible for most of the hog losses and that low vitality, in turn is caused by **worms.** I've always said and I here repeat, because experience has proved it to be a fact, that, if you **get your hogs and sheep worm-free they'll be practically disease-proof!** If you really want to help in ridding this country of hog cholera, begin **right** now feeding your hogs Columbian Stock Powders to rid them of the strength-sapping, food-stealing, disease-breeding worms! Then, after the worms are exterminated, keep right on feeding "Columbian" to make your hogs **thrive, keep** well, take on weight and thus **insure** your pork profits. I tell you this is the **only** way that you **can** hope to have strong, healthy, thrifty hogs—hogs that have the **vitality to better resist** cholera and other swine plagues when they appear in the neighborhood.

Not A Stock Food

Columbian Stock Powders are strictly a highly efficient medicated preparation—not only a safe and sure worm exterminator but also a powerful digestive tonic and appetizer. Sharpen the appetite, tone up the system, speedily put an end to all digestive troubles in hogs and sheep. Prevent waste of feed and shorten the fattening period. These are proved facts attested by many users.

I'll Make Your Hogs Thrifty and Worm-Free

You can have fat, healthy hogs and insure your pork profits by feeding Columbian Stock Powders as directed and you'll not have another wormy, scrawny, hog on your place. The day you begin feeding "Columbian," you reduce the chances of hog losses. Brood sows fed Columbian Stock Powders will produce stronger, healthier, thriftier litters. Keeps them in fine condition, free from fever and insures an abundant flow of pure, rich milk.

"Has No Equal For Hogs"

"I have been a user of Columbian Stock Powders for more than three years. For hogs it has no equal. It sure kills the worms, also is a good appetizer and conditioner. I cheerfully recommend Columbian to anyone in the feeding business as I know it has made me money. I have 600 hogs."
C. D. Carpenter, Hartford, Kan.

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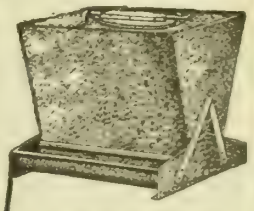
Write Me—Get My Special 1914 Proposition

Here comes the best news of all. I am going to help you get your stock powders partly or even entirely free. When I say free, I mean it won't cost you one penny. I have been years working out this plan, and say, it's the biggest, fairest and most liberal co-operative offer ever made. Now I want you to get my offer right away. I don't want you to wait a minute. I have a special reason for wanting u to hurry and I'll tell you when you write me.



Columbian Self Feeder

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Chat with the President of Panama

By Frank G. Carpenter

HOTEL TIVOLA, ANCON, Panama—I want to tell you something about the baby republic of the South American continent. I have just had a long talk with its president in the government palace and he has laid before me the plans which are proposed for the present and future.

Before I give you my interview, however, I should like to say a word about the country and people. I have called Panama "the baby republic." It is so, in both size and age. It was born when the United States took over the canal proposition, and that was only ten years ago. It is so small that it seems little more than the stubby tail of our sister continent, and, as it looks on the map, it might have been bitten off short, where it joins North America, as one bites off the tail of a dog.

Just a Little Place

Nevertheless, the case of Panama and South America just now is that in which the tail bids fair to do something at wagging the dog. Panama is the setting of our great canal, and although it is only one-hundredth as large as Brazil, one-thirtieth the size of Argentina and one-twentieth as big as Bolivia, it will for the next two years make more news than any of them in the world's daily journals.

Panama has but a small population. The whole country has less population than Buffalo, Montreal or Cincinnati, and many of its people are Indians, some of whom have never been civilized.

Notwithstanding this, the country is rich beyond the dreams of avarice. It has a soil that needs only scratching to bring forth tropical fruits, and its hills are said to contain copper, silver and gold. It has waters in which the pearl oysters live, and islands where are supposed to be buried treasures equal to those of the Peruvian Incas.

It is a land free from debt. The government owes nothing, and in addition it has $6,000,000 invested in mortgages on New York real estate, and from now on it will receive a quarter of a million dollars per annum out of Uncle Sam's treasury as a rental for the zone of the Panama canal.

Dr. Belisaro Porras, Progressive President of Baby Republic

Modern Panama, Showing New Trolley Line

Where Bananas Come From

I have been over much of the republic. A great part of it is a jungle, and of the whole considerably more than half is unoccupied. Nevertheless, it has large tracts of high pasture land in the north and there are thousands of acres of land lower down which will raise cocoa and coffee and sugar cane and bananas. A short time ago I visited the province of Bocas del Toro, which adjoins Costa Rica. There the United Fruit company has already laid out thirty or forty thousand acres of banana plantations, and it is now exporting from Bocas something like 400,000,000 bananas a year, or more than enough to give three bananas to every man, woman and child on the North American continent. The banana exports now amount to six or seven hundred thousand dollars a year.

Adjoining the province of Bocas del Toro is Chiriqui, which President Porras is now trying to open up by an electric railroad to be driven by the waters of the Caldere river. The Chiriqui country is high and healthy. A great part of it is more than 3,000 feet above the sea, and, as the president says, it has a climate which is perpetual spring. It is noted for its fine grass and fat stock and will furnish the beef of the future for the ships passing through the canal. This country has been recently investigated by the American meat trust with a view to determining whether it would pay to build a packing house here to supply the canned beef trade of the west coast of South America. It was found that the cattle on hand just now could not keep the factory running and so nothing was done.

Fine Cattle Country

Nevertheless, it is said that there is enough land in Panama for stock raising to support 5,000,000 head of cattle. There are parts of the country where one acre will fatten a steer, and so far there are public pastures where any one can graze his stock. The weather is so warm that there is no need of barns or sheds and the animals feed out of doors all the year round. There are also special fattening grounds where fodder plants are set out, the animals being fed only wild grasses until the time they are needed for market. It is also said that alfalfa will grow and that at least two crops can be secured during the rainy season and a third crop by irrigation in the dry time of the year. The present cost of cattle raising in the Chiriqui pastures is said to be a little more than $1 a head per annum, and I am told that this can be materially reduced if the lands are fenced.

Americans in Coffee

President Porras tells me that Americans have begun to take up lands and set out coffee plantations in the northern part of the republic. Dr. Dexter, the president of the National Institute, in Panama City, has just set out 5,000 trees, and he expects to have 100,000 when his plantation is in full swing. There are a number of North American families who have coffee estates near David, upon the highlands some miles in the interior. Some of these are ex-employes of the canal and others are outsiders who have come in from the United States to settle. There is one large cacao plantation in Chiriqui where 58,000 trees are in bearing, and there is a rubber estate near Montijo bay owned by a New England company which has 400 square miles that will be set out in bananas, pineapples, cocoanuts and other tropical fruits. This company owns thousands of rubber trees from which it is annually gathering the sap.

At the present time the tomatoes and other vegetables and fruits of the temperate zone are brought to Panama from the states. President Porras tells me that the highlands of Chiriqui will raise the finest of tomatoes and potatoes, and that a great trucking business might be developed which would supply the canal traffic as well as have a large market in the tropical lowlands.

More Tropical Fruits

I asked the president as to his plans for the development of the country in the raising of tropical fruits. He replied that the banana industry could be greatly increased, and that he had already begun to open up a cocoanut and ivory nut industry along the Caribbean sea south of Porto Bello in the province of San Blas. He expects to build a town along the San Blas coast, and to induce immigrants to settle there and go into cocoanut raising. That whole region is spotted with cocoanut islands. The trees grow without cultivation, and they are sold by the Indians to traders, who go from island to island in boats.

The San Blas Indians are semi-savage and until now they would have nothing to do with the whites. President Porras has in some way acquired their friendship, and they are conferring with the Panama government as to its plans for the development of their country. These plans include a town to be built on a beautiful bay near the mouth of the Aguada creek on the Gulf of San Blas.

Best Cocoanuts in World

As to the Panama cocoanuts, it is claimed that they are the best on the market, having more oil than the nuts of other parts of the world. The Isthmus of Panama is outside the hurricane belt and the trees are not in danger of being blown down, as in some of the West India islands. I understand that a Colon merchant is setting out 50,000 cocoanut palms at Nombre de Dios, and that a grove of 100,000 is being planted near Almirente bay, where the United Fruit company has its large holdings. Other groves are being set out on Panama bay and on Montijo bay, but there is no land that surpasses that of the San Blas coast and its thousands of islands in the raising of this crop. A cocoanut grove will fruit about five years after the sprouts are planted, and it is estimated that a grove of 10,000 trees can be brought into bearing for about $3 per tree. When mature the trees should each net the owner something like $1 per year.

Local Land Laws

During my chat with President Porras I asked him to tell me about the new land laws which his government has instituted since he took hold of the administration. He thereupon called in the secretary of public works, or fomento, Senor Ramon F. Acevedo, and we chatted together as to the radical changes which

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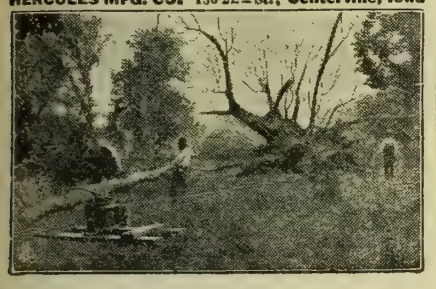

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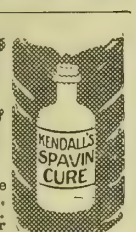

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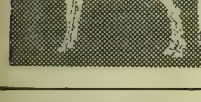

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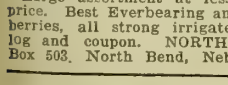

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have been made. They affect the whole land situation and promise to rapidly develop the Panama republic. In order to understand them one must realize that Panama is different from any of the other South American countries. It belonged to Colombia, and all the lands of the isthmus were once the property of the Spanish king, the people holding them from him by lease, as it were.

Each landowner paid so much a year, and this tax was continued until the people met together and objected. They said they were willing to pay a good round sum for once and for all, but they did not want an annual tax. To this the Spanish monarch consented, and along about 100 years ago, more or less, the lands became free. They did not, however, go into individual hands. They were held in common, no one having a title to any individual tract. These were known as the tierras indultadas, and the result of such ownership was that a man would cultivate a tract of land until it was worn out and then move somewhere else and take up another.

Title in Government

The titles to most of the lands have remained in the hands of the government, and so at present the republic is practically in the shape of a new country, with the government having the right to allot the lands as congress decrees. President Porras and his officials have given a great deal of study to this question and it is from them that the present scheme which is now just to be put into operation has come.

These new land laws provide that instead of selling the land as in the past, with the provision that the purchaser shall cultivate the land for five years before he is given a title thereto, the lands shall be sold outright in tracts not to exceed 5,000 hectares, or 12,500 acres, and that the title shall go upon the payment therefor. In the past the land has been sold in large tracts; and it has been impossible for the small landowner to buy, for the reason that he could not afford to cultivate for five years before getting the title. By the new laws he cannot buy more than 5,000 hectares of land until he has all of his first tract under cultivation or in use. Nevertheless, 12,500 acres is a very nice farm, and there are opportunities now for any one—American, European or Panaman—to buy one such tract and hold it for speculation or cultivation as he pleases.

The prices at which this government land is to be sold are from $1.50 to $6.50 per hectare, or two and one-half acres, or at from 60 cents to $2.60 per acre, according to the character and locality of the land. Think of getting 12,500 acres of land for $7,500! That is one of the possibilities that Panama is now offering. Such land can be mortgaged or subdivided and sold. Formerly the poor man who took up public land could not borrow money on it, for he had no title until he had cultivated it for five years. Now he can sell a portion of his purchase or he can make a loan on it and put in such crops as coffee, cacao or rubber, which take some years to come into bearing.

Small Holdings Desirable

The secretary of public works tells me that this law has been in effect since last July, and that it is working well. It will bring in a population of land owners whose estates will be comparatively small, and it will lead to the immediate and active development of the country. Dr. Porras says that the government has also reserved some of its lands to give to the poor. It will allow five hectares to every poor person who can show himself to be such, and ten hectares, or twenty-five acres, to each immigrant family.

"Another thing we expect to do," said the president of the republic, "is to establish here at Panama banks of issue, with charters from the government. The laws for these will go into force very soon. As it is now, there is practically no opportunity for the small land owner to borrow money on long time. The banks here will not usually loan for more than six or nine months, and some years ago before the national bank was established, the interest paid was often as high as 10 or 12 per cent a month. These new banks will loan money on mortgages, which may extend as long as twenty years, according to contract, and the interest must not exceed 9 per cent per annum. We expect that the people who will take up these public lands and pay for them will borrow money of these banks in order to develop their plantations and to maintain themselves until their lands come into bearing."

Plans for Two Railroads

"What are you doing as to other public works?" I asked.

"We have laid out the construction plans for two railroads that will form the initial development of the interior of the country. One of these is in the province of Chiriqui, of which I have already told you, and the other is in Los Santos, which slopes down to the Gulf of Panama. Both of these roads will be electric. Fuel of all kinds is very high here, but we have swift flowing rivers with great falls, which will give us enough electricity to light all our villages and cities, to run our railroads, and in addition move many great industries. We have already tested the Caldera river, which is to supply the power for the Chiriqui road, and also for the road which will run in Los Santos. The Chiriqui road will be about thirty miles long. It will go from David to Boquete, with a branch to Concepcion. There is now at Boquete a colony of about twenty American families. The most of them are raising coffee, but they cannot export their crop on account of the cost of carting it to the seacoast. When the road is completed, it will go down upon it. The road in Los Santos will not only develop the agricultural possibilities of that part of the republic, but will open up a mining section which is rich in copper, gold and silver. Its power will be supplied by the Lavilla river."

Looking for Tourists

"What do you expect to do for the tourists when the canal is completed?"

"We shall make them comfortable," replied President Porras. "We have already put up several hotels in Panama and Colon and we have just now made a contract with an English firm for a big hotel to accommodate at least 500 people. This will be located on the sea, but facing the canal on the edge of Panama City. It will be largely patronized and it ought to pay from the start. We had 25,000 tourists here last year and we expect to have 40,000 during 1914. If they spend $25 apiece, which is not a high estimate, they will leave on the isthmus $1,000,000 in gold.

"What are your plans connected with the completion of the canal?" I asked.

"We have a number of important measures under way," President Porras replied. "For one thing we expect to have a large exposition here in 1915. This will be participated in by the countries of North and South America and we hope by those of Europe and Asia as well. We want the merchants of the world to bring samples of their goods and show them at Panama, and we hope that many of them will leave the samples here, making a permanent commercial museum along the line of the canal. All such samples will be admitted free of duty."

Bonded Warehouse Plans

"How about goods in bond?"

"That is another measure I am trying to further. I want to establish two large bonded warehouses at either end of the canal, where goods can be exchanged and sent onward without paying duty for the privilege of making the exchange at this point. We believe that this will result in a great carrying trade, by which goods will be brought to Panama and trans-shipped. The larger lines of steamers will have their feeders that will go up and down the coast of the continents collecting freight for their larger vessels, upon which it will be taken through the canal and to other parts of the world."

"Is it your idea that Panama will grow rapidly?"

"Not immediately," said the president of the republic. "As soon as the canal is quite finished many of the employes will be dismissed, and for a year or so perhaps, our business may be dull. It will spring up with the increase of the traffic through the canal, and from then on there will be a steady growth in the country and cities.

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This company is a pioneer in the Kansas-Oklahoma fields. Built the first two refineries in Kansas. Built the first one in Oklahoma. Built the first independent pipe line west of the Alleghany mountains. Established the first independent delivery stations in Kansas, Oklahoma and Missouri.

This company is a leader. It is always ahead. Now when the investors of the Middle West are just beginning to realize that there are great profits in the oil industry—when backed with sufficient capital—this company with a great organization that has proven its ability to protect itself and build stronger in the face of persecution by the powers of the greatest criminal trust in the world—has today a property worth at least as a growing concern over $3,000,000.

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The time was a few years ago that the oil trust practically controlled a part of the Department of Justice and the Interior department. It still has many so-called reformers in all parties and in all factions of all parties in the United States. However, this company has been built up in Kansas, surrounded and protected by the real square deal men of the west, who first demand and then fight, if necessary, for the real right.

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As stated before, this is the only absolutely independent company in the middle west. The public is well acquainted with persecutions heaped on this company by political grafting would-be reformers who have tried to kill this company—(but were licked)—in the interest of the oil trust.

The people know when they read by the light of Uncle Sam oil that they are not aiding the Oil Trust in its combination with the invisible government.

The twenty-four oil divisions which constitute our 27,000 acres of oil gas leases, as stated before, are in line with great producers. Any day our drills may develop some of our big leases into regular mints. These twenty-four divisions in many places the close up to the greatest oil pools in the Oklahoma fields. On some of these leases we have drilled some of the great oil wells ourselves. We had one well in Pawnee county start at over 400 barrels. It was reported by our enemies as an 800-barrel well.) Another on the same lease started at 700 barrels—it was reported by our enemies as starting at 2,000 three thousand barrels.)

Our twenty-four divisions, covering the 27,000 acres of oil and gas leases, are situated about as follows:

OSAGE COUNTY 4,120 ACRES, DIVIDED INTO FOUR DIVISIONS.

(Do not have lease on gas rights only for development and operation of property. There are seventy-two producing wells. Some of them have been pumping for six years. There are three to five producing sands above the Mississippi lime formation. We drilled the deepest well in Osage county and have proof that there is oil in deeper drilling. This well was 2,997 feet deep. Another well where formations were lower was drilled about 3,200 feet. But our well was the pioneer deep well and penetrated the formations deeper, as they were about 300 feet higher in our district.

The company has invested in oil wells, leases, pipe lines and equipment in developments in Osage county about ($500,000) six hundred thousand dollars. It is good property, but takes about six years to pay out.

PAWNEE COUNTY, ABOUT 6,000 ACRES, DIVIDED INTO SIX DIVISIONS.

The Pawnee county property is the land of the deep drilling and great producers. The same formations in Osage county extend through this county, only they are deeper. There are five to seven sands above the Mississippi lime formation in this county. The company has undeveloped leases in Pawnee county—lots of them—that can easily develop into a million dollars each.

It takes about $9,000 to drill and equip a deep oil well in Pawnee county. About $4,000 to drill a deep dry test. There are wide-awake investors all over the middle west who can easily remit $500 to $5,000. With this practical proposition and your remittance with others may open one of these great rich pools. All of the about 6,000 acres of oil and gas leases in Pawnee county are in between the greatest oil pools in Oklahoma. The great Osage gushers are on the north and the northeast. The great Cushing field just south and southwest. The Glenn pool and the big fields around Tulsa are on the east and the southeast.

Three of these Pawnee county divisions contain about 1,000 acres each and extend in one chain of leases about six and a half miles from the northeast to the southwest. These three divisions are right in between the great Osage gushers on the northeast and the great wells in the Cushing field on the southwest.

The Bartlesville sand goes in a southwest direction across Oklahoma. The big oil pools in this Bartlesville sand are nearly north and south. The greatest staying oil wells are in this Bartlesville sand. So far in the great Cushing field, on account of the good wells in the shallow sands, the operators delayed testing the deep Bartlesville production. However, about the time this company started a deep test on its big lease in Pawnee county—other operators started for the deep wells in the north part of the great Cushing field.

Our deep well is now down 2,650 feet (over half a mile). We have just drilled into the top of the Bartlesville sand. We should strike the deep Bartlesville production at about 2,725 feet. The drillers are now setting the casing. We have developed the formations. Have a showing of oil, and if we do not get a big well we know results are sure near by, and we have a chain of leases as before stated, consisting of three of our Pawnee county divisions, extending six and a half miles from the northeast to the southwest. Our big lease lies just about half way between the deep Bartlesville wells in the Cushing district and the great gushers in the Osage.

These three districts in Pawnee county, when developed, should produce $2,000,000 to $4,000.000 of oil in the next three years or produce a sum twice as great os all the entire 200,000,000 shares of stock will come to at 1 cent per share—the price you can join with our 12,000 stockholders under the investment opportunity. The first money paid in will be used in starting four or five deep tests over this great acreage, any one of which may start at from 2,000 to 4,000 barrels per day. But it takes the cash to drill these test wells and we desire to put (40) forty drills in operation, and while our production is splendid, it will not run over three or four drills, and to properly develop our great oil and gas leases we must push ahead with thirty to forty drills. So we give you and others this opportunity to join our 12,000 stockholders on a ground floor, solid and conservative basis, with an organization that has stood the storm of persecution and won every battle and now with the new year, with its battle flags unfurled for victory, is going ahead to certain success and is sure of the aid and good will of right thinking people everywhere, and during the next six to twelve months will place all the new capital with good citizens so as to put into actual construction at least $2,000,000 on top of our already great property. This $2,000,000 will make this company stronger and far more influential in the middle west states than any oil trust combination.

The oil business is the real live wire industry in the United States today. Join a winner. You now have the opportunity to put a few hundred or a few thousand dollars into this stock and help drive the Uncle Sam drills at these favored locations.

As stated before, the Bartlesville sand goes in a southwest direction, but the big oil pools line up nearly north and south. The great Osage gushers are about seven miles northeast of our big Pawnee county leases and are on the east side of range 7. Three of our Pawnee county divisions, where we have one drill already in the cap rock of production, are on the east side and center of range 7. The big wells in the same Bartlesville formation in the Cushing field are a little west of the center of range 7. A straight line drawn from the Osage gushers in the Bartlesville sand to the Bartlesville sand gushers in the north part of the Cushing field will go right through the center of three of our Pawnee county divisions for over five miles.

These are the properties the new capital will develop. Our company is established. It is the pioneer refining company of the Oklahoma-Kansas oil fields. Do not wait until wide-awake, patriotic investors secure all the stock under this offer and until thirty or forty drills are in operation on the twenty-four divisions in this great oil field, but hurry in your order at once. Start the new year right. This stock will soon go. Only $400.000 will be accepted at this offer. Eight hundred investors at $500 each will take all of this offer. There are many that will remit $2,500 and $5,000. This proposition is practical, and there are a dozen good prospects on our 27,000 acres that could develop more oil in the next two years than all the stock will come to at 1 cent per share.

The company at this hour is at work on four deep wells in Pawnee county, any one of which may start at from 200 to 2,000 barrels each. To give you an idea of what our big Pawnee county leases might do, we produce hereafter reports on the Osage gushers and the Cushing big wells just completed in the Bartlesville sand in range 7. The Osage gushers are about seven miles northeast of our big, Pawnee county leases. This report on the Osage gushers was published in the leading papers of the southwest November 19 and is as follows:

"WORLD'S GREATEST OIL FIELD. 160-Acre Lease Near Cleveland Produces 25,000 Barrels a Day.

TULSA, Okl., Nov. 18.—The bringing in last week of three monster wells with an aggregate production of 10,600 barrels on a lease in the Osage country near Cleveland, has proven the property to be the greatest producer of high grade oil ever found in the world. The total production of the property is now 25,000 barrels and there is yet room for eighteen more wells, which makes it possible for a production of 50,000 or 60,000 barrels.

The lease consists of 160 acres and was sold for $2,500 a little more than a year ago. It could not be bought now under $2,000,000 and very likely the owners would not part with it at this high figure."

The Bartlesville wells just completed in the Bartlesville sand in the Cushing field are about eight miles southwest of the southwest corner of our chain of three Pawnee county divisions. The report published in an oil trust paper at Tulsa on December 22 is as follows:

"At Cushing—That the Bartlesville sand is the real thing is amply illustrated by the showing made by the Producers' Oil Company well on the Mc Intosh farm in section 3, township 17, range 7. It is increasing gradually, and the last report shows that it made six inches more oil than it did the day previous. It is now making twenty-seven feet, which is 810 barrels."

Remember this fact—all great oil pools have been a few miles apart. Our claims of three Pownee county lease divisions are situated right. Just about half way between the gushers at Cushing and Osage. We have already got the Bartlesville sand. There is a showing of oil. We are sure of big production in the present well or nearby locations. We do not have the space to go into detail on our other great leases in Pawnee county.

The company has paid out for oil lands, leases and development in Pawnee county about $250,000. By pushing ahead during the next six or eight months we should develop our Pawnee properties into millions. The property now back of the stock you will secure is about three to one in your favor. You cannot lose and can easily secure a gain of from ten to twenty times.

CREEK COUNTY ABOUT 9,000 ACRES, DIVIDED INTO SIX DIVISIONS.

All around our Creek county leases there are from three to five oil and gas sands above the deep Mississippi lime formation. The great Glenn pool and the splendid producers in the Okmulgee district are east and southeast of our big acreage in Creek county. The great Cushing field is west and northwest. The Oil Trust has leased up thousands of acres in the south and southwest and all around us. A part of the great Osage field is north and northeast. Like all the properties of the Uncle Sam Oil Company our Creek county oil and gas leases are located right. We should have at least five drills running in that county at this time. Many wells drilled near our leases have developed good sands and some good production. We helped to drill one important well in Creek county and can easily join with other neighbors and in a short time test our great properties situated in big blocks in that great oil producing county. There is yet room for other Glenn pools in Creek county. It will be hard to develop one without reaching into some of the Uncle Sam leases.

TULSA COUNTY ABOUT 3,000 ACRES DIVIDED INTO FIVE DIVISIONS.

In line with a new field just developed near Owasso, this company has about 800 acres. Big gas wells are near on the north, one within 2,000 feet. An old well was drilled and abandoned when the Oil Trust was stealing oil under carpet bag rule in Oklahoma, developed about ten-barrel well which is near on the west, showing a good thickness of sand. This company will soon start one or two drills in this district. The production is shallow and the wells can be drilled quickly and at small expense. The company already has a pipe line completed with four miles of this big lease.

Within three miles of our Tulsa refinery we have twenty-six oil and gas wells. There are many shallow leases for sale in this district and being so close to our refinery, are valuable. The company has about 150 locations it can drill in the shallow and Red Fork sand. This oil is worth a big bonus to our Tulsa refinery. One oil is rich in gasoline and the other lubricating oil. By development the company can easily develop and sell over $1,000,000 worth of oil from our leases within three miles of our Tulsa refinery. We have completed fourteen producers and one failure in that district within the last ninety days. The company should keep ten drills in operation in that district until at least 150 more shallow and Red Fork wells are completed. We now have two deep wells in this district in the cap rock of production that will soon be completed. This is a field that is sure for high grade oil in the shallow and Red Fork sand and rich with small rich pools in stray sands that are liable to develop in any sand deeper down. Tulsa, like Pawnee county, has made millions for oil operators—and this company with its refineries has the inside track and can make from 25 cents to 75 cents per barrel more than any producer.

Near the center west side of Tulsa county on a direct line between the Glenn pool and the Osage gushers the company owns two oil farms of 480 acres each, about three miles apart. Both of these oil farms are located right. Production all around them. This land is owned in fee. This company is preparing for the future and now has lands and leases, which, when developed, should produce from 6,000 to 10,000 per day for thirty to fifty years. While we have many leases that might for a while do this much daily alone when developed.

The company has paid out for pipe pines, refinery, leases and lands, wells and developments about $400,000 in Tulsa county and should increase this investment during the next year to at least $1,000,000. There should be $400,000 go into new oil wells and $200,000 go into a lubricating plant and increasing the Tulsa Uncle Sam refinery and additional shallow territory leases which are much more valuable to our company than any one else, and therefore easily secured.

ROGERS COUNTY ABOUT 5,000 ACRES, THREE DIVISIONS.

Believing that rich pools similar to the Collinsville field on the north—the No-

wata field on the northeast and the Ionola pool on the south and southeast, may be expected on most any lease in between these districts—this company has secured over 5,000 acres in Rogers county. We helped to drill two test wells that developed the oil and gas formation, some oil and some gas and lots of salt water. A thousand feet from any one of these wells may go into big production. We have one tract in the east side bend of the Verdigris river that we believe will be a second Ionola pool.

Another big district that can pass the Collinsville field extends for six miles in a chain of leases from southeast of Catoosa north to gas wells on adjoining farms on the north. We have another big division north of the Verdigris that has good showings on nearby farms. We will start three or four drills on these leases as quick as our construction cash will permit from the remittance under the offer herein.

PROPERTIES IN PLAIN SIGHT.

In Kansas the state tax commission taxes our properties at about three-quarters of a million dollars. We value our combined properties in Kansas and Oklahoma at over $3,000,000.

We figure that the increased capital should develop our property into a twenty million ($20,000,000) valuation. The increased capital should put the Uncle Sam Oil company where in another year it should make $2,000,000 per year at least.

STOCK SHOULD PAY YOU 100 PER CENT DIVIDENDS ON THE PAYMENT BY YOU UNDER THIS OFFER AND INCREASE IN VALUE TWENTY TIMES AND STILL BE GROWING IN VALUE.

The board of directors realizes what the development of these properties means to the old stockholders and all the new ones. To keep the company independent the board of directors by unanimous vote, advised the stockholders to double the capital stock as per resolution as follows:

"Resolved, That at the adjourned session of the annual stockholders' meeting to be held at the office of the company at Phoenix, Ariz., on Monday, December 29, 1913, at 9 o'clock a. m., there shall be submitted to said meeting the proposition to amend the articles of incorporation, so as to increase the capital stock of this corporation from $100,000,000 to $200,000,000, to be divided into 1,000,000 shares of preferred stock, having the same proportion of voting power as at present, to be held and voted in the same manner as at present, for the protection of the treasury stockholders, and 199,000,000 shares of treasury stock having one-half of one vote per share, as at present, that the increased stock shall not be sold to any person other than a patriotic American citizen who will agree as part of the purchase price of the stock, that he will not transfer the same to any other person, without the written consent thereto, of the company, unless such transferee shall pay to the company the difference between the price originally paid the company for such stock and its par value; that all certificates issued for such increased issue or capital stock shall provide that the same shall not be transferred without the written consent of the company, except upon the payment of any difference between the price originally paid the company for the stock and the par value thereof, and that each certificate issued in lieu of any said certificates shall contain the like provision, as an additional assurance that the stock of the corporation shall not fall into the ownership or control of the Oil Trust or of any of the competitors of this corporation and that it shall be and remain an organization of patriotic American citizens banded together to compete with the criminal Oil Trust, and that it may remain free to conduct its business without interference from traitors within its organization; that if it shall be necessary to sell any of said increased capital stock, the proceeds therefrom shall be used in developing the oil and gas properties of the company, completing and enlarging its plants and properties and extending, enlarging and conducting its business; and that the secretary be and is hereby directed to notify each stockholder of said proposed increase of the capital stock, as provided by law."

LAST BUT NOT LEAST.

To make the Uncle Sam Oil company ten times greater than any concern in the west—while securing the 27,000 acres of oil and gas leases—another great lease of 430,000 acres was lawfully secured—another great lease. A bill is pending before congress to validate this lease. Several congressmen and senators from Oklahoma, Misouri and Kansas have secretly aided the Oil Trust—together with subsidized news writers who are trying to swindle this independent company owned by 12,000 American stockholders out of this great lease. But when the public knows the facts there will be a few more Foraker and Joe Bailey statesmen out of a job. A part of the memorial filed before congress will give you an idea of the magnitude of the Uncle Sam Oil company's fight for right. The following taken from the printed report of the hearing of the committee on Indian affairs of the last congress—pages 42, 43 and 44—are as follows:

"THE OIL AND GAS TRUST."

The Standard Oil company and the United Gas and Improvement company belong to the same group of financiers and constitute what is known as the Oil and Gas Trust. Some years ago United Gas and Improvement company organized a subsidiary company known as the the name of this company constructed a Kansas Natural Gas company, and in pipe line for the transportation of natural gas, which pipe line extends from Oklahoma through the eastern portion of Kansas and western portion of Missouri, and has been supplying natural gas for fuel and lights to Kansas City, St. Joseph and Joplin, in the state of Missouri, and Kansas City, Atchison, Leavenworth, Topeka, Lawrence, Ottawa, Garnett, Independence, Wichita, Hutchinson, Columbus, Oswego, Fort Scott, Olathe, Pittsburg and many other cities in the state of Kansas. In most of the cities it organized a separate subsidiary corporation in whose name it constructed a distributing system in the city and obtained a franchise from the city running for a long period of time, which gave it practically the exclusive right to supply natural gas to the city and its inhabitants for fuel and lights, and in said franchise contracts it agreed to supply said natural gas for a fixed price per thousand cubic feet; that it has supplied natural gas to its said customers in said manner for several years and has received a very large income therefrom, which has almost, if not fully, amounted to the cost of the original investment. For some time past United Gas and Improvement company and its officers and subsidiary companies have formed a criminal conspiracy to relieve said subsidiary companies from the obligations of their franchise contracts and to increase the price to be paid by the cities and their inhabitants for natural gas for fuel and lights in violation of said contracts; that recently, and in pursuance of said conspiracy, they have secured the appointment of friendly receivers for the Kansas Natural Gas company, said appointment being made by Judge John C. Pollock of the United States district court for the district of Kansas; that said judge appointed as receivers for said company Eugene Mackie, president of the company, and George F. Sharitt and Conway F. Holmes; that said receivers were the selection of said company to carry out its suggestions with a view to accomplishing said conspiracy to violate said franchise contracts and arbitrarily increase the price to be paid by the people for said natural gas; that the contract price between said cities and said subsidiary corporations who obtained franchises required the gas to be furnished to the inhabitants at from 25 cents to 30 cents per thousand cubic feet; that said price is a reasonable price sufficient to enable said Gas Trust to earn large profits. Notwithstanding this fact, said Gas Trust recently obtained an order from said Judge John C. Pollock that all of the natural gas furnished to said usbsidiary companies must be paid for at prices very much in excess of the franchise price and that, unless paid for at such excessive price, said Kansas Natural Gas company receivers should shut off the supply of natural gas from the people in all of said cities refusing to pay the increased price. Said order was made in midwinter, when thousands of families were depending entirely upon natural gas supplied by said concern for fuel to heat their homes and had gone to large expense to equip their homes for the use of said fuel; that the Gas Trust also secured the appointment of friendly receivers for the subsidiary company having the franchise contract with the city of Kansas City, Mo., and appears to be able to use the United States district court for the district of Kansas in furtherance of the conspiracy to arbitrarily raise the price of natural gas to all of said people, and is making its unlawful, exorbitant and piratical demand, backed by an order of said court, at a time when the people are helpless and when they cannot exercise a free choice as to whether they will submit to the extortionate price demanded by the trust for fear they will suffer from cold.

The conspiracy of said Gas Trust, its officers, receivers, and all who assist it in arbitrarily raising the price of natural gas, is a direct violation of the criminal section of the Sherman anti-trust law, and the conspirators should be prosecuted, convicted and confined in prison. No use of a federal court should shield them from deserved punishment.

If congress will immediately validate the Osage oil and gas leases set out in the bill now pending, the Uncle Sam Oil company can immediately develop on said leased land an adequate supply of natural gas and can by agreement with the Osage national council furnish said gas to the receivers for the Kansas National Gas company at the wells in the Osage nation at a price which any honest court will decide will enable said receivers to furnish gas to its patrons in compliance with the franchise contracts and be able at said price to comply with the contracts it has made with the various consumers and make a reasonable profit. It will not be necessary for any court to order the receivers for the Kansas Natural Gas company to attempt to violate any contracts it has made fixing the price of natural gas supplied by it.

The leases provide that no gas shall be piped out of Osage county, but since the leases were drawn and executed the unexpected and unlooked for opposition from the Interior department has persuaded the Osage Indians that it is to their advantage to have the leases validated, and they are willing to allow gas to be piped out of Osage county provided a reasonable price is paid at the well and provided there is a surplus supply of gas above the amount needed in Osage county.

It appears to be the clear object and intent of the Oil and Gas Trust arbitrarily to raise the price of gas upon all the people it is supplying to about 75 cents per 1,000 cubic feet and then to secure a renewal of the Indian territory Illuminating Oil company lease on the 680,000 acres of the Osage Indian reservation in which it has control of the gas and secure control of the remainder of the Osage Indian reservation and then supply the people with natural gas for cooking purposes and lights at about 75 cents per 1,000 cubic feet. About 200,000,000 cubic feet per day could be used by the people in the territory covered by the pipe lines of the trust. If it could secure 75 cents per 1,000 feet, it would be securing more than 40 cents per 1,000 in excess of its contract rate, and if it could sell 200,000,000 cubic feet per day, an excess profit of 40 cents per 1,000 cubic feet would amount to an excess profit of $80,000 per day, which would amount to $29,200,000 per year. It is safe to say that said supply of natural gas could be obtained from that Osage Indian reservation for the next ten years at least, and if this scheme can be carried out, it would mean an excess profit above a reasonable profit of $292,000,000 to the Gas Trust.

The Uncle Sam Oil company has been striving to have its lease with the Osage national council approved so that it could develop the territory. It believes that said territory is rich in oil and gas; that it could have from said leased premises a source of supply of crude oil for many years to come and that it could develop an enormous supply of natural gas, and if the Kansas Natural Gas company should refuse to pay for the gas in excess of the needs of the Osage county a reasonable price at the wells, it could lay a pipe line and become a competitor of the Kansas Natural Gas company in supplying said cities with natural gas and not only make a profit for its stockholders, but become a blessing to the thousands of people who are now commanded by the Gas Trust to stand and deliver in the dead of winter.

But the Uncle Sam Oil company has been harassed by every device known to the oil trust and has met with the constant, persistent, unreasonable, unjust and unwarranted opposition of the Interior department."

Democratic newspapers in Oklahoma, owned bag and baggage by the oil trust, are abusing one oil trust faction and letting their secret tools in congress write in their paper so as to try and fool the public as the Oil Trust did in Pennsylvania and Ohio.

(CONTINUED ON PAGE 20)

SPECIAL NOTICE

To Kansas, Oklahoma, Missouri and Other Investors Who Were Robbed by the Oil Trust in the Kansas Oil War of 1905

When oil was first discovered in Southeast Kansas—1903-4—there were 400 independent concerns and companies that invested between $12,000,000 and $15,000,000 in developing the Kansas field. At one time the Kansas production was over 30,000 barrels per day. At first the Oil Trust encouraged the producers and paid $1.18 for eighteen to twenty-six gravity crude and $1.38 per barrel for thirty-two to thirty-seven gravity crude oil. Thousands of citizens from Kansas, Missouri and Oklahoma invested in good faith in the developing of the Kansas field, and more than 90 per cent of the investments would have paid out big, but as quick as the Oil Trust had succeeded in lying to the public and deceiving thousands into pioneering and developing the Kansas field, the Oil Trust arbitrarily put down the price of crude oil from $1.38 per barrel to 35 cents per barrel, and then refused to accept only a limited amount from the independent producers. The founder and now president of the Uncle Sam Oil company was one of the Kansas producers that did not surrender, and in the Kansas oil war that followed the Uncle Sam Oil Company was practically the only company that protected its life and maintained itself against the criminal discrimination of the Kansas field. The report of the Kansas attorney general's office shows that out of over 400 independent concerns and companies representing $12,000,000 to $15,000,000 invested, four or five concerns stood through the fight, the Uncle Sam Oil Company being the only big company to weather the storm.

The voters of Kansas that gave the electoral vote of Kansas to President Wilson were the citizens that were robbed and whose oil companies were broken up and killed by the purchasing agent company of the Oil Trust. A republican legislature and a republican governor of Kansas passed laws that curbed the Oil Trust in Kansas and made possible the great success of the Uncle Sam Oil Company, which Congressman Jackson, one of the members of the Indian affairs committee of the last congress, openly stated had saved the people of Kansas $2,000,000 per year by the competition of the Uncle Sam Oil Company with the Oil Trust.

To become a great company and save the people $2,000,000 per year in a dozen states in the Middle West, the Uncle Sam Oil Company needs the Osage lease of 430,000 acres pending before congress. With this big acreage on top of our present 27,000 acres, the Uncle Sam Oil Company can save the people of the Central West $50,000,000 per year in oil, and the people of Kansas, Missouri and Oklahoma about the same amount yearly on domestic gas. To kep the Uncle Sam Oil Company from securing large acreage of the "raw material" and thus protecting the public, the Oil Trust has resorted to every trick and crime to cheat the Uncle Sam Oil Company's 12,000 stockholders out of this Osage lease of 430,000 acres and get it for the Oil Trust.

OIL TRUST CONCERN THAT ROBBED KANSAS PEOPLE IS FIRST CONCERN TO RECEIVE LEASE BENEFITS IN THE OSAGE FROM THE PRESENT INDIAN COMMISSIONER.

As startling as it may seem, such is the truth until an anti-oil trust democrat candidate for the United States senate from Kansas has openly declared war on the present Oil Trust Indian commissioner. This Indian commissioner has proof that he could proceed to collect for the Osage nation about twelve million ($12,000,000) dollars—the difference due the Osages on the royalty price fixed by former Republican Oil Trust office holders—instead of making the Oil Trust pay the Osages their $12,000,000 the present Indian commissioner could collect if faithful to his public trust, he makes an attack on the Uncle Sam Oil Company's Osage valid lease and proceeds to frame up with the same Oil Trust concern that raised the black flag against the Kansas oil producers, and his first act as a traitor Democrat Indian commissioner is to attempt to take a part of the Uncle Sam Oil Company lease without a hearing and give it to the trust on a frame-up deal of a spite bonus paid by the Oil Trust that already has over $12,000,000 of Osage money that could be collected with interest if this traitor Democrat Indian commissioner was as faithful to his public trust as he is to the Oil Trust in his attempt to rob the Uncle Sam refiners of crude oil to manufacture and deliver to the public in competition with the greatest criminal monopoly known in the world.

If each citizen in Kansas, Missouri and Oklahoma who was robbed by this same Oil Trust concern that now has a "special pull" with the present traitor Democrat Indian commissioner will invest one-fourth of as much money in the Uncle Sam Oil Company now and join with our fighting independent army, now over 12,000 strong, we can drive to utter rout these Oil Trust manipulators in high places—beat every Oil Trust senator and congressman in Oklahoma, Kansas and Missouri—protect the Osage lease so the Oil Trust cannot steal it and cause the removal of the present Indian commissioner and the placing in his place an Indian commissioner who will have a suit brought and collected (not settled for 10 per cent on the side) for $12,000,000. Just about the exact sum you Kansas, Missouri and Oklahoma people were robbed of by the Oil Trust in the black flag fight on the Kansas oil fields. A former attorney general of the United States who aided the first fight on the Uncle Sam-Osage lease received one fee of ($100,000) one hundred thousand dollars from the Oil Trust within ninety days after his term of office expired for appearing in an inferior case where ample Oil Trust attorneys were already hired to take care of the case.

What was that $100,000 padded fee for? What is the Oil Trust promising or paying the present United States officials who are doing the same job for the Oil Trust now? This former United States attorney general aided the Oil Trust with the same zeal as the present traitor Democrat Indian commissioner.

Join the Uncle Sam Oil Company today and aid in this righteous fight against treacherous officials and fake reformers and help make the Oil Trust dig over that $12,000,000 to the Osages and help protect the Uncle Sam-Osage lease and the increase on your Uncle Sam stock will make back your former loss—caused by the same Oil Trust gang that now seeks to rob the Uncle Sam Oil Company's 12,000 American stockholders of the valuable 430,000-acre Osage lease—thereby turning it into a profit through the success of the Uncle Sam Oil Company on a big basis which is certain, for its efforts are along lines that win the approval and support of honest men and women of all parties.

Five Wells Will Be Completed During Next Forty-eight to Ninety-six Hours. If All should Come in Big--Oil Stock Still Within Your Reach, Under Old Price, May Be Advanced 100 Per Cent, or Double Old Price.....

Thousands are about ready to remit. The public knows this stock has a great future. Wells near completion are 104, 105, 106, 107 and 108. Locations and late reports are as follows:

Since the statement on the opposite and following columns was published, development work has progressed as follows:

The next well, No. 104, expected in is 1,710 feet deep, should secure big production between 1,718 and 1,735 feet. There is a gas well that has produced for seven years and started at fourteen hundred (1,400) feet—only one location away—just across the line. Sprayed oil when drilled in. This well can easily start at from 100 to 500 barrels; is in high grade oil territory and close to our Tulsa Uncle Sam refinery—company has other territory yet to drill around it.

Well No. 105 should be completed within seventy-two hours—is in between two oil wells on one of the Uncle Sam leases in the deep territory in Pawnee county. One well on the northwest started at 400 barrels per day and on the southeast another started at 800 barrels. We expect this well to make from 400 to 1,000 barrels for a while, and be a big product for many years.

Well No. 106 is our deep well on the big lease in Pawnee county. Since the last report the drillers have had trouble with the casing collapsing. They got this well ready to go ahead yesterday and should have the deep production at 2,725 feet—over a half mile deep—by Saturday or Monday. This well is located on a line between the Osage gushers that have started as high as four thousand (4,000) barrels per day, and the deep Bartlesville wells in the north end of the great Cushing field that have started as high as eight hundred (800) barrels per day. The formations are high in this well—have already struck some oil, but the big pay should be in the next eighty to ninety feet. It would be no surprise if this well started as high as a thousand barrels per day, while it will mean the opening of a great pool even to get a 100-barrel well in the deep sand at this location. Our lease there is 6½ miles from the northeast to the southwest and can easily develop into several million dollars' value.

Well No. 107 is on one of the big Uncle Sam Pawnee county leases. It is about 2,350 feet deep at this hour and should strike the big production at from 2,490 to 2,540. It is located between a reported 10,000-barrel well on the northwest and the 400 to 800-barrel wells on the southeast. Our field men believe they have the connecting trend. This well will be a 1,000-barrel gusher or a failure, with indications for a gusher. Formations are high. The outlook is as promising as it could be at this depth. This well should be completed by Saturday. Around it we have the leases for a mile and a half north and south. This field also can be a lid lifter for Uncle Sam stock.

Well No. 108 is located just 440 feet from a splendid high grade oil well on a lease that joins one of our 120-acre leases in the famous Lost City oil pool near Tulsa. The indications are that The Uncle Sam Oil Company has one of the richest spots of that rich oil field. Like the other four wells drilling, it would seem that success and good fortune was with the independent oil company at this location. Wells drilled on the northwest indicate that this rich pool should cover the south end of this lease, where there is room for 8 to 12 wells that our well organized drilling department can and will put down in the next thirty days if this well starts as high as even three hundred (300) barrels, and it is situated right and only about half mile from several wells that started at from 600 to 900, and one as high as 1,600 barrels per day in this same sand, that is the well only 220 feet from our lease where we will have in this well No. 108 by next Monday. This new well on the south came in at about 150 barrels and has been reported as high as 250 to 300 barrels. Our company has from 400 to 500 acres south and southeast of this new pool if it does not back up on the south end of our big property on the north. So we are sure to get this rich production right there by our Tulsa Uncle Sam refinery, either going or coming, for this company is operating on a big basis and does not leave any bars down when it goes after good stuff.

We are raising this construction capital and will drill these proposed 400 oil wells. The time for you to secure your stock is right now before a big advance takes effect.

(CONTINUED FROM PAGE 19)

Already in Kansas an honest democrat, who knows the tricks of the criminal trust, is the leading candidate for the United States senate.

He will lead a fight against these fake reformers that seek to betray the public. There are now 2,000 Uncle Sam stockholders in Kansas, about 1,000 in Missouri and 1,000 in Oklahoma. The Oklahoma and Missouri stockholders will organize and inform the public of the secret alliance of certain fake reformers who really are the secretly retained lawyer fixers of the criminal Oil Trust and the breweries—the invisible government. The Oil Trust has a willing friend in the present commissioner of Indian affairs, and independent men will never let up on the fight until they drive this Oil Trust Indian commissioner out or force the present Interior department to admit its secret connivance with the greatest of all the criminal trusts. The Uncle Sam Oil Company is no respector of persons and will expose a dishonest cabinet officer just as quick as it will a crooked federal judge, and is gaining ground each day. It is going to build up the greatest producing, refining and marketing oil company in the United States. Its cause is just. Right will prevail. We only want honorable, patriotic investors as stockholders. While you will be sending in your check others will be doing the same. Also 12,000 stockholders will hand from ten to fifty copies of this statement to that many investors, so it will reach millions of investors at once.

That you may understand the condition that caused the board of directors of the Uncle Sam Oil company to bring about this increased capital and order this offer, the following part of the report of the board of directors to the stockholders of November 24, 1913, explains itself and is as follows:

"The board desires to impress upon the stockholders the importance of voting in favor of the increase of the capital stock. It may not be necessary to sell any of this increased capital stock, but the board desires to provide an opportunity for the patriotic American citizens to take part in this contest against the criminal Oil Trust for the rights of this independent oil company to exist and do business under the laws of the United States, and in case it is necessary to sell any of the proposed increase of the capital stock, that the patriotic citizens of the United States be given an opportunity to enroll themselves as members of this corporation, enlisted in this army, pledged to battle for justice against the greed of the criminal Oil Trust, to free the American people from the blighting influence that reaches into high political positions, robs the people through the acts of public officials who use subsidized press to keep the people in ignorance of the facts and blinded to the truth.

"The Uncle Sam Oil company has never taken a backward step. From the date of its organization it has fought the battle of the people. It has been attacked by every power the Oil Trust could control including men occupying the highest public position. The public press has been utilized for the purpose of libeling its officers and belittling their efforts. Persons high in authority have been used to persecute the officers of the company. Departments of the government of the people, which should have protected this company, have been used as instruments in its persecution. Prices of oil have been cut; freight rates have been raised; oils have been damaged; our refineries have been set afire; our officers have been falsely indicted; these false indictments have been published throughout the United States and other persecutions have been conducted against the officers of this company, all for the purpose of preventing it from competing with the criminal Oil Trust, and preventing the people from being aroused and exercising against the trust the power of their righteous indignation. Under all these adverse circumstances the Uncle Sam Oil company has grown and advanced until it has acquired property of the value of $3,000,000, and if its large Osage lease should be validated by congress, by development its properties can easily become worth many millions more and it can become an effective competitor of the Standard Oil Company in several states in the mid-continent field. It can curb the trust as no other independent company can. It can pay its stockholders a fair dividend and furnish oil to the people at a fair price and in time it can spread its distributing stations all over the nation. The recent indictments of its officers is an outrage the Americans will resent when they know the facts. President H. H. Tucker, jr., is indicted because he published an advertisemnt in the Kansas City Journal requesting loyal American citizens to petition their congressmen to support the bill now pending in congress to validate our lease with the Osage national council. William C. Flumb, a stockholder of this company, is indicted because he had the bill introduced in congress, and Albert L. Wilson, general counsel, is indicted because he appeared before the sub-committee of Indian affairs in Washington and urged the committee to subpoena witnesses whose testimony would uncover the rascality and crime of the Oil Trust and throw the light of congressional investigation upon the conduct of the unfaithful public servants who have been doing the bidding of the Oil Trust. The board has determined that the American people shall know the facts in this infamous outrage. The board believes that the time has not yet arrived in the United States when it is a crime to urge loyal American citizens to petition congress to do right or to introduce a bill in congress providing that justice shall be done or to appear before the committee of congress, urging it to investigate the Oil Trust and its tools in public office, and if the stockholders of this company agree with the board and vote the increased capital stock, the loyal American citizens will be given an opportunity to enroll themselves as comrades in this army of stockholders, pledged to see justice done. In this contest with the Oil Trust the American people will gladly take the part of the Uncle Sam Oil Company, for it has been honest and it is right, and the power of the American people cannot be withstood by all of the dirty dollars which the trust now possesses, or the henchmen they can employ.

"The subsidized press and the tools of the trust in public office may raise the cry of over-capitalization and 'watered stock' and 'fraud,' but the fact will remain that the present value of the company's property is three times the amount necessary to make the stock worth what the company will ask for it, and that whatever water is in the stock will belong to the loyal, patriotic citizen who purchases the stock and not to some man like J. P. Morgan, who secures his millions by selling watered stock to the people at par value. When the stock of the Uncle Sam Oil Company pays dividends, sufficient to place the stock at par, the profit between the price the stock is offered to the people and the par value will be in the pockets of the common people of the United States who have patriotism, loyalty and faith in the ultimate success of this enterprise and will not be owned or controlled by any millionaire who waters the stock and sells it at par. The Uncle Sam Oil Company is founded upon the principle that the common people are entitled to all the profits which are usually withheld from the investors and pocked by the promoter. It places its stock in the hands of the common people at a price less than its real value, and those who are fortunate enough to secure it at this price will reap all the profit which usually goes to the promoter. The Uncle Sam Oil Company does not desire any traitors in its army of stockholders. It wants nothing but loyal, patriotic citizens. It appeals to men and women who love the United States and who are opposed to the crime and greed of the Oil Trust and who favor the removal from office and punishment of each public servant who bends the knee to the oil monopoly. Each and every stockholder of the Uncle Sam Oil Company is urged to favor the increase of the capital stock in order that a large additional army of loyal, patriotic American citizens may be permitted to join us. The funds to be raised, the board believes, will make every share you own worth many times its present value and the new stockholders will be an added strength, which will enable this company to defeat any scheme that the Oil Trust may devise for its destruction."

If you are a sincere believer in protecting the "right of opportunity" as each individual or concern is entitled to under the Stars and Stripes, then line up behind the Uncle Sam flag on the following "New Year's Opportunity Offer."

Make all remittances to THE UNCLE SAM OIL COMPANY.

New Year's Opportunity Offer

☐	5,000 Shares	$ 50.00	☐	50,000 Shares	$ 500.00
☐	10,000 Shares	$100.00	☐	75,000 Shares	$ 750.00
☐	20,000 Shares	$200.00	☐	100,000 Shares	$1,000.00
☐	25,000 Shares	$250.00	☐	250,000 Shares	$2,500.00
☐	40,000 Shares	$400.00	☐	500,000 Shares	$5,000.00

State in your letter who you want the stock issued to. Write each address very plain. Allow the office ten days to reach your turn. Place an X opposite the amount you make payment for and sign plainly this order blank.

To THE UNCLE SAM OIL COMPANY, KANSAS CITY, KANSAS: Find enclosed check for $.....for the number of shares of stock as per schedule above.

Signed

.....
Remitter.

.....
Address.

IN CONCLUSION

If you remit $5,000 on this stock you will own practically one oil well. You could not go and secure a lease and complete a well for less and it might be dry. This company submitted this proposition, realizing its merit and knows the capital is certain to be raised. With this capital paid in the company will, during the next eight months, get down the balance of at least 300 producing oil and gas wells. With even fifty more wells drilled such wells should enhance the value of the properties until they would command ready sale at $5,000,000 or $6,000,000. Stock is worth what the property would bring and the proceeds prorated. No one could buy the Uncle Sam Oil Company for $3,000,000 now. The stockholders would vote the sale down. With $2,000,000 additional cash put into drilling 400 more oil and gas wells—completing a main trunk pipe line and enlarging our three refineries to a combined capacity of 20,000 barrels per day—will build up and enhance the value of the Uncle Sam Oil Company so that it should sell for $18,000,000 to $20,000,000. Now figure the proposition over for yourself and you will have to admit that this is a real investment opportunity. The oil

business is ranking today in the Middle West ahead of farming and merchandise or banking. Over 85 per cent of the oil and gas wells drilled in the Oklahoma field are successful. When completed they will produce oil for years. We have a well organized field department. Can operate thirty or forty drills with more economy than three or four. We cannot go to the big banks and trust companies for capital because they are all more or less dominated by the "Money Trust," which is the "Standard Oil" clique of financiers. However, we know that right here at home—in Kansas, Missouri, Oklahoma, Arkansas, Nebraska, Iowa, Colorado and Illinois—states where the products from Oklahoma and Kansas crude oil are needed by the people—that in these states we can easily find 10,000 patriotic investors who can invest an average of $200 each and thereby take all the stock and complete this big enterprise and keep it in the ownership of the people—and with these new stockholders we can force a real square deal in the Osage lease fight. If we can save the Osage lease it will put the stock up twenty times over night.

The treasurer of the company is under a $100,000 bond. The secretary of the company is a white-haired determined Methodist, an old settler of Kansas, formerly from Pennsylvania, from the district where the first oil wells were drilled. Our general counsel, who devotes all his time helping to build up the company, is a former pioneer Kansan, whose brothers joined the Union army from Kansas as quick as they were old enough to do so.

All money coming to the company is deposited in the company's name each day in the Kansas Trust Company, Kansas City, Kan., which is the designated depository of the company, by the board of directors. Every dollar paid out is by a company check signed by four officers of the company. The board of directors can on five days' notice meet and discharge any officer. This company was organized and has been built up for principle as well as financial gain. The stockholders, directors and officers have become accustomed to every kind of persecution and assault on the company—but every attack makes them more determined to build stronger and greater. The company is established and it is backed by men who have the spirit bred in them that made Kansas a free state. We know our proposition is solid and that the future will prove that it is a real opportunity. We know the Uncle Sam Oil Company with this additional capital will have a great future. We have accomplished more during the first few years than the Oil Trust did in the first years of its existence. And we have had outrageous persecution to meet, with our criminal competitor in control of several departments of the federal government and with a purchased press also at their beck and call. The Uncle Sam Oil Company is a needed corporation and will be a benefit to every oil consumer in the Middle West. By its competition with the Oil Trust it will save thousands of you more than you need to pay in for the stock to insure its great success. If you want to join a real live wire organization of stayers and fighters in a worthy cause—START THE NEW YEAR RIGHT by enrolling under the Uncle Sam flag and sending your check attached to the above order blank before the other wide-awake investors secure what you know you want.

Respectfully Submitted

UNCLE SAM OIL COMPANY

By H. H. TUCKER, Jr., President.

Send all communications to the company to the Home Office Address, KANSAS CITY, KANSAS

Make Your Ad Bring Inquiries

Selling of Stock is Up to the Breeder

AN ADVERTISEMENT will not often sell your stock—remember that. It will bring inquiries—prospective customers. You must do the selling after the customers arrive. Of course, you must tell as much as you can in your ad that will make the man think he should have your stock, but when he does write you it is not often to tell you to ship the stock at once. He wants to know a little more about what you have to sell; he may want to know when you can ship, by what route, the express rates, or a hundred and one other points.

But—does your ad bring the inquiries?

You may prepare an advertisement that seems just fine to you. It is condensed, it reads well, it has some startling statements in it, and those statements are true. But after the paper is out you wait in vain for letters of inquiry.

To Close Deal is Good Salesmanship

You know it isn't every man who buys what he really wants as soon as he has found that thing. He puts it off. He doesn't intend to let it get away from him, but he hasn't time to write now because it is time to milk—and so it goes. You must keep your man after you get him. If your headline stops him, and your argument holds and convinces him, you must have another element in the ad that will make him write to you at once. He will probably never be so nearly in the mood to write again—and, more dangerous than all, he may see another ad that attracts him more than yours, and because that other ad has the pulling element in it he may buy from that advertiser instead of from you.

It may surprise you if you haven't had experience in this line, but it is true that the average buyer is very likely to do as the advertisement tells him. You tell the purchaser just what you want him to do and he will probably do it.

Perhaps you will say, "What I want the reader to do is send me a check for $100 to buy my heifer," but you could hardly expect that in the first letter. You do have a right to desire his immediate letter of inquiry, however.

Points of Information

Admitting that it is impossible to tell everything a customer might want to know in an ad of ordinary size, let us make a list of some of the things we do not ordinarily tell in the ad which he might inquire about and perhaps we can decide what ones he might be most interested in.

Here is a list for gilts:

Number of pigs in the litters from which gilts are for sale.

Number of litters farrowed by the sows and number of pigs in each litter.

Number of litters per year.

Age of sow.

Pedigree.

Have sows show records, and what are they?

Show record of the boar.

Weight and age of gilts for sale.

Prices.

There might be many others, but let's see if we can't pick out one of these that the average buyer would be almost sure to be interested in.

Any man who knows something of pedigrees would surely want to know the ancestry of the gilt he proposed to buy. Most breeders of pure-bred hogs do know something about pedigrees, so this would be one point of special interest.

Every buyer would wish to know the price before he sent an order, so here is a second point.

Make It Easy to Write

Now that you think you know what the buyer will ask you first in his letter of inquiry—if he writes one—tell him to write and ask about that thing—command him, and he will probably obey.

"Write for pedigrees." or "Write for prices," tells the reader just what to do, and a very large per cent of the readers will do as you command.

But the average man does the thing that is easiest. So study to make this writing easy. A postal seems easier to write than a letter. Tell them to write a postal. You want to avoid that common procrastination, so tell them to write now. Your little sentence puller will then be one of these: "Write a postal now for pedigrees," "Write a postal now for prices."

In a number of tests run to determine the real value of this pulling device the inquiries were overwhelmingly in favor of the ad with the command. Two ads were placed before the same readers with the only difference in this little sentence. Not only did most of the inquiries come from the ad with the command, but practically everyone who inquired wrote on a postal just as he was commanded.

You want inquiries and lots of them. Whatever you do, don't depend upon the interest of the reader to make him write to you at once. You give the command and make it easy for him to obey.

JOHN Y. BEATTY.

Loup Valley Poultry Show

One of the most successful poultry shows in central Nebraska this season was that of the third annual exhibition of the Loup Valley Poultry Association at Ord, Neb., December 15 to 22, 1913. Many of the winners took their birds to the state show at Grand Island January 19 to 23. Mr. A. H. Smith of Lincoln, Neb., awarded the prizes, and the following is a list of the biggest winners in the various classes:

Light Brahmas, Charles Ciochon, Arcadia; silver-Spangled Hambergs, Frank Glover, Ord; Black Langshans, John Nelson, North Loup; Black Leghorns, J. H. Keating, Ord; rose-comb Brown Leghorns, Clem Myers, North Loup; White Leghorns, Charles I. Johnson, Fremont; Buff Leghorns, A. J. Firkins, Ord; Buff Orpingtons, C. D. Krebs, Scotia; single-comb White Orpingtons, Fred Stephenson, St. Paul; Barred Plymouth Rocks, Ed Bair, Ord; Buff Rocks, Mrs. Nettie Campbell, Elyria; White Rocks, Harold Parks, Ord; Partridge Rocks, D. L. Williams, Ord; rose-comb Rhode Island Reds, George B. Shaw, North Loup; single-comb Rhode Island Reds, A. S. Hepp, Greeley; Dark Cornish, Frank Tedro, Ord; Golden Wyandottes, Frank Glover, Ord; Silver Wyandottes, Clem Myers, North Loup; White Wyandottes, E. E. Bowers, Bradshaw; Partridge Wyandottes, D. L. Williams, Ord; Aylesbury ducks, G. W. Eberhart, Ord; Rouen ducks, W. J. Hather, Ord; Indian Runner ducks, Harvey McBeth, Greeley; Toulouse geese, W. J. Hather, Ord; white guineas, Mrs. Nettie Campbell, Elyria; bronze turkeys, G. W. Eberhart, Ord; pigeons, A. J. Firkins, Ord, and C. W. Noll, Ord.

Our Readers' Exchange

(CONTINUED FROM PAGE FIFTEEN)

that in the future he is going to surrender such a privilege and become a tenant under a landlord system, as he surely will do if the high prices for land continue.

Editor's Note—Every great question that has been brought squarely before the American people has ultimately been settled right. No question of this kind should be settled until it has been fully considered and discussed. We have confidence that this question will be rightly decided, for the greatest good of the greatest number, before definite action is taken, and are glad to have our columns used by those interested enough to discuss the matter.

Raising Jenets

J. K. R., Wyoming: I appreciate your "Our Readers' Exchange" and will take the liberty to ask a few questions. I am interested in the subject of jenet raising, but have had no experience. What I would like to know is this: First, Are there any jenet farms, and where? Second, Is there much demand for jenets? Third, If a demand, what kind of animal is wanted, draft or riding stock?

Answer—There is not much demand for jenets. There are a few stock farms throughout the central west where jacks are raised to supply the mule-raising trade, but would not advise anyone to go into this business alone. Mules are always in demand as draft animals, and mule raising is a good business.

Roots

Roots are excellent feed for dairy cows and are especially desirable for the fall and early winter, as they are palatable, easy to digest and stimulate the flow of milk. They are especially effective with cows that freshened in the spring, and whose flow of milk has been depressed during the summer because of annoyance by flies and mosquitoes and unfavorable pasture conditions. If such are given a liberal supply of roots when brought to stall feeding, the flow of milk is often materially increased. Less grain is required while roots are being fed. The change from roots to more grain should be made gradually, adding grain at the rate of one pound for ten pounds of roots withdrawn.—T. L. Haecker, Minnesota University farm.

Sunshine

Sunlight is one of the best and cheapest disinfectants at our disposal, and we should take advantage of this fact at every opportunity. In the construction of barns or shelters of any kind for animals, ample provision should be made for the admission of the maximum amount of sunlight. Southern exposure is desirable; that is, having the majority of the windows facing the south. The warmth thus provided in cold weather is desirable, and much of the excessive heat in summer can be avoided by providing suitable curtains or screens. Most disease germs are easily killed by direct sunlight, as has been repeatedly shown by experiments—H. Preston Hoskins, Minnesota University farm.

Seed Corn 100% Safe

Less Work—No Guessing

Start every hill in the field with corn that you are positively sure is 100% good.

Ideal Testers

give every kernel the same test. Write us—learn the Ideal way—more efficient than any ever known. Iowa alone has 5000 in use. Shipped on approval—freight prepaid. Write today.

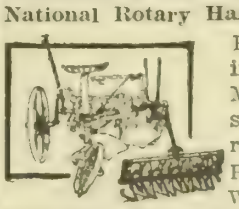
NATIONAL MFG. CO., 1732 Locust St., Des Moines, Ia.

More Wheat Per Acre

Reports show Griswold Durham yields more per acre than any of the other spring varieties. Good hardy wheat—large kernels. Write for prices and big seed catalog—mailed FREE.

GRISWOLD SEED COMPANY
155 S. 10th St. Lincoln, Neb.

National Rotary Harrow for Plows.



Perfect seed bed in one operation. Moisture conserved. Sold direct to farmer. Price only $9.00. Write for circular.

National Harow Co., Le Roy, Ill.

DUROC-JERSEY HOGS

SCHWAB'S DUROC-JERSEYS

A choice lot of spring and fall boars for sale; sired by Buddy K 4th, Wide Awake, Gold Bond, W. L. B.'s Perfection, Cremo and others. Also bred sows. Priced worth the money.

GEO. W. SCHWAB, Clay Center, Neb.

When communicating with advertisers please remember that you will favor both the publisher and advertiser by stating that you saw the advertisement in the Twentieth Century Farmer.

KANE'S "INVINCIBLE CHIEF" — "GOLDEN MODEL 15TH"

Offering of Immune Duroc-Jersey Bred Sows

Sale to Be Held in Kelso's Barn

Wisner, Neb., Monday, Feb., 9, 1914

45 HEAD There will be fifteen sows in this offering by Invincible Chief and twelve by Golden Model 15th, others by Uneeda Crimson Wonder, Col. Tippy, Golden Model 4th, Proud Tip Ear, B. & G.'s Wonder, Chief Invincible, Chief Select 2d and Wonder Model. Offering will be bred mostly to WONDER'S COL. by Proud Col. Jr., out of a Crimson Wonder Again dam, the show boar which Mr. Kane purchased from Mr. Widle. Others bred to SELECT IMPROVER by Chief Select 2d, INVINCIBLE CHIEF AGAIN by Invincible Chief and INVINCIBLE CHIEF. For catalogue, address

Mostly Tried Sows and Yearlings. Some Choice Gilts.

J. J. KANE, Wisner, Neb.

COL. N. G. KRASCHEL, Auct. G. E. HALL, Fieldman.

VALLEY KING *Grand Champion Boar at Iowa and Nebraska*

45 Head of yearling and tried sows and spring gilts, either sired by or bred to this great boar, will be offered in the Duroc-Jersey sale of **F. B. NELSON** at

Lindsay, Neb., Feb. 10, '14

The offering will consist of 12 big, smooth, tried sows, all bred to VALLEY KING, 19 fall gilts and several spring gilts sired by him. Others in the offering are sired by Critic B, Golden Model 3d, Golden Model 4th and Chief Select 2d. 20 head are bred to VALLEY KING and the balance to Red Chief Wonder 2d by Red Chief Wonder and F. B.'s Wonder by B. & L.'s Wonder. Here is an opportunity to get right into the blue blood of the breed, backed up by individual merit that is of the best. For catalogue address

F. B. NELSON, Lindsay, Neb.

Auctioneer—Col. N. G. Kraschel. Fieldman—G. E. Hall.

Froistad's Durocs Are Immune

40 Head of the top sows and gilts from his herd will be offered for sale at his farm adjoining

Newman Grove, Neb., on Feb. 11, '14

The offering will consist of 35 spring gilts and 5 yearling and tried sows. They are a strong, smooth, growthy lot, representing such sires as B. & L's. Wonder, Red Chief Wonder, Valley Prince, Belle's Wonder, M. O's. Chief Select and others. These sows are bred to BIG GANO, a splendid son of Col. Gano, ECHO WONDER by Belle's Wonder, CREMO and COL. MASCOT. Here is a chance to get in and get something good. Furthermore, you can know they are immune from cholera. Better write for catalogue at once to

M. O. FROISTAD, Newman Grove, Neb.

Auctioneer—Col. N. G. Kraschel. Fieldman—G. E. Hall.

WOLF BROS. ALBION, NEB. BOONE COUNTY.

Percherons, Belgians and Shires

OUR NEW IMPORTATION OF PERCHERON, BELGIAN AND SHIRE STALLIONS AND MARES has arrived. They are the best we have ever owned. We also have a splendid lot of American breds. They are the big, heavy-boned, drafty kind, with style and action. Come and look them over. We know you will be pleased.

A Certificate of Soundness Given With Each Animal. We invite correspondence.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Immune Duroc Offering

Forty head of immune Duroc bred sows and gilts will be offered for sale by M. O. Froistad at his farm near Newman Grove, Neb., on February 11. The offering will consist of thirty-five spring gilts and five yearling and tried sows. Mr. Froistad has succeeded in getting a good growth on this stuff, and they will be in admirable breeding condition on day of sale. These sows are of popular breeding, representing such sires as B. & L.'s Wonder, Red Chief Wonder, Valley Prince by Valley King, Belle's Wonder by the champion Belle's Crimson Wonder, M. O.'s Chief Select by Chief Select 2d, and others. An attractive feature of this sale is the fact that a good many of these sows are bred to the splendid young boar Big Gano. This hog is a son of the famous Colonel Gano and is in many respects an exact counterpart of his illustrious sire. If we are any judge, this hog is a comer, and a sow bred to him should prove a valuable asset in any herd. The balance of the offering is bred to Cremo and Colonel Mascot, both boars of commendable merit. Mr. Froistad will be glad to mail catalogues to anyone desiring same. Write him, mentioning this paper. G. E. Hall will represent Twentieth Century Farmer and will handle all bids entrusted to his care.

Valley King Offering

On February 10, at Lindsay, Neb., F. B. Nelson of that place will hold his annual bred sow sale. This is really in the strictest sense a Valley King offering. When we say Valley King we know that every breeder of Duroc-Jersey hogs in this territory will instantly remember this sensational boar, who was an outstanding winner of grand championship at both the Iowa and Nebraska state fairs. There will be forty-five head of yearling and tried sows and spring gilts, all of which are either sired by or bred to this great hog. There will be twelve great, big, roomy, tried sows, nineteen fall gilts and the balance spring gilts. Twenty head of the offering is bred to Valley King and the balance to Red Chief Wonder 2d by Red Chief Wonder by Crimson Wonder Again, and F. B.'s Wonder by B. & L.'s Wonder. This offering as a whole possesses extraordinary scale and is in the very best of breeding condition. If you are looking for the right kind, backed up by blood lines that are of the very best, you will find what you want in this sale without a doubt. Get your name on his mailing list for catalogue. Send your bids to G. E. Hall of this paper if you cannot attend in person. Kindly mention Twentieth Century Farmer when writing.

Kane's Duroc Offering

On Monday, February 9, at Wisner, Neb., J. J. Kane of that place will offer forty-five head of immune Duroc-Jersey bred sows that should appeal to anyone who is desirous of obtaining some new blood in his herd. Mr. Kane has the reputation of being one of the most discriminating buyers of good breeding stock. When he goes out to buy any breeding animal to put in his herd he simply hunts the animal and lets the price be a secondary consideration. Not only this, but he is a careful student of pedigrees and gives close attention to mating and breeding. The offering he is making at this time will consist of fifteen sows by Invincible Chief and twelve by Golden Model 15th. Others are by Uneeda Crimson Wonder, Colonel Tippy, Golden Model 4th, Proud Tip Ear, B. & G.'s Wonder, Chief Invincible, Chief Select 2d and Wonder's Model. The offering will be bred mostly to Wonder's Colonel by Proud Colonel Junior and out of a Crimson Wonder Again dam. Others are bred to Select Improver by Chief Select 2d, Invincible Chief and Invincible Chief Again, a son of Invincible Chief. Write for catalogue and attend this sale. Remember, everything is immune from cholera. If you cannot attend, send bids to G. E. Hall of this paper and they will be given careful attention.

Shallenberger's Coming Sale

A coming Shorthorn sale that should attract attention is that of Hon. A. C. Shallenberger, to be held at Alma, Neb., on March 25. This is ex-Governor Shallenberger's fifteenth annual sale, and he says that he is going to make it an event of more than ordinary importance by putting up an offering of cattle that is the superior of any he has ever made in the past. The offering will consist of thirty-eight females and twelve bulls. Females are mostly heifers of breeding age and matured cows. Ten of the cows will have calves at foot. These are all bred to his chief herd bull, His Highness, considered by Mr. Shallenberger to be the best breed-

Galloway's Nitragin MAKES ALFALFA GROW IN ANY SOIL

Seed inoculated with "NITRAGIN" produces sure and wonderful crops. Big profits and sure success where you have failed before. Increases crops everywhere. Alfalfa on my farm last year produced $90 per acre. The secret is "NITRAGIN," pure seed and knowing how to do it according to the Galloway system.

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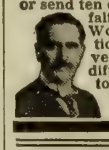
Write a postal and get our 1914 Pure Seed Book Free, or send ten cents for Galloway's 62-page, 25-cent Alfalfa book entitled "How to Grow Alfalfa, the Wonder Crop"—a mine of valuable information; tells how to get big, heavy stands, prevent winter killing, prepare seed bed, about different varieties, planting and curing, how to inoculate seed and many other things.



Galloway Brothers-Bowman Co.
266 Galloway Station, Waterloo, Iowa.

POLAND-CHINA HOGS

POLAND-CHINA BRED SOWS AT AUCTION

At Geneva, Neb., February 10, 1914

Five tried sows, 37 spring gilts and 4 fall male pigs. They are by Blue Ribbon Hastings, Big Sensation, Big Victor and others. These sows are bred to **Blue Ribbon Hastings, Eavey's Perfection, Big Iowa** and **Great Star** by Big Victor. This offering is a very choice one all the way through and carries the best blood lines of the best big type families. If you are looking for Poland-Chinas that are right and will go out and make good for you, write for catalogue to

W. J. EAVEY, Geneva, Neb.

POLAND-CHINA OPPORTUNITIES

Big, smooth, heavy boned, easy feeders. Spring males, by the noted **Wayside Jumbo.** Write me. I have what you want.

FRED WILLE, Columbus, Neb.

O. I. C. HOGS

THIS **O.I.C.** SOW WEIGHED 932 LBS. AT 23 MONTHS OLD

IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **G. S. BENJAMIN** RFD79 **Portland, Mich.**

HOLSTEIN-FRIESIAN

Purebred Registered **HOLSTEIN CATTLE**

If your cows produce only about 4,000 pounds of milk per year and 160 pounds of fat they are practically worthless; 350 lbs. of fat per cow should be your minimum requirement.

No matter how poor your present herd is, you can easily raise it to this standard in a few years by the intelligent use of a well selected Holstein-Friesian bull.

Send for FREE Illustrated Descriptive Booklets.

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JERSEY CATTLE

High-Grade Cattle—High-Grade Farmers

The pure-bred **Jersey Cow**

is one of the most high-grade animals ever developed by man. The high-grade farmer demands the high-grade cow. No breed equals the Jersey for the economical production of high-grade milk and butter. No breed equals the Jersey for intensive farming.

Send for information to

THE AMERICAN JERSEY CATTLE CLUB
324 W. 23d Street, New York

WINELAND FARM JERSEYS

Bulls of serviceable age for sale, sired by Duke Raleigh by Noble of Oakland. Also a number of choice heifers bred to freshen soon. I can suit you in both quality and price.

H. C. YOUNG, Lincoln, Neb.

RED POLLED CATTLE

RED POLLS

Bulls and heifers for sale. Prices reasonable. Quality the best. Satisfaction guaranteed. Write your wants or call.

W. F. SCHWAB, Clay Center, Neb.

ng bull in service on this farm. There vill be a number of show cows and ieifers included in the offering. Among he bulls are two of serviceable age, and he best, he says, that he has ever old. While you are reminded of the act, you had better write Mr. Shallenberger for catalogue, which will be eady for distribution in a very short ime. Also watch these columns for urther information. Kindly mention Twentieth Century Farmer when writing.

Holsteins at Auction

On February 11, at his farm near Walon, Neb., a few miles east of Lincoln, F. A. Gierens will offer sixty-five head of Holstein cattle for sale. Forty head of these cattle are registered and of the very best breeding. Included in the offering will be a splendid son of the world famous Katy Gerben and also four grandsons of this great cow. Besides these there will be a number of other bulls of serviceable age. Included among the females will be twenty-five granddaughters of Katy Gerben. This offering as a whole is an especially good one. One feature that should appeal to buyers in this territory is the fact that these cattle are practically all Nebraska-bred cattle and are tuberculin tested and guaranteed free from disease. If you are contemplating the purchase of something in this line, we believe here is an opportunity to get something worth while. Write Mr. Gierens for further particulars, mentioning Twentieth Century Farmer.

Eavey's Poland Sale

We particularly desire to call the attention of readers of Twentieth Century Farmer to the advertisement of W. J. Eavey, the well known breeder of Poland-China hogs at Geneva, Neb. Mr. Eavey will hold his annual sale of bred sows at his farm near that place on February 10, and will present an offering for sale that should receive the attention of anyone wanting something in his line. In point of breeding his herd is as good as is to be found anywhere. The offering he is making at this time represents such sires as Blue Ribbon Hastings, Big Sensation, Big Victor and others. They are bred to Blue Ribbon Hastings, he by Jumbo Junior 2d; Eavey's Perfection by Big Sensation, Big Iowa by Winning Dude, and Great Star by Big Victor. Besides bred sows he will also sell four fall male pigs, representing practically the same blood lines as those mentioned above. Write for catalogue and arrange to attend this sale. Kindly mention Twentieth Century Farmer when writing.

Would Raise Elk

A rancher has applied for the rental of 20 acres on the Pike national forest, Colorado, to be used in connection with other private land for raising elk as a commercial venture.

To Mellow Tone

Makers of phonographs are aiming to use wood instead of metal in all parts of the instrument where this is possible, in order to increase the mollowness of the tone.

Seeds for Reforestation

The forest service collected 40,000 pounds of tree seed last year for use in reforestation work. The total area reforested was about 30,000 acres.

Sale Dates

Hereford Cattle

February 19 and 20—Nebraska Hereford Breeders' Association. Sale at Grand Island, Neb., Robert Mousel, Cambridge, Neb., manager.

April 15 and 16, 1914—Breeders' Combination sale at South Omaha, W. N. Rogers, McCook, Neb., manager.

Holstein-Friesian Cattle

February 3 and 4—H. C. Glissman, Station B, Omaha, Neb. Sale at South Omaha.

Aberdeen-Angus Cattle

April 1 and 2, 1914—Charles Escher, Botna, Ia. Sale at South Omaha, Neb.

Duroc-Jerseys

February 2—E. H. Carpenter, Fontanelle, Neb.
February 3—Clarence Wallace, Wisner, Neb.
February 4—Gus Krueger, Beemer, Neb.
February 5—Robert Leisy, Wisner, Neb.
February 6—Henry Stuthman, Pilger, Neb.
February 9—O. E. Green, Genoa, Neb.
February 9—J. J. Kane, Wisner, Neb.
February 10—F. B. Nelson, Lindsay, Neb
February 11—M. O. Froistad, Newman Grove, Neb.
February 18—George W. Schwab, Clay Center, Neb.
February 21—E. E. and N. T. Youngs, Lexington, Neb.
February 26—J. J. Kane, Wisner, Neb.
February 27—Blackburn Bros., Royal, Neb.
February 27—O. G. Smith & Son, Kearney, Neb.
March 2—L. J. Kuzel, Clarkson, Neb.

Poland-Chinas

February 10—W. J. Eavey, Geneva, Neb.
February 11—D. C. Lonergan, Florence, Neb.
February 20—A. E. Rich, Creighton, Neb.
February 24—Jacob Dietsch, Boone, Neb.
February 28—O. J. McCullough, Clarks, Neb. Sale at Central City, Neb.
March 6—William Ferguson, Scribner, Neb.

Hampshire Hogs

March 14, 1914—Roy Fisher, Winside, Neb. Sale at Wayne, Neb.

Shorthorns

February 27—J. C. Hardman & Son, Valley, Neb.
March 11—E. H. Cosgrove, Farnam, Neb.
March 25—A. C. Shallenberger, Alma, Neb.

Clydesdale Horses

February 27—J. C. Hardman & Son, Valley, Neb.

$254 an Acre NET from Potatoes

is what the manager of one of the Shippers' Associations on our line says can be averaged every year. The long growing season, productive soil and abundant rainfall do it. One farmer gathered at the rate of

1120 Bushels to the Acre

Write me for illustrated booklets and magazines telling of successes Northern men have made in Kentucky, Tennessee, Georgia, Alabama, West Florida and South Mississippi. You can do as well on these cheap lands and live in an almost perfect climate.

G. A. PARK, General Immigration and Industrial Agent
Box A-108, Louisville & Nashville R. R., Louisville, Ky. (406)

HORSES

Percherons, Belgians and Shires Imported and Homebred Stallions and Mares, ranging in age from coming two-year-olds to matured ages. We have a lot of two and three-year-old stallions weighing from 1900 to 2100 pounds; among them a fine lot of pasture-raised stallions—the kind for the western breeder. A fine lot of mares for sale. Always have stock for sale—never sold out. Write for prices, descriptions, etc.
NORTH & ROBINSON CO., - Grand Island, Neb.

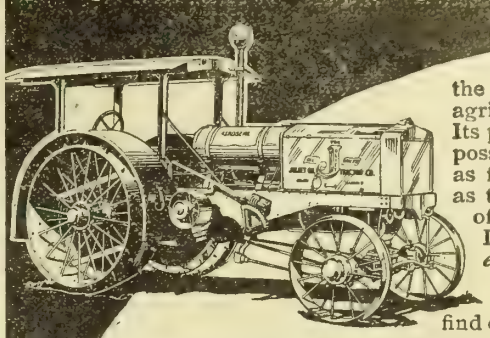
Foaled and grown on the farm, offered at farmer's prices. Eight coming 2-year studs, 9 coming 3-year studs, 8 3-year-old and over studs, registered Percheron Society of America. Of the big type with substance and from French ancestry on both sides. Just east of Omaha. FRED CHANDLER, Rt. 7, Chariton, Iowa.

FRESH IMPORTATION OF HEAVY BONED, BIG
BELGIAN STALLIONS
just received. You should see them. Eighty Belgians and Percherons on hand. A carload of good mares (both breeds) for sale now at prices that will move them. Some first class jacks also for sale.
W. L. De CLOW, Cedar Rapids Stallion and Jack Farm, Cedar Rapids, Iowa.

JACKS AND JENNETS.
Eighty large-boned, black Mammoth Jacks, 15 to 16 hands standard, guaranteed and priced to sell The kind all are looking for. Also good, young Percheron stallions. Reference, five banks of Lawrence. 40 miles west of Kansas City on Santa Fe and U. P. R. R.
AL. E. SMITH, - - LAWRENCE, KAN.

TOWER CULTIVATORS
Are the best for corn cultivation
Are " " " potato "
Are " " " bean "
Are " " " cotton "
They avoid root pruning entirely
They slaughter all noxious weeds
They form the desired IDEAL mulch
Thus: they mature crops much earlier
Largely increase the average yield
Write for 20th Century corn book today
J. D. Tower & Sons Co.
93rd Street, Mendota, Illinois

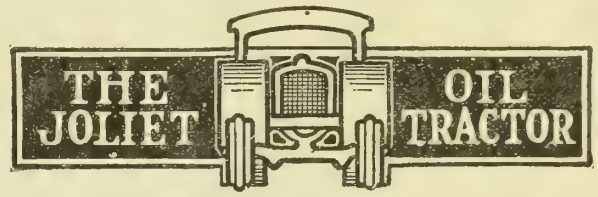
This Tractor Has Startled the World!



The Joliet Oil Tractor is the tractor that the *thinking, value-demanding*, agricultural world has waited for. Its performance under the hardest possible field conditions has put it as far ahead of ordinary tractors as the modern harvester is ahead of the old-fashioned hand scythe. If *dependability, power, fuel economy, ease of operation and simple, staunch construction* mean anything to you, then find out about the Joliet Oil Tractor.

Speed 8 to 10 Miles an Hour! Light—Powerful—Simple!

The Joliet Oil Tractor is as speedy as a motor truck. Ordinary tractors have a speed of from 2 to 4 miles an hour—and shake themselves to pieces doing it. The Joliet runs 8 to 10 miles an hour, with little or no vibration, due to the efficient spring suspension. The Joliet is the lightest tractor for its power ever built, being from one-third to one-half lighter than any other of equal power. It has such perfect bearings that an ordinary man can roll this 8,700-pound machine along a floor with one hand! Looks impossible? Let us prove it.



A Real Kerosene-Burning Tractor Note These Exclusive Features

The Joliet burns kerosene *all* the time. It doesn't make a bluff at it. The engine was designed to run on kerosene, and with our patent mixer it does it well. This means fuel bills cut in two. Note these features of the Joliet. You won't find them combined in *any* other tractor for years—if ever. Here they are: Simplicity, light weight (200 pounds per horsepower), spring suspension of entire machine, roller bearings on all moving parts, every axle, bearing and gear *dust-proof* and always run in oil, selective type transmission, chrome-vanadium gears on nickel steel shafts, 4 cylinder, heavy duty kerosene-burning engine, automobile control throughout, road speed 8 to 10 miles per hour. *Now* do you wonder why experts say the Joliet is matchless?

$600 Puts It On Your Farm!

The price of a Joliet Oil Tractor is *less* than most tractors of its size and capacity. The $600 is simply to assure us of your good faith. We give you absolutely a *free trial* on your own farm and cheerfully refund your money if we don't make good. Let us tell you about this. There's over 30 years of machinery manufacturing experience behind the Joliet Oil Tractor—"The Packard of the Farm." Fill in and mail the coupon for the greatest tractor book ever printed—it will pay you well. (1)

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Send me full particulars of the Joliet Oil Tractor.

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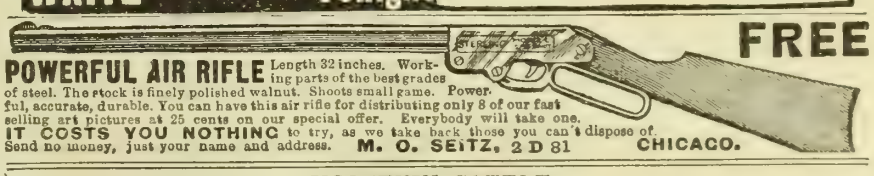

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HOLSTEIN CATTLE

HOLSTEINS AT AUCTION

40 Head of Registered Holsteins and 25 High Grades to Be Sold
AT AUCTION AT FARM NEAR WALTON, NEB., FEBRUARY 11, 1914.

This offering will consist of a splendid son of Katy Gerben and also four grandsons, as well as a number of other choice bulls of serviceable age. There will also be 25 granddaughters of Katy Gerben and several other females of choicest breeding. These cattle are all Nebraska bred and tuberculin tested and the offering is an exceptionally good one. Walton is located a few miles east of Lincoln on the Missouri Pacific R. R. Write for further information to
COL. Z. S. BRANSON, Auct. **T. A. GIERENS, WALTON, NEB.**

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.
DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

POLAND-CHINA HOGS

IMMUNE POLAND-CHINA GILTS

We have a splendid lot of spring gilts for sale, sired by Blue Valley and Blue Valley's Orange by Big Orange. They have been given the double treatment and are immune from disease, and all bred for early spring farrow. Satisfaction guaranteed.
THOMAS P. WALKER & SON, Alexandria, Neb.

Review of Live Stock Market

By A. C. Davenport

CONDITIONS prevailing in the cattle trade during the week just closed have shown so little change that there is not much to be said. In fact, conditions have continued practically the same as were outlined a week ago; that is, the market has been in very satisfactory condition. The demand for all kinds of cattle has been broad and the markets of the country generally active and in a good healthy condition. As to prices, there have been weak spots as well as strong spots, and in the main no great change has taken place. It is safe to say, though, that the high prices prevailing a week ago have been fully maintained and in some instances substantial gains have been made.

Receipts at the six largest markets continue to run a little behind the record of a year ago, which has some influence toward maintaining prices.

It may be of interest to note that prices for beef cattle are high for the month of January. Taking Omaha as a basis, the best cattle have sold this month 45c higher than any cattle bought in January, 1913, and $1.10 higher than two years ago. A year ago at this time good to choice cattle were quoted at Omaha as selling at $7.60@8.00, in fact, good heavy cattle were selling under the $8.00 mark. The same kind of cattle are bringing around $8.50 or better at present writing. Cows and heifers show about the same improvement over last year. Stockers and feeders, however, were very high a year ago at this time and prices on that class of stock have not shown so much change, but still they are higher this year. It is safe to say that cattle are now the highest that they have been the latter part of January in a good many years. While the figures quoted refer to Omaha, it will be understood that other markets show corresponding gains.

It is very evident that the prediction of high prices on fat cattle made last fall for the spring of 1914 has already been realized. However, the great majority of operators on the market do not believe that the top has been reached by any means. On the contrary, most cattlemen look for a still higher mark as the season advances, although many are of the opinion that the market is already high enough for the time being, and that sellers may be forced to wait a few weeks for further gains. As a matter of course, this will depend largely upon the size of the receipts. Cattle feeders have shown a disposition all the season to push their cattle to market as rapidly as possible, which has kept the markets of the country well supplied the greater part of the time, thus tending to arrest the upward movement in values.

Healthy Hog Trade

Hogs have been acting this week about the same as last, that is, prices have been gradually firming up, although net gains have been small. The trade has been in a good healthy condition and sellers have been more than pleased with the action of the market. Prices have reached the highest point touched since the last of September, and it would take only a few cents further advance, which might be scored any day, to carry the average market to the highest notch occupied by it since July of last year. A more striking comparison than this is brought out by the fact that hogs are now selling for more money than they ever brought during the month of January, as far back as the memory of the oldest trader runs, with the exception of January, 1910. At present writing the average price of all the hogs on the basis of Omaha is in round numbers a dollar higher than at this time in January, 1913, and over $2.00 per hundred higher than two years ago.

It will be remembered that in 1910 hogs sold on the basis of Omaha during January at prices averaging a little better than $8.00. In February the market advanced rapidly and continued on the upgrade until the latter part of March, when the average price ranged as high as $10.70.

Some of the most extreme bulls on the market are looking for something of the same kind to happen this year, but it is hardly safe to predict anything quite so strong as that until more is known regarding supplies of hogs in the country. Reports as to the extent of the losses from cholera have been so much at variance that it has been impossible thus far to obtain satisfactory knowledge of the number of hogs still in farmers' hands. The bulls, however, hold to the belief that the reports of severe losses from cholera are all true, while the bears fall back on the old axiom, "This is a big country," and profess to believe that enough hogs will make their appearance at market to prevent the realization of skyrocket prices.

Lambs Lower Than Last Year

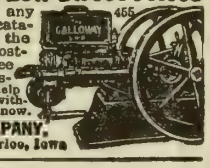
Sheep and lambs have been in excellent demand all the week and prices have remained about where they were the week before, in fact, nothing has occurred to disturb the even tenure of the market. As often as receipts have proven a little burdensome prices have eased off, but they speedily come back as soon as receipts drop off again. While the market has been very satisfactory and prices high enough to make the feeders a little money, lambs and yearlings are not as high as they were a year ago. Taking Omaha as a basis from which to figure lambs this week have been selling 50@75c lower than a year ago, and yearlings over a dollar lower. On the other hand ewes are selling very nearly as high as a year ago.

Save $50 to $300

I absolutely guarantee to save you $50 to $300 on any Galloway gasoline engine. Made in sizes from 1 3-4 h. p. to 15 h. p. My famous 5 h.p. engine—without an equal on the market—sells for $99.50 for the next 60 days only! Buy now! Same size costs $225 to $300 through your dealer. Think of it! Over 30,000 Galloway engines in use today. All sold on same, liberal, free 90 Day Trial Offer I make you—and all giving satisfaction. Isn't that proof enough?

Get My Catalog and Low Direct Prices

Write me before you buy any other style or make. Get my catalog and low, direct price on the famous Galloway line of frost-proof, water cooled engines. Free Service Department at your disposal. My special 1914 offer will help you get an engine partly or wholly without cost to you. Write today. Do it now.



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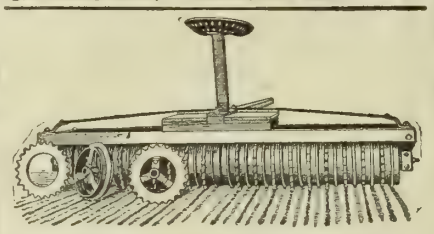

Pulverizes clods, fills and packs air spaces in the soil, levels and mulches the surface, makes a mellow, smooth, compact seed bed which holds the moisture and stimulates seed germination and growth.

Pays for itself in one season. Is made of iron and lasts a lifetime.

Write for circulars and prices.

WALKER MANUFACTURING CO., Council Bluffs, Iowa.

The Market Place

FOR THE BUYER AND SELLER

POULTRY

Andalusians

BLUE ANDALUSIAN COCKERELS—Sweepstake winners, scoring 95, $2.50; eggs, $3 setting. Maude McMurry, Bolckow, Mo.

Langshans

CHOICE BLACK LANGSHANS—MAE Curtis, Lyons, Neb.

PRIZE-WINNING BLACK LANGSHAN cockerels for $25 each. Good cockerels as low as $3. Write John T. Nelson, North Loup, Neb.

CHOICE BLACK LANGSHAN COCKERELS, $1.50. Mrs. H. H. Krum, Arlington, Neb.

WHITE LANGSHAN COCKERELS—$2.50 and $2 each. Eggs in season. Henry Neidig, Madison, Neb.

BIG-SCORED BLACK LANGSHAN cockerels, $2.50 each, guaranteed. H. Osterfoss Farm, Hedrick, Iowa.

Cornish

DARK CORNISH EGGS FOR SALE—F. B. Tedrow, Ord, Neb.

Leghorns

ROSE COMB BROWN LEGHORN Cockerels, Indian Runner Ducks. Otto Frahm, Fort Calhoun, Neb.

MY ENTIRE FLOCK CHOICE ROSE-comb White Leghorn cockerels, $1 each; hens, $8; pullets, $10 dozen. Kaveney Bros., Linwood, Neb.

ROSE-COMB BROWN LEGHORN cockerels, 75c each. Ben Wachter, Herman, Neb.

SINGLE-COMB WHITE LEGHORN cockerels, $1.50. Mrs. L. Schellhorn, Chester, Neb.

ROSE-COMB BROWN LEGHORN cockerels. Mrs. E. Fauquet, Wahoo, Neb.

Orpingtons

WHITE ORPINGTONS—COCKERELS, $1.50 to $4; 1-year-old cock direct from Kellerstrass last March, $10 to first party sending money with order. H. E. Eells, Falls City, Neb.

SCOTT'S FAMOUS CRYSTAL WHITE Orpingtons—breeding stock and eggs for sale. B. F. Scott, Rising City, Neb.

BUFF OR WHITE ORPINGTONS—From prize-winning stock, bred for layers. Catalogue free. Frank Lewis, Gibbon, Neb.

ROSE-COMB BUFF ORPINGTON cockerels for sale. Amos Toyne, Adaza, Iowa.

SOME SINGLE-COMB WHITE ORpington pullets, cockerels and year-old hens for sale reasonable. Eggs for hatching. C. Higinbotham, Central City, Neb.

Plymouth Rocks

BARRED ROCK COCKERELS—"Thompson's Ringlets" direct; also choice Silver Campines and Buff Orpingtons. All birds shipped on approval. Archdale Farm, Fremont, Neb.

CHOICE BARRED ROCK COCKERels—Heavy-boned and well barred—$1.50 and $2.50; pullets, $1 each. F. G. Selden, Rising City, Neb.

BIG BUFF ROCKS, GOOD ENOUGH to win four firsts at big Nebraska shows; grand layers. Mrs. Isaac Williams, Wymore, Neb.

CHOICE BARRED ROCK COCKERELS shipped on approval. George Franklin, Axtell, Neb.

FISHEL STRAIN WHITE PLYMOUTH Rock cockerels; prices reasonable. Eggs in season. Mrs. J. Lampert, Wahoo, Neb.

POULTRY

Plymouth Rocks

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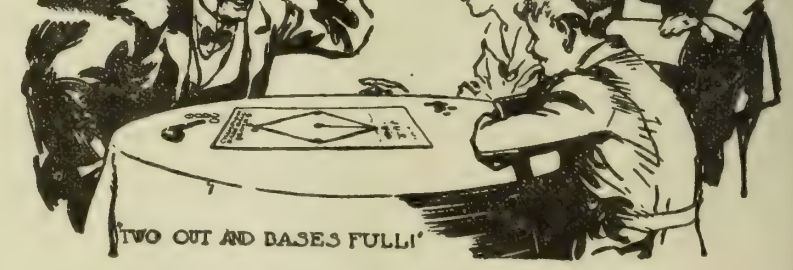

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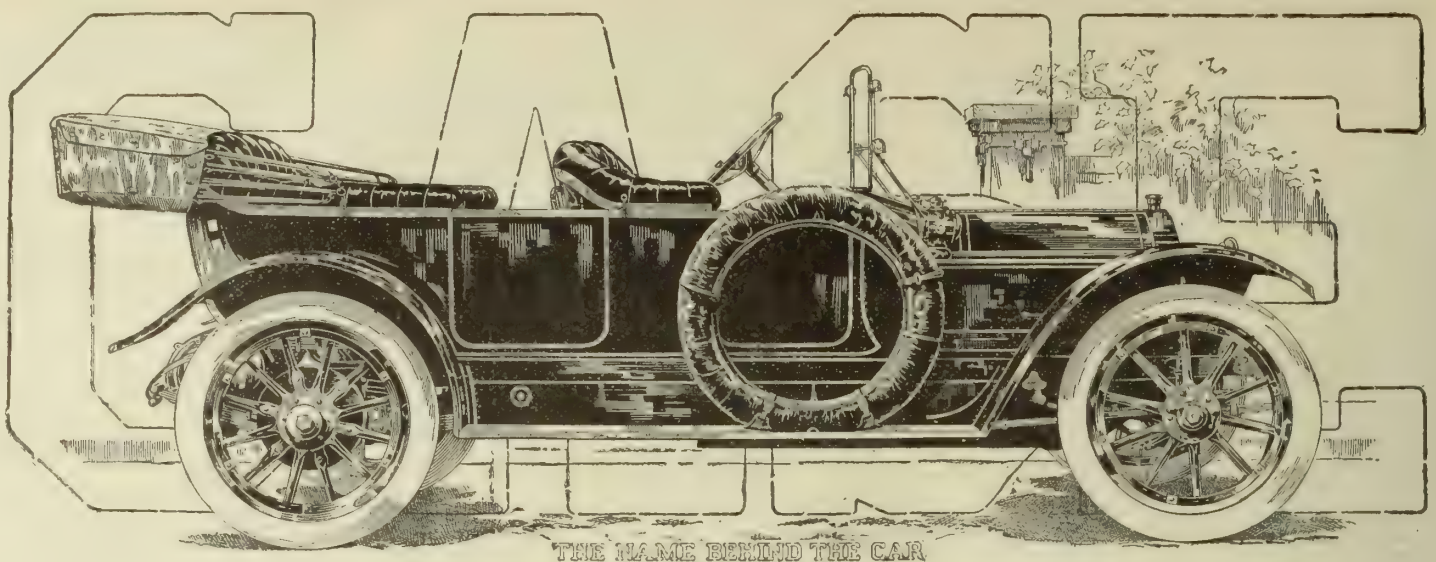

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TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, February 7, 1914 | Number 687

Prattle of the Youngsters

They Do, Too

"Mamma, I love you awful much," said little Amy, as she put her arms around her mother's neck.

"And I love you, too, Amy, when you are good," replied her mother.

"But, mamma," continued the little miss, not to be outdone, "I love you just the same, even when you ain't no good."

Gave Information

Little Tommy had spent his first day at school. "What did you learn?" he was asked on his return home.

"Didn't learn nothin'."

"Well, what did you do?"

"Didn't do nothin' A woman wanted to know how to spell 'cat' and I told her."

Spanish Floriculture

Teacher—Now, children, can you tell me what are the national flowers of England?

Class—Roses.

Teacher—And France?

Class—Lilies.

Teacher—And Spain?

(Silence for a minute—then small voice at back of the schoolroom :

"Bullrushes, ma'am."—Life.

And She Was

A 4-year-old miss, whose homeliness is as pronounced as her lovableness, has long resented the practice of her parents and others of spelling words that they didn't want her to hear. Recently a relative who hadn't seen the child arrived for a short visit. In talking with the mother the next day in the little girl's presence she said: "Isn't it too bad she is so u-g-l-y?"

"I may be u-g-l-y, auntie, but I'm s-m-a-r-t."

His Contribution

A little boy of 5 was invited to a children's party. The next day he was giving an account of the fun, and said that each of the little visitors had contributed either a song, a recitation or music for the pleasure of the rest.

"Oh, poor little Jack!" said his mother. "How very unfortunate you could do nothing!"

"Yes, I could, mother," replied the young hopeful. "I stood up and said my prayers!"

How Did He?

A Sunday school superintendent, named Mead, who was a graduate of Yale, was deploring the fact that the children of the present generation do not memorize the scriptures as they did a generation ago. "Now, I'll tell you of a practical joke," he announced to the scholars, "that a student once tried to play on the old president of Yale.

"He removed the Bible from the desk and put a dictionary in its place. Next morning at chapel the president announced that he would read the 119th psalm, before he discovered the trick. He opened the dictionary, and so perfectly had he committed the psalm that he could repeat every word, and no one ever knew that the change had been made except the president and the boy who

He paused a moment for this to take effect, when a small voice piped up: "How did you find it out, Mr.

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Let the Tractor Do the Work

LAST fall the Twentieth Century Farmer engineered a demonstration at Fremont, Neb., at which all the best known makes of tractors were shown. Farmers from many different states were present to watch these tractors work. They saw what each tractor could do and each tractor man made his talk to the spectators, after which the farmer could use his own judgment as to which make would best meet his demands and requirements. There was no contest, with rules and regulations, but each tractor took its own strip of land and worked it under the eyes of the prospective purchaser and the man who was interested enough to come to the demonstration.

This demonstration was planned and carried out, as the demonstration next fall will be, to satisfy the general demand for knowledge of this comparatively new method of performing the hardest labor on the farm. In our next issue we will tell you something about our plans for the demonstration the coming season and show some views of tractors at work, besides having interesting articles in regard to the use of power on the

Bright and Breezy

Too Particular

A traveling salesman stopping at a hotel in a country town on circus day refused to use the wet and soiled crash towel in the lobby.

In response to the drummer's protest the colored porter said, deprecatingly:

"Boss, seventy-five men has wiped dere hans on dat tow'l dis mornin' an' you de fust ter complain!"

Mother's Cooking

Mrs. Jelly—How are the biscuits, George?

Jelly—A trifle heavy, dearest.

Mrs. Jelly—And the soup?

Jelly—Too much seasoning in it.

Mrs. Jelly—And the duck?

Jelly—Done a little too much.

Mrs. Jelly—I'm so sorry, dear, that your dinner does not suit you—your mother prepared it.—National Food Magazine.

Couldn't Scare Him

A grave digger had the habit of visiting the cemetery every night at about midnight to see that all was going well

Some boys decided to play a trick on him. They dug a trench in a dark spot which the grave digger always passed over, and one of their number, clothed in a white sheet, hid behind a tree.

The grave digger at midnight duly appeared, and, sure enough, he stumbled and fell into the grave.

Then the boy in the sheet stepped forth and said, in hollow tones:

"What are you doing in my grave?"

"What are you doing out of it?" the grave digger calmly replied.

Obeyed Instructions

One of the bosses at Baldwin's locomotive works had to lay off an argumentative Irishman named Pat, so he saved discussion by putting the discharge in writing. The next day Pat was missing, but a week later the boss was passing through the shop and he saw him again at his lathe. Going up to the Irishman, he demanded firecely:

"Didn't you get my letter?"

"Yis, sur, Oi did," said Pat.

"Did you read it?"

"Sure, sur, Oi read it inside and Oi read it outside," said Pat, "and on the inside yez said I was fired, and on the outside yez said, 'Return to Baldwin's locomotive works in five days.' "—Lippincott's.

Either Variety

Ed and Jo were walking along a country road one hot day in July and became very thirsty, but could not find any water. Coming at last to a farmer's house, and noticing a woman standing in the door, they went up to her and requested a drink of water. She said: "We haven't had any rain for three weeks and the well is dry."

"Then please give us a drink of milk."

The woman replied that the milk was all taken to market, but added that she had some buttermilk stored near and would give the thirsty travelers a drink of it.

After quenching their thirst with buttermilk they offered to pay the kind woman for it, but she refused the money, saying: "I was going to give it to the pigs, anyway"

THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Meeting of the Nebraska State Fair Board

The Editor Was Unable to Find a Real State Board of Agriculture at the Lincoln Meeting

THE editor of this paper attended all the sessions of the Nebraska State Board of Agriculture. He was there only as a spectator. His observance of the organization in session and the work and the character of the members composing the body were very favorable, viewed from the standpoint of a state fair. The discussions were very practical, dealing with fair management topics. Concessions, horse races, amusements, fair program features, agricultural exhibits, live stock premiums and classifications, baby shows and kindred subjects were under discussion. The men taking part in the discussions showed themselves to be thoroughly familiar with the business end of fair management. There was no time for the discussion of practical farm subjects.

The attendance was the largest in the history of the organization. Besides the twenty-nine corporate members of the state board, there were sixty ex-officio members representing county fair associations. This meeting was reresentative of nearly every walk of life. There were lawyers, real estate men, implement dealers, general dry goods merchants, active and retired farmers and live stock breeders. The kind of business a man is engaged in is not an essential qualification for a first-class fair man. The conducting of successful county and state fairs depends upon having men with experience in fair matters who possess executive ability.

Correcting a False Impression

At the first session Secretary Mellor and Treasurer Dickman made their annual reports. E. R. Purcell of Broken Bow, chairman of the auditing committee, reported that it had inspected the books of the secretary and treasurer and found them correct and in excellent condition. We learned from some of the members that there was an impression in their neighborhood that there had been grafting and misappropriation of funds. They attributed this to the articles which have appeared in the Twentieth Century Farmer. This paper has never made such a charge. It has questioned the expenditure of the $2,000 extending the boulevard and the $15,000 additional cost for rushing the erection of the agricultural building and then not completing it in time for the fair last fall. We believe the talk of graft was caused by the demand so insistently made by Secretary Mellor inviting an investigation of his books. This statement was printed in the first article on the reorganization of the State Board of Agriculture. We tried then to make plain that neither the correctness or accuracy of the books were the real issue.

Secretary Mellor, after reading an exhaustive report, made an oral statement in regard to the use of free passes. He admitted that free passes had been given out, but that their use had been limited to 371 free passes for the 1913 fair. In other words, he is guilty, and only used passes where they would do the most good. We have always conceded Mr. Mellor to be a clever politician.

A banquet was tendered to the State Board of Agriculture and the County Fair Association by the Commercial Club. Over 200 members attended. A number of addresses were given, followed by informal discussions, and a business meeting was held. The following officers were reelected: H. P. Wilson, Geneva, president; Charles McLeod of Stanton, vice president, and W. H. Smith of Seward, secretary and treasurer. Henry Pickett of Wahoo, Jacob Weis of Geneva and H. M. Kojer of Clarks were appointed to co-operate with C. W. Pugsley of the state farm in arranging for state farm exhibits at county fairs.

Turn Down Gustafson's Resolutions

The closing day proved to be the liveliest session. Two incidents served to divert the proceedings out of the usual routine. C. H. Gustafson of Saunders county offered a set of resolutions making five changes in the rules of the board. These are printed in box on this page. By a vote of 51 to 6, the proposed change in the manner of selecting a board of managers was snowed under. The members who voted in favor of this rule were C. H. Gustafson of Mead, G. C. Doehling of Surprise, H. L. McKelvie of Fairbury, C. E. Hopping of Beaver City, H. U. Hubbard of Chambers and F. M. Stocking of Wahoo.

The anti-free pass rule proposed by Mr. Gustafson was defeated by a vote of 55 to 2, Mr. Gustafson and Mr. McKelvie of Fairfield alone voting in favor of the change to an absolute cash basis for admissions.

Two rules were adopted—the one which provides that the president of the State Board of Agriculture shall not be eligible to a place on the board of managers within two years after his retirement, and the [illegible] the management to prohibit misleading, immoral or objectionable amusements on the fair grounds.

An Opportunity to Do Something

In support of his rules Mr. Gustafson said: "There was unrest in the state over the Board of Agriculture, and the legislature one year ago was called upon to change the laws gov-

CONTINUED ON PAGE [illegible]

The Gustafson Resolutions

WE REPRODUCE below the resolutions presented to the Nebraska State Board of Agriculture by C. H. Gustafson of Mead. What was done with these resolutions is told in the accompanying account of the meeting:

1. The board of managers shall consist of seven members of the State Board of Agriculture, to be chosen as follows: One member from each of the six congressional districts of the state, to be elected by such districts during the regular annual meeting of the board, and to serve until their successors are elected and qualify. The president of the State Board of Agriculture shall be chairman ex-officio of the board of managers.

Members of the board of managers shall execute satisfactory bond, running to the president of the State Board of Agriculture in such sum as the State Board of Agriculture shall prescribe at its annual meeting.

2. The president of the State Board of Agriculture shall not be eligible to membership upon the board of managers for two years next succeeding his retirement from the office of president.

3. All members of the State Board of Agriculture shall be notified in writing by the secretary of the board of any regular meeting of the board of managers in order that any member of the state board shall have opportunity to appear before the board of managers and be cognizant of its proceedings. Such notice shall be mailed to each member of the state board not less than five days preceding such regular or special meeting.

Provided, That this rule shall not apply in case of meetings of the board of managers which may be held immediately prior to or during the State Fair.

4. Hereafter no free tickets shall be issued to the State Fair to any person or for any purpose whatsoever. This rule shall apply to all exhibitors, concessionaries, members of the board, employes, state and other public officials, and all other persons. Admission to the State Fair shall be only upon payment of the regular fee deposited in cash by the person passing through the gates.

5. In the interest of the protection of the patrons of the State Fair, the board of managers shall not permit the operation of any concessions or amusements of a misleading, immoral or objectionable character upon the State Fair grounds, whether such concessions or amusements be for fee or be operated wholly or in part for the benefit of the State Fair. Upon satisfactory evidence of misconduct or misrepresentation by any concessioner, exhibitor or manager or employe of any amusement enterprise, it shall be the duty of the board of managers to immediately revoke such concession and eject such offender from the State Fair grounds. The board of managers shall have police power to carry this rule into effect.

Read Editor's Answer to President Robert's Criticisms on Page Six

From Producer to the Ultimate Consumer

Being the Story of an Up-to-Date Poultry Plant Which Has Solved the Marketing Problem

THE poultry industry affords great opportunities for investment, entertainment and amusement. It affords great opportunities also for the inexperienced to part with their money. We are admonished that "all is not gold that glitters," and this old saying is abundantly verified when applied to the poultry industry on a large scale or under confinement. There is probably no line of animal industry that figures up more flatteringly on the investment employed than poultry. There is nothing that seems to be more easily within grasp of the man of small means or that offers greater possibilities in the way of large profits and sure returns than the poultry business.

And the poultry business is all that it seems to be when in the hands of an expert in the care and management of fowls. There is nothing deceptive, fraudulent, dishonest or unfair in the poultry business that causes one man to lose money and fail in its management while another succeeds; yet this is the history of poultry ventures all over the country. There is a peculiar facination in the poultry business that captivates the majority of persons. The business seems to be so easy that any person ought to be able to conduct it successfully. Here, however, is the stumbling stone in the business. It is not a hard, laborious business, but there are certain things that must be carefully observed—system, detail, attention to the little matters of sanitation and care of the fowl in order to preserve health, comfort and vigor. There are few persons who can get down to this detail work. There are few persons who can appreciate or understand why poultry under confinement and kept in large flocks cannot be treated and handled the same as a few dozen fowls about the barnyard.

Cherrycroft Poultry Farm

As an illustration of poultry under confinement, and poultry in large numbers where business and system are employed in their handling and management, we have selected for our readers the history of Cherrycroft poultry farm. This is a little subdivision of eighteen acres in a suburb of Omaha. It is situated on a high ridge of rich agricultural land, commanding a magnificent view for miles in all directions—an ideal location for a poultry plant and homestead that carries with it all that nature can contribute in beauty of scenery and landscape view. It is the country home of J. W. Welch, the proprietor and operator of several eating establishments, lunch counters and cafeterias in the city of Omaha.

These grounds have been laid out with a view to gardening, poultry raising, the growing of small fruits and keeping of an apiary, and are apportioned as follows: Four acres in garden, four acres devoted to poultry buildings, yards, etc., three acres to alfalfa, two acres to pasture, five acres to farm buildings and orchard. The buildings consist of a family dwelling, cottage for hired help, barn and stable for horse and cows, garage, feed storage, with power grinders; feed cooking room, and accommodations for swine and Indian Runner ducks. Everything on the Cherrycroft farm is given the chance to live and develop into the best of its kind. Contentment, peace and happiness seem to be the expression of countenance of every animal on the farm.

This little suburban farm, while now one of mixed husbandry, and rapidly becoming one of great interest from the standpoint of up-to-date methods and appliances for its operation, has poultry as its strongest feature. Just two years ago its present proprietor came into possession of this land, and at once planned its outlay for a definite purpose, that of assisting him in furnishing supplies for his restaurant business.

The subject of high cost of living appealed to the new farm owner in a very direct and impressive way. This was certainly in his line of business, and how to get the products of the soil turned more directly to the consumer was the great question that was agitating the public mind. Without consulting the middleman, his garden acres were put to work supplying his demand for vegetables, his poultry plant was equipped to furnish both eggs and meat. As fast as a supply of the best bred egg producers could be had the poultry plant commenced the work of furnishing eggs for the restaurants operated by Mr. Welch.

Where the Eggs Are Laid

Ducks that Laid Over Ten Thousand Eggs in a Year

How Brooder Houses Are Made

The equipment now consists of a brooder house, 14x112 feet; a laying house, 30x100 feet; five colony houses for the handling of individual broods of specially high-bred chicks for breeding purposes, yards and pastures for the fowls to be turned into at the discretion of the manager. There are four divisions in the brooder house, 14x28 feet. Each of these divisions has two compartments, 14x14 feet, or fourteen feet square. One of these contains a Simplex brooder stove. These stoves are supplied with kerosene oil for fuel, from tanks located outside the building, and piped into the brooder stoves. These stoves are so constructed as to radiate a heat down upon the floor, which decreases as it extends to the walls of the room. This supplies the young chicks with heat on their backs and also keeps their feet warm from the heated floor—the two essential features of heat that the chick demands to secure perfect artificial conditions for health. There may be 1,500 chicks in each of these rooms at one time. The adjoining room, of the same size, has feeding and scratching accommodations for these chicks, and a six-inch hinged door or board at the bottom of the division wall is raised up to give them access to both places. The chicks are kept in these brooder accommodations until they are half grown or may be removed to other quarters, if the weather is favorable.

Mr. Welch prefers buying his chicks incu-

Some of the White Leghorns on Cherrycroft Farm Enjoying Their Summer Freedom

bator hatched, as soon as they are out of the shell, or at least within twenty-four hours. His present arrangement is a contract for 1,000 chicks February 1, 1914, and 1,000 each month following for five months. These chicks cost from 7 to 12 cents each, depending upon quality and breeding. He deals entirely in full-blood White Leghorns, regarding these the most profitable egg producers under confinement. The cockerels are early maturing and are dressed for the restaurant trade when they attain one and a half to two pounds weight. Only the very choice cockerels are retained for breeders.

The brooder house is very compactly and closely constructed. The best of material is used. The sides and floor are double, with one-inch air space, and walls are double, with tar paper between. The only possible introduction of air is by the ventilators, which are regulated by thermometers so that an even temperature is had, or changes made when desired by the manager of this division of the work. All drinking water, buttermilk, grits or other supplies are carefully guarded from dirt of any kind. The litter on the scratching floor—straw or what not—is removed as often as indications suggest a change is necessary. Strict sanitary regulations are observed. The result is but a very small per cent of loss. What loss there is is attributed to natural or hereditary weakness.

Egg Laying Division

The laying house is the business section of this poultry plant. Did you ever see 1,500 laying hens or hens of laying age in one room, with each hen having a permit entitling her to two square feet of floor space? This house is 20x100 feet, with 3,000 square feet of floor, and 1,500 hens occupy it. They do not seem crowded. They soon learn to distribute themselves pretty evenly over this space. The south side of this building from the floor to the eaves of roof is only four feet six inches. The lower eighteen inches is tight, double wall. From the top of this is quarter-inch mesh wire screen, filling the three-feet space to the roof. This screen remains open to the weather all winter. There is no other space about this building that will admit a particle of air; the eighteen inches at the bottom cuts all draft on the floor, and the screen above cuts or breaks any current of air in blowing in, even in very stormy weather.

Now you have the whole weather and ventilation proposition before you, and these 1,500 White Leghorn hens, with their big, red, pendulous combs lopping down over one eye, not a bit frosted or in the least blighted from zero and near zero weather up to February 1, 1914, are a beautiful sight to behold. It is a dazzling, glittering, moving picture in the noonday sunlight that cannot be described. It looks as though each hen had pre-empted her two-foot square and was holding it down, with head up at full attention. The argument is that each hen has all of this 3,000 square feet to exercise on, and may go over this a dozen times a day if she chooses to travel around.

Feeding Arrangements

In this large room is a roosting apartment occupying a space ten feet wide at the north wall and two and a half feet above the floor, thus not obstructing floor space in the least. This has a tight dropping-board floor, with horizontal roost bars extending to within one foot of the front of this dropping-board platform. This floor is level. Under this are sliding nest boxes or drawers open at the rear for the hen to enter. These pull out at the front in gathering the eggs. This plan of nest box has the advantage of seclusion, which pleases the hen, and it takes up no floor space, is easily and quickly gotten at and always clean and in order. The dropping floor is scraped each morning and no hen house smell is observable at any time.

There are five portable self-feeder hoppers uniformly spaced down the center of the building. These contain grits, meat-meal, charcoal and dry mash, appetizers for the fowls to take at pleasure. They have a narrow platform about one foot from the floor, where the chickens fly up and stand while feeding from the hopper. Water is supplied from galvanized iron pails placed likewise upon a platform above the scratching floor and out of the way of litter or straw. Fresh water is supplied two or three times each day to the laying hens. Grain feeds are scattered on the floor, where the hens scratch for it in a litter five or six inches deep. They are never fed to their fill, but are given feed five times a day. This keeps them wide awake and active. They work for their board. There is no such a thing as a hobo on the Welch ranch. There is a row of glass windows two feet square near the roof in the highest point of this building that are hinged and can be opened for ventilation during warm weather.

These hens are kept in this house from autumn to late spring without being liberated, and under a continuous demand for eggs, which they supply in liberal quantities. Mr. Welch believes in a strictly business chicken, kept and handled upon business principles. Consequently he forces out all the laying energy that the hen can muster up, and retires her when 2 years old or the autumn before. He aims to add about 2,500 to 3,000 pullets to his egg-producing flock each year from this time forward. He utilizes everything from his restaurants in the way of waste, scraps, bones, etc. The bones are run through the bone grinder, and fed to the hens, and thus converted into eggs and taken back to the restaurant, where the consumer is given another chance to help the producer save a little profit in his business.

In addition to the poultry assisting in taking up the waste about the restaurants, there is a little bunch of Duroc hogs kept on this farm that, in addition to a slight ration of ground feed, are enjoying the lunch counter menu to a degree that would make a hobo turn green with envy.

Over Ten Thousand Duck Eggs

There is another colony of egg producers on this farm that are under a sort of probation trial to see if they will hold out. This consists of fifty-one Indian Runner ducks that from January 1, 1913, to January 1, 1914, produced 10,274 eggs, an average of 201½. It is a difficult matter to keep an accurate count of the eggs, as they pay but little attention to nests, and no doubt a number are lost, as they have the run of an acre of orchard and occasionally are given access to an alfalfa lot. They are great layers when properly handled, but it must not be overlooked that they are great feeders and need plenty of pasture in order to be made economical producers.

The Cherrycroft poultry farm is yet in its infancy as to its producing ability. It is only two years old from its first planning and laying out of grounds for its chief purposes of production of poultry, gardening and small fruits. This, however, is one of the plainest examples of carrying the produce of the farm to the consumer with the least possible support of the middleman. Mr. Welch produces his poultry, eggs and vegetables on his own land, hauls it to the city, and through his own business enterprise feeds it into the mouths of the consumer, the place of last resort.

Fertility of Soil and How to Maintain It

Article III---What Does Your Soil Need? Two Ways of Telling

CAN the farmer tell the needs of his soil without understanding chemistry?

In talking with farmers about their soil's fertility we are often confronted with the statement that they do not know what the needs of their soils are. They say that they would gladly attempt to supply the needs of the soil if they only knew what those needs were. The majority of these farmers contend, in action if not in word, that no one but a chemist can tell what a soil needs, and, therefore, in not knowing what a soil needs, it is impossible for them to know what to do to supply those needs.

In the writer's opinion, such reasoning is erroneous. The farmer does not need to be a chemist to tell what his soil needs or to know what materials to apply to supply those needs. There are simpler methods by which these seeming mysteries may be told. These methods are so simple that the most unlearned may understand them; in fact, they are more reliable than chemical analyses.

Chemical analyses will show the amount of plant food in the soil, but nearly all, if not quite all, of the plant food found in the soil may be unavailable, and the crops attempted in that soil may do no better than they would in soils deficient in plant food. On the other hand, if the farmer employs the methods hereinafter suggested, he will be able to tell whether or not his soil needs available plant food. Of course, he will not be able to tell the amount of unavailable plant food in the soil, but this is not so material so long as the available supply is ample to meet the every need of the soil.

Soils need mechanical improvement, as well as the improvement in plant food, and the mechanical needs of the soil can be told as easily by these simple ways as the plant food needs.

Two Ways of Telling

There are at least two simple ways by which the farmer may tell what his soil needs. The first is by watching the growth and development of the crops. "By their fruits ye shall know them," applies to the soil as well as to men. The second way is by noting the color and texture of the soil. What can be more simple than this? If you were a chemist and were able to tell to the fraction of an ounce how much nitrogen, phosphorus and potash your soil contained, as said before, you would not know to any certainty how much of these foods were available to supply the needs of the crops you wish to grow.

By watching the growth and general appearance and manner of maturity and productiveness of the crops we can tell in which element o. elements the soil is deficient; that is, deficient in available supply. There need be no guesswork about this. Crops need certain plant foods to accomplish centain ends, and if those plant foods are not present in the soil in sufficient quantities available to the plants' needs, then these ends cannot be reached. By noting what the plant is not doing that it should be doing, or by noting what it is doing that it should not do, we can tell in which plant food the soil is deficient and of wha. plant food there is an excess. If one plant food is needed to promote growth, and the crop makes an inferior growth, we may know that the soil needs that particular plant food. If the growth is ex-

CONTINUED ON PAGE TWENTY-THREE

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

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The babies were put into a glass house in the center of the stadium arena at the Denver stock show. Fresh water and fresh air were plentifully provided, so that the babies were kept comfortable, notwithstanding the crowds that surged around the glass house. The judging of the babies fairly divided the attention of the spectators with the judging of the stock.

Cream that settled to the bottom of the bottle instead of rising to the top caused complaints to come in to the Indianapolis authorities. Investigation revealed the fact that a dairyman was making his milk out of milk powder, whipped into a little real milk and a good deal of water, some cream and foreign fats being added to bring the fat content up to legal standard. Difficulty is being experienced in settling this new method of adulteration.

Silt from a dried-out reservoir on the Cody irrigation project is reported to have been blown out by the wind and covered four farms, ruining them for crops or stock raising. The owners say this silt blows about like snow, drifting in some places to a depth of five or six feet and shifting from one part of the land to another with the changing winds. These farmers have taken the matter up with the government, but the case is so unusual that it will require a special act of congress to take care of the matter.

Personal Word to President Roberts

President Roberts, the newly elected president of the Nebraska State Board of Agriculture, is facing a great opportunity. It is to be hoped he is a big enough man to make the most of it. Seemingly, up to date, he has not been able to understand the difference between the functions of a state board of agriculture and a state fair board.

There are two big things to be done during his administration. First, the 1914 State Fair should be the biggest and best ever held. With himself and three men of his own choosing, President Roberts starts with a harmonious and united board of managers. This paper had its say before the election. It believed that there should be an infusion of some new blood into the management.. The representative county and state fair men of the state have decided otherwise. This paper has done its duty. It will now watch the record made in 1914.

The second big thing to be done during the administration of President Roberts is the reorganization of the State Board of Agriculture so that "it may better serve the agricultural interests of the state." At the meetings of Organized Agriculture each of the organizations appointed a representative to serve on a joint committee to consider this question, "the findings of this committee to be reported back to their respective organizations, together with proposed changes and recommendations as to the manner in which the changes may be effected." This committee is made up of strong, able, representative men. This paper is confident that it will present a report that will be of great value to the farming interests of the state.

We will now give attention to some of President Roberts' criticisms. It will help to give our readers a better understanding of the issues involved. The following extracts from the speech will serve as a text:

> I presume, having been elected president, I am now in a position to be classed as building a political machine to elect me. I want to say that I have never asked a single person to assist me or vote for me for any position; neither have I ever heard Messrs. Rudge, Mellor or Youngers in any way solicit support to retain themselves in office.
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>
> The Nebraska State Fair owes its success in a great measure to the newspapers who have loyally supported it, and I had hoped that the paper now attacking the board would be fair and publish facts. The editor of the Twentieth Century Farmer is trying to mislead its readers into believing that he is working for the upbuilding of one of Nebraska's greatest institutions, when in reality nothing would suit him better than to see the State Fair a failure.
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> I invite and request any member or person interested in the upbuilding of our State Fair to help me with any suggestions or criticism that will work for its good.
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> * * * *
>
> As to the reorganization of the State Board of Agriculture, I do not believe there is a member on this board but what would gladly welcome it, if by so doing the great agricultural, educational and other interests that go to make up our great state could be better conserved. But it is well to consider the source and motive that prompt this action.
>
> * * * *

The assertion that nothing would suit the editor of the Twentieth Century Farmer better than to see the State Fair a failure is not only false, but it is malicious. President Roberts knows that no paper has given the State Fair more loyal support. Why should he get so angry? So far he has not been criticised. Why was it necessary for him to rush to the defense of Rudge, Mellor and Youngers? Was not his political obligation to these men fully met in his reappointment of two of these men to the board of managers? All the boosting and the many good things said about the State Fair by this paper are forgotten. This is to be expected, for Roberts and his "angelic" friends are only human.

This paper is not to be led away from the real, vital points at issue in this discussion by personal matters. It is for the best interests of the State Fair that the changes suggested by the Twentieth Century Farmer should be made. Following is a summary of what the editor of this paper believes should be done:

The use of the free pass for political purposes should be abolished. We have Secretary Mellor's word for it that 128 were sent to members of the legislature last year.

The secretary should not be a member of the board of managers. He is an employe and should not hold a position on the board which makes him his own boss. The word "hold" is used advisedly. It is the opinion of many that Secretary Mellor missed a political opportunity when he did not voluntarily get off the board at the annual meeting.

A state fair is a business undertaking, requiring experienced men to handle its affairs. Naturally these men get their first experience from county fair work. As a state fair organization, what is commonly called the Nebraska State Board of Agriculture is built along right lines. Its corporate board of twenty-nine members and the delegates from the county fair associations make up the personnel of its annual meeting. They are practical fair men. This organization has done practically nothing in the last fifty-five years but conduct a state fair. It would be a mistake to try to enlarge its function at this time. It would be better for the State Fair to have these men give their undivided attention to its management.

Nebraska should have a state board of agriculture which should be representative of all the agricultural interests of the state that have to do with the development of its resources. It should be separate and distinct from the State Fair Board. The men who constitute this board should be persons who are engaged actively in some sort of farming operation. The form this organization should take, how its members should be chosen, their duties and the scope of its powers and activities are some of the things to be considered by the joint committee appointed at the request of the Farmers' Congress. This paper will go into this subject more fully at a later date. From now on personalities should be eliminated. What this paper wants, and what its readers want is results.

Curing Meat at Home

Kansas has long had an annual ham and bacon show, which has become a matter of widespread interest, and there are many entries each year. Other states are now following this example and running ham and bacon shows in connection with their farmers' weeks. This year Nebraska held its initial show. There were not many entries, but the exhibit, though small, attracted a great deal of attention. Next year it is likely that the exhibit will be much larger, judging by the amount of interest expressed. There were premiums of $20, $15 and $10 given, besides which the Worcester Salt company gave each prize winner a barrel of salt. These fine hams and bacons on display were in an entirely different class from those supplied by the big packing houses. It seems a shame to think of shipping a nice, fat hog into market and having to buy back the hams for a price almost equal to that of the whole hog, and then have them juiceless and tough, when by doing a little extra work one might have nice, fat, juicy hams that would fall to pieces at the touch of the knife when the competent housewife took them out of the oven.

"Dry seasons may be expected about once in three years on an average—not a total drouth, but a reasonably dry season will come along about once in this length of time." This is a statement made recently by G. A. Loveland, United States weather bureau director of Nebraska. If Mr. Loveland could tell us now just which years these dry ones are going to be, the farmers of the central west might be able to prepare to overcome the unfavorable conditions. Since he cannot, we will have to be prepared every year.

The new "Delicious" apple, which attracted so much attention at horticultural shows this year is an Iowa product. Jesse Hiatt of Peru, Ia., says it originated as a chance seedling and that the original tree, which stands on his land, is now about 15 years old. The apple tastes as its name implies, is a brilliant, dark red, with a bit of gold at the blossom end, and is said to keep all winter.

Pure-Breds of All Kinds

Of course, keep pure-bred poultry on the farm. Why not? The pure-bred fowls of any kind—chickens, turkeys, ducks or geese—are just as easy to raise as the scrubs, cross-breds and mixed breeds. Besides, they give the farm a sort of dignity and standing in the estimation of passersby that is worth something to the owner. The day of scrub stock has passed, and the sooner you get this into your head the better.

There is no disputing this statement: "The farmer who keeps pure-bred stock of any kind on his farm is held in higher esteem among his neighbors than the farmer who does not." The farmer who keeps pure-bred or high-grade stock of all kinds is known and talked about for miles around as one of the most enterprising men in his community or county. Everybody knows him; everybody has heard of him far and near. He is recognized as a progressive, up-to-date man, an authority on live stock matters. His opinion is quoted and accepted as good evidence with his neighbors.

What is there that makes a nicer show on the farm than a lot of pure-bred chickens? It at once suggests thrift intelligence and enterprise, and a good impression of the people who own the farm is the result.

A nicely kept lawn, surrounded by a neat, substantial fence, indicating that the family and the pigs and chickens do not live together, is a feature that helps with the pure-bred fowls. A combination of neatness and pure-bred stock on the farm is the greatest incentive in creating a good impression of the farm, its owner and manager. It is an advantage to any family to be associated with a prosperous pure-bred live stock farm. Commence breeding pure-bred stock. Throw out the sign by a display of fine-bred fowls. Nothing looks better on the farm; nothing is more attractive and of greater advertising advantage.

Co-operative Meat Clubs

The farmers' meat circle is not a new idea, nor yet one that has gone into general practice, but it is one that under the proper neighborhood relationships might be profitably carried on to the mutual advantage of many farmers The farmer is the best situated citizen in the country to avail himself of the opportunities of low prices of living if he would try a little planning in co-operative relationship with his neighbor or neighbors.

In the one item of fresh meat supply a few farmer neighbors may organize themselves in a club or meat circle and arrange to butcher within their own membership a supply of beef, mutton and pork for the year. This circle may be composed of any number—six or eight would be considered sufficient. Each furnishes a beef animal, which in turn is butchered and divided as nearly as can be into equal parts, the number of parts corresponding with the membership of the club. Each member receives one of these parts, and a record of the distribution is kept. At each killing he gets a different piece of the animal until each family has had an entire beef, and no two cuts or pieces the same

The pork killing is conducted the same way. These neighborhood co-operative conveniences help in the living expense and keep neighbors feeling neighborly, but must be organized with reference to congeniality and neighborly instincts. The feeling that it is not a good plan to be too neighborly with your neighbor cultivates distrust and a lack of co-operative spirit.

Horsemen Not Harums

At the recent annual meeting of the Nebraska Horse Breeders' Association one speaker advocated pulling certain teeth from the mouths of 3-year-old horses in order to enable them to be sold as 5-year-olds. In defending himself from the storm of criticism aroused, the speaker stated that in many cases the 3-year-old was well enough grown and developed to do the work ordinarily required of a 5-year-old, and that the purchaser would really benefit by the deception practiced on him.

The meeting became quite stormy, and the atmosphere was not cleared until another speaker finally announced that if a horse were sufficiently developed to do the work of a full-grown animal, these teeth would be shed naturally.

The days of David Harum are fast passing away. The reputable horseman of the present time no longer measures his capacity as a dealer by his ability to unload defective stock on an innocent purchaser. However excellent the motives in the mind of this Nebraska horseman may have been, it is greatly to the credit of the association that the suggestion was not adopted, carrying with it, as it would, the approval of the association of practicing deception on the purchaser.

Ten per cent of the 2,300,000 miles of highway in the United States is now classed as improved. The aggregate of bond issues for road construction along modern lines, now outstanding, and not including the appropriation of current revenues which have been made for the purpose, is estimated at $200,000,000, and last year the total of state and local appropriations was $150,000,000.

Basis for Feeding Industry

Sugar beet factories have been the basis of large sheep and cattle-feeding industries throughout the western districts of the United States. At Fort Collins, Colo., there have been 700,000 lambs on feed this winter, besides several thousand cattle. The sugar beet industry made it possible to do this feeding. The beet pulp would have been an entire loss had these animals not been employed to consume it. It is true, at all the sugar beet factories the waste product properly employed is a great source of revenue to the factory, and to the feeder as well, when used as feed.

There is no better local enterprise for a western town than a beet sugar factory. It furnishes employment to a large number of people in all its branches of trade, from the field work in growing the crop to the factory. The sugar beet industry is a money maker and adds promptly to the price of lands. The establishment of sugar beet factories has made possible the introduction of the sheep and cattle feeding industries in the country immediately west of the corn belt.

Educational Influence

This is an age of education, an age of progress and improvement. The educational influences that are being urged upon the attention of the crop grower and live stock producer are many and persistent, and are coming from many directions. The preparation of the soil, the sowing of the seed, the harvesting of the crops and the gathering of the produce of the farm into the cribs and garners is the process by which results are obtained of what the season's work has accomplished.

Every man who farms in this day and age of the world becomes to an extent an educator, an instructor, either for improvement in the building up of agricultural industries and the preservation of agricultural resources, or he contributes to the criticism of incompetency. The plans and methods of the present day up-to-date farmer are based upon recognized scientific practice; he is patterned after and he becomes an authority in his neighborhood. The chance farmer who depends upon the elements helping out, who trusts in Providence to make good where he fails to provide labor and intelligent application, is taken up as an example of bad practice, and is criticised as the failure.

The tendency, however, is to the improved methods. Everybody is talking better farming, intensive farming. The present-day idea is to raise better crops each recurring year, to improve a little on the preceding season. There is not much hesitancy in putting more labor on the crops, in better preparation of the ground, in more care in planting the seed and cultivation of the crop.

There is a spirit of rivalry developing in counties, townships and neighborhoods. The farmer and farmer's family who are not stimulated to a determination to improve along all lines of farm and crop industry is the exception. The spirit of contest is developing in a disposition to exhibit the results of the season's crop work.

The county fair and the state fair have become matters of interest to the progressive farmer. The tendency is to demonstrate the educational influence which the agricultural college, the farmers' institute and other educational means have been exerting for better seed, better cultivation, better crops and better results in profit earning on the farm. At no place and under no other circumstances can this be so fully and completely demonstrated as at the agricultural fair.

Oregon's wonderful 303-egg hen was cross-bred. This fact has been thoroughly advertised, and Prof. Dryden, who has charge of the Oregon College poultry, has been more or less criticised on the charge of encouraging the keeping of mongrel fowls. It may be a relief to pure-bred enthusiasts to know that he has recently expressed himself strongly against the practice of keeping mixed breeds and in favor of pure-breds. He says that cross breeding should only be resorted to in a limited and scientific way and for the purpose of establishing new breeds, which seems to be his purpose in these experiments.

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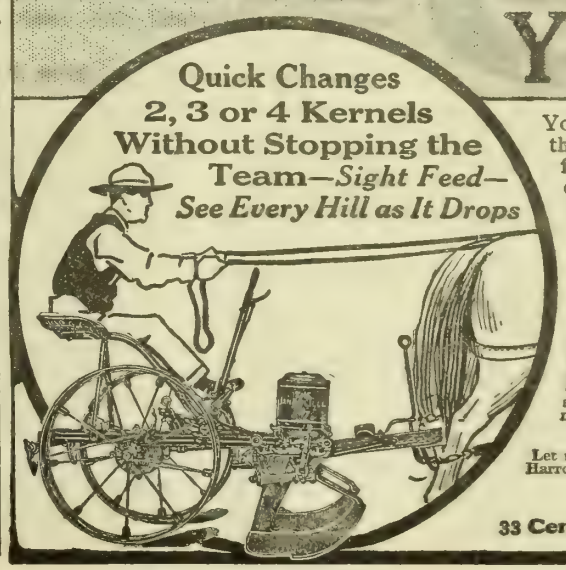

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You are under no obligation to go further; but you will get much information that must be of value to you if you will write for these books to-day and read them carefully. Then, if you wish, I will be glad to give you first-hand information about the several sections of the valley, the value of the land, the crops best adapted to the various sections, and anything else that you care to know.

I also will tell you of the work of the Santa Fe Agricultural Department, which furnishes expert advice to those who are on the ground, and this without charge.

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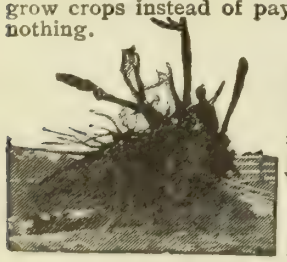

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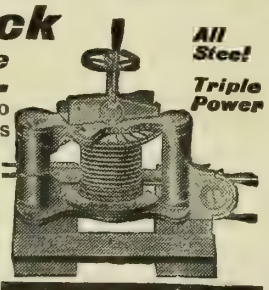

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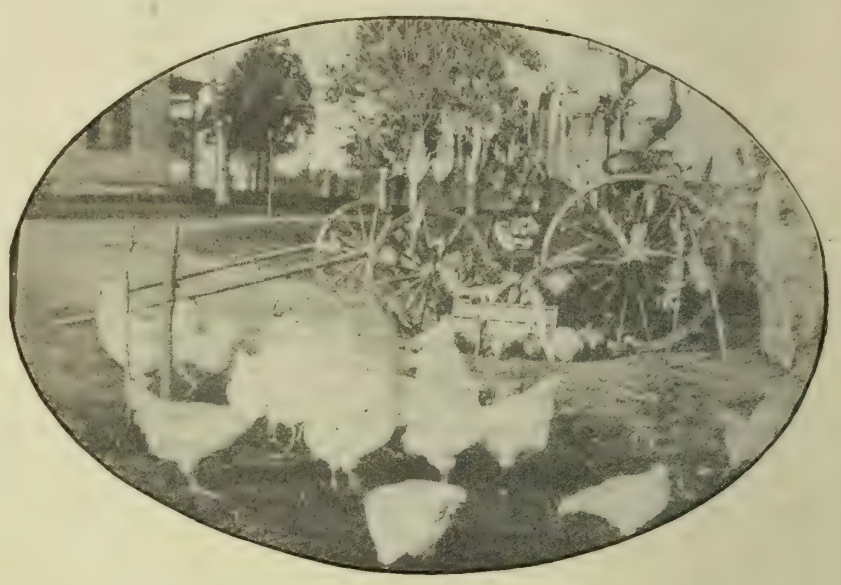
Exercise Makes the Hens Lay

No System of Feeding Avails Without It

THE experiences of two poultrymen at the Mid-West show recently held in Chicago, when told within a few minutes of each other, presented an interesting contrast.

Both of these men were keeping Rhode Island Reds exclusively. One of them was feeding a ration prescribed by a professor at an experimental station. The other fed from an experience of fifty years on the farm. One of them kept twenty-five fowls, the other 100. The twenty-five were kept in a back yard; the hundred had a range of fifty acres, but the hens were kept in a town.



Plenty of Room for Exercise

One of the flocks had an abundance of exercise, the other had scarcely any.

The farmer with the flock of 100 lived in a small town, but owned a big range adjoining. He kept his hens in a warm house, with straw on sand for a bottom. He fed corn, oats, wheat, meat scraps and vegetables, the coarse food being thrown among the straw. He said he was receiving a good average production of eggs, for which he had a market direct to the consumer. One of his customers was a carpenter, who took three dozen a week, called for them and paid him 35 cents on a winter contract. Another customer was an undertaker, who paid 40 cents because the farmer delivered them to his house. Both of these consumers claimed that eggs at the prices named were cheaper than meat at prevailing prices.

This farmer, who hailed from Putnam county, Illinois, said that he feeds but little corn, because he considers it too fattening. He attributes a deal of his success to the fact that he plans to keep the feet of his hens warm. He said that no one could expect results from fowls with cold feet.

This man talked like a practical farmer, with a fund of experience. He was one of the kind of farmers who, when they finally are induced to talk, say the things that appeal to space in a high-class farm paper.

The man who had the twenty-five fowls evidently was an enthused city "back-yarder" — a frank, earnest man, willing to do the right thing to get results. He kept his hens within a space of 150x30 feet, in a Porter county, Indiana, town. He seemed put out because he wasn't getting any eggs.

To be sure about the feed, he had written to a college man, who told him to feed ground oats, wheat middlings, cracked corn and bran in a mash. Meat scraps also were prescribed, as were sprouted oats at noon. At night he threw equal parts of corn, wheat and oats in the straw. A good supply of charcoal, oyster shells and grit was kept within easy reach, as was also an abundant supply of fresh water. This city man told us that he didn't know why he wasn't getting any eggs, and no one else seemed to know.

We do know, however, that the word "exercise" cut more of a figure at this show than any of the others. There was a predominating feeling and expression that hens are over-fed and that they lacked an essential provision to good laying, namely, exercise. An exhibitor who had one of the finest non-prize competing displays told me that from an egg-producing standpoint every fowl in the show was over-fed, and, worse than that, a great number of the farm-kept flocks are over-fed. They lacked exercise, without which there could be no great success in producing paying quantities of eggs The idea of making hens scratch for what they eat had many supporters among the exhibitors and the visitors. At the show were some contrivances invented to prevent hens from cramming themselves with food. They had to fight for what they got, grain by grain, instead of taking it in gulps. Without commenting on the value of their contrivances one way or the other, the men advanced a good many cogent reasons in favor of exercise, and whatever cause may be attributed to the failure of some of the back-yarders and other poultry raisers to get results, the quantity of feed in heaps is out of all proportion to the amount of exercise afforded a flock that differently treated would make good.

J. L. GRAFF.

About Incubators and Incubation

If You Manage Them Properly Results Should Be Good

THE fight between the consumer and the cold storage man over the high price of eggs has set us all wondering if really the shortage of eggs has anything to do with this price. We must expect to pay higher prices for eggs in the dead of winter, but would it be necessary to pay quite so high even then if the supply was far beyond demand in the months that hens do lay well enough beyond to enable the cold-storage man to put away this surplus cheaply, then have no occasion to charge such startling prices when he unloads?

The Old Way

If the cold-storage man be right, and no doubt but that he is to a large extent, then don't you see what the country needs to do—to extend its poultry flocks and supply the demand, and where cheaper, better in every way, can this be done than on the farm? And how will you extend it? Well, not very fast by the old, haphazard way that nature has of doing, by trusting to the hens. If you think about two chicks a year apiece to each of the hens kept on the farm is enough, and let the hens waste time in raising these two, why then certainly go on the old, imperfect way. But you know this isn't business at all. There is no business arrangement in the poultry raising unless you own at the very least one good incubator, and on the farm more than one good incubator is necessary, with brooders in plenty, to handle the chicks safely when they come off.

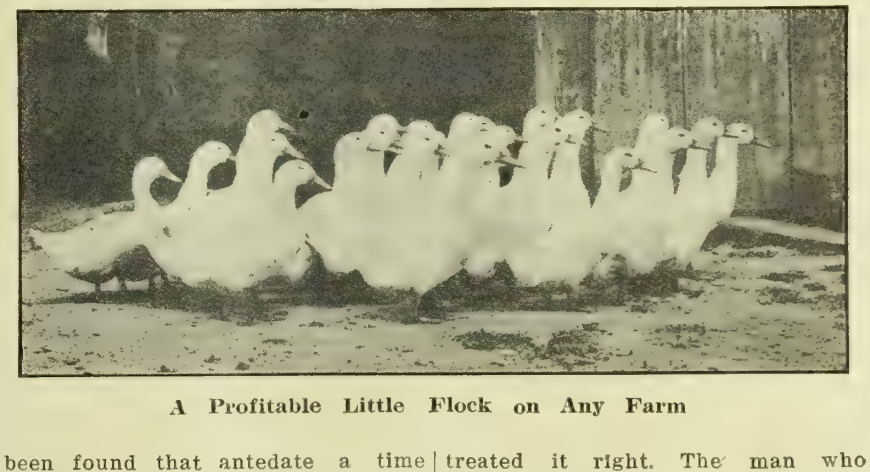
These Light Brahmas Are the Prize-Winning Kind

Without Mothers

So many people argue that artificial hatching is all wrong. Why, you might just as well argue that growing lettuce and strawberries in hot houses is all wrong and really cannot be done right and should not be because nature never intended these things to mature out of season and under unnatural conditions. There is nothing in such an argument, and neither is there in the hen hatching and caring for the chick. Chickens do not require the particular heat of the hen's body to hatch well, nor anything in that body that she can impart, nor her wings, after hatched, for brooding purpose. If nature intended that nothing but the hen could hatch her own eggs, then we would never see the chicks that we have seen hatched in a hot cupboard, lying forgotten against a warm chimney, and the dozen other strange places we know of them having been hatched far from the hen and raised far from her also.

Incubator an Old Invention

The incubator of today is almost as near hatching perfection as it can be; it is no new experiment. Ages ago poultry keepers knew there were speedier ways for increasing their poultry flocks than trusting to hens, and they knew ways to make concrete underground rooms, warmed with hot-water pipes, that would keep the chicks warm and growing fast, and do it better than any old hen. Rock-built incubators have been found that antedate a time when the Pharoahs went to rest. China and other nations show that eggs of all fowls for centuries have been hatched by artificial heat—placed down in clay ovens, heated by stable manure, or swung in baskets, tier on tier, near some rough-made heat, or placed on roofs where the sun scorched the tile or thatch all day. Even under all these difficulties, with neither thermometer or mosture gauge at hand, or any of our up-to-date appliances for incubation, the ancients increased their poultry flocks by sheer sense and perseverance, and not only thereby increased their food supply, but their poultry sales also.



A Profitable Little Flock on Any Farm

Their Own Fault

Nine cases in ten or more, if the incubator fails to give a good hatch, the fault lies with the operator or the eggs, not the incubator. It is the same with chicks after hatching. To lose them all, or even half, simply means that somewhere along the line you failed to run the brooder aright, or feed as you should. It might be that, in instances, the chicks came into the brooder ready to die with white diarrhea, and, of course, you feel that here you were not at fault. But you were, for you could, by due precaution, have cut down the number of hens that laid eggs contaminated with the disease. Nine times in ten, if precaution is taken in disinfecting incubators and brooders, as well as all eggs, before placing in the incubators, then closely culling every droopy one from out the brooder chicks, you will raise the rest to paying numbers. These things are to be studied and kept in mind. The trouble with we Americans, in chick raising as in other things, is that we want to see results, and big ones, right away, and if results do not come up to anticipation soon, we lay the blame everywhere but on the right factor—ourselves.

I can well remember the first incubator I tried. I made three lamentable failures. The first time I filled it with chilled eggs a neighbor sold to me; next time I let the thermometer run to 113 and cooked all the eggs, and the next time I let the tray fall and broke all the eggs but sixteen. Strange, though, these sixteen hatched, and never were there finer, healthier birds. I declared the incubator was a nuisance and sold it, knowing deep in my heart I hadn't treated it right. The man who bought it thinks it's the best ever. The next year I got another, one holding twice as many eggs. I set it early. Somehow this one did not take the looking after that the first one did. When I set it I would also set several hens at the same time, so that I would have fertile eggs to fill in vacant places of those tested out. I had not as yet learned how to run the brooders exactly as they should be run, and I had my losses. Despite these, by the first of May I had 400 chicks running spry as chip birds, where, if I had a hundred by the middle of May in other years, I considered myself doing well, and all these hatched from the eggs of just twenty-five hens, and then eggs to spare.

To me it seems foolish for the man or woman on the farm to not avail

(CONTINUED ON PAGE TWENTY-ONE)

JOHN DEERE

The Spreader with the Beater on the Axle.

Easy to load. Only hip high to the top and still has big drive wheels.

Here's the reason for the great strength, wonderful simplicity and good, everyday working qualities of the John Deere Spreader—

Beater and all driving parts mounted on the rear axle (patented). No strain on frame. No shafts to get out of line. No chains, no clutches, no adjustments. Only half the parts heretofore used on the simplest spreader.

Light draft because of few parts, the roller bearings and the beater and apron being driven directly from the rear axle.

BOOKS FREE Every farmer who asks about the John Deere Spreader will also receive "Farm Manures and Fertilizers". This book tells all about manure, how to apply it and how to double the value of each load by a proper system of top dressing. To get it ask for our Package No. Y15

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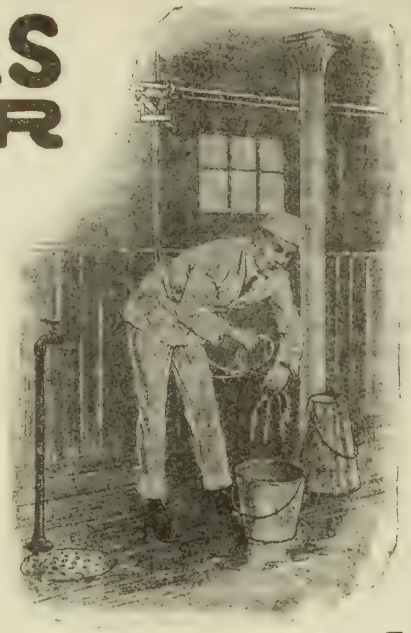
SHARPLES MILKER

Easy to Clean

Easy to Keep Clean



"They are easy to take care of," writes one SHARPLES MILKER user, whose name we will be glad to furnish on request. "When we get through milking we milk a pail of water through them, the machine is cleansed in water about scalding, then placed in a solution of lime water.

"The machines do not hurt the cows. We have used them eighteen months. To anyone in the dairy business I would recommend them. We are milking around seventy cows daily in an hour and ten minutes. We use five units.

"One man attends to the milkers and another man strips the cows. The cows like it better than hand milking and it does away with the labor problem. I had to keep eight and nine men on my farm, but after pay day we might have one or two to do the milking. It just made things hum for the foreman and one or two men that would be regularly on the job. Now we are under no obligations to them. Everything works smoothly and there is no friction among the men picking out the easy milkers and all those stunts."

The SHARPLES MILKER now is being used in dairies of from 15 to 700 cows. Built sturdily, its operation is absolutely reliable.

Ask the editor of any national authoritative dairying paper what *he* thinks of the SHARPLES MILKER.

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High quality, low prices and square dealing have made us the biggest custom tanners in America. One-third of the entire custom tanning business is done in our big plants. We *originated* the business and have always dominated it. Over one hundred thousand farmers have done business with us during a period of twenty years, and every one was satisfied.

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is sufficient for the front of a post card. If you will write your own address plainly on the other side we shall be pleased to send THE LEADING AMERICAN SEED CATALOG,—a bright new book of 182 pages, which should be read by all who would have the best garden possible and who are willing to pay a fair price for **Seeds of the Burpee-Quality**

New Kind of Iowa Dairy Train

-Communities Will Co-operate to Greater Extent

THE Iowa State Dairy Association has just completed arrangements with the Chicago, Burlington & Quincy railroad to operate a special dairy train over the branches of this line in southern Iowa. The tour will begin February 9 and continue until March 1.

This special will differ from those run in previous years in that the communities will co-operate to a greater extent in the meetings. Stops will only be made at towns where the citizens and the farmers of the surrounding country agree to advertise, exhibit cattle and assist in making the meetings a success.

Exhibits of the various kinds of feeds, barn equipment and silos will be carried in an exhibit car. These will be designed to give the beginner practical illustrations of inexpensive equipment for the small dairy farm. In addition the usual dairy cow demonstrations will be given, and specimens of dairy animals will be carried in a baggage car equipped as a model dairy barn.

All meetings will be held at town halls. This will enable the lecturers to talk to the entire audience at once. Lectures will be delivered to the city and rural school children with the idea of encouraging them to live on the farm. The boys of each community will be given an opportunity to enter a dairy cow judging contest, as well as a dairy record contest. The latter will be based upon records of the production of milk and fat in the herd three months from the date on which the train passes through each respective town. Prizes for these contests will be given by local merchants and business men.

In addition an effort will be made to have a small dairy show of the cattle in each community. These animals will be scored and the owners advised as to how their herds may be practically improved by breeding and testing.

Heretofore the farmers of southern Iowa have made dairying only a side line. They have in a large measure sold their grains directly from the farm, and as a result their soil has not been built up as has that in the northern part. They are now beginning to take a great interest in the problem of soil maintenance, and realize that the dairy cow is the best means of converting their feeds into profitable condensed products and at the same time return the manure to the land. Southern Iowa will undoubtedly become as great a dairy section as the northern part.

Groom the Cows

From the sanitary standpoint, it is more essential to groom the cows than the horses. It requires not more than one minute to properly brush the flanks and sponge and dry the udder of a cow preparatory to milking. The body of the cow, and especially the flank and udder parts, must be free and clean from dust to insure good milk. Bacteria are transported upon dust particles. Don't groom the cows or distribute dusty foods or litter just before milking time; always allow sufficient time for the dust to settle.

It is customary to reject the first few streams of milk in first-class dairies, as such milk is of poor quality and likely to be highly contaminated with bacteria which have found entrance from the outside. It is little short of a crime to milk a filthy cow without first rendering her parts clean by scrubbing.

Disease of Dairy Cattle

The first symptoms of milk fever are constipation, loss of appetite, and when turned out she may stagger and later she may lie down. Don't give medicine if you fear milk fever. The treatment is to inflate the udder with air. It is best to own the milk fever outfit. If you do not have it, use the common bicycle pump, but be sure to sterilize the tube which is inserted into the teat. Milk out a little and inflate the quarters one at a time. Get each so full that you will need to tie a string around the teat to keep the air.

Bloating of the dairy cow may be caused by gas, which can be removed by inserting a rubber hose down the throat, which allows the gas to escape. If you have no rubber hose, tap the cow on the left side just back of the ribs, where there is nothing but paunch. If you have nothing better, use a sharp jackknife blade and insert something hollow, like a nozzle to an oil can or a quill. Give your knife a sharp, quick thrust full length and on one side of the knife insert the tube.

A remedy for garget in cattle is extract of poke root, used internally. Commence with one tablespoonful of the fluid extract and increase the dose. Bathing with hot water is also essential. Don't feed the cow heavily on grain. Milk out often. Extract of poke root is also good to apply to the exterior of the udder.

Abortion may be divided into accidental and contagious types. Use carbolic treatment for the contagious type. Apply the carbolic acid solution—one ounce of carbolic acid to one quart of water—with a syringe. One quart of liquid twice a day is about right.

When Should Cows Freshen?

One of the questions often asked in regard to the management of the dairy herd is: What is the best time of the year to have cows drop their calves? The large percentage of farmers answer in favor of the spring months, and follow the practice of having their cows freshen during that season of the year. It is their opinion that by following that practice they can produce milk and butter at less cost per pound than with any other system, as the cows are then on pasture for several months after freshening and require less care than during the winter months. For a number of reasons, it pays better to have the cows come fresh during the fall months. Win-

er dairying pays better than sum-ner dairying, unless the farmer is ocated near a large town or city nd has a special patronage or trade, n which case he should have cows reshen at all seasons of the year to eep up a uniform milk supply.

Butter and milk command higher rices during the winter months han in summer and are also more asily cared for and kept fresh. Most farmers are not specially quipped to properly care for their ilk and butter products during the ummer season.

As to the production of the cow, f she freshens after fly time and hen she is on stall feeding, she ill make a large record, as a teadier and more persistent flow of ilk can be obtained from her on a arefully planned ration than on a pasture which fails to supply her needs properly for a part of the season. Then, when she is turned out upon new grass in the spring, she will flush up again and will often hold up to a good flow until the late summer, when it is time to dry her off for her annual six to eight weeks' rest. Considering the matter from the standpoint of the calf, a heifer can be raised to maturity for milk production cheaper, if dropped in the fall, inasmuch as she must have milk and grain at any rate during the first six months of her life. By springtime the fall calf is ready to use grass to better advantage than when younger. A young calf is liable to thrive better cared for in the barn than running on pasture, where the hot sun and the flies will be a source of worry and torment to it.

National Live Stock Association

Guards Interests of the Western Stockman

THE American National Live Stock Association, the greatest association of this character existing in the United States, and which is theoretically embodying protection to the ve stock interests of the entire ountry, but practically centering its fforts and work more among the ve stock producers and shippers' associations on the western side of the nited States, where its services are ost needed, is a strong factor in he support and advocacy of live tock production. This association, y its persistent and able work in uarding the legislative interests of he stockman, has established its orth and reputation, and the neessity of its existence to a degree hat has removed any prejudice that ay have existed as to its ability to elp the live stock interests of the ountry.

The association was in session at enver January 19, 20, 21 and 22, 914, and through its various discusions, addresses and business counils, formulated as a result of its conention sessions the following sumary of resolutions adopted:

Opposing any change in regulations of ureau of animal industry regarding ange.

Investigation of delays at stock yards nd terminals.

Demanding reduction in westbound ates on live stock from intermountain egion.

Approving educational bureau.

Requesting that government print and istribute addresses of President Jastro nd Vice President Pryor.

To control dourine in horses.

Education of children on the farm.

Campaign to raise more alfalfa.

Protesting against elimination of grazng lands in forest reserves without full nvestigation.

Approving federal control of open ange.

Demanding protection of American live tock owners and ranchmen in Mexico.

Condemning abuse of live stock passes.

Approving establishment of regional ank in intermountain region.

Demanding adequate inspection of imorted meats.

Endorsing work of United States Sanary Association.

Demanding modification of present valations in live stock contracts.

Opposing increase in live stock rates.

Urging more effective sanitary regulaions.

Opposing prohibitive tax on oleomargerine.

Expressing thanks to president of this association.

Expressing thanks to governor and citizens of Denver.

Endorsing feed and water cars.

Urging uniform live stock contracts.

Endorsing work of Department of Agriculture.

Endorsing administration of national forests.

Endorsing work of agricultural colleges.

Reaffirming attitude of this association in opposition to the placing of live stock and meats on the free list.

Opposing repeal of quarantine law of 1884.

There were over 700 members and delegate representatives present from the various large cattle companies operating the grazing and breeding of cattle on the range, from Texas north over the Rocky mountain ccuntry to the British-American border. This association may be justly credited with holding one of the best educational business conventions that is held by any line of industry in the entire country. It is the man of the range who in his every-day life has learned the principles of self-protection, both of life and property, and with this basis of independence and honesty of purpose takes up his battles for a square deal in the commercial world.

The next annual meeting will be held at San Francisco, in 1915, owing to the concentration of national conventions during the Pan-American Exposition. A fund of $10,000 was subscribed in a few minutes to assist in carrying forward the work. The following officers were elected:

President—H. A. Jastro, Bakersfield, Cal.

First Vice President—Wallis Huldekoper, Wallis, Mont.

Second Vice President—J. B. Kendrick, Sheridan, Wyo.

Third Vice President — C. M. O'Donel, Bell Ranch, N. M.

Fourth Vice President—M K. Parsons, Salt Lake City, Utah.

Fifth Vice President — Ike T. Pryor, San Antonio, Tex.

Sixth Vice President — C. B. Rhodes, Orchard, Colo.

Treasurer — John W. Springer, Denver.

Secretary—T. W. Tomlinson, Denver.

DE LAVAL

Butter Triumphs as Usual at the NATIONAL DAIRY SHOW

BUTTER made from cream separated by De Laval Separators made the usual clean sweep of all highest awards at the great 1913 Chicago National Dairy Show and Annual Convention of the National Buttermakers' Association, just as it has always done every year since the organization of the National Association in 1892

Whole Milk Creamery Butter

The highest score in this class was awarded to O. N. Peterson, of Rapidan, Minn., a De Laval user, as were 187 out of 200 whole milk creamery entries.

Gathered Cream Creamery Butter

The highest score in the gathered cream factory-made butter class was given R. O. Brye, of the Readstown Creamery Co., Readstown, Wis., this prize-winning butter being made from the cream of farm patrons all using De Laval Cream Separators.

Farm Dairy Butter

The highest score in this class was awarded to Mrs. D. H. Turnbull, of Monmouth, Ill., whose family has been using De Laval Cream Separators for over twenty years.

De Laval Superiority Indisputable

The evidence of the superiority of De Laval cream and butter, demonstrated by the winning of all highest awards the world over for thirty years, is so overwhelming as to be indisputable and unanswerable. A De Laval catalog, to be had for the asking, will make plain reasons for it.

Fill out the coupon or give information asked for in a letter or postal and get this 72 page book free

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I keep.....cows. I sell cream, make butter, sell milk (which?).....The make of my Separator is....., used.....years.

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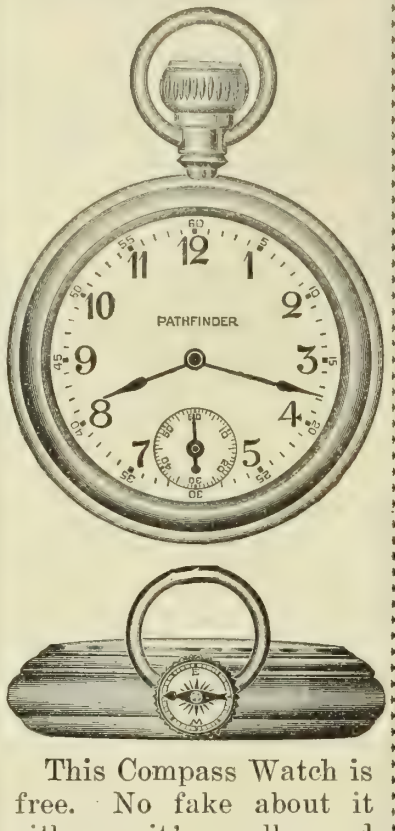
BOY SCOUTS

Look Here!



This Compass Watch is free. No fake about it either — it's really and truly free.

Get your father, mother, or big brother or some neighbor to subscribe for the Twentieth Century Farmer, or renew their subscription for one year at the regular price of $1.00, and we will send you this watch free. It's new and just out and will please you. It is guaranteed to run and keep accurate time.

A Watch and a Mariner's Compass are two indispensable articles to a proper equipment for hunting, fishing, outings, hikes or cross-country runs.

The "PATHFINDER" Watch combines these two necessities without sacrificing the efficiency or appearance of either.

It is a 14-size, thin model, German-silver nickel-plated case, open face, Arabic dial, with red minute numerals around outer margin, "pull-out" stem set, and is guaranteed a first-class time-keeper.

The unique location of the compass in a recess formed in the top of the watch crown obviates all necessity for increasing the thickness of the case or distorting the appearance of the watch to accommodate the compass, and at the same time the compass is far enough removed from the steel parts of the movement to prevent its being deflected thereby.

Every Boy Scout should have one.

Make up your mind to get it today.

Address,

Twentieth Century Farmer
OMAHA, NEB.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Where Blackbirds Sing

"Sing a song o' sixpence, a pocket full of rye,
Four and twenty blackbirds baked in a pie;
When the pie was opened the birds began to sing;
Wasn't that a funny dish to set before the king?"

Who would think he'd want to eat the feathers, bones and all?
He was sure a funny king for such a dish to call;
But what has always seemed to me the very strangest thing
Is that when they cut the pie the birds began to sing.

All the blackbirds I have seen have never sung at all,
For I've watched them from the springtime up until the fall.
Watched them walking on the lawns, perching, on the wing,
Heard them croak and heard them squawk, but never heard them sing.

England is the place, I've heard, where that strange pie was made;
It was one of England's kings on whom that trick was played;
If I should go to England I'd surely do one thing—
I'd go out and listen well to how those blackbirds sing.

Blackbirds

The most common kind of blackbird we have is the purple grackle, or crow-blackbird. They are large and glossy, with beautiful iridescent green and purple coloring that shows in the sunshine. The blackbird has a very bad reputation, and he deserves a large part of it. When there are only a few of them they do more good than harm, for they are great eaters and eat harmful insects and caterpillars in great numbers, but they have a habit of meeting in big flocks and attacking corn and oat fields or orchards, so that it is sometimes necessary to kill some of them to protect the crops. They have also been known at times to rob the nests of smaller birds, eating their eggs and young.

These blackbirds are almost human in some of their habits. They are not a bit afraid of you unless you have a gun, and if you speak to one of them as he marches up and down on the lawn he generally cocks his yellow eye up at you a second and then goes on about his business as if he knew what you said, but was too busy to bother with you. They often establish neighborhood meeting places, to which they come late each afternoon from miles around and apparently discuss matters of common interest, for they croak and screech with their harsh voices until everyone in the vicinity is almost deafened. One man in Nebraska who lives near one of these meeting places says that thousands of them meet there every evening at certain seasons and the trees and fences are black with them. People from the town nearby drive out there to see them, but the birds go on with their meetings undisturbed by visitors.

Purple Grackle

Besides the purple grackle there are other blackbirds—the rusty, Brewer's and the red-winged varieties. These are all smaller than the grackle, which is the most common, and all are well enough in small numbers, but capable of doing some damage when they come in great flocks. The red-winged variety, as the name tells you, has a red cap on the top of each wing. Some of the eastern varieties have a beautiful song, but the grackle and red wing have none. HOME EDITOR.

Picture Contest No. 10

Write a verse of four lines about this picture. Each of the two children writing the best verse about this picture will receive a book as a prize. Make your verse bright and original. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all given consideration, as well as the quality of the verse, in awarding the prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than February 28. Keep this date in mind and be sure your verses reach us. Last time over thirty verses came in too late. In one case a teacher sent in the verses of several pupils. We are sorry to have to discard these verses, but the date given is the one on which they must go to the printer.

(Prize Story)

Why the Stove Smoked

By John Nichols, Aged 13, Logan Nebraska

One day, about 5 o'clock, as we were eating supper, the stove began to smoke. We didn't know what could be the matter with it. We cleaned off the top of it and raked the ashes down, and it kept on smoking. It was Christmas eve, and we were talking of Santa Claus, and little Dick said: "Maybe Santa Claus is stuck in the stovepipe!"

It happened that one of the boys went out for a pail of water and as he was coming back he saw that the old turkey hen was sitting on the chimney to keep her feet warm. He gave a shout and called for us all to come and see what was the matter with the stove. We saw it and had a good laugh, and then we chased her off the stovepipe. So that was how it happened that the stove smoked us out, and we went back into the house and ate our supper.

(Honor Story)

The Changed Town

By Bertha E. Hayes, Aged 14, Fayetteville, Ark.

An old, old Irish woman told it to me—this little story:

"'Tis well you know, my dear that in old Ireland the fairies are free to do what they will; that is, on Friday. There was a wee, lovely town, but its inhabitants were dissatisfied—too many were rich and too many were poor. So one Friday night when all the people were asleep the fairies changed the rich people from their own beds to the beds of the poor people, and the poor people into the beds of the rich.

"When all awakened there was much excitement. Fine Moreen O'Hara milked a goat for her washer woman—for the fairies had made the rich do the work of the poor. Tiny, crippled Ann Malone awakened to find herself in a dainty bed, and, peeping in at her window, sweet rosebuds of purest white. Ann loved roses with all her soul, but it was seldom in her sordid home that a rose ever was. So, running across the room, Anne laid her pale cheek lovingly against the roses. Of course, Anne was surprised; everyone was. They could not think why anyone had done it—changed the town so, I mean.

"But the fairies did not leave them in doubt. Blue Bell, a fairy, whispered in Anne's ear that it was the fairies' work. 'Then let it be,' said the people, for they all loved the fairies.

"But lo! the next Friday night they were all changed to their proper homes. Then the rich people saw how hard it was for the poor, so they divided with the poor; then the poor saw what luxury the rich

had and how hard it had been to give it up. But everyone in this town was happy. Yes, and Anne had the little room with the roses at the window.

"'Twas a fairy story you asked for, my dear, and here is a fairy tale, though sure I wish 'twas true."

(Honorable Mention)

Our Picnic

By Bernice Morris, Aged 10, Melrose, New Mexico.

One day we, with Mr. Hall's family, went on a picnic. We were to go to Red river. When we got there we went across, got out of our wagons and picked plums. Papa offered a nickel to the first boy or girl who picked a bucketful. Clarence Hall won the nickel, but Nora Hall and I were second, so Mr. Hall gave us each a nickel. Mrs. Hall was stung by a wasp. Nora and I found some pretty little shells on the large, white piles of sand. After a while we made a fire and warmed our dinner and ate it under a large tree.

As it began to grow cloudy, we thought we had better go home. We wanted to get across the river before it began to rain. After we had crossed we saw some wild grapes on the bank. Papa and Mr. Hall got out and picked some. We children ate them on the way home.

By the time we were about four miles from home it began to rain hard. We stopped at Mr. Morgan's house. It rained for about two hours and the wagon blew a quarter of a mile from the house. We went home after the rain ceased. I had eaten so many grapes that I was sick the next day.

Mary's Birthday Present

By Mabel Steward, Aged 13, Quenemo, Kan.

Mary got up very early one morning, for that day was her birthday, and she was anxious to find out what she would get for her birthday. When she came to the breakfast table she found on her plate a little work basket, and her sister gave her a nice little story book. After breakfast she was told that she was to go and spend the day with her grandma, so she got ready and soon her papa brought the sleigh around to the door.

"Oh," said Mary, "papa is going to give me a sleigh ride for my birthday!"

Soon they were on their way to grandma's house. It took them about half an hour to go, and be sure grandma was glad to see her. Mary had a good time all morning playing with a doll her grandma told her used to be her mamma's, and for dinner grandma had a big cake, which she told her was her birthday cake. But, best of all, when she got ready to go home grandma brought out a little puppy.

"Oh, what a pretty little puppy!" said Mary. "What is his name?"

"His name is Trixy," said grandma. "He is to be your birthday present."

"Oh, grandma, how good you are! I am going to teach him lots of tricks."

Every morning after that Mary's mamma would open her bedroom door and let Trixy in. He would jump up on Mary's bed and wake her up to get a romp with her. By Mary's next birthday Trixy could sit up, jump over a stick, shake hands and do several other tricks.

The Baby Skunks

By Melvin Noel, Aged 10, Pampa, Texas.

One day when papa and mamma and we children were out driving we saw some objects out in the field. Papa and we boys ran out to see what they were, and they proved to be an old mother skunk and her seven babies. The mother was shy, but would not leave her babies. They were not afraid, but would come up and whine at us. The mother had been caught in a trap and had her front foot gone. We would not harm them, because they catch lots of mice and rats and so help we farmers.

We also saw a coyote the same day. He was not as brave as the skunks, but ran off as fast as he could. Papa says coyotes are like preachers—they like yellow-legged chickens. This is a true story.

Additional Stories

Goldie Bruner, Shelton, Neb.; Edna and Norma Horner, Hooper, Neb.; Henrietta Jonas, Schuyler, Neb.; Della Marks, Ord, Neb.; Harold Mansfield, Cedar Rapids, Neb.; Dorris Cottrell, Spring View, Neb.; Lena Wilson, Coleridge, Neb.; Ella and Erma Clayton, Hubbard, Neb.; Glendon Morgan, Henderson, Ia.; Emily Hunt, Dunlap, Ia.; Norma Harvey, Goldfield, Ia.; Walter Stock, Wall Lake, Ia.; Mabel Larson, Eagle Grove, Ia.; Henry Jaschke, Linden, Ia.; Gladys Wood, Garland, Wyo.; Anna Belle Nielsen, Belle, Wyo.; Lenora A. Urish, Green Valley, Ill.; William Flannery, Flandeau, S. D.; Lola Caldwell, Wentworth, S. D.; Elsie Ferrari, Smith Flat, Cal.; Melvin Noel, Pampa, Tex.

Treatment of Cats in London

Some time ago an old man revisiting London after forty years in Australia was asked what appeared to him most strange in his walks about town. He said it was the change in the public attitude toward the cat. In his young days, if a cat appeared in the street it was a signal to throw stones at it or set a dog on it, in any case to rouse a hostile demonstration, and the cat had to gallop for its life. Now he saw them sitting undisturbed on doorsteps and corners all over town.

The Friend I Met

I met a friend the other day—
He wore a cap of red;
Yet as I passed he did not deign
To lift it from his head.
Instead, he gave a saucy quank,
With head atilt, for he
Was just a downy woodpecker
A-tapping on a tree.

--Nellie M. Coye.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write with ink, on one side of paper only.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department. Twentieth Century Farmer, Omaha, Neb.

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Of Interest to Our Women Readers

Let Something Good Be Said

When o'er the fair fame of friend or foe
The shadow of disgrace shall fall; instead
Of words of blame, or proof of this and so,
Let something good be said.

Forget not that no fellow-being yet
May fall so low but love may lift his head;
Even the cheek of shame with tears is wet
If something good be said.

No generous heart may vainly turn aside
In ways of sympathy; no soul so dead
But may awaken strong and glorified
If something good be said.

And so I charge ye, by the thorny crown,
And by the cross on which the Savior bled,
And by your own soul's fair renown
Let something good be said.

—James Whitcomb Riley.

Our Home Chat

"You are such a comfortable visitor," said a middle-aged woman as her young guest helped her make the beds. "I'm not mentioning names, but I have had some guests that I was glad to see go home, and I'm not naturally inhospitable either."

"You are such an ideal hostess," replied the guest, "that I don't see how anyone could allow herself to be a burden to you. You have a nice way of turning your guests loose and allowing them to read or sew or play with the children or help you with the work, just as they choose. It is a pleasure to help with your work, too, because you never get excited about it and always have some simple little job ready whenever anyone wants something to do."

"Well," laughed the hostess, "since we are throwing bouquets at each other, I may as well tell you that I am not always as nice to all my guests as I am to you. Something happened last summer that I don't know whether I ought to be ashamed of or not. I had a self-invited guest. She apparently thought, as many city people do, that one more in a farm household is not noticeable. She never saw the pan of chicken feed ready to be taken out, or the dish-towels hanging by the range, or the full darning basket on the table, or the other little things you are always noticing. She used to get up so late mornings that I had to get two breakfasts, and she complained of the noise the children made afternoons, when she wanted to sleep, and she wanted me to cook special dishes for her. You know, it was a terribly hot summer, and the work seemed unusually hard and discouraging."

"Did she think you were running a hotel?" asked the younger woman, indignantly.

"I don't know what she thought, but after she had been here nearly four weeks I told her one afternoon, as politely as I could, that I was not feeling particularly well and my family thought it too much for me to have extra work to do, and the boys would take her back to town in the car that evening. I felt like a culprit after saying it, and she was furious."

"Why, I can't imagine your saying a thing like that," said her guest in amazement.

"You don't need to be afraid I'll say it to you," her hostess added hastily. "You fit in like one of the family. You don't make a bit of extra work, and your company is worth a lot to me. But I have often wondered since if I was justified in saying such a thing even to her."

HOME EDITOR.

Music in the Home

Visiting district school recently, I was again reminded of the importance of music in the home. Of the thirty pupils present perhaps a third could sing and appreciate real music; another third had a fair idea of song, but the other third were yet to receive their initial notion of tune, time and volume. The teacher often forgot the music period in her program, because the task was discouraging.

There is in almost every school that large, neat girl who, being asked to sing, croons the words in a monotone, and several boys do likewise. They have not learned the scope of their voices, how to raise and lower them, and now, if criticised so late, become diffident and clam-like. Then there are those half dozen little ones who have only to hear a tune to know it. Of this, talent, a trifle; unconscious training, much.

It is not necessary to argue the potent, refining influence of music. Mother, sing to your little ones when about your work. Father, get your children about your knee at night and sing them a song or play a tune. Such music as can be made in the home not only cheers and calms, but develops some early musical idea. Brothers and sisters, sing together for the younger tots.

Once a woman told me she never sang in all her life, because someone had told her when a child that she "couldn't sing a note." Encourage musical efforts. A tow-headed 2-year-old boy used to swing by the hour singing to syllables of his own the tunes his sisters learned at school. In a family of six boys, none of whom could sing and all of whom were considered non-musical, a strange thing happened. A violin teacher, meeting the third youngest on the street, asked him to come to his house for violin lessons, in return for which the boy could do fruit chores. Out of this step there developed a family circle of instrumental players, and I need not tell you that their home is a rendevous of the first quality, and that mother is proud and happy of being able so easily to keep her boys at home evenings. Let us be awake to musical possibilities.

MRS. WILBUR KRISTENSON.
Iowa.

Social Problem of the Farm

The wife of a well-to-do farmer once said to me that she was urging her husband to sell the farm and move into town. She said that a life deprived of social privileges was scarcely worth the living, and when she read or heard of the social functions enjoyed by her town acquaintances she always felt like sitting down and having a good cry.

To this statement I really had nothing to say, because I knew that when any woman had come to the point where she could sit down and cry for social privileges, words would be useless, but I could not help wondering just what her idea of society was, anyway. If by getting into society she meant belonging to half a dozen different clubs, playing bridge and frittering away her time in the social whirl, then I suppose she would have to move into town, for farm women usually have something more important to occupy their time. But even then she might find to her amazement that not all city women of the better class spent all their time in these diversions.

To a good many town women home and home duties come first, and a good many farm women have found, after they have sacrificed more than they could afford to break into society in the city, that the pleasures which seemed so dazzling and desirable grow insufferably dull and burdensome, and that the game is not really worth the candle. And while it is true that the farm woman is deprived of a good many privileges which her city sister may enjoy if she chooses, it is also true that a woman who has so little good sense as to fret and cry and make her family miserable because of her lack of social privileges never will be very

(CONTINUED ON PAGE TWENTY-SEVEN.)

The Greatest Modern Educator Of Children—

Mme. Montessori

on her recent tour of America included Battle Creek, the great Pure Food Center, in her itinerary. Speaking of diet for children she makes the following statement (in the Chicago Daily Journal of Dec. 31, 1913):

"Coffee and tea should never be placed within reach of a childish hand."

Besides being an educator, Madame Montessori is a physician, and bases this advice on her scientific knowledge that an ordinary cup of coffee contains about 2½ grains of caffeine--a poisonous drug (also found in tea).

In these days of liberal education the average American parent is becoming informed concerning the baneful effects of tea and coffee drinking, not only on the youth, but on those further along in life.

How much better to place before the children (and older ones too) a wholesome, nutritious, pure food-drink such as

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Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6364—Ladies' Skirt—Serge, cheviot or broadcloth can be used to make this skirt, which is cut in two pieces and is made in the peg top style. The high or regulation waistline can be used. The pattern 6364 is cut in sizes 22 to 30 inches waist measure. Medium size requires 2¾ yards of 44-inch material.

6164—Children's Dress—Serge, cheviot or linen can be used to make this dress, which closes at the front and is made with a removable shield. The long or short sleeves can be used. The plaited skirt is attached to the waist with a belt. The pattern 6164 is cut in sizes 2, 4 and 6 years. Age 4 years requires 2⅛ yards of 44-inch material and 2 yards of edging.

6058—Ladies' Skirt—This skirt is very simple to make, as it is only cut in two pieces. The closing is at the front and the empire or regulation waistline can be used. Serge, cheviot or broadcloth can be used. The pattern 6058 is cut in sizes 22 to 30 inches waist measure. Medium size requires 4⅝ yards of 27-inch material.

5503—Ladies' Dress—This frock is quite easy to carry out, as it is made with the body and upper part of the sleeves in one, and the skirt is a six-gore model. The sailor collar is an attractive feature. This is fashioned of contrasting material, of which the cuffs are also made. The pattern 5503 is cut in sizes 32 to 42 inches bust measure. Medium size requires 5⅝ yards of 36-inch material and ¾ yard of 27-inch contrasting goods.

6055—Boys' Dress—Serge, cheviot, linen or gingham can be used to make this dress, with the collar, cuffs and belt of contrasting goods. The dress closes at the front and can be made with either the long or short sleeves. The pattern 6055 is cut in sizes 1, 2 and 3 years. Age 2 years requires 2⅛ yards of 44-inch material and ⅜ yard of 27-inch contrasting goods.

5523—Ladies' House Dress—Far neater in appearance than the wrapper, the house dress is becoming more popular. The model illustrated is a simple bodice in shirt-waist style, closing at the side and attached to a seven-gore skirt, which is made with a panel front. The pattern 5523 is cut in sizes 32 to 44 inches bust measure. Medium size requires 4½ yards of 44-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

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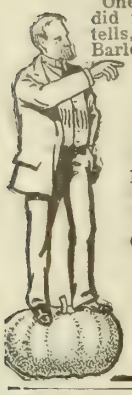
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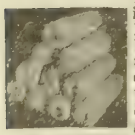
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Two Corn Club Boys at National Capital

What Nebraska Prize Winners Saw on Their Trip to Washington

CORN club winners from all over the country have recently returned from a trip to Washington. Below appear the stories of the trip which were written by the two Nebraska boys. These two boys went to Washington together, accompanied by Miss Hulda Peterson, assistant in the Agricultural College extension department. It is an interesting thing to note the different ideas the boys got of the same things, and how some things impressed them both alike and some things one found interesting and the other did not mention.

The corn and canning clubs for 1914 will soon be well started, and it is a good plan for those who want to enter to be getting their applications in now. Any boy or girl desiring to enter these clubs should send their name to the State Agricultural College and get blanks to fill out. We hope that there will be a number of Twentieth Century Farmer boys and girls represented in the various clubs this coming year, and that they will raise big crops and some of them win the trip to Washington.

Jesse Correll's Story

I WAS a member of the Nebraska Boys' Corn Club in 1912 and won some very good premiums then. My yield was 109 bushels. The corn club has always been very interesting to me. In 1913 I entered the contest early in March. I entered the contest early so when it came time to plant my corn I would be ready. I planted and cared for the corn until I had husked and cribbed it; but, to my surprise, I had a yield of eighty-eight bushels by measure, or ninety bushels and ten pounds by weight.

About three weeks after I had husked my corn I received a letter stating the following: "The boy who has the largest yield of corn on his acre will get a free trip to Washington, D C."

Mr. Andreas, sent through the agricultural extension service of the State University, came to Cambridge to inspect my work. He went out to my uncle's place, where I grew my corn, and made inquiries as to how it was grown. He went back to Lincoln that evening in good spirits and wished me success. Saturday evening I found out that I had been declared state champion of the Corn Club.

I was to leave on Monday, so had little time to get ready for my trip to the great city of Washington, D. C. If it hadn't been for my mother and sister I wouldn't have gotten ready so quickly. I left Cambridge Monday morning. Miss Peterson, assistant in charge of the club work in Nebraska, met me at Lincoln. At Omaha Walter Pflug, from Papillion, joined us. He won second place in the corn contest. We left Omaha for Chicago at 6 that evening; went by the way of Ames, Ia., because the Iowa club delegation was to go on the same train.

A Day in Chicago

We arrived at Chicago about 7 o'clock the next morning. We stayed in Chicago that day. During the forenoon we went to the Board of Trade building. There men spend their time in buying and selling grains. This is done by signs that they know as well as we know anything about an auction sale. As a rule the grains are sold in carload lots. Samples of the grain, in sacks, are on tables at one side of the room. There are numbers on the sacks corresponding to the car of grain the sample is from. When a car of grain is sold the sample, with the number of the car on it, is taken from the table. On the other side of the building are the telegraph offices, where reports of prices are sent over the United States.

We went to the Art Museum, on Michigan avenue, and saw many interesting things. It was a very large building. We had our pictures taken as we were going in and had another one taken after we came out.

The state of Iowa has a club in Chicago called the "Hawkeye Club." We took dinner with them, because we were with the folks from Iowa, and they invited us to take dinner with them. The club is made up of people who have lived in Iowa and now live in Chicago, or persons from Iowa who travel and come to Chicago often. We were treated very cordially here. After dinner we went to the Marshall Field department store. There were about 1,500 employes at work at that time. The Christmas stock was out and we certainly saw a lot of toys there. They have one room where children can come and play. From there we went to Lincoln park, where we saw Lincoln's and Grant's statues; they are very fine pieces of work, as it is very hard to construct this kind of statue. We visited the zoo, where we saw many different kinds of animals; some of these we had never seen. Then we went to the green house; here we were in a summer climate; there were great, large trees in the house and flowers of all kinds.

We left Chicago for Pittsburgh about 8 o'clock and got there about 10 o'clock the next morning.

Modern and Colonial Pittsburgh

After breakfast we went to the Heinz factory, the home of the fifty-seven varieties of canned goods. We saw how some of the food which we buy on the market is prepared. If the pickles are not packed right when the inspector inspects, she sends them back to be repacked. We ate our lunch in the auditorium of the factory. They served foods prepared in the factory, and a better lunch of its kind I never ate. During the afternoon we visited the block house where the Indians and whites fought during the French and Indian war. Stood on the point of land where the Monongahela and Allegheny rivers unite to form the Ohio river. From there we went to the Carnegie museum. It is a beautiful building, covering five acres of ground. We saw many interesting things there. After supper we went to Mount Washington. On the way we went through a long tunnel. From Mount Washington we saw how the sky is lighted by the great furnaces of this wonderful city of smelters; it is called "hell with the lid off" from the mountain.

We started for Baltimore at 10:30 that evening and got there about 8 o'clock in the morning. Saw one of Washington's monuments there, which was about 250 feet high. We went to the Poote oyster plant, where we saw how they took the oysters from the ship and put them in small cars. These cars were pushed into ovens, where they were cooked under a fifteen-pound pressure of steam. These are canned as cove oysters. The raw oysters are simply taken from the shell, packed in ice and and shipped out.

We also visited the Baltimore market, where we saw how they sell their products there. They sold cottontail rabbits for 45 cents each and marsh rabbits (mush rats), as they called them, at 18 cents each.

Meeting Interesting People

We left Baltimore about 4 o'clock in the afternoon and got to Washington about an hour later. We went to the Ebbitt hotel from the depot, where we resided all the time we were in Washington. That evening a reception was held in the "red room" at the hotel. We got acquainted with Mr. Benson, the national club leader of the northern states, and other men from the Department of Agriculture; also many of the boys and girls from the other states. There were club winners from thirty states.

One of the speakers told us this story: "Once a negro was asked by a white, 'What is the way of your people's farming?' He said, 'Some sit down and think; others jest sit down and sit still.'" Also this speaker said: "If a farmer has the best of stock and crops and does not have a good home, he is but one-half of a farmer." I believe this is as true as anything I heard while I was in Washington.

The author of the book called "Joe, the Book Farmer," talked to us and gave each one of us a copy of his book. I think a great deal of this book. It tells about a boy who got a trip to Washington for raising a prize acre of corn, although his father didn't believe in studying books to learn how to farm. But when the son's ways succeeded, his father began to follow the son's ways, because it made the crops count.

Sights of Washington

The next morning, December 12, we went to Washington's monument, which is 555 feet five and one-eighth inches high. We went up in five

minutes on the elevator and then walked down.

In the afternoon we went to Fort Meyer and Arlington. The United States soldiers are at Fort Meyer. They had a special indoor drill for us. It was a very nice drill in all respects. From there we went to the Arlington cemetery, where many soldiers, especially officers, are buried. We went to the congressional library in the evening; that is a magnificent place. I could not understand the pictures and engravings on the floor, walls and ceilings or I would have liked it better.

We took our exhibits to the National Museum the next morning. There were some fine exhibits there which were brought from the various states by the club boys and girls. The day was warm and nice, so Mr. Houston, the secretary of agriculture, gave a talk and presented to us diplomas out on the green campus near the agriculture buildings.

That afternoon we went to Mount Vernon on a steamboat. Mount Vernon is sixteen miles up the Potomac, but I enjoyed the ride so much the time seemed short. When we landed we went up a flight of steps and up the path which led to Washington's old tomb. The tomb was covered with vines and oak leaves which had fallen. From there we went to the new tomb, where thirty-four Washingtons are buried. The tomb was finished in 1830 and Washington's body was put in the tomb in 1831. The last of the Washington family was put in September 6, 1885. The vault was then locked, the keyhole sealed and the key was thrown into the Potomac the same day.

We saw the barn that was built in 1733, a year before Washington was born; it is still in use. And we saw the coach which was used by Washington. The residence isn't a modern house of today, but it was one of the finest houses in Washington's time.

I cannot explain all the places we visited, such as the zoological park, printing office, bureau of printing and engraving, department of education and the White House, where we met Mrs. Wilson. The president was sick, so we did not get to see him. We spent half a day in the capitol building, where every club member was introduced to the committee on agriculture. We were present at noon when congress opened the day's session. We went to the War and Navy departments and the Pan-American building, where business with foreign counties is carried on. Congressman Maguire from Nebraska took us for an automobile ride one morning, when we saw some interesting things that we would not have seen otherwise. We also saw Mr. Bryan, secretary of state; he talked to us for a few minutes.

We started home Saturday morning, December 20, and arrived home safe the following Monday morning.

I don't think that I will ever have a more interesting and profitable trip than this was. I am very grateful to the Union Stock Yards company of Omaha for paying all of my expenses.

I believe that the club work is doing a great deal for this country. It is making many good farmers who would not have otherwise thought of being farmers. I am a town boy, who would not have thought much about farming had it not been for the Corn Club.

Our motto is, "Make the Best Better." Try it.

What Walter Pflug Saw

I ENTERED the Boys' and Girls' Club and won first prize in my division, which consisted of the eastern half of Nebraska; also won second prize in the entire state. I was requested to go along to Washington, D. C., with the champion and Miss Peterson, our state leader, which I did.

I left Omaha at 6 p. m. December 8. We wet Mr. Bishop and the Iowa delegation at Ames, Ia. We did not get to see much of the country, as it was dark the whole time from Omaha to Chicago. We reached Chicago the next morning at 7 o'clock.

In the morning we visited the Art Institute, which was grand. We had dinner with the "Hawkeye Club." The "Hawkeye Club" consists of people now living in Chicago but who formerly lived in Iowa. We had a fine time and were treated very kindly. After dinner we visited Lincoln park. This park has a large statue of Abraham Lincoln in it, also a statue of General Grant. We could see Lake Michigan from this place. There is a fine hot house here; there are also a large number of animals. We went under the Chicago river in a street car. One very interesting thing visited was the Board of Trade. It seemed to me like an insane asylum turned loose. You could hear nothing but men yelling. I enjoyed our stay in Chicago very much. We left the city at 8 p. m.

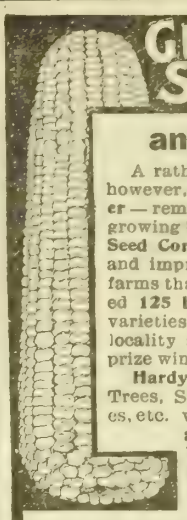
Dark, Dirty Pittsburgh

We saw our first snow between Chicago and Pittsburgh. We reached Pittsburgh at 8:45. We were taken through the Heinz pickle factory. This factory is sanitary throughout. The workers are furnished with a fine dining room in which to eat their dinners, also with a cup of hot coffee, and all this at the cost of 1 cent each. We were then taken to a dining room and given a sample of the different foods which they make; it served as a very good meal.

We next visited the old block house in which Washington stationed his men and defeated the Indians in the French and Indian war. We also saw where the Monongahela and Allegheny rivers meet and form the Ohio. Our next stop was at the Carnegie Art Museum. They had a fine collection of birds and animals here, also a few mummies. Mount Washington, our next trip, is a large hill, from which you can see all over the city of Pittsburgh. When the steel furnaces are working at night their flames seem to lighten the whole sky. It seems as if the earth is afire; therefore it is called "hell with the lid off." We left Pittsburgh at 11 p. m. We were glad to leave it, as it is a very dark and gloomy city.

We next reached Baltimore. A visit to the oyster company was enjoyed by all. It is very interesting the way oysters are canned. We saw the Chesapeake bay, where large quantities of oysters are obtained. The oysters canned as cove oysters are first steamed; they open easily after being steamed. We visited the market and also the Young Men's Christian Association of Baltimore.

(Continued on Page Twenty-two.)



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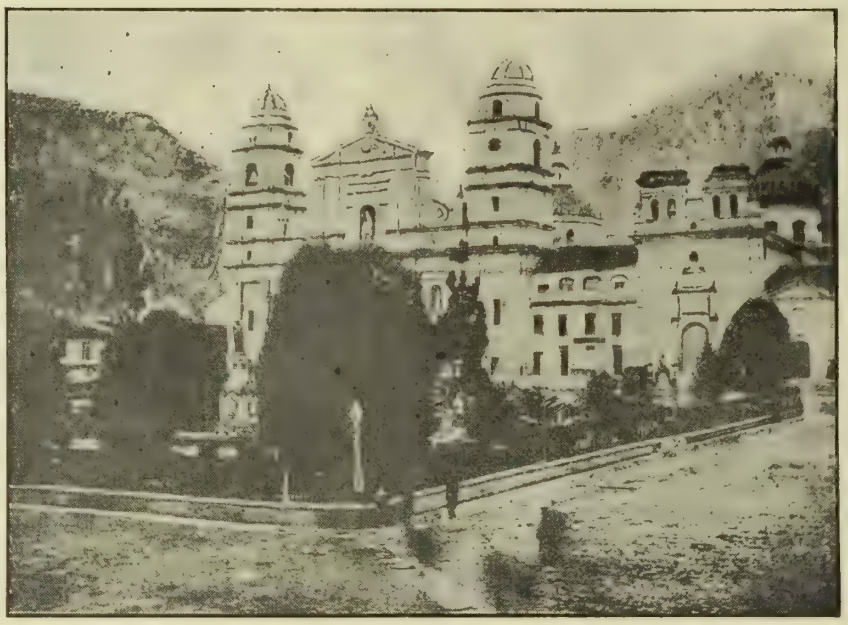
Colombia and the Panama Canal

By Frank G. Carpenter

ON THE Pacific ocean, off the coast of Colombia—I am seated on the deck of the Peruvian steamer Huallaga, sailing southward along the west coast of the South American continent. We left Balboa and the Panama canal two days ago, going out as the sun was setting over our fortifications on the Islands of Flamenco, Perico and Naos. We sailed past these islands, and when not far from Tabagoga turned southward. We are now a little north of the equator, moving along the coast of Colombia. We are in the doldrums or one of equatorial calms, where there is so little wind that sailing vessels will hardly be able to reach the canal. The air is almost still, and were it not for the slight breeze we have from the northeast trade winds it would be stifling. As it is, the sea seems to steam. The ocean is a vast sheet of molten silver, which now and then, ripples into a moving ocean of diamonds under the tropical sun. In the shadow of the vessel the water is indigo blue, but on the opposite side there is nothing but a vast expanse of this dazzling steaming sea.



The Cathedral and Park, Bogota, Colombia

On the Biggest of Oceans

This is the mighty Pacific, into the heart of which we have cut our way by the Panama canal. It is here at the equator that the ocean is widest; and its waters stretch from where I now am, a distance of almost 10,000 miles before they reach Asia. The Pacific ocean has three-eighths of all the salt water on the globe, and within a few years it will be covered with trade routes whose focus will be the Isthmus of Panama. Many of the countries of the world are already building steamers. Japan has several lines under way, and there is hardly a great port in Europe that is not preparing to send ships to Panama.

All down this west coast of South America they are planning to take advantage of the new waterway. The vessel on which I am traveling is subsidized by the Peruvian government. Another line of ships sailing along this coast belongs to the Chileans, and the day I left Panama one of the largest vessels of the Pacific Steam Navigation company, the old British line, started south, to call at the west coast ports the same day. I could have gone to Guayaquil on the Manavi, but that ship would have taken eleven days to have made the less than 800 miles between the two ports, whereas the Huallaga made it in less than three. The Manavi is a little British boat of 1,000 tons, and its passenger rates are over 10 cents a mile. The fare from Panama to Guayaquil is $82.50. It is so high that if you had to pay at the same rate, it would cost you $300 to cross the Atlantic from the United States to Europe, and something like $500 to go from San Francisco to Shanghai. I have bought a through passage from Panama to Callao, Peru, on this steamer, and have paid for it just about $100. The distance here is only 1,346 miles, or about as far as from New York to New Orleans, a trip that can be made by rail for less than one-third the amount.

Ship Like a Farmyard

And still I like these Peruvian steamers. They are unlike those of any other part of the world. The cabins are large and they open out upon deck with windows and doors. You can sit in your room as though on a porch, and look out over the ocean, and the windows and doors can be kept open both day and night. The ship carries much of its own live stock on board, and I awake every morning thinking I am on my mountain farm in Virginia. There is a crowing of roosters and a cackling of geese and ducks. We carry about 200 fowls on board, and the stewards gather the eggs every morning. The omelet I had for breakfast today was almost fresh from the hen, and it was far better than the cold storage egg that one gets at Uncle Sam's hotels on the isthmus.

New Boat to Ride On

We have breakfast at 11 o'clock, which my boy Carl says is a peach of a time for the meal. The times of eating here are strictly Latin-American. They begin with desayuno, which is a cup of black coffee and a cracker served in your room upon rising. After that comes almuerzzo or the first breakfast, at 11, consisting of a soup and fish, steak or eggs, with bananas and oranges at the close. We have tea at 4 o'clock in the afternoon, and at 7 a table d'hote dinner. The cooking is Spanish, and is not at all bad. The waiters are natives, and the bills of fare are in Spanish, so that Carl takes his dictionary to the table to order his meals.

Colombia's Pacific Port.

The Huallaga has just about 5,000 tons. It is a new boat made in France about two years ago. It burns oil as fuel, and it can make sixteen knots an hour. It is very steady and is exceedingly comfortable.

Just now we are moving rapidly down the west coast of Colombia, but so far out that the land cannot be seen. It is only the small steamers like the Manavi that call at the ports on that coast, and this will be the case until the Panama canal is opened.

There are a half dozen Colombian ports on the Pacific, the largest of which are Buenaventura and Temuco. Neither of these has over 2,500 population. Most of the other ports have no good landing places, and at some you have to be carried on shore on the backs of negroes. Nevertheless, I am told that the harbors are good, and that they will be improved as soon as the canal is in use.

Buenaventura will probably be the chief port on the west coast of Columbia. The town is built on an island, which lies at the head of the bay about eight miles from the sea, and at the mouth of the Dagua river. By dredging, the harbor can easily be made an excellent one; and the firm of S. Pearson & Son of London has just made a contract with the Colombian government for surveys with a view to its improvement. In this contract they are to get $25,000 for the plans and estimates of the cost of construction. The proposed improvements include a clearing and anchorage ground of more than a mile long and about half a mile wide, and also a new city, including its waterworks and a system of sanitation and paving. All of the plans are based upon a city of 50,000 inhabitants, and by the contract they have to be ready on or before August 19, 1914.

The Buenaventura of the present has only 2,000 people, so that this will give you some idea of what is expected in the way of growth from the opening of the canal.

Has One Railroad

Buenaventura has already a railroad which is being built over the mountains into the great valley of the Cauca river. This road is owned by Americans. It begins at the harbor and will go over a pass about 6,000 feet high from where there is an easy grade down into the valley. The valley of the Cauca is one of the paradise spots of the South American continent. It is several hundred miles long and twenty or more miles in width. It begins near Ecuador and runs north through a great part of Colombia. Altogether it is almost as large as California and equally rich. The land is high and healthful and the soil is fitted for coffee, cocoa and all sorts of semi-tropical fruits. There are some Americans who have already lands there. Labor is plentiful and the chances for development are good. Parts of the valley are underlaid with coal, some of which is of a good steaming variety, and one of the objects of the railroad will be to carry this coal down to the Pacific ocean, where it will command a high price. The road will eventually connect with the other railroads of the country, and will probably some day be so extended as to reach Bogota.

Opportunities for Americans

You people of North America have no idea of the possibilities right under your noses. Colombia is your next-door South American neighbor and it will pay you to cultivate it. Its people now have strained relations with the United States, because they think Uncle Sam took advantage of them in regard to the Panama canal. It is very much a question whether they have been equitably treated, and it will pay the United States to make a treaty with such terms as will satisfy them. James T. Du Bois, our last minister to Colombia, had such negotiations well under way before the present administration came in, and if they can still be consummated it will be of great benefit to the two republics. It would also improve our standing with all of the other South American countries.

But before I go farther let me tell you just where Colombia is and something of what it contains. It is just across the Caribbean sea and the Gulf of Mexico. The shortest distance between it and our country is not as far as from Philadelphia to Chicago. Tampa, Fla., is as near to Cartagena as New York is to St. Louis, and from that Colombia port to New Orleans is only four days' easy steaming. From Barrenquilla to New York is less than 1,900 miles and the trip can be easily made in five days. By way of the canal Boston can reach the west coast of Colombia by steaming a little over 2,000 miles, and the whole of this coast is nearer our Atlantic seaboard than any part of Pacific North America.

Some Big Country

And then look at the size of the country. Colombia has a coast line of about 700 miles on each ocean. From south to north it is longer than from New Orleans to St. Paul, and from east to west in places it is wider than from Baltimore to Chicago. It is larger than all the Atlantic coast states, with Ohio and West Virginia added. It is nine times the size of New York and ten times as big as Kentucky. It is bigger than Germany,

France, Holland and Belgium combined, and notwithstanding it is almost on the equator, the most of the land is so high above the sea that white men can live in it and the soil will produce crops that have a steady market in Europe and in North America.

Colombia has pasture lands which may make it one of our future sources of meat. One-half of the whole republic consists of plains that slope down to the Amazon and Orinoco rivers, and these are now raising something like 4,000,000 cattle. The Cauca valley alone could supply enough chocolate to glut the markets of the world, and there are extensive regions along the Caribbean fitted for coffee. On the lowlands of the coast the United Fruit company now has vast plantations of bananas, the product of which it is shipping to England and the United States. The exports run into the millions of bunches a year, and they are carried away to New York in steamers of 5,000 tons. each having accommodations for 100 first-class passengers. They have steamers to Europe which make the run in about fourteen days.

Also Has Oil

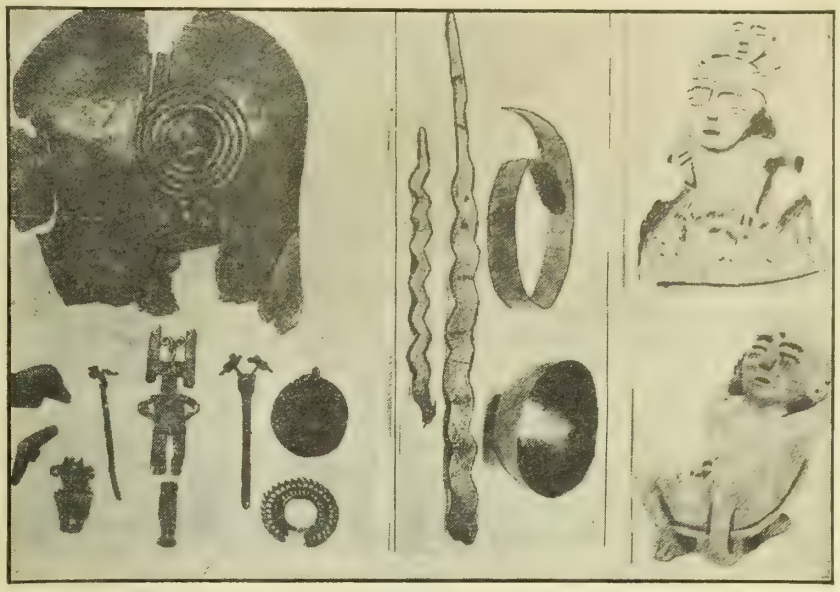
I understand that there are valuable deposits of petroleum on the northern coast of Colombia. In coming to Panama I traveled with a Californian who owns a tract of 30,000 acres not far from Cartagena. He says that it is underlaid with oil and that there is oil all along the coast, and here and there throughout the West Indies. This man has been all over South America investigating the oil fields. He tells me that our sister continent has probably more petroleum than we ever had, and that the most of it is yet to be exploited. He describes the oil fields of Colombia as being so close to the seaboard that the oil can be easily piped into the steamers. So far the country is undeveloped, but American oil men have been coming in, and a thirty-year concession has been granted to a tract of oil fields 100 miles long and 60 miles wide in the department of Santander. The owners have agreed to work this field and to put up one or more refineries, and the government has promised to admit free of duty all necessary materials. Arrangements are now being made for an oil refinery and warehouse at the port of Cartagena.

Rich Gold Mines There

The mineral possibilities of Colombia correspond with those of Alaska. It was there that Balboa found his first gold, where the Indians told him of the treasures over the mountains that were afterward opened up by Pizarro. Since that day more than $700,000,000 worth of gold has been taken out of Colombia, and there are mines in a half dozen different states which are now paying well. The great gold-bearing regions are in the mountains of the Choco and Antioquia provinces, and in the ranges between the Cauca and Magdalena rivers. This area covers thousands of square miles and gold is said to be found wherever there is gravel. Back in the mountains, where the rock has been laid bare, there are gold veins everywhere that require only modern machinery and methods for the extraction of the metal. Much of this territory has never been explored except by the Indians. There is also gold in the department of Narino, bordering on Ecuador, and gold nuggets are found in the gravel beds of all the rivers of that section which flow into the Pacific ocean.

Gold in Sacred Lake

One of the odd gold finds of Colombia is connected with the sacred lake of Guatavita, which lies high up in the mountains, two miles above sea level. This lake has a deposit of mud about thirty feet deep at the bottom that is believed to contain quantities of gold images, gold plates and gold dust that were placed there by the Indians before and since Columbus discovered America. According to the tradition the Indians came to the shores of the lake and threw in this gold as offerings to their gods. The ceremony was performed by the chief, who first took a bath in gold dust. He was then rowed upon a raft which was loaded with gold in various shapes out to the center of the lake. Here his subjects washed the gold dust from his body and threw the golden offerings into the water. I have seen golden images at Panama which are said to have come from Lake Guatavita, and I know that gold images have been dug up from its shores for a generation or more. From time to time the Spaniards have tried to drain the lake by making a cut through the mountains. They have always failed, and now an English company has gotten a concession, and it is slowly making its way through the mountain walls. In understand that a great part of the lake has already been drained, and the treasure or the lack of it is soon to be found.



Images of Solid Gold Taken from the Sacred Lake at Guatavita

Copper and Emeralds

The natives of Colombia claim that they will some day have the greatest copper producing country in the world. Copper ores are now found in five different states, and there are important copper deposits right on the Magdalena river, about 750 miles from the sea. The river is navigable for this whole distance, with the exception of a short stretch of rapids. The copper there is in low mountains bordering the stream, and the mining engineers say it can be worked at a profit.

The emerald mines of Colombia are said to be the richest of the whole world. They belong to the state, and are worked through concessions or leases. According to the law, private parties are now prohibited from claiming any emerald mine they may discover, and those which have been already found can only be worked by paying the government $60,000 a year from the time the mining begins.

The best emerald mines at present are those of Muzo, about seventy-five miles from Bogota. Here the stones have been deposited in the bowl of an extinct volcano. They are dug out of the crater by laborers, who break the lava along a fixed line, uncovering the trail of green quartz that contains the crystals. This quartz is then taken out with great care. The gems are extracted from the matrix and the debris falls into a sluiceway where it is washed by water dropping down from the higher planes of the mine. After the water has drained off the sediment is searched for emeralds.

Some Prize Gems

It was out of such gravel that the Duke of Devonshire, the most valuable single emerald ever found, was taken. That stone weighed a little over half a pound; it was about two inches long and averaged two inches in thickness. Another fine stone which came from Colombia is the Hope emerald, which weighed six ounces.

The Muzo group of mines is now turning out over 700,000 carats of emeralds per annum. Of these about 262,000 carats are of the first class and 500,000 of the second class, while there are others of the third and fourth classes. There is a new group of mines now being worked which it is believed will yield a half millions dollars' worth of emeralds per year.

There is a tradition that Cortez got an emerald of the Aztecs that was worth 40,000 ducats, and that another emerald the size of an ostrich egg came from Peru, where the Indians worshiped it as a goddess.

The first emerald mines here were opened up by the Spaniards in 1540, the Indians being enslaved in order to work them. After a time they were closed and lost to the world. They became hidden in the jungle and remained so for more than a hundred years, being discovered again only about sixteen years ago.

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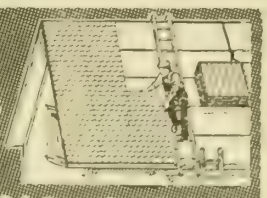

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Write at once for Special Price Roof Book No. 298, and give size of roof if possible.

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Please send book on your Steel Shingles, together with latest Freight-Paid Prices.

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Address.....

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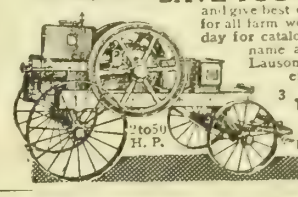
No Cranking—start easily with a slow turn of fly-wheel. Sumter Gear Driven Magneto does away with batteries, their expense and trouble. In other ways they SAVE YOU MONEY and give best of satisfaction for all farm work. Write today for catalogue, dealer's name and Proof of Lauson Frost King efficiency.



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PROF. JESSE BEERY, Box 76 Pleasant Hill, Ohio

Please send, free of cost, to the address below, Prof. Beery's Introductory Course in Horsemanship

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Bad Habits Cured By Beery System

Refusing to lead.
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Afraid of band playing
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Afraid of the touch of shafts or harness.
Running away.
Kicking
Biting. Striking.
Hard to shoe.
Bad to groom.
Breaking straps
Refusing to hold back while going down hill.
Scaring at hogs or dogs along the road.
Tail switchers
Lolling the tongue.
Jumping fences
Bad to hitch to buggy or wagon.

To all men *owning horses*, who answer this advertisement, I will positively send my introductory course in Horse Training and Colt Breaking ABSOLUTELY FREE.

World's Greatest System of Horsemanship

Twenty-five thousand FARMERS and horse-owners have taken my regular course and found that *it does the work*. Even if you have only *one horse*, it will pay you to master my wonderful system. The Beery Course is the result of a lifetime's work as a tamer and trainer of horses. As one of my students has said, "The horse has never been foaled that Prof. Beery cannot handle." My record proves it.

Master Any Horse

The Beery Course gives you the priceless secrets of a lifetime—enables you to master any horse—to tell the disposition of any horse at sight—to add many dollars to the value of every horse you handle—and my students are all good traders.

Break a Colt in Double-Quick Time!

You can do it by my simple, practical, humane system. There is a lot of money in colt training.

Make $1,200 to $3,000 a Year

Many of my graduates are making big money as professional horse trainers at home or traveling. I made a fortune traveling and giving exhibitions. You have the same opportunity.

BEFORE TRAINING

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My Graduates Are Doing Wonders

A. L. Dickinson, of Friendship, N. Y., says: "I am working a pair of horses that cleaned out several men. I got them for $110, gave them a few lessons, and have been offered $300 for the pair." Fred Bowden, R. R. No. 2, Keokuk Iowa writes: "It's worth many times its cost." I have many similar letters from graduates all over the world.

Send the Coupon

and get the Introductory Course in Horse Training FREE. This special offer may never be repeated. Act now. Tell me about your horse.

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The Flail Was Good

The grain *must* be *beaten* out when it is threshed. This is the only sure way to get *all* of the grain. Incompetent threshers are letting too much grain go to the stack.

Hire a Red River Special

And Save Your Thresh Bill

J. H. Hallford and nine other farmers of Clinton, Missouri, say: "The Red River Special put our grain in the sacks and not in the stacks. It really does save the farmer's thresh bill." You spent time and worked hard to grow and harvest your grain. Don't let an incompetent thresher make you divide your profits with the straw pile. The Big Cylinder, the "Man Behind the Gun" and the Beating Shakers let nothing but straw and chaff go to the stack.
Write today for "Thresher Facts."

Nichols & Shepard Company
(In continuous business since 1848)
Builders of Threshers, Wind Stackers, Feeders, Steam Engines and Oil-Gas Tractors
Battle Creek, Michigan

LET THE WIND PUMP YOUR WATER FOR NOTHING

WHY PAY FOR GASOLINE WHEN WIND IS FREE!
Get a Big, Heavy, Powerful, Light Running, Double Geared

SAMSON WIND MILL

SEND FOR CATALOG
We also build Ideal Feed Mills, Pump Jacks, Hand Grinding Mills for Poultry Raisers, Gasoline Engines, Ensilage Cutters and Brass Candle Sticks

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SHORES-MUELLER CO.
Shores REMEDIES
EXTRACTS SPICES

Wanted
Farmer or Farmer's Son

with rig in every County to introduce and sell Family and Veterinary Remedies, Extracts and Spices. Fine pay. One man made $90 one week. We mean business and want a man in your County. Write us.
Shores-Mueller Co., Dept. 25, Cedar Rapids, Iowa

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WESTERN CANADA NOW

The opportunity of securing **free homesteads of 160 acres** each, and the low priced lands of **Manitoba, Saskatchewan and Alberta**, will soon have passed.

Canada offers a hearty welcome to the Settler, to the man with a family looking for a home; to the farmers son, to the renter, to all who wish to live under better conditions.

Canada's grain yield in 1913 is the talk of the world. Luxuriant Grasses give cheap fodder for large herds; cost of raising and fattening for market is a trifle.

The sum realized for Beef, Butter, Milk and Cheese **will pay fifty per cent on the investment.**

Write for literature and particulars as to reduced railway rates to Superintendent of Immigration, Ottawa, Canada, or to Canadian Government Agent.

W. V. Bennett, Room 4, Bee Building, Omaha, Neb.

160 ACRE FARMS IN WESTERN CANADA FREE

Money-Making Farms 21 states; $15 to $50 an acre, live stock and crops included to settle quickly. More for your money in productive land near good markets here today, than elsewhere on earth. Get the facts. Big illustrated Bargain Sheet free. E. A. Strout Farm Agency, Station 312B, New York City.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

GETTING ready for the spring work means that one phase of the business points to looking after the poultry yard. Perhaps the poultry yard has been looked after in recent years and does not need it. This may be true in some cases, but I know it is not true in many. Poultry yards have a fashion of getting quite bare of vegetation, then staying that way. Such a yard becomes well poisoned in a couple of years, and what must it be in several years? That this ground is poisoned with filth, though it may be swept clean and look clean, may be the main reason that you lose so many of the young stock, to say nothing of epidemics that mysteriously carry off the old each year. The proper thing to do each spring with these bare poultry yards or bare places in the poultry yards is to scrape the top dirt off, throw it on the garden, then put six inches or more, much more if you want to do the right thing, of gravel over in its place. Dirt will do, clean dirt from some bank in a field; even ashes, coal or wood, will do; but there's nothing like gravel to keep down disease and shut off the gape-worm trouble. If it is too much trouble to scrape the yard, don't neglect giving it a coat of fresh earth of some kind anyway. Wood ashes themselves make excellent fillers for sink holes, purifying the ground and making solid footing in a short time.

Old Boards, Coops, Etc.

In the spring one only too often finds the poultry yard filled up in corners and divers places with old broken-down coops, barrels, boxes and the like, left-overs from the chicks brooding in or on them until winter appeared. Every one of these should be gone over with fire or scalding water in plenty. Coops good enough for the next year's work can be scalded, mended, disinfected and placed on clean, fresh ground, but the old boxes, broken-down barrels, boards, with odds and ends of coverings for coops of no more good, should be burned to ashes, and the grounds they occupied all winter scalded or burned over, for it is under these boards and other leftovers from last fall's brooding that mites, as well as the larger lice, harbor and multiply the long winter through, despite ice and snow, and it is these that start the next summer's loss of chicks.

Some Questions and Answers

D. P., Nebraska: I come with a new trouble in my flock. My hens have overdone themselves laying this winter, but now I am getting so many eggs without shells, just that thick membrane. Why is it?

Answer—Because, as you suggest, they have outdone their power to form shells. More than likely you have over-stimulated your hens with soft, rich feed. Change all this and give just good grain and plenty of oyster shell, and I think the trouble will disappear in this case.

***

A Beginner, Nebraska: Would you kindly tell me how long I must keep my hens penned until I can set the eggs? Will it be necessary to keep the male with them all through the hatching season?

Answer—You cannot be sure of fertility until after the tenth day with most hens. From this on until the fifteenth day the number of eggs showing fertility will increase, and from this quickly decrease if the male has been taken from the pen. This is why the males must be kept in the pens all through the breeding season.

***

A Subscriber, Nebraska: Is there any difference in the laying quality of the single and rose-comb Rhode Islands? If so, which lays most?

Answer—The shape of the comb has nothing to do with the productive power. One kind lays as well as the other. Freezing of the comb might make a difference until the comb healed. High combs seem to freeze easily, while the small comb does not; at least this is my experience. However, certain poultry keepers make the claim that the rose comb will freeze as readily as the single comb.

***

A. M., Iowa: I have had help from you before. This time I come to ask about lamp hovers, something that is not connected with a brooder, one that you can set around anywhere for small chicks. Is there such a fixture? Is it costly? Any pointers you can give me will be appreciated. I have a good-sized incubator.

Answer—There are lamps with just the hover attached. You can set them in a box with chicks or on the floor of a room. The pipes leading from the lamp to the hover top are well insulated with asbestos. If you have early chicks that you do not want to put out with hens or in outdoor brooders, I cannot see why these lamps and hover combined chick mothers are not just the thing to save you trouble. At first you could put them down in a big, flat box. Later, as the chicks get larger, you could merely set them on the floor of any kind of a room that was not open and cold, and they would run to it, as to the hen, when they wanted to sleep or warm up. Those I know of are of tin and copper. The tin ones have the hot-air pipes, are, of course, lighter and cheaper; the hot water ones have copper pipes and boiler, and, being slightly heavier and more durable, cost a little more. Neither kind are dear, and beat trying to keep chickens warm by any old-fashioned method.

Small Notes

Grade the number of the male birds kept by the number of hens in the flock. One vigorous male for each ten hens is the best rule.

***

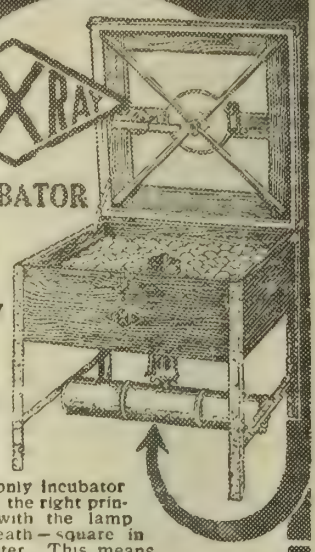
A cement floor is seldom a fit

Tells why chicks die

J. C. Reefer, the poultry expert of 1619 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

The Lamp in the Center

THE X-RAY INCUBATOR



Saves Big Money Let Me Prove It

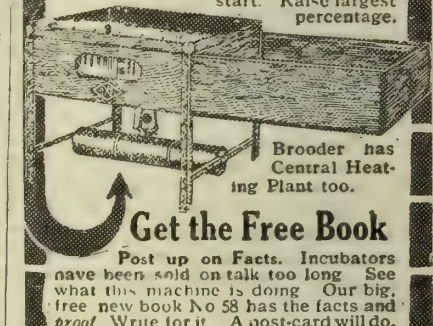
The only incubator built on the right principle, with the lamp underneath—square in the center. This means an absolutely even, regular temperature. No more cold corners. Note the big oil tank! This only needs to be filled once for a hatching and **1 gallon of oil makes the hatch**—a saving of 75c to $1.25 each hatch.

Get Our Factory-Direct Price
Get the Big New X-Ray Book

Study the construction of the X-Ray! Study its big hatching record. The door is the top; has two double glass panels. You can see the thermometer and all that is going on.

X-Ray Brooders Too

Built on the same scientific, lamp-in-the-center plan. Sanitary, healthy, evenly heated. Give chicks the best start. Raise largest percentage.



Brooder has Central Heating Plant too.

Get the Free Book

Post up on Facts. Incubators have been sold on talk too long. See what this machine is doing. Our big, free new book No 58 has the facts and *proof*. Write for it. A post-card will do. We pay the freight.

X-Ray Incubator Company
Des Moines, Iowa

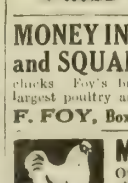
RADIO ROUND INCUBATOR THE EQUAL HEAT

Round like hen's nest--no corners to get cold—heat rises through center with equal radiation. Only hatcher combining round box, center heat, complete circuit radiation, visible egg chamber, safety burner attachment which prevents overheating and explosion. Turn eggs without removing. One filling, less than gallon oil, to a hatch. Write today for free Radio Round Book.

RADIO ROUND INCUBATOR CO.
BOX D-506 COUNCIL BLUFFS, IOWA

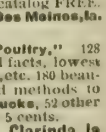
Radio Bantam Hatcher & Brooder set up freight paid, **$6.75**

SHOEMAKER'S BOOK on **POULTRY**



and Almanac for 1914 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about Incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c.
C. C. SHOEMAKER, Box 856 Freeport, Ill.

MONEY IN POULTRY and SQUABS Start small. Grow BIG. Get winter eggs. Keep healthy fowls. Save your chicks. Foy's big book tells how. Describes largest poultry and pigeon farm. Mailed FREE.



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MONEY MAKING POULTRY

Our specialty. Leading varieties pure bred chickens, turkeys, ducks and geese. Prize winners. Best stock and eggs. Lowest prices. oldest farm. 29th year. Fine catalog FREE.
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Latest Book "Profitable Poultry," 128 pages practical facts, lowest prices on fowls, eggs, incubators, etc. 180 beautiful pictures. Latest improved methods to raise poultry. All about **Runner ducks**, 52 other varieties pure-bred poultry only 5 cents.
Berry's Poultry Farm, Box 80, Clarinda, Ia

BEES It pays to keep bees right and raise your own honey. Send today for Free catalog of BEE SUPPLIES and sample copy of the AMERICAN BEE JOURNAL; oldest bee paper in America and indispensable to the beekeeper.
DADANT & SONS, Box 8, Hamilton, Ill.

floor for the scratching shed, unless it is kept covered with earth or sand. On a bare cement floor chickens have been seen with torn toenails and bloody feet, because they tried to scratch loose the cement.

***

Main points of successful poultry keeping are: Healthy stock, clean houses, dry, warm in winter, cool in summer, and ample in room for stock kept; plenty of good and somewhat varied food; well selected stock as to age. In these three lie about all the law and gospel for the right kind of poultry keeping.

***

What an amazing list of cheap poultry supplies the poultry keeper now finds to pick from—so much in galvanized iron, cheap and durable, sanitary and handy. A few years ago there was nothing of this kind; now there are trap nests, feed boxes, drinking fountains, coops, brooders, with or without lamps, etc., etc.

***

When the chicks come off, keep a close watch on them for a day or two. This will enable you at the end of that time to pick out all the dumpy, crippled and sick chicks. Kill every one of these and start with only those that at this age are hungry, spry and alert of eye. Nine times in ten these are fitted to live on if you do your part toward them.

Nebraska State Poultry Show

NEBRASKA'S greatest state poultry show during the twenty-nine years' existance of the Nebraska State Poultry Association was held at Grand Island January 19-23, with nearly 2,500 birds on exhibition. With the exception of a lack of room on account of the arrival of many unexpected exhibits, entire satisfaction was expressed by the poultrymen. Many sales were made and orders booked for birds and eggs. The biggest winners in the respective classes are as follows:

Barred Rocks—W. A. Irvine, Wilber; C. M. Hurlburt, Fairbury; W. H. Wright, Lebanon, Kan.; O. R. Hill, North Loup; E. C. Jewell, DeWitt; Arthur Gillette, South Omaha; S. S. Nevins, South Omaha.

White Rocks—G. E. Schreff, Lincoln.

Buff Rocks—Alex Mitchell, Coleridge; J. F. Cichler, Abie; Mrs. J. B. Christopher, Carleton.

Partridge Rocks—A. Boyer, DeWitt; A. M. Hadley, Doniphan.

Silver Wyandottes — Herb Reisinger, York; W. A. Hosack, Geneva; V. E. Shirley, Central City.

Golden Wyandottes—C. W. Noll, Ord; W. H. Hare, Fairbury; F. E. Glover, Ord.

White Wyandottes — E. E. Bowers, Bradshaw; O. L. Bock, Council Bluffs, Ia.

Buff Wyandottes—H. J. Weigand, Fremont.

Black Wyandottes—V. E. Shirley, Central City.

Partridge Wyandottes—C. G. Cottle, Edgar; C W. Brehm, Harvard; Fred Karre, Cotesfield; W. W. Jack, McCool Junction.

Columbian Wyandottes—George Cross, Sutton.

Single-Comb Rhode Island Reds—Mrs. A. M. Johnson, Clarks; Scott Covalt, Council Bluffs, Ia.; J. E. Fulmer, Columbus; Paul Bliss, Lincoln.

Rose-Comb Rhode Island Reds—Dr. C. R. Watson, Miller.

Light Brahmas—C. G. Cottle, Edgar.

Buff Cochins—A. D. Dort, Pawnee City.

Partridge Cochins—J. H. Wolfe, Tecumseh.

Black Langshans—Frank Boyd, Broken Bow; Frank Hoagland, Glenville.

White Langshans—Mrs. William Hoops, Byron.

Single-Comb Brown Leghorns—L. P. Harris, College View.

Rose-Comb Brown Leghorns — George Bacon, Hartwell; Ed H. Eggert, Minden; Mrs. John Holzhey, Bendena, Kan.

Single-Comb White Leghorns—G. E. Schreff, Lincoln.

Rose-Comb White Leghorns — August Berkmeier, Exeter; Ed H. Eggert, Minden.

Single-Comb Buff Leghorns—L. P. Harris, College View; William F. Gerlack, Havelock.

Rose-Comb Buff Leghorns—Inez Coleman, Geneva.

Single-Comb Black Leghorns — Miss Edna Eggert, Minden.

Single-Comb Black Minorcas—Mrs. E. L. Shidner.

Rose-Comb Black Minorcas—R. W. Laing, Geneva

Single-Comb White Minorcas—Ed H. Eggert, Minden; Barney J. Hahn, Grand Island.

Blue Andalusians—Ed H. Eggert, Minden.

Mottled Anconas—E. A. Doty, Rising City; Charles Hurlbert, Utica; Mrs. M. J. Galliton, Wahoo; William D. Ferrand, Central City.

Rhode Island Whites—A. E. Childs, Belleville, Kan.

Buff Orpingtons—S. R. Anstine, Tamora; L. E. Porter, York; W. A. Mellenger, Wathena, Kan.; Leo Anderson, Kenesaw.

Black Orpingtons—C. A. Scoville, Sabatha, Kan.; O. E. Henning, Mead.

White Orpingtons—M. G. Scudder, Central City; F. P. Majors, Peru.

Silver - Spangled Hamburgs — F. E. Glover, Ord.

Cornish Indians—Ole Hanses, Sutton; W. H. Gideon, Doniphan.

Missouri White Fluffs—A. B. Smith, Wilsonville.

Lakenvelders—A. B. Smith, Wilsonville.

Black Sumatra Games—W. H. Swartzley, Riverdale.

White Indian Games—E. E. Bowers, Bradshaw.

Pit Games—H. P. Davis, Lincoln.

Black Polish — Erle Smiley, Beaver Crossing; V. E. Shirley, Central City.

All addresses are Nebraska unless otherwise stated.

A. H. Smith of Lincoln, Secretary of Nebraska State Poultry Association

Incubators and Incubation

(CONTINUED FROM PAGE NINE.)

themselves of the help of the incubator in the chicken business. Crops in many places throughout the west have been a failure. For the lack of feed the raising of cattle and hogs has been cut short. Why not make it up in part by redoubling the poultry crop? Chickens, turkeys and geese will thrive on rations that would not keep larger stock in any condition for market. They will hunt a living where a hog or calf would starve.

"If I were buying a dozen incubators they would all be Queens." C. E. GRAGG, BUTLER, MO.

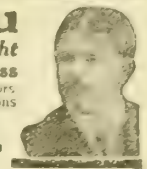
Mr. Gragg wrote after he had taken off two 95¾ hatches. The grand record of the

Queen Incubator

is built on service. You can depend on good hatches every time you fill it with fertile eggs. I build honestly, so your machine will last many years. See my 1914 Model with its 28 Special Features. Paying a higher price for other incubators will not get you a better hatcher. Send for finely illustrated 1914 catalog.

P. M. WICKSTRUM, Incubator Man
Box 9 , Lincoln, Neb.

I'll Start You
and Keep You Going *Right* in the POULTRY Business



My World-famous high quality incubators and brooders, and my Free Poultry Lessons make success **easy** and **sure** for **you!**

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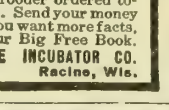

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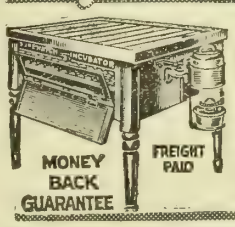

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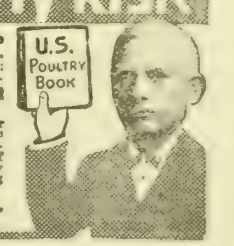

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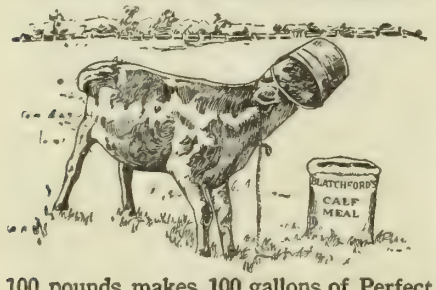

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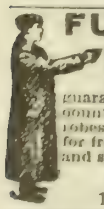

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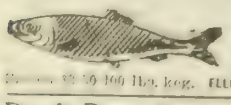

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GOVERNMENT POSITIONS are easy to get. My system tells you how. Write today—W. CARL HOPKINS, Washington, D. C.

Two Corn Club Boys at National Capital

(CONTINUED FROM PAGE SEVENTEEN.)

We left Baltimore at 3:45 p. m. December 11.

Meetings in Washington

We reached Washington, D. C., at 4:40 p. m. We were taken to the Ebbitt hotel; it is a new hotel and a very pleasant place to stop. Our first night in Washington was spent at a social meeting; the main object was to get acquainted. It was told at this meeting that four years ago four boys had the free trip to Washington. This year there were over fifty. This shows what good work the club has been doing. We were given a lecture on diet and on avoiding danger. A story was told about an old negro, who, when asked how his people made a success of farming, answered, "Some of us sits down and thinks, and some of us just sits down." It was then decided that the best method of farming is "labor intelligently applied." One of the speakers said: "If a man be a good farmer and raise good crops, but does not have a happy home, he is only half a farmer." We were presented with a book, "Joe, the Book Farmer," printed by Garrard Harris. The evening meeting was enjoyed by all and helped greatly to become acquainted.

Our first morning in Washington was spent at Washington's monument. This is 555 feet high. It takes five minutes to ascend in the elevator. From the top you can see over the entire city. We next visited the bureau of engraving; this is where all the paper money is made. After dinner we went to Fort Meyer. This is a very interesting place. We saw the mounted soldiers drill; this was the most beautiful drill I have ever seen. We next visited General Lee's home, and there we saw a great many things that had been used by the general. We walked home through Arlington cemetery, where old soldiers have been buried. Our day was finished with a trip to the congressional library.

Visiting Points of Interest

The next morning the secretary of agriculture gave an address. We were then presented with our diplomas. Our ride down the Potomac river was enjoyed by all in the afternoon. We went down to Mount Vernon, Washington's old home. On the way down we saw the place where cartridges are made for the men in the army. We also saw the wireless telegraph office. They have sent news to Paris successfully from this point. At Mount Vernon we saw Washington's old home, his stable, carriage, garden, and in fact most everything which he once had. We saw the room and also the bed in which Washington died. We saw the Washington tomb. There are thirty-four bodies in this vault. In September, 1885, the tomb was locked and the key thrown into the Potomac river. In the evening we had a theater party.

Sunday was a day of rest. In the afternoon we visited the zoo. This zoo is adapted to the different animals and birds; it is hilly, wooded and has a stream in it.

The department of education and the public printing office were two places visited the next morning. Both were very interesting and educational. We also visited the White House. We did not meet the president, but we met his wife. President Wilson was ill.

Our next day was spent in the capitol. We first met before the house committee on agriculture. Every club champion was introduced by the national club leaders to this committee. We visited the house of representatives and saw how things were carried on there. They started out with a prayer, after which business was taken up. From there we went to the senate, which was also in session. We then went to see the supreme court; this was very interesting, it being the highest court of all.

An evening meeting was held in one of the parlors of the Ebbitt hotel. We saw Dr. Mary Walker. Dr. Walker was a great doctor among the soldiers in the civil war. She found it more convenient to dress in men's clothing when on the battlefield, and she still wears men's clothes.

Congressman Maguire took us Nebraska people for a drive in his automobile the next morning. We drove through the Old Soldiers' Home and Rock Creek Park; it was very interesting. This park is a beautiful place; there are rocks and streams just as in the mountains.

Our Army and Navy

We then went to the army and navy headquarters. In this place we saw models of all the war vessels of the United States. In this building war is decided and war vessels and soldiers ordered out. They also have the flag that draped Lincoln's coffin in this building. Mr. Bryan has his office here. We next went to the Pan-American union. In this building all the countries' ambassadors hold their meetings. There is one of the most beautiful reception rooms in the world in this building.

In the evening a lecture was given at the Young Men's Christian Association; it was on the Boys' Club work.

Our next morning was spent at the National Museum. This is a very large building and has four stories. In the afternoon we visited the navy yard. Cannon and shells are manufactured here. It is very interesting the way they find what power engine to put into a ship. They make a small model of the large ship to be made. They have a building in which the water stands. On both sides of the building is a track. A large machine, which reaches across the building and is run by electricity, is attached to this small model. In this way they can tell what power engine is needed and how fast it will go.

Our next day was the last day in Washington. We were all very glad to think of starting home. This trip to Washington, D. C., is a trip every man should take. A person does not know what the United States is doing for the people until he makes this trip. It would be impossible to take a trip which would be a better educational trip than the one which we had.

I think we owe a great deal to our state and county helpers who made it possible for us to get this trip. We also appreciate the kindness of Mr. Benson, the national club leader, especially for the good program he had planned for us and the interest he took in making our trip enjoyable.

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REGARDLESS of price or any other reason Save-the-Horse is the cheapest remedy known. It goes through and through both bone and tissue—it works inside, not outside. And Produces a Cure That Withstands Every Test. No Scar or Loss of Hair. Horse can work as usual.

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Troy Chemical Co., Binghampton, N. Y. I have cured the horse of bone spavin. I also recommended it to a neighbor who cured a bone spavin. Frank Stevens.

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JUST TO SHOW YOU what good tobacco really tastes like. we have packed 9 pounds for sample and will send parcels post, prepaid State whether for smoking or chewing As sure as you order one 9 pound lot, you will order 100 pounds at 25c per pound. Our old customers are our best customers, so will you be if you try this sample box Send for price list and book of testimonials Satisfied customers in every State.

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Fertility of Soil and How to Maintain It

(CONTINUED FROM PAGE FIVE)

cessive we may know that the soil contains too much of that particular plant food. If certain other elements increase the production of grain or fruit and there is an inferior production of these, we may reasonably suppose that the soil needs those elements.

Observations in the Field

Suppose, now, that the reader has a field in which the corn, oats or wheat is very short. The growth is slow and the straw or stalk inclined to be short. If it is small grain and the straw is so short that it is very difficult for you to pick it up with the self-binder, you may reasonably conclude that the soil needs nitrogen, the plant food that promotes growth. If it is corn or any of the forage crops, and the stalk is short and inferior in growth, you may know that the soil needs nitrogen.

If, on the other hand, the growth of forage is excessive and the growth of fruit or grain is retarded, you may well conclude that there is too much nitrogen and not enough of the other elements. Every reader of this paper has seen such fields; perhaps you have such fields on your farm. Out where an old straw stack stood or on the plat that was once a cow lot; the effects of the nitrogen may be seen. The crop grown is tall and rank. If it be oats, the growth will be so heavy that the straw will break and fall before the grain can ripen. There is a tendency for this plant to remain green long after the other grain is ripened. This all shows there is an excess of nitrogen and not the proper proportion of other plant foods.

Watching the Crops Grow

Potash and phosphorus are needed in the production of fruit and grain. Phosphorus is especially needed in the maturity of grain, and potash is needed in the formation of starch. If there is an inferior production of grain or fruit while the production of leaf or stem are ample, it is reasonable to suppose that the available supply of phosphorus and potash is deficient. Soils rich, excessively rich, in organic matter, such as peaty soils, are deficient in mineral plant foods, especially potash. Soils that have been cropped to cabbage have been known to be deficient in potash, when there is considerable organic matter in the soil. On some market gardens, if corn follows the cabbage, there will be an inferior production of grain because the supply of available potash has been worn out by the production of the cabbage.

It can be seen that, after all, it is an easy matter to tell what the soils need by simply watching the crops and noting their development and production of fruit or grain.

Soil Tells Its Own Story

In addition to the crop, the soil itself will tell in no uncertain terms what it needs and in what elements it is deficient. The color of the soil is the most important way it has to tell the farmer what it needs. We can tell the race to which a man belongs by the color of his face. No guesswork about it—his color tells us better than we could decide by scientific research. The farmer can tell the red Duroc-Jersey from the black Poland-China by its color. No guesswork about it—the animal's color is more reliable than any scientific scoring that can be used, aside from the color of the hog. So it is with soils. The color of the soil tells us what it contains and what elements it lacks. No guesswork about it—so far as the farmer is concerned, it is more reliable than scientific investigation or even chemical analysis.

Color and Texture of Soil

What does a black soil tell us? As a rule, black soils are rich in humus, and, being rich in humus, they contain a great deal of nitrogen and a considerable of soluble phosphorus and potash, because the humus, as we have shown before, acts upon the unsoluble mineral elements, making them available or soluble. If the soil is a mellow black soil over the proper subsoil, we may rest assured that it is rich enough in all the plant foods to grow any of the common crops. Yellow soils, soils the color of clay, are lacking in humus, and, consequently, in nitrogen and available mineral plant foods.

On soils rich in humus, such crops as corn or forage crops do best, while on clayey soils they do not make profitable growths. On clayey soils fruit generally does the best, because fruit does not require much nitrogen, and on soils rich in that plant food there is too much growth of green leaf, while the production of fruit is retarded.

The texture of the soil will also tell us what it needs. We have learned that humus makes soils more mellow. If soils are compact and hard, we know that they are deficient in humus and, consequently, deficient in nitrogen and soluble mineral elements. The reader has seen such soils in his section of the country. No matter how deeply they are plowed and how well pulverized, after a heavy rain they will run together, become compact and nearly as hard as they would have been had they never been plowed. Such soils need humus and are deficient in, perhaps, all of the plant foods in their available supply.

Supplying the Soil Needs

There are two ways to supply the needs of any soil. First, by natural means; second, by artificial means. The first way may be the application of manures that may be produced upon the farm and by the rotation of crops. The second is by the application of commercial fertilizers.

The store of nitrogen in the soil may be increased by the application of manure that is as nearly fresh as possible. In the decay of manure, especially if the decay is rapid, there is a great deal of the nitrogen lost by it escaping in a gaseous form into the air. If the farmer has a clay farm that is deficient in nitrogen, he should see that the manure is supplied to the soil as soon after it has been voided as possible; or that it is kept moist at all times, so that the fermentation will not be rapid and the nitrogen lost in this way.

Nitrogen may be supplied, as we have shown before, by growing clover or alfalfa in rotation with the grain or forage crops. These plants gather nitrogen from the air and store it in the soil for the future needs of the soil.

Commercial nitrogen in any of its several forms is generally too expensive to be profitably applied for the common crops or where manure can be applied or legumes grown.

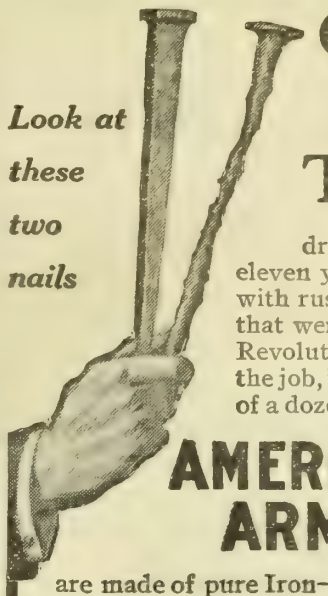
How to Get Mineral Plant Foods

Mineral elements can be applied to the soil in barnyard manure if the manure has not deteriorated from leaching. If the manure has been piled out behind the barn and the rain has washed through it till all the plant food has been carried off in drains, there is but little mineral plant food or nitrogen left. If the soil needs mineral elements and is already rich in nitrogen, the manure should be allowed to decay and the nitrogen permitted to escape, but the heap should be covered so none of the mineral elements be lost by leaching.

Beyond a doubt legumes bring up a considerable amount of mineral plant food from the subsoil by their long roots, and thus the supply is increased in the surface layer. However, the best way to increase the supply in the soils, if special crops are to be grown, is by the application of commercial fertilizers. As we have said before, this should not be done till all of the manure produced on the farm has been carted out. Commercial fertilizers rich in phosphorus or potash may be successfully or profitably applied in soils in which these elements are deficient. Peaty soils, or soils that are rich in humus, generally show an increased production of crops after the application of mineral fertilizers. As said before, this should not be resorted to till all natural means have been employed.

CHESLA C. SHERLOCK.

Speak gently to the horse, and do not swear or yell at him. He is a gentleman by instinct, and should be treated as such. The stable is the horse's home and it is your privilege to make it a happy one.



Old-fashioned Nails did not Rust

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are made of pure Iron—even purer iron than the famous "Old-fashioned Iron" of Colonial Days. It contains not more than sixteen one hundredths of one per cent. of foreign substances. Because of this high purity American Ingot Iron Culverts show an unequalled resistance to rust. They are strong, tough, elastic, light in weight and easily installed. They represent fundamental economy in road building and maintenance.

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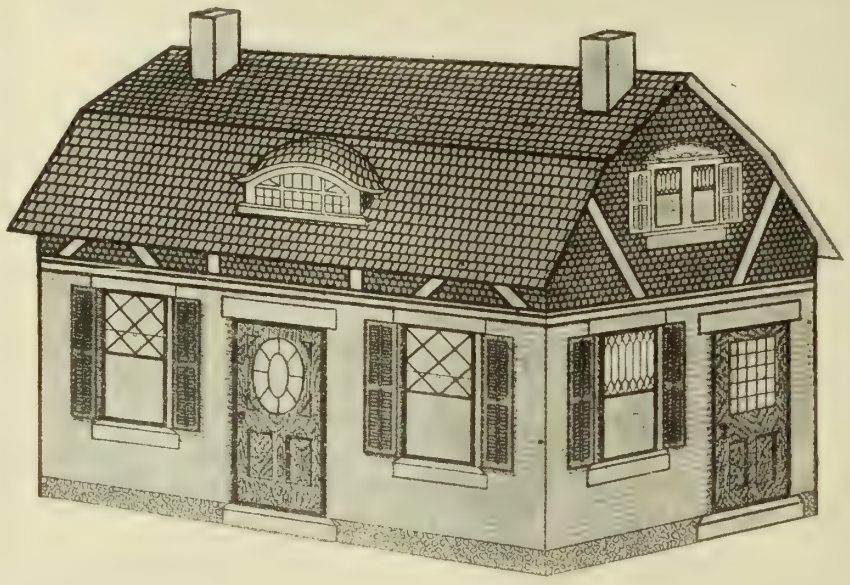
Sent to Any "Little Mother" Free

Swinging Doors *Brass Knobs* *Isinglass Windows*



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YOUR little girl, your niece, your sister or little neighbor will go wild over this house. It is exactly like a real house and is built to last for years and years. Heretofore all good doll houses have cost a lot of money, but here at last is a perfect treasure of a house offered ENTIRELY FREE.

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From an Ex-Cream Station Agent

J. M., Nebraska: I am a reader of your valuable paper, and I take great interest in your direct cream-shipping advocacy. I am a farmer, but have spent half my life in the cream business. I hauled cream when there were no cream stations. I ran skimming stations, and after they went out I ran cream receiving stations eight years. I am fairly well posted on all that work and I am now a direct shipper. I have a tester scale for weighing my samples and I know I am getting a square deal, and I ship my cream to a creamery that has no receiving stations.

Now, for the cream station operator. I read the piece in your paper of January 17. He says he has more trouble with those that bring a poor grade of cream than with those that test 35 or better. He is right there, as I have found nine out of ten that bring a poor grade of cream are not making any money out of it. He says it does not pay in his town to ship direct, as it costs them 3 cents per pound to get it to the depot. Three cents looks good to me. I would like to take it for that, for it means about 90 cents on a can of cream.

He also states that a man hasn't always got a ten-gallon canful. What is the matter with a five-gallon can? I sell my cream on track in five or ten-gallon cans, and the creamery pays transportation, and if you can't fill a five-gallon can, make good butter and sell it. He says in case you get a can of cream spilt you have to wait six months or a year before you get your money. I used to use that same hot air seven years ago. Every creamery I know today will send you check for can of cream spilt or partly spilt by return mail. All you have to do is to send in your shipping bill showing you shipped a can of cream, and they collect from the express company themselves. I also note where he says the man at the station will do right by you if you stay by him. This man seems honest by the way he writes, but I know of a good many instances where they would take from the old patron and raise a new one's test, thinking the old one would not get wise and the new one would stay by him. That is one of the worst things where they have five or six stations in a town—it makes dishonest operators. An honest agent has my sympathy, as I know they have a hard road to travel. What we need is some good dairy inspectors that are not afraid and have no strings tied to them that will put every operator out of business that gives a false test. We have the law.

Editor's Note—About a year ago this paper printed a series of articles on creamery problems in the Missouri valley. "Why the Cream Receiving Station Must Go" was the topic discussed in the eighth article. This evidently started a large number of farmers to thinking. Since the publication of these articles we have printed in this department several letters from our readers. This week we have two—one from an ex-cream receiving station agent in favor of direct shipment, the other from a station man.

Another Station Man's Argument

C. J. N., Iowa: I have been following your discussion of direct shipment of cream and am taking advantage of your invitation to write you. It seems to be a fact that higher prices are being paid per pound for butter-fat for direct shipment than are being paid by local buyers. But have you stopped to consider who makes the prices? Is it the creamery reaching out for direct shipments, or is it the local buyer? If it is the creamery that makes the prices, we had better do away with the local buyer, either by legislation or by a general boycott. But I fear that if you do away with the local buyer you will be in a sad plight, indeed.

As an example of what would most likely happen, let us look up the salmon industry in the west. Ten years ago there was a local cannery on nearly every ten miles of waterfront, and each cannery had a middleman buying fish from the fishermen. Each fisherman at that time owned his boat and net and earned from $2,000 to $3,000 per year. At this time the canneries were competitive and depended on commission men to supply them with fish. Now the canneries are combined and own the boats and nets and pay the men by the day to fish for them at so much per fish, and not by the pound as formerly. Where the fishermen formerly had an average yearly income of about $2,500, they now make about $75 a month for six months, and the canneries have no need of local buyers. Had the fishermen stayed by the local buyers, who only received a commission, I do not believe this would have come to pass. The crux of the whole matter is that hundreds of men have been driven out of business, the canning of salmon has been cheapened, but you and I have to pay as much for salmon here as ever.

Now, in this cream business, let the local buyer stand in the shoes of the local buyer for the man who used to buy fish of the fishermen. Let the man who feeds and milks the cows take the place of the fishermen, and the creamery man the place of the canner. You eliminate from the business the very man who, like the fisherman, kept up the price of the raw product, put him at the mercy of the man with money enough to dictate prices both of the raw and finished product, and who gets the benefit? The consumer? Not by a jugful.

I am buying cream on commission, with orders to compete with all comers. It does me no good to under-rate any customer's cream, as the benefit will all accrue to the creamery men. But, nevertheless, I once in a while find a first-class kicker like this one. I made a test of some cream and figured up the amount it came to. The customer was dissatisfied, so I just simply dismissed the matter and let them ship their cream to a competing point. I accidentally got a chance to see the check for the cream when it came, and there was 2 cents difference in the amounts. The story told was that there was $1.40 difference in their favor. Now that is what we have to contend with in the business. I do not think I am the only one, either. The only consolation we have is that we did not do the prevaricating, and that "lies have long legs, but weak backs, and, like chickens, usually come home to roost." We must admit that we need large concerns in order to carry on many kinds of business profitably, but it is not necessary that they should own the earth already fenced for them. Should the large butter concerns get absolute control of the butter industry as they have the salmon canning, the price of butter and cream will be absolutely in their hands. Any small concern can be wiped off the earth with a sweep of the hand, and what are you going to do about it?

The parcel post has been created for the benefit of the mail-order houses as much as to go into competition with the express business. Instead of killing off the express men, the increase in the size of packages is ruining the parcel post, because of the burden laid on the carrier. Now, the express companies are

delivering cheaper and just as safely as the postal service. The result will be, if the war is kept up, to ruin the retail merchants in the small towns. As things have started, if kept up, towns of from 2,000 to 4,000 and under will be only little way stations, with nothing doing but by the express office and the post-office. The only thing to do is for the producer and consumer to stand by their business and run it themselves. Keep your middleman on the job as a buffer if for no other purpose. Farmers have quit curing their own meats, leaving it, with all profits accruing, to the large concerns, and take packers' prices for it both ways. To a great extent the large butter interests have done the same. Give them what extra rope the taking of the middlemen out of the deal will furnish and we will be doing the same way there. In fact, we are practically doing it in many places now.

Drop Muskmelon

Mrs. C. L. E., Nebraska: Do any of the readers know where I can get the drop muskmelon? It has a seed capacity like an ear of corn when dry, all in a round core. It has white flesh and drops off the vine when ripe and is similar to bananas when sliced with sugar and cream. The skin is green, with a white stripe, and it is oblong in shape? Also the Glory of Asia watermelon?

Answer—The drop muskmelon is not listed in any of the seed catalogues, but is grown considerably in western Nebraska and Kansas. It is also known as the "apple-core melon" and the "corncob melon." We are unable to publish the names of business houses in this column, but have sent the writer the address of a seed grower who says he can furnish her a few balls of seed.

Navy Beans in Michigan

A Michigan subscriber writes us a long letter, taking exceptions to what we said to U. S. L. in regard to raising navy beans. He states that they can be raised to good advantage in rich soil, and adds that he has raised them on mown clover sod. He also states that this was on sandy or gravelly soil. This is the kind of soil we recommended, saying that rich bottom land would make the vines produce nothing but leaves. Our answer was written to a Nebraska subscriber, and we believe if our Michigan grower tried to raise a crop on some of Nebraska's rich river bottom land he would find that conditions are as we stated.

Irrigation by Surface Pipes

In connection with the letter in this department, issue of January 24, entitled "Windmill Waters Orchard," the following experience of the Colorado Agricultural College is an interesting one. The lawns at the college are graded so that surface irrigation in the ordinary way has been very difficult. Wood fiber pipe six inches in diameter and in five-foot sections was ordered. These sections are so constructed that they will join together easily by a slip joint, and may be laid along the surface of the ground, thus delivering the water at any point desired. The pipes are very light and therefore easily handled, and have proven a success in every way.

For a farmer who has a field with knolls or ridges in it, these surface pipes could be used to great advantage, and will prove to be very economical in the amount of water used. The installation is very simple. The pipes are delivered at the edge of a field where the irrigating is to be done. The first pipe is connected with the irrigating ditch by means of a canvass dam and irrigation commences next to the ditch. When the water has spread as far as desired from this first section of pipe, another section is attached, and in this way the pipe extended gradually, covering all of the ground thereunder, and when a ridge or knoll is reached these pipes will carry the water to the top of the same and there deliver it, with practically no loss at all at the joints, although the pipe is under pressure. Thus the entire field can be irrigated with only sufficient water to thoroughly wet the entire surface, and it is not necessary to drown out the low spots in order to "force" the water to the higher ground.

Canada's 1913 Crop Estimate

The final crop estimates for 1913 issued by the statistical office of the Dominion government show that Canada's principal field crops in that year covered 35,375,000 acres, as against 35,575,000 acres in 1912, and their value was $552,771,500, as compared with $557,344,100 in the preceding year.

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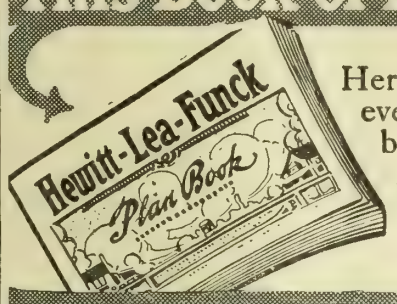

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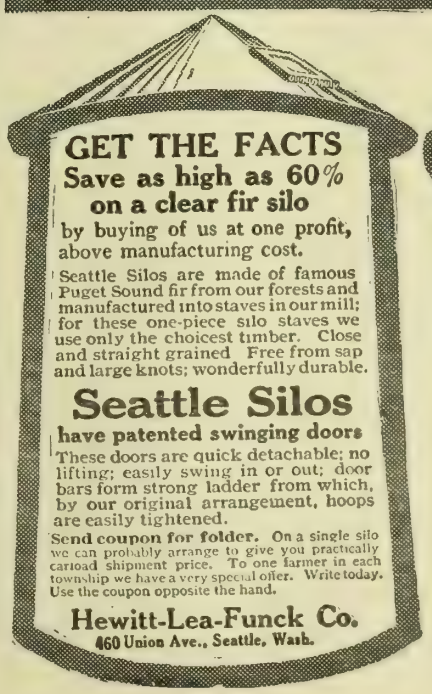

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TWENTIETH CENTURY FARMER, Omaha, Neb.

Of Interest to Our Women Readers

(CONTINUED FROM PAGE FOURTEEN)

much of an ornament to the society which she may manage to climb into.

Pastor Wagner tells us if we would find good society to look for it in our neighbors' houses, and it is a fact that people who cannot find the very best society at home around their own fireside and in their own neighborhood, have a very poor prospect of finding it anywhere else.

When a man has lived a life of industry and honesty, when he has put forth his best endeavor to support his family in comfort and to be a good neighbor and a good citizen, and the community is better for his having lived in it, he represents the very best society to be found on earth. And when a woman has set up high ideals for herself and her home life, when she has trained her children in ways of truthfulness and honor and industry, and when she is a true friend and a good neighbor and a helpful member of the community in which she lives, then there is no better society on this earth than this man and woman and their children may find in their own home and around their own hearthstone. Such people may be found in almost any country neighborhood, and what folly for farm people to think they must leave the farm and move to town to get into society!

The fact is that a good many city women long to get out into the country. They hunger for the peace and quiet and the unconventional associations to be found in the farm home, and instead of looking down on the farm woman because of her environment they envy her her sane and peaceful life. So, now, here is a happy combination that will, if the city woman and the farm woman are both wise and inclined to be hospitable, be the means of bringing a great deal of pleasure into the lives of both. Let the farm woman invite the city woman to visit her out on the farm; let her not try to ape the social customs of city life, but give her guest the full benefit of the wholesome simplicity of every-day life in the farm home. That is usually the part of country life that city people most enjoy, and the fact that she is not expected to reorganize the whole scheme of her household affairs for the entertainment of her city guest should make it easy for the farm woman to be hospitable.

Then the city woman could return the compliment by inviting the farm woman to visit her and take in some of the lectures, concerts and social functions that are the privilege of the town. In this way the farm woman and the city woman would be brought closer together and a better understanding be brought about between them, while both would be the better for this exchange of hospitality. The city woman would be benefited by the quiet restfulness of the farm home, and the farm woman would be equally benefited by the few days' change from the usual routine of every-day life in the farm home.

ELIZABETH CLARKE HARDY.
Wisconsin.

Sleep and Live Long

Good bedding—a good spring and a good mattress—is something which is sure to be appreciated by every member of the family. The better you sleep the longer you will live. Springs and mattresses are not expensive.

Coming 3-Year-Old Percheron Stallion on Farm of Fred Chanlder, Chariton, Ia.

Meeting of Nebraska State Fair Board

(CONTINUED FROM PAGE THREE.)

erning the board, but it took no action. I believe the State Board has an opportunity now to comply with some demands of the people. If it does not, it will fall down." Mr. Gustafson said the rules proposed were his own, and he had not been asked by outsiders to present them. He said he was not after anybody's scalp, but he desired the different districts to elect members of the board of managers.

The following old members of the State Board of Agriculture were re-elected:

First District—William Foster, Lancaster; V. Arnold, Richardson; W. B. Banning, Cass.

Second District—Jacob Sass, Sarpy; J. H. Taylor, Douglas.

Third District—Joseph Roberts, Dodge; R. M. Wolcott, Merrick.

Fourth District—Peter Youngers, Fillmore; George F. Dickman, Seward.

Fifth District—J. E. Ryan, Red Willow; T. B. Keedle, Kearney.

Sixth District—E. R. Purcell, Custer; Charles Mann, Dawes; W. R. Mellor, Sherman; Z. T. Leftwich, Howard.

The following officers were unanimously elected: President, Joseph Roberts; first vice president, J. A. Ollis; second vice president, R. M. Wolcott; treasurer, George F. Dickman; secretary, W. R. Mellor.

Death was the cause of two changes. T. B. Keedle of Kearney was elected a member of the board from the Fifth district to succeed the late President Hawe. The advancement of Mr. Roberts to the presidency and the natural promotion of those under him left the position of second vice president vacant, which was filled by the election of R. M. Wolcott of Palmer.

Amusing and Interesting Sidelight

An amusing incident occurred in connection with the election of officers—at least it was interesting to the editor of this paper. When Secretary Mellor was nominated, immediately a motion was made to make it unanimous, and he was elected by acclamation. When the nomination for second vice president was reached, L. C. Lawson, who evidently was not on the inside and did not know who had been slated for this office in the caucus the night before, in a strong speech of endorsement placed Charles Graff of Bancroft in nomination. In closing his speech he moved that the rules be suspended, as had been done in the case of Secretary Mellor and others, and that Mr. Graff be unanimously elected. The president, without anyone raising a point of order, declared this motion out of order, because opportunity should be given for other nominations. The editor wonders why he did not think of this when the Mellor motion was made? Mr. Graff, who is rather wise for his age, refused to permit his name to be considered, and F. M. Wolcott, the caucus nominee, was unanimously elected.

This little incident is thrown in here simply as a sidelight. When President Roberts was nominated he surrendered the chair to the vice president. As soon as the formalities had been concluded he drew from his pocket a typewritten speech, in which he scored those who had been presumptuous enough to criticise the manner in which the business of the board had been conducted during the last year. In fairness to President Roberts, we reproduce his speech, which was as follows:

President Roberts' Speech

I thank you for the honor you have conferred upon me by electing me president of this association. What higher compliment could be paid a man than the support and confidence of representative men from different parts of the state with whom you have worked for many years trying to build up one of the best state fairs in one of the best states in America.

It gives me added pleasure at this time to feel that perhaps you have not forgotten, but overlooked the many mistakes I have made during the years we have worked together.

I presume, having been elected president, I am now in a position to be classed as building a political machine to elect me. I want to say that I have never asked a single person to assist me or vote for me for any position I have ever held in this association; neither have I ever heard Messrs. Rudge, Mellor or Youngers in any way solicit support to retain themselves in office, or say aught against any candidate for election or re-election, and when such charges are made that their election is the result of a political machine built up by them, it is a reflection on every member who has a vote in this association, for we have been the so-called machine that has retained them, and why? Because they have the ability to do things and have done them. They are the men who when this association was in debt and unable to pay its premiums assumed the obligations by giving their personal notes to secure the money to pay the indebtedness. These men have built up a reputation, not a machine. That is why you and I have voted to keep them in office.

Mr. Mellor has built up a reputation by his ability to do things that is recognized by all the state fairs in the United States. He was elected chairman of the legislative committee at the National Fair Association, held in Chicago in December, also vice president of that association, without a dissenting vote, and he will be elected president next December if he chooses to accept it. Do long terms in office of honest and competent men demand criticism, or does it not show good judgment of the men who vote to keep them there?

As to the reorganization of the State Board of Agriculture, I do not believe there is a member on this board but what would gladly welcome it if by so doing the great agricultural, educational and other interests that go to make up our great state could be better conserved. But it is well to consider the source and motives that prompt this action.

The Nebraska State Fair owes its success in a great measure to the newspapers who have loyally supported it, and I had hoped that the paper now attacking the board would be fair and publish facts. On the other hand, everything that it has written has been for the purpose of misleading the ones who read it.

The editor seriously objects to the swine pens having been removed to the lower part of the grounds instead of the baby exhibit and the heavy tractors, for the reason if the fair had been held one week earlier the hogs would all have been drowned. He does not say that if there had been any hogs anywhere between the fair grounds and Arbor, or in the lower residence part of Lincoln during this flood it would have been impossible to save them. And no mention is made of the fact that the grounds have been graded and ditches dug so that it would be impossible for a like condition to exist again.

Some of the records of 1911 are quoted where Mr. McLeod of Stanton offered a resolution advocating some changes, but no mention is made of what Mr. McLeod said, and the good words he spoke of Messrs. Rudge, Mellor and Youngers. The records show that Mr. Rudge at that meeting requested that he be left off the board of managers. This paper does not say that our good friend, Mr. Lawson, president of the Farmers' Congress, moved to table Mr. McLeod's resolution. I have known Mr. McLeod for many years and I believe him one of Nebraska's best citizens and would be a valuable member of any organization.

I can see the handwriting on the wall of some men who year after year used every effort to become members of the State Board of Agriculture, but for some reason, I do not know what, have failed to secure enough votes; others whose bills were not allowed because of over-charges. In fact, they are trying, with the editor of the Twentieth Century Farmer, to mislead its readers into believing that they are working for the upbuilding of one of Nebraska's greatest institutions, when in reality nothing would suit them better than to see the State Fair a failure.

We are criticised for electing old members to office, and denounced if a member seeking re-election is defeated. And the paper claims it is absolutely fair. I will leave others to be the judge. Iowa has just passed through such an experience, and an investigating committee appointed, and after investigation reported everything in the best of condition, and that is the way a committee will find things here. Their annual meeting was held a short time ago and President Cameron and Secretary Corey were re-elected. Governor Clark at that meeting gave great praise to the men in charge, and I am proud to say that ex-Governor Aldrich and Governor Moorehead have used every effort, by their good words and personal work, to make our fair one of the best.

And, fellow members, the only way for us to do is what we believe right and for the best interests of our association, regardless of our enemies, and I invite and request any member or person interested in the upbuilding of our State Fair to help me with any suggestions or criticisms that will work for its good. So let us all pull together, and not only maintain the high standard set in the past, but endeavor to make the 1914 State Fair one of the best in its history.

Editor's Note—The answer to President Robert's criticisms is made in an editorial on page six of this issue.

Pruning Fruit Trees in Winter
Use of Starters in Butter Making

THE average farmer and fruit grower has very little conception of the proper pruning of fruit trees. It is generally done any time during the winter season when the tree is dormant. If no time is at hand, it is delayed for another year. This system of pruning is disastrous. The fruit trees should be regularly pruned regardless of the pruning required. If pruning is done every year, the tree will get into the habit of producing a certain amount of wood and fruit and there is little occasion for severe pruning. If the pruning during the first three or four years of an orchard after planting is properly performed, there will subsequently be little need for removing large branches. The pruning will then consist merely in the removal of superfluous shoots or branches that interlace, and this kind of pruning does not upset or disturb the growth and fruiting habits of the tree.

Winter pruning should be delayed until March or until after cold weather has passed. Pruning during December and January is often disastrous, as the wounds are apt to crack from the cold and thus make lodging places for diseases. Further, the wounds made at this time will not heal over so rapidly, while if pruning is done late in the season the wound will not crack and will heal over as soon as growth starts.: If the removal of large branches is necessary, the wounds should be painted, using common, thick, white paint. Severe pruning in the winter also tends to increase and encourage the growth of water sprouts.

E. P. SANDSTEN,
Colorado Agricultural College.

Use of Starters in Butter Making

"The chief value of starters, which are almost indispensable to makers of large amounts of butter and cheese," says W. L. Clevenger of the College of Agriculture, Ohio State University, "lies in the fact that in these cultures are found a reliable source of souring bacteria, which, when properly used, insure a more uniform quality of butter and cheese. A starter is simply sour milk which contains a large number of desirable souring bacteria in the growing stage. It will have a mild, acid odor, and when added to pasteurized cream at the right time will insure a uniform, excellent-flavored butter."

Trouble is often experienced on the farm in getting cream to churn properly and butter from it that will be uniform in flavor and quality from season to season. This is due to an excess of undesirable bacteria which produce bad flavors and prevent the proper souring. This condition can be overcome in many cases by the use of natural starters, which simply means the adding of a culture which is known to contain the proper bacteria for souring to the cream in which cultures of unknown bacteria have been growing. A natural starter can be made by putting clean milk fresh from the cow in a sterilized jar and letting it stand at 70 degrees Fahrenheit until it thickens, which is usually from twenty-four to thirty-six hours. This permits the lactic acid bacteria, which are naturally more numerous in the milk, to develop under the most favorable conditions. This culture should be added to the cream twelve hours previous to churning in quantity varying with the size of the churning and mixed thoroughly. Unless other outside unfavorable conditions prevail, the adding of this starter will result in a more certain churning and better quality of butter.

Hints on Churning

Brief hints on churning in the farm dairy are given in a bulletin issued by the Department of Agriculture at Ottawa. They are as follows:

All the cream should be passed through a finely perforated tin strainer as it is being put into the churn. Churning will be completed in the shortest time when the churn is about one-third full. The churn should never be more than half full. If a small amount of cream is being churned, it is difficult to gather the butter properly and it is apt to be overchurned. When coloring is used, it should be added to the cream just before churning is commenced. Coloring does not improve the quality of the butter, but in the late fall and winter months a little coloring improves its appearance. The butter makers must be guided in using color by the tastes of their customers. Too deep a shade is repulsive.

The proper speed for the churn depends upon its size. That speed which gives the greatest concussion will be the most effective.

If the cream has been properly prepared and is at the right temperature, the churning may be finished without adding any water. If for any reason the butter is coming a little too fast, it is advisable to add, just when the cream is breaking, some water with a little salt in it about two degrees colder than the cream. This will assist in separating the butter from the buttermilk. Two common causes for cream churning too slow are: First, too much cream in the churn; second, the temperature of the cream is too low.

The time of stopping the churn is an important point, and it has a great deal to do with the quality of the butter. The churn should be stopped when the granules are about the size of wheat or split peas. When the butter is churned to too small granules, many of them will go through the strainer into the buttermilk and cause a considerable loss. Overchurning should be avoided as much as under-churning. Over-churned butter will retain a large amount of buttermilk, which will be difficult to remove in washing. The buttermilk should be drawn off as soon as churning is completed. A dipper with a wire gauze can be used for straining the buttermilk.

The butter should be washed as soon as churning is finished, and only pure, clean water should be used. If the butter is for immediate use, rinse the butter by sprinkling two or three dipperfuls of cold water over the butter, allowing it to run off at once. Then run in a little less water than there was cream and revolve the churn as in churning until the granules are about the size of large peas and draw the water off immediately.

Forestry Notes

One of the principal by-products of the national forests of Japan is furnished by mushrooms, which have yielded in one year a revenue of a million dollars.

Articles of clothing from wood fiber are being made in Europe. The material for a suit costs about 50 cents. Clothing made of this material, however, cannot be washed.

Sale Dates

Hereford Cattle

February 19 and 20—Nebraska Hereford Breeders' Association. Sale at Grand Island, Neb., Robert Mousel, Cambridge, Neb., manager.

April 15 and 16, 1914—Breeders' Combination sale at South Omaha, W. N. Rogers, McCook, Neb., manager.

Aberdeen-Angus Cattle

April 1 and 2, 1914—Charles Escher, Botna, Ia. Sale at South Omaha, Neb.

Duroc-Jerseys

February 9—J. J. Kane, Wisner, Neb.
February 10—F. B. Nelson, Lindsay, Neb
February 11—M. O. Froistad, Newman Grove, Neb.
February 18—George W. Schwab, Clay Center, Neb.
February 26—J. J. Kane, Wisner, Neb.
February 27—Blackburn Bros., Royal, Neb.
February 27—O. G. Smith & Son, Kearney, Neb.
March 2—L. J. Kuzel, Clarkson, Neb.

Poland-Chinas

February 10—W. J. Eavey, Geneva, Neb.
February 11—D. C. Lonergan, Florence, Neb.
February 20—A. E. Rich, Creighton, Neb.
February 24—Jacob Dietsch, Boone, Neb.
February 28—O. J. McCullough, Clarks, Neb. Sale at Central City, Neb.
March 6—William Ferguson, Scribner, Neb.

Hampshire Hogs

March 14, 1914—Roy Fisher, Winside, Neb. Sale at Wayne, Neb.

Shorthorns

March 11—E. H. Cosgrove, Farnam, Neb.
March 24—A. C. Shallenberger, Alma, Neb.

The Market Place
FOR THE BUYER AND SELLER

Too Late to Classify

POULTRY

ROSE-COMB WHITE LEGHORNS — Chicago blue ribbon winners. Write for price list. August Barkmeier, Exeter, Neb.

ROSE-COMB WHITE LEGHORN cockerels, thoroughbreds, $1 and $2; eggs, $1 setting. Orla A. Granger, Glen Elder, Kansas.

EGGS — BARRED ROCK, WHITE Rocks, Buff Orpingtons, White Leghorns, Brown Leghorns, Black Langshans, Toulouse geese. Mrs. Frank Davis, Holbrook, Neb.

WHITE ROCK COCKERELS, SCORing 90 to 94, score card furnished, $2.50 to $5 each. Write your wants. White Rock Poultry Farm, Tilden, Neb.

CHOICE WHITE WYANDOTTE COCKerels, $2 to $3. E. M. Tarbell, Lexington, Neb.

TURKEYS — MAMMOTH BRONZE — Something extra large. Ed Wilber, Cresco, Iowa. Route 1.

EGGS FOR HATCHING; FROM SINgle-comb Rhode Island Reds, $1, fifteen; $5, hundred. Mrs N. Brodahl, Box 3, Wahoo, Neb.

BUFF WYANDOTTES AND BUFF Cochin Bantams. Good cockerels and stock for sale. Eggs for hatching, $1 per setting. P. A. Theobald, Wayne, Neb.

PURE-BRED MAMMOTH BRONZE toms, $5, $6, 22-30 pounds. Mrs. W. N Preston, North Loup, Neb.

FOR SALE — EGGS, COCKERELS from Barred Rocks, Houdans, Orpingtons, Langshans, Reds, guineas, drakes, ganders; also dogs, rabbits, fancy pigeons. Write D. L. Bruen, Platte Center, Neb.

LANDS

COLORADO FARM BARGAIN — 200 acres, 11 miles from Denver postoffice, on railroad and Mountain Park boulevard, on which $100,000 will be spent this year. Excellent improvements. Best paid-up water right, 1861 priority. All cultivated, including 115 acres alfalfa—$160 per acre, easy terms. Owners, Armstrong & Williams, Ideal Bldg., Denver.

SHALLOW WATER DISTRICT, LOgan County, Colorado. Finest farm land in the west, at lowest prices. Reports show 300,000 bushels of corn shipped from our territory this season. Also fine wheat, alfalfa and potato land. Agents wanted. Write for information. Platte River Valley Land Co., Omaha State Bank Bldg., Omaha, Neb.

SPLENDID UNIMPROVED FARM Lands—30,000 acres of farm land in Clark county, Wisconsin, $18 an acre. Best of terms given, good soil, good water. Land easily cleared and well located. Write for booklet, "Your Great Opportunity." Agents wanted; commission guaranteed. Lake States Land Co., 405-6 Commerce Bldg., St. Paul, Minn.

SEEDS

SEED CORN, HOME GROWN, GOOD yielder. Iver S. Johnson, Stanton, Neb.

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on the crop payment (no cash down) or easy cash terms plan in the "Shallow Water" districts of eastern Colorado. Excellent sub-irrigated soil; water at from 6 to 35 feet; good climate. Here is your opportunity to get a good farm on very easy terms.

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Colonization and Industrial Agent, Union Pacific Railroad Co., Room 1102 Union Pacific Building,
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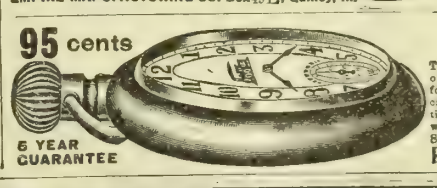

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Yes sir! You can't afford to purchase any other style or make of cream separator until you have first investigated my new Special 1914 Offer. Write me today for my catalog and I will mail you details of my offer. The new Galloway Sanitary is absolutely the most modern, most sanitary and closest skimming cream separator on the market, regardless of price. Now, that's a strong statement! Alright, here's my way of proving it. I'll send you any one of my three sizes of separators and let you try it 30—60 or 90 days on your own farm. I want you to try it out any way you can think of; compare it point for point with any other machine you know of, no matter what the price. Put them right side by side and test them. Then if you are not satisfied the New Galloway Sanitary is the machine you want, you can return it and I'll refund your money and pay the freight both ways. That's my offer in a nutshell.

Buy Direct from the Actual Manufacturer. Save $35 to $50

When you buy on my direct from factory plan you save all middlemen's profits. You get a high quality superior machine, equal to any machine on the market today and you save easily $35 to $50. Give me a chance to prove my claims. Let me show you just what the New Galloway Sanitary, Bath-in-Oil Cream Separator is like. Get my new catalog. **Just mail free coupon.**

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We also manufacture and sell direct gasoline engines, manure spreaders and other farm machinery.

Nebraska Hereford Breeders' Sale

115 Head of High-Class Cattle Will Be Offered for Sale at

Grand Island, Neb., March 19 and 20, 1914

This offering will consist of 75 head of bulls and 40 females. They represent the natural increase of 15 of the very top herds of Nebraska. Nothing is being consigned but first class animals, and every breeder stands behind the animals he is putting in the sale. The consignors are: G. C. Doehling, Surprise, Neb.; Jno. McConnell, Somerset, Neb.; Elmer E. and N. T. Youngs, Lexington, Neb.; O. E. Green, Genoa, Neb.; E. C. Rodwell, Cambridge, Neb.; Henry Smith, Octavia, Neb.; F. W. Meus, Edison, Neb.; O. J. McCullogh, Clarks, Neb.; Fred McClymont, Holdrege, Neb.; E. H. Gifford, Lewiston, Neb.; M. D. Meisenburg, David City, Neb.; Arthur Smith, Lexington, Neb.; Binger & Son, Callaway, Neb.; C. G. Clement, Ord, Neb. The variety of breeding and the strong individual make-up of this offering will certainly afford exceptional opportunities. For catalogue address

ROBERT MOUSEL, Mgr.
CAMBRIDGE, NEB.

Auct's, Col. Kraschel, Col. Snell; Fieldman, G. E. Hall.

HOLSTEIN CATTLE

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.
DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

POLAND-CHINA HOGS

IMMUNE POLAND-CHINA GILTS

We have a splendid lot of spring gilts for sale, sired by Blue Valley and Blue Valley's Orange by Big Orange. They have been given the double treatment and are immune from disease, and all bred for early spring farrow. Satisfaction guaranteed.
THOMAS F. WALKER & SON, Alexandria, Neb.

HORSES

Percherons and Belgians

Our New Importation of Percheron and Belgian Stallions and Mares has arrived. They are the best we have ever owned. We also have a splendid lot of American breds. They are the big, heavy-boned, drafty kind, with style and action. Come and look them over. We know you will be pleased. **A Certificate of Soundness Given with Each Animal.** We invite correspondence.

WOLF BROS., Albion, Boone County, Neb.

Percherons, Belgians and Shires

Imported and Homebred Stallions and Mares, ranging in age from coming two-year-olds to matured ages. We have a lot of two and three-year-old stallions weighing from 1900 to 2100 pounds; among them a fine lot of pasture-raised stallions—the kind for the western breeder. A fine lot of mares for sale. Always have stock for sale—never sold out. Write for prices, descriptions, etc.

NORTH & ROBINSON CO., - Grand Island, Neb.

Foaled and grown on the farm, offered at farmer's prices. Eight coming 2-year studs, 9 coming 3-year studs, 8 3-year-old and over studs, registered Percheron Society of America. Of the big type with substance and from French ancestry on both sides. Just east of Omaha. FRED CHANDLER, Rt. 7, Chariton, Iowa.

80 Imported Percheron and Belgian Stallions and Mares on Sale

My exhibit comprises the largest number of big, heavy-boned, 2000 to 2400-pound stallions to be found in the United States. The Cedar Rapids Stock Farm is the jack metropolis of the world. Don't forget my jacks here. The majority of the best mules in the United States are the result of the past twenty years' improvement inaugurated and carried on here. Write for catalogs. Come to me when you need stock. I will make it worth your while.

W. L. De CLOW, Cedar Rapids Stallion and Jack Farm, Cedar Rapids, Iowa.

JACKS AND JENNETS.

Eighty large-boned, black Mammoth Jacks, 15 to 16 hands standard, guaranteed and priced to sell. The kind all are looking for. Also good, young Percheron stallions. Reference, five banks of Lawrence. 40 miles west of Kansas City on Santa Fe and U. P. R. R.

AL. E. SMITH, - - LAWRENCE, KAN.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Shallenberger Changes Date

Hon. A. C. Shallenberger of Alma, Neb., has changed the date of his sale of Shorthorn cattle from March 25 to March 24. Mr. Shallenberger's reason for doing so is so as not to conflict with the Central Shorthorn Breeders' sale to be held at Kansas City, Mo., on March 25 and 26. This will give breeders an opportunity to attend the Shallenberger sale and then go to Kansas City if they desire to do so. He is going to have an offering of cattle that as a whole is the best he has ever put up for sale. Better get your name on his mailing list for catalogue and watch these columns for further announcement.

Jacks and Jennets for Sale

Al E. Smith of Lawrence, Kan., has eighty head of large, heavy boned mammoth jacks that he is offering for sale at this time. These jacks are from fifteen to sixteen hands high, are a grand good lot and are being priced to sell. Mr. Smith also has a number of mighty choice young Percheron stallions that he will sell at this time. He is one of the old established breeders in this territory, and we feel confident he will be able to supply your wants if you are looking for something in your line. Kindly mention The Twentieth Century Farmer when writing.

Rich's Poland Sale

We wish to call attention in this issue to the advertisement of A. E. Rich of Creighton, Neb., who will sell thirty-five head of choice Poland-China bred sows and gilts at his farm near that place on Friday, February 20. The offering will consist of eight fall yearlings and twenty-seven spring gilts. The fall yearlings are a choice, smooth, growthy lot, sired by Nodaway Lad, a son of Pawnee Lad. Spring gilts are sired by this boar and also some by Victor, Jr., a son of Big Victor, and others by Pioneer Pan, a son of Pan Look. The greater part of them are bred to Pioneer Pan and Jumbo Jim, he by McGath's Big Jumbo and out of a Giantess bred dam. If you are looking for the big, smooth kind of Poland-Chinas with plenty of bone and quality, write Mr. Rich for a catalogue and arrange to attend this sale. Kindly mention The Twentieth Century Farmer when writing.

Immune Polands for Sale

Any of our readers who are desirous of obtaining a few very choice Poland-China gilts at private sale will do well to get in touch with Thomas F. Walker & Son of Alexandria, Neb. Mr. Walker, sr., is one of the old-time Poland-China breeders of Nebraska, and they have a herd that is good enough to rank right up with the very best in the country. The fact is, there are few herds in the country possessing a combination of such size and quality as is to be found right here in this herd. These gilts they are offering for sale at this time are sired by Blue Valley and Blue Valley Orange, two of as good big type boars as are in service in any one herd in the country. One of the important facts connected with these gilts is that they are immune from disease and we trust that any of our readers who are looking for anything in this line will not hesitate to write Messrs. Walker & Son, mentioning The Twentieth Century Farmer.

Mulefoot Breeders' Meet.

At the recent annual meeting of the American Mulefoot Hog Record association held in Columbus, O., John H. Dunlap of Williamsport, O., was elected president; Prof. C. W. Burkett of Newburg, N. Y., vice president, and Robert E. Pfeiffer of Columbus, O., secretary. Applicants for membership are being received from all over the United States by the association. The future seems very bright for this record association, whose managen ent is composed of men of experience and ability. Mr. Dunlap has been appointed on the live stock board of the Panama-Pacific exposition by exposition officials. While the association is comparatively young, all members present were surprised to learn of the business done the last year, and of the good balance in the treasury. There is a growing demand for these hogs and the association expects to do some publicity advertising as well as to give information to the many inquirers. Mr. Pfeiffer, the secretary, was elected because a man was wanted who was not breeding these hogs and would be impartial in every way to the members. It was asked that the secretary make arrangements to have classes for these hogs this year at as many fairs as possible. The association published two herd books last year and they are both free to new members who come in now.

Mousel Bros.' Hereford Sale

One of the largest and most representative gatherings of breeders ever seen at a sale of Hereford cattle in Nebraska was that which attended the sale of Mousel Bros. at Cambridge, Neb., on January 28. Breeders were present from practically every state in the corn belt and range country, and the prices paid for the cattle were the best evidence of the high regard in which the cattle were held by those present. However, we want to add that the offering as a whole was one of the cleanest and best we have seen sold in a long time. The top price paid in the bull end of the auction was $1,025, and we are pleased to say that the purchaser was a Nebraska man, Mr. John McConnell of Somerset, Neb., being the buyer. This was on lot 8 in the catalogue, Beau Mischief 40th, an 8-month-old calf sired by Beau Mischief and out of the great breeding cow, Maybelle 20th. Mr. McConnell also paid $700 for the great cow, Germania 2d, a daughter of Great Princeps. The top female was Mischief Maker 36th, a daughter of the great cow above named and also sired by Beau Mischief. Price paid for this yearling heifer was $810 and the purchaser was J. M. Curtice of Kansas City, Mo. She was the first prize senior heifer calf at the International at Chicago this year. Below will be found a list of the sales and also purchasers.

Thirty-four bulls brought $11,270, average, $331.47.

Twenty-three females brought $8,360, average $363.48.

Fifty-seven head brought $19,630, average $344.40.

BULLS.

Lot.		Price.
4	Will Henn, Denver, Colo.	$ 505
7	C. S. Behrent, Oronoque, Kan.	505
8	John McConnell, Somerset, Neb.	1,025
13	O. S. Gibbons, Atlantic, Ia.	910
14	Fritz Bickel, Loup City, Neb.	280
16	J. W. Schroeder, Bird City, Kan.	300
18	C. G. Nelson, Elwood, Neb.	200
20	A. W. Hunt, Cambridge, Neb.	180
25	Henry Asbrae, Fordyce, Neb.	250
28	Marion Armentrout, Botna, Ia.	455
30	Andy Norrell, North Park, Colo.	215
31	Albert Johnson, Cambridge, Neb.	195
33	Harmon Bros., Edison, Neb.	165
35	James Ensley, Holbrook, Neb.	145
36	J. A. Shode, Kingsley, Ia.	420
37	Freeman Rhodes, Cambridge, Neb	205
39	Andy Norrell	300
41		175
42	Fred McClay, Holdrege, Neb.	355
43	M. J. Meyerly, Holbrook, Neb.	145
45	John Goslin, Kansas City	200
46	Jesse Engle & Son, Sheridan, Mo.	480
48	Guy Clement, Ord, Neb.	410
49	Tom Goslin, Kansas City, Mo.	300
50	Ray Reynolds, Cambridge, Neb.	200
51	John Goslin	340
52	Allen Grant, Imperial, Neb.	350
53	Andy Norrell	275
55	Andy Norrell	180
64	L. J. Smith & Son Parker Colo.	245
68	Lee Douche, Stockville, Neb.	290
69	Earl Shietz, Cambridge, Neb.	195

FEMALES.

5	H. D. Cornish, Osborne, Mo.	700
6	Fritz Bickel, Loup City, Neb.	485
9	James McCloud, Indianola, Neb.	305
10	J. M. Curtice, Kansas City, Mo.	810
11	H. D. Cornish	450
12	John McConnell	700
15	L. J. Smith & Son	150
17	George J. Anistey, Massena, Ia.	615
21	M. D. Meisenburg, David City, Neb	500
26	L. J. Smith & Son	235
32	L. N. Taylor, Imperial, Neb.	225
38	C. J. Taylor	220
40	E. B. Carter, Cambridge, Neb.	250
44	E. H. Gifford, Lewiston, Neb.	325
47	Dr. E. T. Watkins, Cambridge Neb.	205
54	Chris Wicke, Udell, Kan.	190
56	Frank Bean, Red Cloud, Neb.	325
57	Chris Wicke	210
58	John McConnell	280
59	Mrs. L. C. Wilkinson, Edison, Neb	175
60	Charles Thompson Indianola, Neb	380
61	Charles Thompson	475
62	Marion Armentrout	335
66	John McConnell	380
67	Fred Moore, Holbrook, Neb.	410

Nebraska Hereford Breeders' Sale

A Hereford event of unusual importance will be the sale of 115 head of high class cattle to be sold at Grand Island, Neb., on February 19 and 20. This sale is being held under the auspices of the Nebraska Hereford Breeders' association and will be made up of consignments from many of the leading herds of the state. It is being held under the direct supervision of Robert Mousel of Cambridge, Neb. Mr. Mousel has personally inspected practically all the cattle going in this offering and we are quoting below what he has to say regarding those being consigned by the different breeders:

G. C. Doehling, Surprise Neb., sells five bulls and they are five very choice ones. Mostly the get of Marquis by Beaumont. Some choice herd bull propositions among them, with ample scale and quality.

John McConnell, manager, Somerset, Neb., sells ten head of very choice cattle, including eight bulls and two females with good scale and well developed, grown out of doors, including Dales Lad by Gladys Lad and out of the sensational $5,100 cow Miss Dale. One of the chief attractions is Jessamine Lad by Gladys Lad and out of Jessamine. He also sells Miss Dale No. 119849. Look up the pedigrees. It will please you.

Elmer E. and N. T. Young, Lexington, Neb., sell ten head including eight very choicely bred heifers, bred to his herd bull Tempter Third, he by Beaumont, and two young bulls. This is a lot of carefully selected animals for this sale.

O. E. Green of Genoa, Neb., sells ten head, six are bulls and a choice lot they

(CONTINUED ON PAGE THIRTY.)

Putting Up Woven Wire Fence

Some Farmers Practically Throw Money Away

AS OUR population increases our large farms are cut up into smaller ones, and with this cutting down of the size of our farms comes the question of ncing these smaller tracts that they ay be made to pay the best. Years ago, nen the barbed wire fence was first roduced into the country, it filled the l exactly. The fields were large, little ne grass was grown and the small de- ls of getting the most out of a little re not looked after as they are now. Vithout question, the fence of today be used most successfully on the farm the woven wire fence. It is not ex- nsive, will enclose a field to keep any- ng from a chicken to a stallion or a ll, and, if properly put up, will last for long term of years.

Put the Fence Up Properly

The matter of properly putting up a ven wire fence is of the utmost im- rtance. We believe that 50 per cent the money put into woven wire fences this country is practically thrown ay, as far as the use of the fence is ncerned, after the first or second year. l this waste just because the party tting up the fence does not put in a od corner. To put in a good corner which woven wire fence is to be etched requires time, the right method l a good, sound post of sufficient size. would have a red cedar post not s than eight feet long, as large as a n's body and sound. This post should firmly set not less than three and a f feet in the ground and the man who s it should take more time in filling hole and tamping around the post n he did in making the hole. Firmly ce the post so that when the fence is etched there will positively be no ing. A wire fence is good and useful as long as it is well stretched and longer. When once it begins to sag slacken its usefulness is about gone. stretching the fence don't be afraid of getting it too tight; you are more liable to not stretch it enough.

In stapling the fence to the intermediate posts, staples of sufficient length should be used to permit the staple to be firmly driven into the post and leave sufficient room between the staple and the post for the free play of the wire, necessary on account of contraction and expansion due to changes of temperature. Strands of the fence are often broken and the efficiency of the fence destroyed by stapling the wire firmly to the intermediate post.

Barbed Wire Bad for Animals

Every year our farmers are losing many thousands of dollars by having their live stock cut on barbed wire fence. This is particularly true of our horses. Many a good horse that might go into the market and bring a top price is needlessly ruined with barbed wire. This loss would in many cases fence the field in which this horse is kept with a woven wire fence, which, once properly constructed, would hold any of your stock, and when you turned them into the field you could rest secure in the knowledge that they would not only be there when you wanted them, but would be safe from harm.

How often at milking time have you been "handed a package" in the form of the old cow's right hind foot, all because she had the misfortune to come in contact with some of your barbed wire fencing. In turn you gave her your compliments a la milk stool vigorously applied, and every time you gave her a belt you were taking money out of your pocket because of the decreased flow of milk.

A farm well fenced with good woven wire is a thing of beauty and joy, as well as money saver and a money maker. You will be better natured, better to your family, better to your live stock; they will grow better, and your further reward will be a better bank balance.

ational Forests Valuable to Stockmen

ALBERT F. Potter, associate forester, United States Forest service, in an address before the National Wool Growers' association, said that the question meat supply is involved in the meth- of grazing used on the national for- . He also made the statement that grazed ranges can be improved ker through use than they could be ney were left idle.

e points out that the forage resources the national forests represent a valu- asset upon which not only the stock- depends, but that of a large pro- ion of the people. The task of the ernment has been to work out a plan ch would develop this resource and mote its use to the fullest extent with- harming tree growth.

uring the first three weeks of admin- ation, from 1905-07, the problem of the rice was to take care of areas which been bady overgrazed, and a ma- al reduction had to be made in the nber of stock grazed before the dam- could be stopped. From the begin- g, the forest service invited the co- ration of the stockmen and consulted h them regarding the practicability of plans which were to be adopted. This operation was secured through the ious stockgrowers' associations and it s so successful that similar associa- ns have grown up among other users the national forests.

efore range control was put into ef- t, the feed belonged to the man who his stock on the land first, though re was no way by which he could hold except by physical force. Under such stem might made right, and the only ought was to get what feed there was ile it lasted. This condition led to ious controversy and out of it grew range wars which often resulted in s of life and property. Under the pres- control right prevails, and had noth- ing else been accomplished, Mr. Potter says, the removal of this one evil alone would have made the work worth while.

But he goes still further and states that the systematic use of the ranges has stopped loss of forage and that the feed formerly wasted has been putting the stock in better condition, with the result that, in many cases, the stockmen have been able to sell beef and mutton direct from the ranges where they were before producing only animals which had to be fed and conditioned before they could be put on the market.

He called attention to the experiments of the government in artificially reseeding the grazing areas to cultivated grasses, and showed that in some cases the forage crop has been increased as much as 400 per cent. He maintained, however, that this method is both slow and expensive, and said that the great part of the range lands must be improved by protection and natural reseeding, for the next twenty years at least. He says, too, that investigations have established beyond doubt that natural reseeding can be accomplished best by a rotation system of grazing based upon the simple principle that grazing aids in scattering and planting the seed after the seed has been given an opportunity to mature. Reports show that areas protected until after seed maturity and then grazed, as compared with areas absolutely protected for the whole year against grazing, are approximately 50 per cent better, and probably 200 per cent better than range which has not been protected at all. This means that ranges can be improved faster in use than they can be in idleness, and the principle is being adopted on many of the forests.

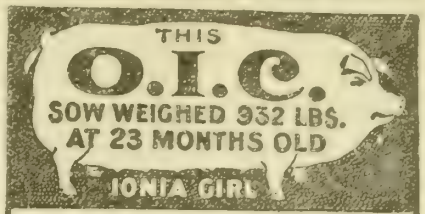
He also spoke of the new open system of handling sheep, which is simply quieter herding during the day and bedding the sheep where night overtakes them. He contrasts this with the old plan of herding sheep close by the use of dogs and returning them each night to a fixed bed ground. The old plan, of course, rendered certain areas absolutely bare and the going from and returning to the bed grounds trampled a great deal of forage. He estimated that an increase of 10 to 25 per cent has been added to the carrying capacity of the ranges and that five pounds weight has been added per lamb, because they have not been harassed by herding or forced to trail long distances to and from bed grounds. On 5,000,000 lambs this means 25,000,000 pounds added to the sheep men's salable product and to the country's meat supply.

He gave an amusing instance of a government experiment in which it was attempted to try out the old alongside of the new system, but it was found impossible to secure a sheep owner who would return to the old method, except through a bonus. The change in handling has been in large part responsible for the building up of the Madison forest, which there enabled an increase in the number of sheep grazed from 90,000 to 107,000, with promises of further increases of several thousand.

One objection to the new method of handling sheep brought up by many owners has been that the herders who were used to the close system would not adopt the new one. The associate forester says that herders naturally take a pride in having their sheep look well, and that since they are coming to realize that open herding means better sheep they voluntarily adopt it.

In conclusion Mr. Potter mentioned other studies and experiments which the forest service is undertaking to help stock growers utilize the forest resources.

O. I. C. HOGS



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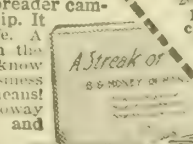

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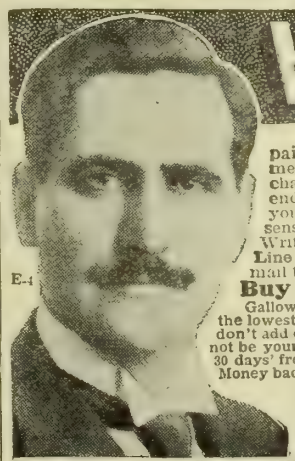

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Review of Live Stock Market

By A. C. Davenport

WEATHER conditions have been the dominating influence in the cattle trade during the last week or more, and that influence has all been to the detriment of the selling interests. It has often been noted that there is something about mild weather that decreases the public appetite for meats of all kinds, especially beef, and with weather of that description prevailing over the greater part of the country the demand for meat products of all kinds was largely curtailed. Unfortunately, just at the time when the demand for that reason was less brisk than usual, there came reports of three boat loads of Argentina beef to be landed in the course of a very few days. Another unfortunate coincidence was the fact that receipts of live cattle at all the big market centers were liberal. Thus, just at the time that the consuming demand was especially poor, the receipts of live cattle and of imported beef became large. No clearer case of supply and demand could be offered by the market, and the supply being in excess of the demand, prices declined sharply under the influence of the restricted buying. Thus at the close of the week cattle were quoted anywhere from 10c to 25c or more lower at the different points, the amount of decline depending largely upon the kind of cattle, the medium and half fat grades selling to the poorest advantage.

Feeders in Haste to Ship

The same mild weather that decreased the consuming demand for beef put yards in many sections of the west in the very worst condition, mud being knee deep. This was the most common explanation on the part of feeders for their haste in shipping cattle and may be taken as the chief reason for the liberal receipts noted above. At the same time the high prices prevailing the previous week undoubtedly induced many feeders to unload. Whatever may have been the cause, the fact remains that there was a surplus of the medium and half fat kinds. On the other hand there was a distinct shortage in the offerings of strictly good and well finished beeves.

Old-timers in the cattle trade are never surprised when the market reacts a little at this season of the year, as it is a tradition of the trade that cattle generally break some time during January. If so the break has taken place and still prices are by no means bad so far as the better grades of cattle are concerned.

It might be of interest to note in this connection that the mild weather, which has undoubtedly hurt the sale of cattle, has been of great value to the feeders. It is a well known fact that stock of every kind requires less feed during mild weather and at the same time takes on flesh much more rapidly. The less active demand for corn and alfalfa has caused these comodities to ease off in price. Thus the feeder has had the double advantage of putting more flesh on his stock and at the same time has secured feed at a lower price.

The outlook for the future of the market continues good. Receipts for the month of January at the six big markets show a decrease of 50,000 head in round numbers as compared with the same month last year. While these figures are not large they are bullish in their tendency. A bear future of the market is the generally accepted fact that there are a good many more cattle on feed in eastern states than usual, and these cattle must of necessity cut down to some extent the demand for western beef. A good many operators are anticipating that receipts of cattle during the next month will be fully up to requirements of the consuming demand, but no one is anticipating any great surplus, so that if the country uses good judgment in letting the cattle come forward steadily and not all in a bunch there is no reason why the market should not be in a good, healthy condition.

Hogs Decline Slightly

Hogs sold on an average a little lower last week than during the week before, but the decline was not large enough to be of very much importance. The market all week was in a good healthy condition, but buyers took advantage of liberal receipts to bear prices a little. Still it is very apparent that they wanted the hogs and on most days supplies at all points were well cleaned up. Even after the decline noted above, hogs were still selling better on an average than any time barring the previous week since the latter part of September or early part of October, which means that from a seller's standpoint prices have been very satisfactory.

Hogs continue to occupy a bullish position. Government reports recently issued show a large decrease in country supplies and figures compiled by individuals indicate the same thing, some of these estimates placing the number of hogs in the country at the present time as smaller than two years ago by 8,000,000 to 10,000,000 head. Receipts at the six big markets for January show a decrease of about 200,000 head as compared with January of last year. Taking the record of eleven markets, the showing is not so bullish, the decrease being only about 60,000 head. On the other hand eleven markets show a falling off for January as compared with two years ago of over 500,000 head, so that however the comparisons may be made the general tendency of all of them is bullish. This does not mean necessarily that the market is going to score any great advance in the immediate future, as prices are already high as noted above. Still the feeling is strong and the bulls are inclined to look for higher prices before the end of the season.

Heavy Sheep Shipments

Sheep and lambs for some little time back have been playing see-saw, up for a few days and then down for a few without any great or permanent changes taking place. Last week the mutton market suffered severely from weather conditions, mutton being fully as sensitive to unseasonable weather conditions as beef. The receipts were also large, running considerably ahead of the corresponding week of last year, and that tended to still further depress the market.

The six big markets of the country showed an increase in sheep during January of about 85,000 head, being the only kind of stock to show improvement in receipts. While most sheep men still adhere to the opinion voiced in these columns some time ago that prices will continue to fluctuate within reasonably narrow limits, their attitude is not what might be caled bullish. It is pretty generally admitted that the supply of sheep on feed is quite liberal, while there is nothing in the wool market to induce flock masters to hold back their stock. For weeks back lambs of the better grades have been selling on the basis of say $8.00 at Omaha, the price ranging a little above or a little below that figure as receipts became heavy or light.. If they can be kept on about that basis, the trade will be fairly well satisfied.

Breeders' Notes

(CONTINUED FROM PAGE TWENTY-EIGHT.)

are. Some herd material among this offering. Practically all are the get of Beau Mischief and Parsifal Sixteenth. Four females are offered and are the same breeding as the above bulls.

E. C. Rodwell of Cambridge, Neb., sells five choice bulls, the get of his great herd bull Beau Denver. Like his last year's offerings, these are very high class, some star attractions among them.

Henry Smith of Octavia, Neb., offers six bulls and they are a very good lot, including one polled Hereford bull of popular breeding.

F. W. Mues of Edison, Neb., offers five bulls including some herd bull propositions the get of Beau Mischief Fifteenth. Look these up as they will please you.

O. J. McCullough of Clarks, Neb., sells five bulls, including his state fair winners. These are claimed by him to be as good a lot as he has ever offered.

Fred McClymont of Holdrege, Neb., sells three extra good bulls of good scale and quality.

E. H. Gifford Lewiston, Neb., sells three extra good polled Hereford bulls claimed by him to be the best lot ever offered by him. They are herd bull material in quality and breeding.

N. D. Meisenburg of David City, Neb., sells seven head, five bulls and two females. Some special attractions among them including his herd bull of proven worth and one of the best bull calves by him to be sold this year, and he is of the show yard quality.

Arthur Smith of Lexington, Neb., sells ten head, eight bulls and two females and they are the get of his present herd bull and are a choice lot. Some very fine prospects among them.

Binger & Son of Calloway, Neb., sell eight very choice young cows and heifers, the get of Princeps-I-Am, first prize yearling at Chicago, 1907. The females are bred to Beau Wilton, and he by Beau Mischief. Some with calves at foot and bred again.

C. G. Clement of Ord, Neb., sells ten bulls and they are high class, the get of his two champion herd bulls, Fast Freight and Sensation. Some star attractions among these, with good ages, scale and quality, and breeding that should please anyone.

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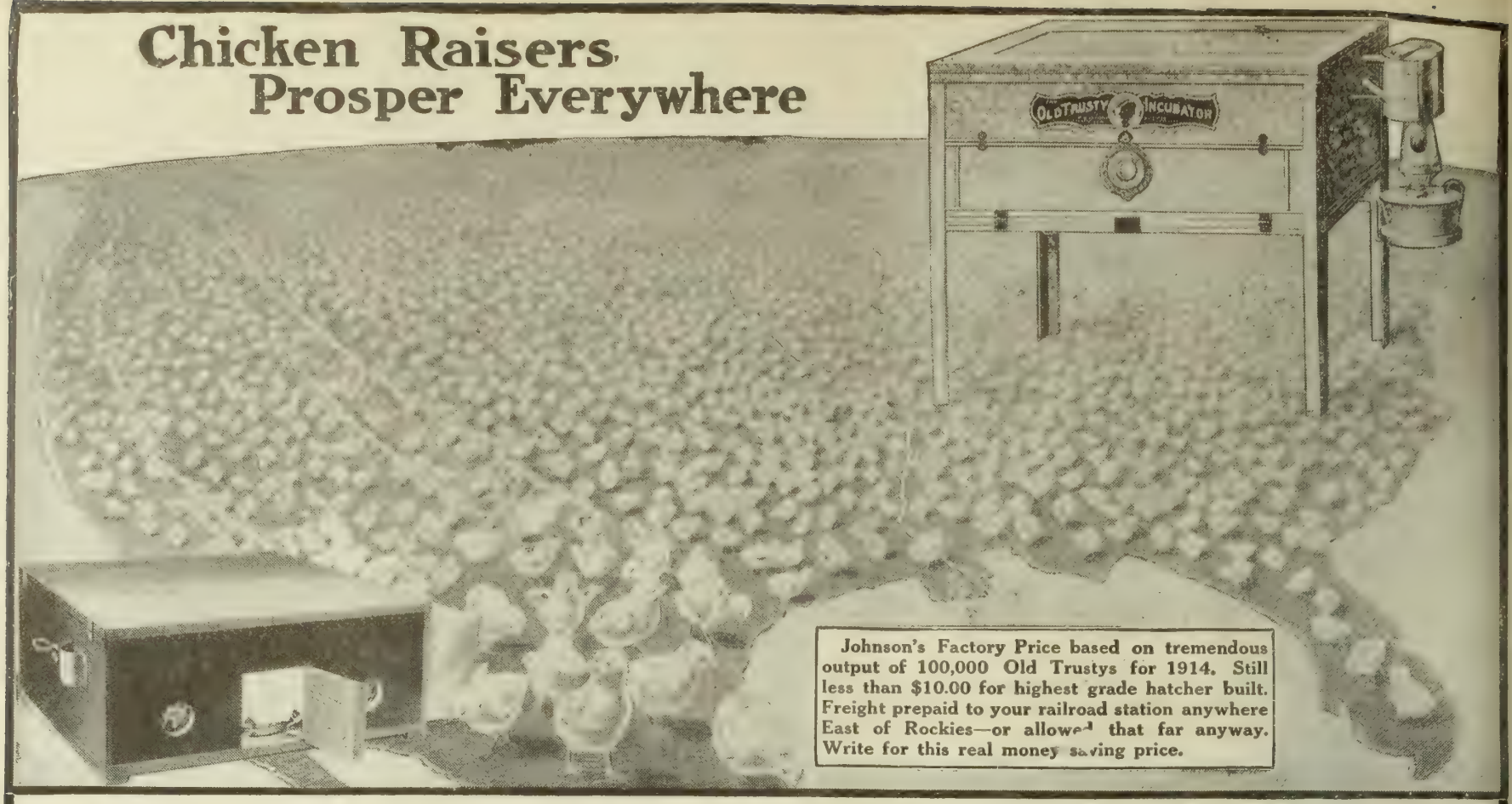

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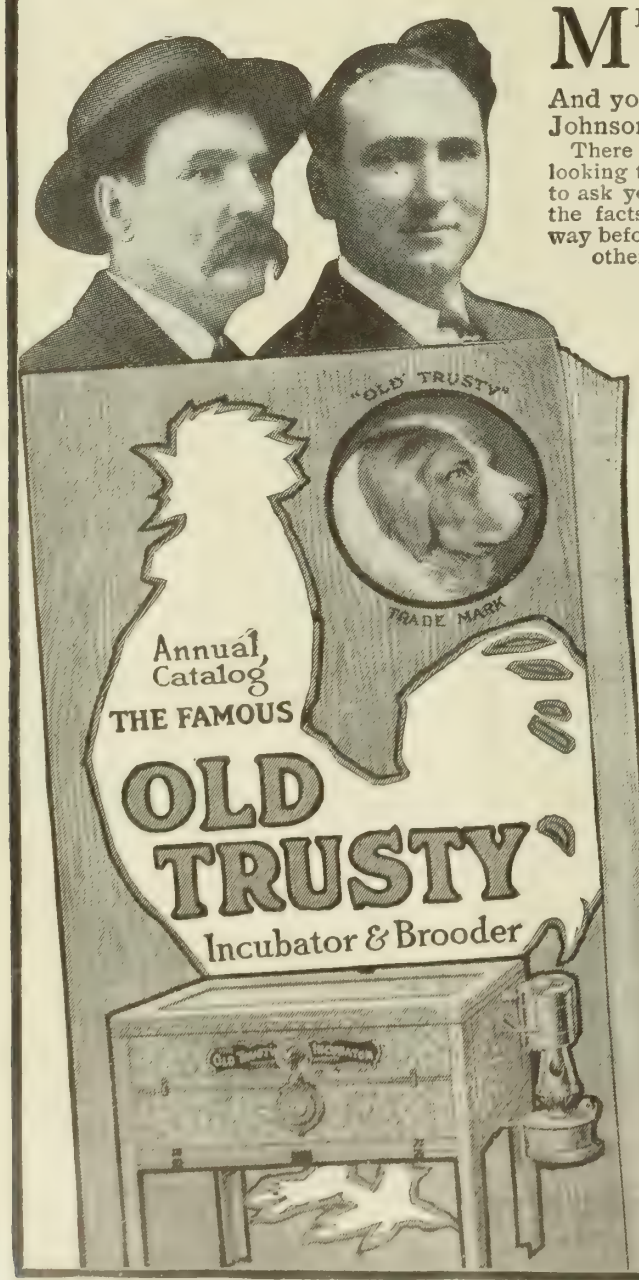

MEN and women, hundreds of thousands, make two incomes instead of one. Thousands let poultry make their living and bank the money they make in other ways. You can make money from poultry if you have little or much land, no matter where you live. And you can make the most money, and make it easier, on a smaller investment, if you follow Johnson's plan.

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The Old Trusty Hatcher may not look any different to you than a number of other hatchers that you may see illustrated in this paper or in catalogs. But it isn't the illustration of a thing that you buy. It's the thing itself. Now the Old Trusty *is* different, and it's different in just the biggest vital things that you are interested in. If it wasn't different and if it wasn't better we would not have three or four times more customers than anybody else. If it wasn't better this factory would not have grown to the biggest in the world. If it wasn't better, we couldn't sell it on 90 days' trial and 20 years' guarantee. Our proposition is that the Old Trusty does its part or we trade back. The Old Trusty is shipped, freight prepaid, the same day your order is received. The machines are already crated—shipments leave here promptly. You get an Old Trusty working for you in just a few days after you order.

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TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, February 14, 1914 | Number 688

Bright and Breezy

Didn't Want It

A near-sighted old lady at a dinner party one evening had for companion on the left a very bald-headed old gentleman. While talking to the gentleman at her right she dropped her napkin unconsciously. The bald-headed gentleman, in stooping to picking it up, touched her arm. The old lady turned round, shook her head and very politely said: "No melon, thank you."

Too Busy

A year ago a manufacturer hired a boy. For months there was nothing noticeable about him except that he never took his eyes off the machine he was running. A few weeks ago the manufacturer looked up from his work to see the boy standing beside his desk.

"What do you want?" he asked.

"Want my pay raised."

"What are you getting?"

"Three dollars a week."

"Well, how much do you think you are worth?"

"Four dollars."

"You think so, do you?"

"Yes, sir, an' I've been thinkin' so fer three weeks, but I've been so blame busy I haven't had time to speak to you about it."

Self-Criticism

A business man who had amassed a comfortable fortune lost it in speculation. He became a traveling salesman, and having to "work" every hamlet and country store in order to make ends meet, he found himself one night crossing a pasture where a number of mules were grazing.

Now, it is a well known fact that these animals, particularly after dark, will follow in single file any moving object that attracts their attention. This they proceeded to do, stepping sedately and at regular intervals behind him.

When the worried man, immersed in his troubles, looked over his shoulder and saw the sort of procession he was heading, he stopped. Then, although he had only the rising moon to share the spectacle, he said, solemnly:

"Right you are, boys. You know me. I'm the biggest donkey of you all!"

Father Had a Gun

"If you kiss me again," declared Miss Lovely, firmly, "I shall tell father."

"That's an old tale," replied the bold, bad young man. "Anyway, it's worth it," and he kissed her.

Miss Lovely sprang to her feet. "I shall tell father," she said, and left the room.

"Father," she said softly to her parent when she got outside, "Mr. Bolder wants to see your new gun."

"All right, I'll take it in to him," said her father, and two minutes later he appeared in the doorway with his gun in his hand.

There was a crash of breaking glass as Mr. Bolder dived through the window and departed in all haste for the railway station.—Ladies' Home Journal.

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You Will Reap What You Sow

IF YOU sow dodder seeds in your alfalfa patch, dodder is going to come up. If you sow poor, weak seed corn, you will have a sickly looking field, no matter how favorable weather conditions may be. All the lectures, demonstrations, common sense, experience and hard work in the world will not give you a good crop if you sow poor seed to start with. The planting season will soon be here. You are probably considering the seed question at the present time. Be careful what you buy. Some states have laws requiring that the dealer label his seeds, showing the percentage of germination and of weed seed. If your state has such laws, read the label and be sure to buy the best. If not, then it is time you saw to it that such laws were passed. If you do not know what is the proper thing in pure seed laws, read the next issue of Twentieth Century Farmer. We will have an article for you written by an expert in detecting adulterations in agricultural seed, who has worked under different seed laws in different states and knows under what laws you can be given the best service. There will be other articles of interest to the man who is looking for the best there is in the seed line.

Prattle of the Youngsters

All Animals

"Everybody in our family's some kind of an animal," said Bobby to the amazed lady visitor. "What nonsense!" she exclaimed. "Well," replied Bobby, "mother's a dear, my baby sister is mother's little lamb, I'm the kid and dad's the goat."

An Awful Risk

"Eddie, my dear, what are you crying for?" said a lady to her little boy, who had just returned from church.

"Because the clergyman says that we must all be born again, and I am afraid I shall be born a girl next time."—American Boy.

Good Guess

The story is told of the leanest man, that he was one day walking along a street and noticed a hound dog was following him. After he had gone a block and the dog was still trailing him, he turned to a street gamin and asked: "Boy, what do you suppose that dog is following me for?"

"Well, mister," said the boy, as he looked the man over from head to foot, "I dunno exactly, but my idee is that he takes you for a bone."—National Monthly.

Not to Be Bossed

A little 7-year-old girl was laboriously spelling her way through a reading lesson.

"Al-ways speak the truth," she read, "and o-bey your par-ents.

"Be gen-tle and qui-et. Never slam the door and shout or scream about the house.

"At the ta-ble eat slowly, not in a greed-y manner like a pig."

Suddenly she shut the book with a portentous bang and announced, with firmness and decision: "I'm not going to let any old third reader boss me like that."

Just Like Papa

Little Dorothy was studying her Sunday school lesson a few weeks ago. The lesson was in the Old Testament and didn't interest the girlie much until she came to a subject which she thought she recognized.

"Mamma," she said, "did Moses have the same trouble with his stomach that papa has?"

"Why, dearie, what a question! What do you mean?"

"Well, it says here that the Lord gave Moses two tablets," replied the earnest little student.

Lightning Change

A young minister was invited to spend his vacation at the summer home of a wealthy member of his congregation. The little daughter watched the young man very closely during the visit and one morning sat down beside him and began to draw on her slate.

"What are you doing?" the minister inquired.

"I'm going to draw your picture," replied the child.

The young man sat very still, and the little girl worked away very earnestly. Suddenly she stopped and compared her work with the original.

"I don't like it very much," she said. "I guess I'll put a tail on it and call it a dog."

TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

How Farm Tractor Saves Time and Money

Use of Power to Do Work Formerly Done by "Human and Other Animal Labor" on the Farm

AN INFLUENTIAL eastern weekly in one of its editorials made this statement: "Fifty years from now, when some writer brings Woodrow Wilson's 'History of the American People' up to date, we think he will say that the ten years ending about January 1, 1914, was the period of the greatest ethical advance made by this nation in any decade. On the material side, he will doubtless conclude that the most important phenomenon of this ten years was the development of the gasoline engine, and, especially in the latter part of the decade, its adaptation to commercial uses to doing, in cities and on farms, the work formerly done by human and other animal labor."

If the editor who wrote this had left out the reference to cities entirely and had mentioned only the adaptation of engines to doing the work formerly done by "human and other animal labor" on farms, his statement of the greatest advance made by the nation would still hold true. Internal combustion engines have raised farming into an industry. They have, indeed, worked miracles—if one can designate causing the earth to be fruitful and multiply without the aid of the sweat of the brow a miracle.

Farming in the Dark Ages

In the history of agriculture the centuries have produced a good many anomalies. For instance, the age of chivalry was an age which required the physical perfection of the human race; they had to be well fed or they could not succor distressed damsels and that sort of business. Yet the honorable calling of husbandry not only received no encouragement, but was looked upon with contempt. In England the man who produced the crops was a "clodhopper"; in France he was just "Jack"; if two or three of them gathered together they were the "Jacquerie." He was made to feed the knight, yet he was not treated in a knightly manner.

As the centuries passed it became more popular to be well fed than to be well armed. Devices were invented to make the production of food easier. Strange to say, attention was given toward harvesting and threshing the crop rather than toward preparing the seed bed and planting it; sort of putting the cart before the horse, as it were. The mower, the reaper and its high-brow successor, the binder, were adopted almost all over the world before attention was directed toward relieving the horse from its burdensome duties. It was but very few years ago that some bold experimenter who had an idle threshing steam engine undertook to plow with it. He found that the soil could be turned and cultivated this way, but with the crude outfit of his time, while he did the work of horses, he did not do away with the need of them; he merely changed their jobs from pulling the plow to becoming haulers of wood and drawers of water.

Automobile Inspires Use of Engine

The next move was inspired by the automobile as a possibility of the stationary gasoline engine as a working basis. The product was a gasoline engine capable not only of self-propulsion, but of drawing a load.

Not many years ago a gasoline engine going along on its own power and pulling behind it a load equivalent to about one-fourth of its rated horsepower was a novelty. Today a similar looking engine, but delivering over one-half its belt power at the drawbar, is a common sight on many farms. Tomorrow an improved engine possibly, but an engine designed on the present-day principles, will be found on every farm that now requires three or more horses.

The reason for this is that the oil engine attacked the labor problem where the labor problem was most acute. It has been estimated that it requires almost one-fourth of the farm products annually to maintain the work animals. The work animal, like the hired man, is a labor problem which regulates tremendously the profits of the farm. The gasoline engine was designed to relieve the strain hitherto imposed by animal power. It began at the hardest and most tedious of all farm activities—plowing—and step by step proved its usefulness in other phases of farm work. A well known and popular professor at the Nebraska College once made the statement that he could take a tractor engine and use it in every step of grain growing, from plowing, harrowing and seeding to harvesting and threshing, and finally haul it to market without the aid of a horse. In raising corn he affirmed that he could perform every operation but that of cultivating. To him the tractor was an all-round farm machine. It is because it can be put to so many tasks which hitherto the horse has been heir to that far-sighted agricultural students are prephesying its almost universal adoption.

Another phase of power plowing arises from the fact that modern bookkeeping is giving modern farming a few modern jolts in regard to the cost of production, salaries for the owners, interest on investments, and a few other items which make life more complicated, but at the same time more profitable. In old days the system of the average farmer was to do his bookkeeping in his head and work with his hands. He has reversed that now, so that he does his bookkeeping with his hands and works with his head. Good bookkeeping shows that a horse costs so much on the market, requires so much negotiable oats and hay for its support, and has just so many days' work in him at so much per day. If he works hard enough and days enough to yield a profit on the investment in him and on the interest on the money which he would bring were his money value invested elsewhere, he is doing all that a horse is expected to do, and is probably yielding a fair annual profit. Each day, however, that he is idle lessens his value as a money maker. Statistics taken at large show that the average working days of a horse per year are so lamentably few in proportion to the total working days that the word "stalling" as applied to a man who evades the task set before him deservedly comes from the habits of what the poets call our "equine friend."

Horse Needs Valet

Applying the investment rules to the power substituted for the horse, there must be considered—first, the original investment, with the accumulating interest, depreciation and fuel consumption. Certain combinations of these factors conspire to make the tractor dollar for dollar seemingly the better purchase. In the initial investment, the tractor, at the price horse flesh is today, would cost less than the horses it could supplant. You can generally figure that the drawbar rating of an engine is about equivalent to the number of horses whose work it will do.

In depreciation there is no standard by which a comparison can be made, as both a horse and a tractor depend for their longevity and usefulness on the man who handles them. But in upkeep and fuel consumption there are ways of stacking one against the other. In the first place, a horse eats seven days a week and works six. An engine needs fuel only when in actual service. A horse requires a home, storage room for its food, care in keeping its

NATIONAL·POWER FARMING·DEMONSTRATION
August, 17 to 22, 1914·Fremont, Nebr.

Some of the Tractors Seen at the 1913 Demonstration at Fremont, Nebraska

home sanitary, care in regard to its person, water, medical attention—everything, in fact, that the care of a human being requires, with the addition that it also requires a human being's care—a horse needs a valet. All of this costs money, especially the valet's salary, and it must go on continually, night and morning, whether the horse works or not. Contrasted to this, the engine needs only a shed to protect it from rain or snow, a barrel or tank to contain its daily fuel, and a valet only when it is out in the field.

Farmer bookkeepers all over the United States have figured out to their own satisfaction the solution of this comparative upkeep problem, and the result is a steady, growing tendency to rely less and less on the faithful but costly sinews of old Dobbin.

Tractor Saves Time

Aside, again, from the overhead charges and the running expenses of horse farming versus tractor farming, how do they compare in the amount of work they can accomplish and in the time they consume in its accomplishment? Almost everybody knows that with a two-horse team and a twelve-inch single bottom plow about two acres can be plowed in the course of a ten-hour day, but few people realize that the farmer behind that plow walks over sixteen miles as his share of the day's work. Almost any good tractor will plow that same amount in about two hours, thus saving eight hours of the farmer's working time and ten hours of his walking time.

In seeding and cultivating one team and one man can handle one drill. They seed all day long at the rate of about two and a quarter miles per hour. The same man with a tractor can travel just as fast, but he can haul from three to five times as large an outfit. In harvesting one man and two horses can keep a binder busy, but every year the sad sight is seen in every community of grain getting over-ripe and falling to the ground because of the farmer's inability to cut more than one swath at a time. Contrasted to this, a small tractor would easily pull three eight-foot binders, and a large one walks off with five, creating a "fair green" down the field forty feet wide with every turn.

In threshing there is no reason to hesitate for a comparison, because oil-fed internal combustion power has long supplanted oat-fed internal alimentary power. In hauling to market the issue centers around the value of the man's time, because one man and one team mean only one load each trip, whereas one man with a tractor means from 30,000 to 50,000 pounds each trip. Over prairies or poorly packed roads, or on any long haul, the value of this big load is apparent.

Use in Making Roads

These few paragraphs have outlined the customary uses with which one associates the tractor in the every-day work of the farm. As a sort of subsidiary by-product along the lines of the factory owner's theory of keeping all machines always busy, hundreds of tractor owners are using their engines for pumping water for irrigation; they are using them to shred their corn and fill their silos; and, above all, they are making roads.

Good roads mean everything to a farmer; they lessen his expenses and increase his commercial activities. In its eulogy of the gasoline engine, the paper which we quoted at the beginning of this article went on to say: "And we think the same historian will say that the most important economic feature of the next decade, from 1914 until, say, 1924, was the completing of great highways and the improvement of roads everywhere." The county in

which tractor-owning farmers live need never suffer from poor roads.

It is in its ability to do these things, from plowing to road making, cheaper and quicker than the horse which will make or unmake tractor farming. If tractors continue to prove that they can lower the cost of raising wheat or corn or oats so much per bushel, or if they make life easier for the man who owns them, or if they increase the yield of our farms by making it possible to do more fall plowing and cheaper plowing, and better cultivating, their use will grow, because economic laws have a way of regulating these things, irrespective of the agitation, irritation or legislation against them. They have already passed through their experimental stage. They have become cheaper in their original cost, and they have now been so perfected as to burn not only high-priced gasoline, but almost every form of distillate, such as kerosene, solar oil and gas oil. Kerosene and the lower-grade oils contain more heat units than an equal bulk of gasoline, and in a properly designed engine will give practically the same power. The entire difficulty with utilizing this power in kerosene is summed up in the three words—properly designed engine. All engines are not alike. Some are better made than others. Some are made on better principles than others. It is on this account that farmers planning to invest as much money as it takes to buy a power outfit should be sure that they are doing business with a firm that is conservative in its statements, reliable in its promises and financially able to carry out its contract.

Shall Veterinarians Sell Cholera Serum?

Missouri Valley Veterinary Association Discusses This and Other Questions of Interest to Farmers

THE semi-annual meeting of the Missouri Valley Veterinary Association was held at Kansas City on January 27, 28 and 29. It was a very successful meeting. More than 500 veterinarians were in attendance. A program dealing with matters pertaining to the profession was arranged. The topic in which most interest was taken was that of handling hog cholera, and particularly the use of anti-hog cholera serum.

The foremost paper dealing with this subject was read by Dr. M. Dorset, chief of the biological division of the Department of Agriculture and one of the men who discovered this method of treating hog cholera. Dr. Dorset told of the experiments of the government in one county in each of four different states, in which counties the department is making a close study of the disease and its eradication. This work was only begun on July 1, 1913, and consequently has not progressed to such an extent that definite conclusions can now be reached.

Dr. Dorset explained the plan of work in a general way and said that they were working along three lines:

First—Education and organization of the farmers.

Second—Enforcement of sanitary and quarantine regulations.

Third — Application of anti-hog cholera serum.

One line of investigation being taken up in this work was the source of infection. The facts were brought out that the main source of infection is from farmers visiting each other, changing work, etc., where hog cholera exists. Dr. Dorset emphasized the importance of strict sanitary and quarantine measures and a strict enforcement of these laws.

Use of Serum and Virus

The treatment of the disease by using serum and virus was taken up and discussed at length. Among members of the association there is a divided opinion as to the extended use of these two remedies. Some hold that the only way to eradicate the disease is by the use of the double treatment, while others are just as strongly of the opinion that by the use of virus hog cholera will never wiped out. In this connection we quote Dr. Dorset. He said: "Personally, I do not feel that the work has been sufficiently extensive to warrant our decision irrevocably in favor of one process or the other."

The subject, "Preventive Measures Other than Vaccination in Combating Hog Cholera," was discussed by Dr. J. W. Connaway, who is at the head of the veterinary department of the agricultural college at Columbia, Mo. Dr. Connaway has been giving the matter of hog cholera elimination careful study for a number of years, being one of the first to take up a thorough investigation of the elimination of the disease. In consequence we must give Dr. Connaway's views on the subject due weight. He takes a decided stand in favor of strict quarantine regulations, the utmost care in sanitary matters, the use of serum in some cases and in very few instances the use of virus.

Licenses to Commercial Plants

Ten other subjects along the line of using anti-hog cholera serum were discussed by men of experience in that line. These ten subjects were all handled by men who are connected with some commercial serum plant. We believe that a better understanding could have been gotten by the members in attendance if some of these subjects could have been handled by experienced veterinarians who have been out in the field and done a large amount of field work.

The manufacture and distribution of serum is one of the very important matters in the work now going on in this line. Considerable discussion was had of this matter, in the course of which it was stated by Dr. Dorset that all government licenses of serum plants expire on the first of January each year, and that so far this year no licenses had been granted. He assured these men, however, that inspections had been made and were being made, and when plants came up to the requirements of the government licenses would be promptly granted. He also stated that in issuing licenses last year they did not find any plants up to their ideal and found many they could not license at all.

A very important subject was on the program to be discussed by four different veterinarians. Two of these men were not present. The subject was, "What is a Just Charge for the Administration of Serum and Virus?" We quite agree with the president of the association, who said that this is a matter of great importance to the profession and should be given careful consideration and discussion.

Two of the men who had papers on the subject had opinions that were at variance with those of the Twentieth Century Farmer. One man said in discussing this subject that the veterinarian should buy from the manufacturer serum he uses and should have a profit of half a cent per c. c. for all serum and virus administered, and that veterinarians should not patronize manufacturers who would not sell at a lower price to them than they would to farmers. The other man thought a quarter cent per c. c. profit would be about right.

Profession or Trade?

This paper takes the position that the vocation of the veterinarian is that of a professional man and not that of a commercial man, especially in this connection. The veterinarian is entitled to good pay for his services, and to no more, when he is called in a professional way. We do not think that the farmer should pay the veterinarian for his services and a profit on the serum he uses. Right here we find a difference of opinion among the profession as to their using state serum. One veterinarian told a representative of this paper, in discussing state and commercial serum, that he did not use state serum, for the reason that he could not make a profit on it and that he could make a profit on commercial serum.

The Twentieth Century Farmer has no axe to grind with the veterinarians, and fully recognizes their valuable services to the farmers and stock owners of this country. We want here, however, to sound a note of warning. We believe that at no time since the old-time "hoss doctor" gave way to the professional veterinarian has there been anything that has made as much work, consequently as many dollars, for the veterinarians as has the use of anti-hog cholera serum. The farmers of this country are willing to pay for services rendered and no more. If the veterinarians want to destroy the goose that lays the golden eggs, they can easily do it in this case. We believe a large majority of our farmers would rather pay a qualified veterinarian a reasonable fee to treat his hogs with serum than to do the work themselves, but if they think they are being charged more than a reasonable fee they will learn to do the work themselves, which they can do. We want to say in this connection that the veterinarians were not as a unit on this matter by any means, and we believe a majority of them were not of the opinion that the veterinarian should handle the serum and make a profit on it.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

Branch Offices

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Subscription Rates

To all points in the United States and Mexico, per annum, in advance....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING—Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Some of the Minnesota creameries are grading all cream received and paying according to grade, with a premium of 1 cent for first-grade cream. These creameries will no doubt be able to play even on their fine butter, for which they ought to be able to get special prices.

Canada lost some of its finest pure-bred horses, hogs, sheep and poultry in a boiler explosion at the Ottawa winter fair. Three men were killed, all attendants at the show. Fortunately the explosion occurred at an early hour before spectators got on the ground. Sir Spencer, a Clydesdale stallion, made a remarkable escape from a pile of wreckage into which he and other horses were thrown, moving the debris about and climbing out in a way that showed almost human intelligence. Exhibitors not only have to stand the loss of stock, but further awarding of premiums is impossible.

It is very possible that the United States government makes many foolish expenditures. At any rate, there are a good many people who think they could spend the public funds more wisely than they are being expended. We may be thankful, however, that we do not have to spend the best years of our life in military service or pay the heavy penalty for keeping a lot of idle soldiers fed and clothed that some countries do. Switzerland's standing army costs it $9,000,000 per year, while trade, industry and agriculture together only get a little over $3,000,000. We still have something to be thankful for.

Power Demonstration or Contest?

The idea prevails among a number of the leading agricultural engineers of the country that the coming power exhibit to be held at Fremont early in August should be a motor contest rather than a power farming demonstration. This question can be best answered by a comparison of the number of entries made by tractor manufacturers at the Fremont Power Farming Demonstration held last year as compared with the number of entries at the Winnipeg motor contest, also the number of actual farmers in attendance at each. The number of entries and the attendance at Fremont were about ten times those at Winnipeg. In looking at this proposition from that standpoint, one is easily convinced that both manufacturers and farmers await with great interest the coming power farming demonstration, while if it were changed into a motor contest it would no doubt soon follow along the lines of the one formerly held at Winnipeg.

Contests are of great value to manufacturers and mechanical engineers, but mean very little to the average farmer. The reports as compiled from the past contests proved to be hieroglyphics of the earliest type to all who attempted to gain any knowledge from them. In most cases, even the expert engineers who participated in this contest were unable to decipher them, to say nothing of the average farmer who is not mechanically inclined.

Contests no doubt stimulate manufacturers to make improvements in their machines, yet the one prevailing idea of past motor contests was the winning of gold medals. All have been successful in winning these medals, and only a small per cent of the farmers who have purchased tractors since that time have been able to learn for what the medals were awarded.

If the opinion of the majority of manufacturers of tractors, as well as the users, were to decide whether the coming exhibition would be a contest or a demonstration, the latter no doubt would win out by a large margin. Educational demonstrations are a means of furthering the better interests of agriculture, and getting first-hand knowledge before the farmers who are to use power on their farms, while the contest is a means of educating the manufacturers and getting them to put a better type of machine before the public. Both are useful and valuable, but from the standpoint of the farmer the demonstration serves his purpose best. What he wants to see is the machine doing actual field work.

Interested in Better Cattle

There seems to be a general tendency to better cattle quality. Everybody is talking "better cattle, better bulls," until the common tail end of the ordinary herds are not in demand. This is the best possible evidence of a general cattle quality improvement throughout the country. When scrubs and culls are not wanted at any price for breeding purposes, there is hope of better cattle and more cattle. As long as the farmer is satisfied with any kind of an old cow, there is not much evidence of cattle improvement.

The hope of this country, with both beef cattle and dairy cattle in competition with foreign countries, is to forge ahead in quality. The production of the best quality of beef cattle will pay when a poor quality of cattle would be produced at a loss. The same has been repeatedly illustrated in the milch cow population. The cow testing associations have proven that on some farms there are cows that have been kept year after year not paying for the feed they consumed, while others were making their owners a big profit. The intelligence of the cow owner or cattle owner is to be exercised in determining these conditions.

It is an old saying, in relation to such comparisons, "that the best is none too good." It is truly the case when applied to cattle. The cattle owners of the United States must awaken to a realization that they have competition in the matter of beef supply, that they have competition in the matter of butter supply, and in order successfully to meet these conditions they must employ better breeding; they must make their land yield larger crops, and develop the beef-yielding capacity of their cattle and the butter-fat qualities of their dairy cows. Larger yields of beef in their baby beef classes, and larger yields of milk in their dairy cow classes—this is the logical solution, and it is the only solution that is going to test out.

The spirit is now started in the people. It was plainly manifest in the demand for better cattle and better bulls that developed at the recent Denver Stock Show. Of course, this sentiment was incubating in the minds of the cattle growers long before this opportunity was offered for it to become manifest. But it was left for this occasion of a great bull display to bring it to the surface. Bulls are wanted, bulls are needed, but they must be bulls of good quality, and this demand is not yet filled. The tendency is now to raise more cattle, better quality of cattle than formerly, and this means disposing of the old bull and buying a better one. This is the most sensible way of accomplishing results, and the better class of bulls will all be called into service before the completion of the breeding season of next spring and summer.

Burn Old Grass and Weeds

It has been pretty well established that the last year's growth of grasses and weeds left along the roadsides, fences and out-of-the-way places, where crops were not produced or grazing animals given opportunity to eat, have become the breeding grounds and winter quarters for many insects injurious to vegetation. Therefore every farmer should join in the effort to exterminate these pests. It is a duty that the land owner or resident farmer owes himself, his neighbors and the general public welfare—to destroy these breeding grounds by burning off at the most opportune time for insect destruction.

Some farmers keep a little farm flock of sheep to attend to this kind of work. Where sheep are kept and given an opportunity to graze along such fence lines, roadways or idle grounds, they proceed in advance of the insects and carefully crop off all vegetation so closely that there is no winter protection left for a chinch bug, grasshopper egg or any other kind of insect. This is one of the economical advantages in keeping a few sheep on the farm.

The winter burning of such places—and there are lots of them on all farms where grazing animals are not kept—is a duty that should not be overlooked or neglected. Any time in the winter when the ground is bare and the rubbish dry and easily fired will do, but should not be left later than February. If a systematic observance could be enforced among land owners, there would soon be a marked difference in insect pests detrimental to the crop interests.

The time is coming, and it is not far off, when there will be a systematic war waged against all forms of injurious insects and a close observance in the protection of all insect-destroying birds. There must be a law for the enforcement of these demands, and people taught to observe them.

"Black-Hand" Operations

Recently the Twentieth Century Farmer received a complaint from a reader about one of our advertisers. We wrote this advertiser, as is our custom, asking him for his side of the story, and in reply received a long letter threatened to sue us for blackening his character. He added: "This statement that he makes to impare my reputation is false, a black lie, and you are a party to this black-hand outrage!" We have been called almost everything, both complimentary and the reverse, but this is a new name, and we think it only fair to warn readers who may have confidence in us that we are engaged in this kind of "black-hand" operations. This advertiser says he does not care to advertise with us any longer, and the feeling is mutual, as advertisers whose methods will not bear looking into are not welcome in the columns of this paper.

Reports come from the far eastern states of terrible snowstorms and zero weather. In one locality in New York the snow was so badly drifted that the rural mail carriers did not get through for two days.

American Royal Show

The American Royal Live Stock Show has held its annual election of officers and placed a strong corps of workers on its board to superintend and shape its exhibition interests for 1914. This has been a very successful and high-quality show from its foundation to the present time. It is held at the right season to attract practically all the prize winners from the state fairs and is a sort of lining up for the International a few weeks later.

The American Royal should be one of the largest stock shows in the United States, both in exhibits and attendance. It is a strong show in many departments. It is conveniently located and well housed. Few exhibitions have a better or more convenient amphitheater and show ring for the judging of stock. Its machinery and poultry displays are features of great interest, independent of the cattle, horses, sheep and swine. In beef cattle, especially in the two strong classes—Hereford and Shorthorn—this show cannot be excelled in quality. Its horse show for several years has not been up to the expectation of visitors, and needs a little bracing up.

The new officers and board of managers are among the best representatives of their special lines of breeding in the country, and should furnish this show sufficient momentum to send it through with the highest exhibition honors.

The American Royal stockholders elected officers and directors as follows: President, Judge J. C. Ewing, Youngstown, O.; vice president, E. F. Caldwell; secretary and general manager, T. J. Warnall, Missouri; treasurer Robert H. Hazlett; directors, Hereford, Robert H. Hazlett, El Dorado, Kan.; R. J. Kinzer, Kansas City Mo.; Shorthorns, N. H. Gentry, Sedalia, Mo.; H. C. Duncan, Osborn, Mo.; Galloway, J. Calvin Ewing, Youngstown, O.; G. E. Clark, Topeka, Kan.; Aberdeen-Angus, E. F. Caldwell, Burlington Junction, Mo.; M. A. Judy, West Lebanon, Ind.; stock yards, G. R. Collett, W. H. Weeks and A. D. Cottingham, Kansas City, Mo.

Spring or Fall Calf

The question of which is the most profitable period of the year for the cattle owner to have his calves come, spring or fall, will never be entirely settled as long as there are new recruits in the cattle breeding industry. The spring season is by nature the established period, and when animals in this latitude are left to their own direction the young will most generally be born within the spring and summer months. This is the season selected by breeders to have the increase of their herds and flocks because of the natural advantages of fresh grass, and the general invigorating influences of all nature in the revival of vegetation and its influence in animal growth and development at this period.

There are conditions of business developing from the use of the animal, especially the cow in her milk production, that might suggest a change from spring to fall for her freshening. The better prices for butter and milk that a few years ago were quite pronounced during the winter season influenced many cow owners to have the calves dropped during the fall months. This class of commercial trade developing from the cow may make it more profitable to change the period of freshening from spring to fall, and thus argue for the fall calf. It must be understood, however, that the calf will cost a little more feed and trouble the first six months of its life than if it had started in the spring.

Again this is a milch cow proposition, not one of raising calves for beef or for stock purposes. Such a proposition on the range would be ruinous to the cattle industry, as the calves and cows would both encounter weather difficulties that would be damaging to the owner. Hand-fed calves, well provided with shelter and the necessary feed, can be made to yield a good profit by being born in the fall. The spring calf and the fall calf are two separate propositions, and their expediency or fitness for the position they are expected to fill will depend upon the judgment of the cow owner in his rightly planning his work in accordance with nature's demands in calf development.

System in Breeding

There are great possibilities in breeding when system is employed in securing results. The haphazard, hit-or-miss breeding that is carried on with some farmers and stock owners can never accomplish anything definite or useful. For example, the man who buys a Hereford bull to cross with his herd of grade cows and after a year or two concludes that he would like to get a dairy cross, something that would produce more milk, and resorts to the Holstein or other dairy breed in order to secure this, and keeps on introducing something new in breed every few years, has nothing in the end that will recommend his efforts. There are some breeders who started with a very common lot of grade stock, decided on a course of breeding, and bought good, pure-bred sires and adhered to this breed, and in a few generations had a very desirable class of stock, stock that carried the characteristics of full-bloods, and were getting almost full-blood results so far as individual performance was concerned in meat or milk production.

It pays to breed for a purpose. In no line of breeding will this prove more satisfactory than in the dairy cattle. It is possible to replace the mother by the daughter and keep this up a few generations and secure a magnificent herd of dairy cows. There are only a few persons who are really scientific breeders or who can outline a plan of breeding and stick to it until something really good has been accomplished. The vacillating tendency of most persons causes them to change their fancy. They see something else that pleases them better, something that arouses their curiosity and inclination to try it. They let loose of what they formerly were infatuated with and take up with the new idea, and thus accomplish nothing. It is this class of breeders or producers that undo what the constant, persistent breeder is striving to accomplish. To fill the country with improved animals of a high standard is the duty of all breeders.

There will continue to be scrubs as long as there are persons who experiment in cross breeding for breeding purposes, and there is no evidence that this habit will cease. The breeder who starts in with a pure-bred sire and adheres to the breed can in ten years have a fine herd of high-grade cattle of any breed he choses. It should be the ambition of every farm and live stock owner to produce a herd of some line of farm animals distinctly his own in breeding results.

Read Agricultural Bulletins

Every up-to-date farmer and live stock grower should have his name and address recorded with his experiment station publication bureau, that he may get copies of bulletins as they are issued. There may be some of these not of any special interest to you, though you will find them a very profitable source of information in case you do want to refer to them.

The feeding tests, the soil analysis, the horticultural investigations, crop work, latest information on insect pests, etc., will interest the boys and girls, and the bulletins will be received with as much eagerness eventually as the daily news. There is no source of information available to the farmer that is of so much real worth to him in the prosecution of his business as the experiment station bulletins, and yet he does not seem to realize their worth.

There might be some just criticism in the bulletins not being more definitely summarized so that the reader could get the gist of the whole matter on a few pages devoted to results. It is not often that the casual reader can get down to a full digest of every little detail of a test or an experiment, unless he is greatly interested and has plenty of time to study it out, as defined by the bulletin in detail.

There is certainly some explanation why the experiment station bulletins are not more generally read by those in whose interests they are written and distributed. The mailing lists are not large enough to cover the homes of those who are sadly in need of their teachings and who could profit greatly each year by the knowledge they contain.

To secure a merit badge in forestry, boy scouts are required, among other things, to identify twenty-five kinds of trees.

$1.00 Puts It On Your Farm

For $1.00, I Clean and Grade Your Seed Grain

THE CHATHAM Grain Grader and Cleaner

Handles 70 Kinds of Seed Grain and Grass Seed

From Wheat, it takes Wild Oats, Tame Oats, Cockle, Rye and Smut.
Cleans the dirtiest Flax. Has special knocker and skimmer which prevents clogging. (Other machines choke up.)
Takes Dodder, Barn Yard Grass and Foxtail out of Alfalfa and Millet "slick as a whistle."
Takes Buckhorn from Clover.
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Handles Peas as well as any Grain or Grass Seed. Removes foul weed seed and all shrunken, cracked and sickly grain. Takes out all dirt, dust and chaff. It is also a bully chaffer. Handles 60 bushels per hour. Gas power or hand power. Easiest running mill.

You can't afford to plant common Seed and take chances on a poor crop, when I am offering to scientifically clean and grade every bushel of your Seed Grain for this spring's planting for one paltry dollar.

Here's my proposition, and if you are a smart man you will write me before sunrise tomorrow:

Send me one dollar and I will ship you, FREIGHT PAID by MYSELF, this improved 1914 Chatham Grain Grader and Cleaner, with all equipment. Clean your Seed Wheat, Oats, Flax, Barley, Peas, Beans, Corn, Grass Seed, etc. Then PLANT those fine seed. AFTER you have harvested a bumper crop, pay me the balance of my low price. Not one penny need you pay, except the $1, until next October. And by October YOUR CHATHAM WILL HAVE MORE THAN PAID ITS ENTIRE COST IN INCREASED CROPS. Then you'll have it to work FREE for you the rest of your life.

Your Dollar Returned

I only want the dollar as evidence of good faith—to protect myself from mischievous boys. If after 30 days' hard test, you don't want my "Chatham," send it back at my expense and I will return the dollar.

A "Made-to-Order" Machine

Every "Chatham" is practically a *made-to-order* machine, for I send you the exact and proper Screens, Riddles, Hurdles and Sieves to grade and clean every *Grain and Grass Seed grown in your locality*. That's the secret of my success. I would not be the leading maker of Graders and Cleaners if I had tried to make my equipment fit ten million farms. What would you think of a clothing maker whose suits were all one size? Wouldn't it be a *miracle* if he gave you a fit. Yet all makers of Graders and Cleaners, except me, send the same equipment, whether you live in Maine, Ohio or Oregon. They wouldn't do that, if they had my 41 years' experience.

Extra Screens Free

I use, all together, 81 Screens and Sieves. It usually requires 15 to 17 for the average farm. These I select from the 81. After 41 years in the business, I am pretty sure to pick the exact equipment needed on your farm. If I shouldn't, just drop me a line and I'll send your additional requirements. There will be no charge for this.

Samples Graded Free

Maybe you have some Seed Grain that you can't clean or grade or separate. Send me a sample. I will purify it and tell you how you can do it cheaply. No charge for this.

Seed Corn Sorted

My big Corn Sorting Attachment, invented 2 years ago, is a great success. Twelve thousand farmers and many leading Agricultural Colleges are using it. It is the only machine I know of which scientifically sorts seed corn for drop planters.

New Book Ready

Send me no money now—just a Postal, for the finest, most complete Book on Seed Selection I've ever written. After the Book comes, write me what size machine you want and I'll ship it, freight prepaid, on receipt of $1.00. Then clean and grade all your Seed Grain. If you write today, you get my Book by return mail. Address nearest office.

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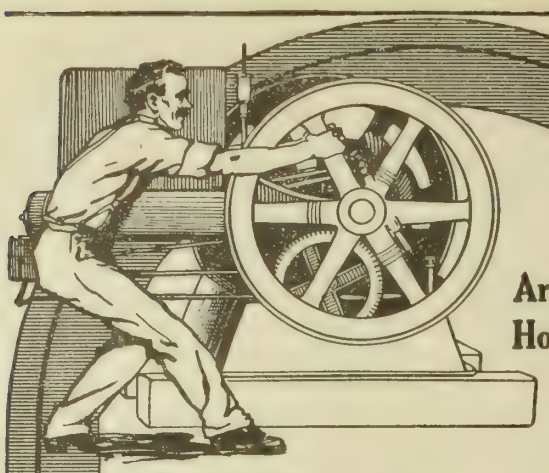

Are You Holding Your Engine Back?

Are you letting it give the service it will when you supply perfect ignition—a strong, hot spark every time it's needed? Most engine troubles are ignition troubles due to poor equipment. You will never be troubled by them if you insist that the maker of the engine you buy equip it with a Wizard Magneto. It is so simple in construction there is nothing to get out of order. It is so strong and rigid it will last as long as the engine. And it's waterproof. If you want the best service from the engine you buy, don't accept it without a Wizard. There's a Wizard for every engine. Every one is guaranteed,

If you own an oil or gas engine now, a Wizard will cut out many of the troubles that reduce its value to you. Write us. We'll supply you if your dealer cannot. Ask your dealer to write us for details. Let us send you

"The Happy Engine Owner"—Our Free Book

which explains fully about ignition and shows also how to remedy or prevent most engine troubles.

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WIZARD MAGNETOS

Ask the First 12 Men You Meet

which is the "one best" wagon built, and at least ten of them will say "The Peter Schuttler." All wagons look good when the paint is fresh, but it makes a lot of difference what is under the paint.

Old Reliable Peter Schuttler
The One Best Wagon

is made in the honest, careful, old fashioned way—in the most modern and completely equipped wagon factory in the world.

Peter Schuttler Wagons cost a little more than the "almost as good" kind but they save much more than the difference in first cost in time, horses, harness, repair bills and trouble.

Write for Booklet About Peter Schuttler Roller Bearing Wagons

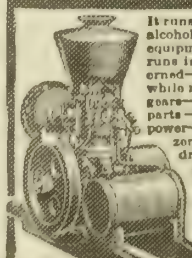
Peter Schuttler Company, Chicago
The World's Greatest Wagon Factory Established 1843

Don't Wear a Truss!

Brooks' Appliance is a new scientific discovery with automatic air cushions that draws the broken parts together and holds them as you would a broken limb. It absolutely holds firmly and comfortably and never slips, always light and cool and conforms to every movement of the body without chafing or hurting. I make it to your measure and send it to you on a strict guarantee of satisfaction or money refunded and I have put my price so low that anybody, rich or poor, can buy it. Remember, I make it to your order—send it to you—you wear it—and if it doesn't satisfy you, you send it back to me and I will refund your money. The banks or any responsible citizen in Marshall will tell you that is the way I do business—always absolutely on the square and I have sold to thousands of people this way for the past 30 years. Remember, I use no salves, no harness, no lies, no fakes. I just give you a straight business deal at a reasonable price.

C. E. BROOKS, 1930 State St., Marshall, Michigan

20 Reasons Why You Should Investigate the SANDOW Kerosene Stationary ENGINE



It runs on kerosene (coal oil), gasoline, alcohol or distillate without change of equipment—starts without cranking—runs in either direction—throttle governed—hopper cooled—speed controlled while running—no cams—no valves—no gears—no sprockets—only three moving parts—portable—light weight—great power—starts easily at 40 degrees below zero—complete, ready to run—children operate them—5-year iron-clad guarantee—15-day money-back trial. Sizes 2 to 20 H. P. Send a postal today for free catalog, which shows how Sandow will be useful to you. Our special advertising proposition saves you one-half cost of first engine sold in your county. (167)

Detroit Motor Car Supply Co.
265 Canton Ave., Detroit, Mich.

Do the Farmers Want Tractors?

Corn Belt Farmer Gives Us His Views

THE following questions are frequently put to me by farmers, want-to-be farmers, bankers, professional men and implement dealers: "Do the farmers want tractors?" "Are tractors up-to-date and practical for small farmers?" My answer is invariably, "Yes" and "No." "Yes," in that there is a long-felt need for power on the farm today that will cheapen and do the present-day farming operations more efficiently; and "No,' if these power machanes are inefficient, impracticable, cumbersome loads of steel, designed largely to be sold to the farmers by an expert salesman who thinks more of closing a contract than of selling the farmer a machine which will actually fulfill his present-day needs.

Labor-Saving Machinery Wanted

The thousands of farmers who attended the Fremont power demonstration last fall were certainly evidence enough to convince any clear thinking man that the farmer today is ready for any efficient, economic class of machinery that is going to aid him in producing more and better crops at a price less than they are costing under the present methods of production. A demonstration such as was held at Fremont is far superior to any private demonstration held on your own farm or that of a neighbor, in that it gave thousands of prospective buyers an opportunity to inspect all the better class of farm tractors on the market today working under the same conditions, and at the same time allowing the farmer himself to be the sole judge of the merits of each particular machine.

In many cases prospective buyers were not satisfied with one day's visit to this great demonstration, but many stayed two or three days, and a large number the entire week, before they were convinced that the proper tractor for their individual needs was in the demonstration.

A large number of farmers were present who came with the intention of buying a machine for immediate delivery, but returned without purchasing the same because they were unable to find the type they felt was best suited to their needs.

Small Tractor Popular

One of the noticeable features at this demonstration was the general trend of the manufacturers to decrease the size of their machines and at the same time increase the efficiency.

This is no doubt a step in the right direction. The general consensus of opinion of prospective tractor purchasers of the different states was for lighter machines. This was true of the farmers who were in attendance from the great wheat-growing districts from the north and northwest, as well as those from the 80 and 120-acre farms in this particular locality.

There will no doubt always be a great demand for large and medium sized tractors. Especially is this true in the farming districts where these machines can be used for commercial purposes, such as shelling, threshing, ditching, etc. But a small machine is sure to be popular in the entire corn belt because of the smaller farms, the diversified farming conditions and the small amount of commercial work that is to be performed. The manufacturer must look to the 80-acre and 240-acre farms upon which to market his product, as these farms are divided into fields varying from five to forty acres, due to the systems of crop rotation. These farmers are going to demand tractors different from many put on the farms during the past which were later put in the fence corners.

Must Be Practical

Yes, the farmer is ready for a real farm tractor. Not all will want the same kind of a machine, neither will all buy the same size, but as a farmer who has been engaged in agricultural work in Nebraska for more than twenty-five years and has watched the development of power farming machines from its infancy, I feel that the small-farm farmers are going to keep closely in touch with the different manufacturers and buy what in their judgment is the most practical and efficient machine that the market affords.

The ear marks for an A1 small farm tractor will be efficiency, practicability, simplicity, light weight and moderate in price. To be efficient, a machine must be constructed of excellent material and by the highest class of skilled workmanship. The designer should not be of the automobile or airship type, but rather a man with a knowledge of the farm and the many farm operations that

Appetite
Finds Ready
Satisfaction
In a bowl of

Post Toasties

and Cream.

Thin, crisp bits of Indian Corn — cooked and toasted so that they have a delicious flavour—

Wholesome
Nourishing
Easy to Serve

—sold by Grocers everywhere.

A real one-man tractor that will perform all operations on the farm usually done with horses. This machine cut seventeen acres of oats in seven hours. There is a contrivance allowing different lengths of steering device so that this machine can be attached to the mower, seeder, harrow, disc, manure spreader, hayrack, wagon or binder.

the machine will be expected to perform. The engine, magneto, carbureter and transmission should be of 'undisputed' quality, well protected and at the same time easily accessible to an unskilled engineer who is to operate them.

Fool-Proof Construction Necessary

Simplicity of construction as well as of operation should be the keynote of every tractor. The average farmer is not mechanically inclined and, therefore, demands a fool-proof machine, as in most cases the operator will be the hired man or the tenant.

For a tractor to be practical on the average farm it should perform a number of farm operations done today by horses, and should do them with one man or one boy rather than two men, or one man and a boy. They should be real one-man outfits —machines that will pull the plow, pulverizer, seeder, binder, manure spreader and possibly the cultivator. They should also run the feed grinder, ensilage cutter, corn sheller and threshing machine and do other classes of belt work on the average farm.

Farmers of today are also working for a lightweight tractor, one that will weigh from one and a half to five tons. Larger than this are too heavy for the average farm work, as they compact the ground too much in moving over it, and are inconvenient to operate in small fields, and under the diversified conditions found on the small farm.

Price an Important Item

Price is anotner item to be considered in purchasing tractors. An investment of $2,500 or $3,000 is more than the average 80 or 160-acre farmer can afford to pay for a machine to perform the work ordinarily done by from four to eight head of horses, and yet be compelled to keep these horses to perform the operations his tractor is yet unable to do.

The average farmer in this locality would not object to paying from $750 to $1,500 for a practical machine, one that will allow him to dispose of three or more horses and yet do his work quicker, more efficiently and cheaper. The tractor that will plow, pulverize, seed, cultivate and harvest the different farm crops with the aid of one man, and has all the earmarks of a twentieth century tractor, will find favor among the small farmers, medium-class farmers and many larger ones.

CORN BELT FARMER.

Not All Imaginary

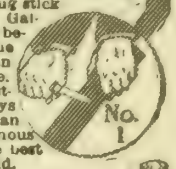
Some people have educated their tastes until they say they can tell whether a hen has had good feed just by the flavor of the egg she lays. There is some imagination about this, and yet there can be no doubt that good feed makes far better eggs than that which is half rotten and stale.

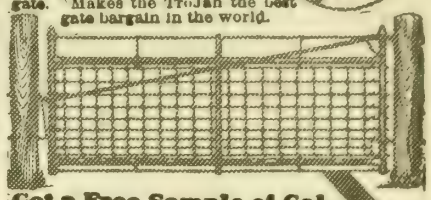
Better Cows, More Profits

Are your cows better than they were last year? If not, you haven't realized what you should from the season's dairying. Get ahead every year.

TroJan Gates Now Better Than Ever

Another big improvement for TroJan gates Special and exclusive Galvoit electro-galvanizing process makes galvanizing stick so hard you can't scrape it off. Galvanizing enters the pores and becomes practically a part of the steel. Ordinary galvanizing can be scraped off with a knife. Makes TroJan steel gates rust-proof and keeps them always bright and new. Galvoit adds another feature to an already famous gate. Makes the TroJan the best gate bargain in the world.





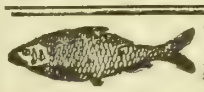
Get a Free Sample of Galvoit Process Galvanized Steel

The same as is used in the TroJan gate. No cost or obligation. Just tell us how many gates you use. We'll also send literature describing our steel farm and yard gates. Get TroJan factory prices before you buy.

TroJan Gates Are Sold on 30 Days' Trial—Factory Prices

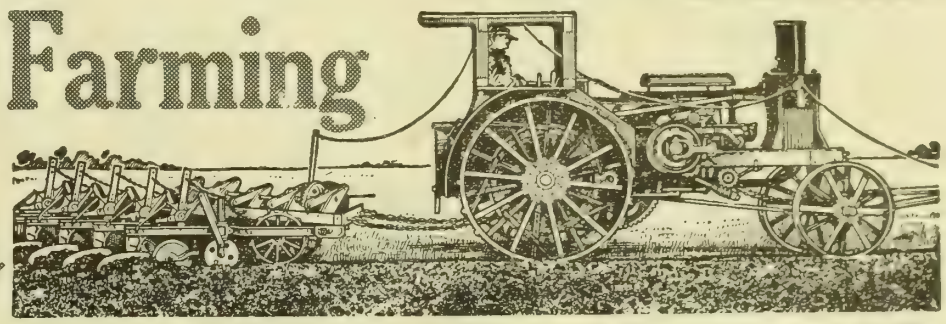
Try them at our risk. Adjustable at both ends for snows or side hills. Individual tighteners keep mesh snug. Steel center brace. Automatic latch. One-piece hinge. Save money by getting the TroJan at factory prices.

STANDARD MFG. CO.
303 Fourth St., Cedar Falls, Iowa



THIS SEASON WE SHIP "FROZEN LAKE SUPERIOR HERRING," in special made wooden boxes, keeping the fish clean and fresh. We ship only when we can rely on weather. Price $3.50 per 100 lbs.; 500 lbs. or more, $3.25 per 100 lbs. .Enclose money order and state Railway. JOHN DEGERSTEDT & COMPANY, Box 532, Two Harbors, Minn.

Tractor Farming Now a Necessity



The farmers of this country are right up against a serious situation. **The three things they have to depend on are soil, help and power.**

The **soil** of this country is being worn out The average crop per acre is getting smaller every year **Hired help** is a problem. Wages are constantly increasing and it is hard to get help at any price. **Horse or mule power** is also getting more expensive. The average farm horse actually eats its head off every year and is unprofitable to raise. It takes one fourth of a crop to feed the horses or mules necessary to raise it.

And even after you raise a crop under these handicaps you must sell your surplus at prices fixed by foreign labor working at much lower wages than you are forced to pay and using intensive cultivation methods.

It's a serious situation and the problem is how to meet it. Conditions have reached a stage where a radical change in farming methods must be made **You must raise bigger crops and do it cheaper.**

The one big solution to this whole problem is **"Tractor Farming."**

Tractor Farming is necessary to solve the soil problem. Deep plowing, plowing at the right time and thorough cultivation have been proven to be absolutely necessary to raise bigger crops. Tractor power is the only way to do these things.

Only Tractor Power can solve the hired help problem. With a Tractor, one man or boy can do as much work as two or three men with horses or mules.

Tractors also solve the power problem. You can farm cheaper with a Tractor than with animal power. You can also farm more extensively as well as more intensively

Only Tractor Farming can solve your soil help and power problems. Tractor Farming is now a necessity.

AVERY "ONE-MAN" OUTFITS

"Light-Weight" Tractors and "Self-Lift" Plows

Avery "Light Weight" Tractors and "Self Lift" Plows make it possible for you to change to Tractor Farming successfully on **any size farm—large, medium or small.** Avery Tractors are built in five sizes, from a little 8-16 h. p. pulling two or three plows to a big 40-80 h. p. pulling 8 to 10 plows. They fit any size farm, large or small.

The wonderful success of Avery Tractors and Plows is due principally to three things: First, Avery Tractors are the Lightest Weight Tractors built considering their draw bar efficiency—Second, Avery Tractors are the Simplest Tractors built—Third, Avery "Self-Lift" Plows make it possible for one man to run the entire outfit alone.

Thousands of farmers are already doing Tractor Farming with Avery Tractors and Plows and having wonderful success.

The Avery Selling Plan is also the fairest and broadest of any —Avery Tractors and Plows are Sold on Approval at Low Prices and Fully Guaranteed

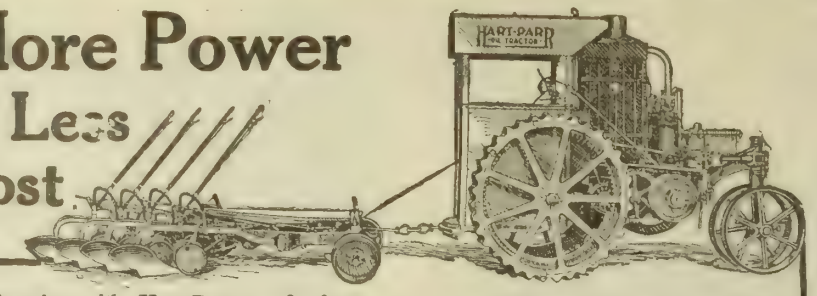
Write for Avery Tractor Farming Books — *Free*

Our new Book "Tractor Farming" tells why and how to farm with Tractor Power. Our 1914 Tractor and Plow Catalog tells all about how Avery "Light-Weight" Tractors and "Self-Lift" Plows are built and what they will do. Learn all about Tractor Farming. Write for both books. Address

AVERY COMPANY, 1977 Iowa Street, PEORIA, ILLINOIS

Also Manufacturers of Avery Undermounted Steam Traction Engines, "Yellow-Fellow" Grain Threshers and Gasoline Motor Trucks.

More Power at Less Cost



Farming with Hart-Parr outfits is a proven economy and success. We have letters from hundreds of satisfied farmers who say they are making more money every year, with Hart-Parr power outfits, than they ever did, farming with horses or mules.

Just think of the big saving possible on your own farm, if you replace 12 to 30 horses and several hired men with a Hart-Parr Tractor and plow, operated by one man, and still do as much or more work, better, quicker and cheaper.

Working or idle, horses eat every day. A Hart-Parr Tractor requires fuel only when working and then it uses **cheapest kerosene,** costing much less than horse feed.

HART-PARR -OIL TRACTOR- & **HART-PARR SELF AND HAND LIFT PLOW**

the outfit with the "big pull," illustrated above, can plow deeper, turn better furrows and finish the job quicker than horses or mules. One man operates the entire outfit from the engine platform. You save the plowman's wages and board.

The tractor can also be used for any kind of field or belt work—discing, seeding, harrowing, harvesting, threshing, hauling, silo filling, road making. It saves money at every turn. Easily pays for itself in a few seasons. It is light and simple. Contains 80 per cent less parts to get out of order than any other. Drivers are solid steel castings—not built up or pieced. Wave form driver lugs afford greatest surface contact. Drivers can be equipt with "Hold-Fast" extension lugs—the lugs with a bull dog grip on soft soil. They enable this tractor to get on the job earlier in the spring than any other outfit.

The Complete Line of Hart-Parr Power Farming Machinery Includes:

Oil Tractors - Self and Hand Lift Plows - "Money-Maker" Threshers

Investigate! Write today for descriptive catalogs, special circulars and literature on power farming costs. 106

HART-PARR CO., 254 Lawler St. Charles City, Ia.

When You Are Motoring You Must Have "PIPER"!

Eating up the road—nerves a-tingle—wish you had some tobacco. You can't smoke *then.* Your two hands are busy; you can't have ashes flying in your face; you can't light up without stopping. A hundred reasons.

What's your old pal yelling in your ear?

"Take a chew of 'PIPER'. Beats smoking anyway!"

PIPER Heidsieck

CHEWING TOBACCO—Champagne Flavor

In this way thousands of men have made the discovery that there is *more solid satisfying enjoyment* in chewing PIPER Heidsieck than in any other form in which tobacco is used.

The *rich, wine-like flavor* that distinguishes PIPER Heidsieck from all other tobaccos, comes from the ripest, mildest, mellowest tobacco leaf, carefully selected from the world's choicest crops. This delightful, lasting flavor completely *satisfies the taste* as nothing else can.

FREE Send 10 cents and we will send a full-size 10 cent cut of "PIPER" and a handsome leather pouch FREE. The tobacco, the pouch and mailing expenses will cost us 20c and we are glad to spend the money to get you to try "PIPER" just once. We know that once you have started, you will become a permanent friend of this wonderfully wholesome, healthful and satisfying tobacco.

This offer applies to U. S. only.

In writing us please tell us the name of the dealer of whom you buy your tobacco.

THE AMERICAN TOBACCO COMPANY, NEW YORK

National Western Stock Show

It Has Become Our Greatest Feeder Show

THE Western Stock Show association of Denver, Colo., in its ninth annual exhibition, held January 19 to 24, 1914, gave the greatest exposition of western live stock that has ever been presented to the public on the western side of the United States. From its inception this association gave promise of being a great factor in the development of the live stock resources of the western country and of attaining a creditable position in the exploitation of its range industries in horses, cattle and sheep.

It was generally conceded that it would develop a great feeder market at Denver, for the range country tributary thereto, that it would serve the purpose of introducing the range cattle and sheep growers to the corn belt feeders of the Missouri and Mississippi valley states. It has accomplished all this, and surpassed even the most sanguine anticipations of its promoters. It has not only attained the position of the greatest feeder show in America, but it has developed an exhibition of breeding animals, of all kinds adapted to farm and range, that is the surprise and wonderment of visitors from all parts of the country.

Giant Young Show of the West

This great western stock show has passed the experimental and impulsive stage of growth and development, and is now in the full vigor and glory of assured success. This young giant of western enterprise has made no mistakes in its planning and building. It is up-to-date in all its improvements. Its present urgency is simply expansion, a widening out to accommodate the rapidly growing and increasing exhibits and attendance, which is now a feature of urgent concern with the management. Its influence and support has ruthlessly trampled down state lines, and is spreading out over the Rocky Mountain country to the north, northwest, west and southwest, and even Kansas and Nebraska on the east are affiliating in this exposition undertaking with as much interest as though they were members of the same family. In short, it is a great big success, and is today the greatest feeder and bull market in the world.

The Denver Stock Yards company gave out the information that there were received during the week of the show, for exhibition and sales purposes, more than 1,200 bulls. These were mainly in carlot shipments, and directed to breeders. A very general feature of comment was on the high quality of these animals. There was a time in the history of the western cattle range when any of the bovine kind, distinctly masculine, would sell to the range cattleman. This period of the bull trade, however, has passed. The demand is now for good quality and registered stock. A few of the commoner kinds are still taken, but this class of trade is rapidly giving way to the best that is produced.

Good Price for Breeding Stock

That there now exists on the western range a strong tendency towards more and better breeding cattle was fully verified at this show, where hundreds of pure-bred cattle were sold to range cattle breeders at top prices. Bulls were sold in carlot purchases at prices ranging from $150 to $325 per head; individuals from $400 to $1,000. The auction sales were not a necessity, and were not resorted to by many breeders who had choice animals to dispose of, buyers preferring to close their purchases privately rather than take the chances of losing out on the animals they wanted, or be forced to pay a higher price for them in open competition.

The western range is in an entirely different position now in the matter of buying breeding stock than it was a few years ago. There are many cattle companies now who are buying the best of both bulls and cows, and establishing herds to accommodate their own demands for bulls. It has been proven by actual test that the range country is a good place to produce and develop bulls, and that the only need in this industry is the good quality of foundation stock and the usual system and care in developing the bull calf into a mature animal. This is no longer a

THE WAY OUT
From Weakness to Power by Food Route

Gettig then right start for the day's work often means the difference between doing things in wholesome comfort or dragging along half dead all day.

There's more in the use of proper food than many people ever dream of—more's the pity.

"Three years ago I began working in a general store," writes a man, "and between frequent deliveries and more frequent customers I was kept on my feet from morning till night.

"Indigestion had troubled me for some time, and in fact my slight breakfast was taken more from habit than appetite. At first this insufficient diet was not noticed much, but at work it made me weak and hungry long before noon.

"Yet a breakfast of rolls, fried foods and coffee meant headache, nausea and kindred discomforts. Either way I was losing weight and strength, when one day a friend suggested that I try a 'Grape-Nuts breakfast.'

"So I began with some stewed fruit, Grape-Nuts and cream, a soft boiled egg, toast and a cup of Postum. By noon I was hungry, but with a healthy, normal appetite. The weak, languid feeling was not there.

"My head was clearer, nerves steadier than for months. Today my stomach is strong, my appetite normal, my bodily power splendid and head always clear."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

matter of experiment or guess. There are numerous instances over the range country which have clearly demonstrated this assertion as a well grounded fact.

The example of the Allen Cattle company of Husted, Colo., in the Shorthorn classes, was sufficient of itself to convince any one what the western pure-bred cattle breeder can do and may be expected to do in these shows in the future. They can be made to stand up beside the best that can be produced anywhere, and at the same time be born and raised in the short-grass country in the Rocky mountain states. Don't be fooled any longer on what the western range cattle breeder can do or cannot do. And they had such competition as F. W. Harding of Wisconsin, Carpenter and Rose of Ohio, C. A. Saunders of Iowa, Howard Reese & Sons and Rapp Bros. of Nebraska, a lot of world beaters in the Shorthorn show rings of the United States.

Feeder Cattle Division

The feature of greatest interest to the greatest number of persons was the feeder cattle division. It was estimated that of the 250 carloads in the yards approximately three-fifths were entered in some of the classifications for contest. The quality of these cattle was a subject of remark by almost everyone. Excellence of carload exhibits has always been the feature of greatest boast by the fair management. But this year the old cattle raisers and exhibitors planned to give competitors a little closer hustle than usual, and thousands of these cattle were a little better fleshed, a little closer mated up in matter of uniformity, a little better bred, and a little better cattle all around, from the standpoint of the expert feeder judge.

The feeder cattle show draws feeders from every state as far east as interest is taken in the production of good beef. It means a great deal with the critical, scientific cattle feeder to get just his ideal in a lot of steers for the feed yard. There is a great ambition among this class of feeders in topping the market when their cattle reaches the packer trade Some of the sales reported were twenty Angus calves, average 602 pounds, raised by W. L. Harrison, of Roggen, Colo, at $13.10 per cwt., bought by A. W. Boagg, Tuscola, Ill. This is said to be the highest price ever paid for any load of feeder cattle in any market. It exceeds the record sale of last year at the Denver show when $12.25 was paid. A carload of 2-year-old Colorado steers weighing 1,045 pounds was sold to Anderson, Clark & Weeks of Tarkio, Mo., for $10.60. Many sales were reported at or above $9.00, and $8.00, while regarded high, was within the bounds of reason for the very choice loads.

Day of Cheaper Cattle Not in Sight

Among cattle feeders, cattle breeders and cattle enthusiasts generally, prices plainly forecast the sentiment for higher-priced beef for next spring and for some time to come. There is no one willing to set a date in the future when beef prices will be lower. Old gray-haired men volunteer to indicate "many years will pass before cheaper cattle and cheaper beef will be had in this country." A shortage of cattle is the prevailing expression among cattle raisers and cattle handlers from the range country, as well as the corn-belt states.

The grand championship for carload feeder cattle was won by a load of 3-year-old Hereford steers raised and owned by the Jones Cattle company of Middle Park, Colo. N. L. Harrison's load of Angus calves were awarded reserve champions. The grand champion load of fat cattle, Hereford steers weighing 1,190 pounds, sold for $10.25 per hundredweight. They were fed at Eaton, Colo., by Clayton & Murnan. These cattle were on full feed ninety days.

Horse and Swine Departments

The horse department of this show was of special interest. Besides the scores of fine draft horses shipped in by breeders and importers from the eastern states, there were special stables of western horses, western bred, showing that the big draft horse can be produced with every quality of style and finish that can be attached to him under any influence of feed or climate in any other part of the country. This division of the show was strong and highly creditable for any section of the United States. The saddle and harness or driving division of the show was of a quality that a fashionable city like Denver would naturally possess and encourage independent of this exhibition.

The swine department was one of interest, strong competition and a rivalry that was hard to sort out in quality between western and eastern grown hogs. The states to the east are interested in this show, as may be appreciated when we say there were sixteen breeders from Nebraska in the show ring with hogs of their own breeding. The market for breeding stock is strong in the western country, and indications point to increased demand all over the west for pure-bred swine of good quality.

The Dairy Cow in Demand

The dairy cow section was one of interest; while not crowded to suffocation, there was a steady stream of interested inquirers visiting the milch cow division and many sales were closed among breeders and exhibitors of all the leading breeds. There were hundreds of grade and pure-bred dairy cows shipped into the Denver yards to find sale during the week of the fair. Prices were well maintained and many sales made to visitors.

The Sheep Department

The sheep department, among carlot shipments, was of good quality, though not so full as in former years. The lamb division was particularly good. In the breeding section of pure-bred sheep there was the poorest display in numbers that has ever been recorded since the show has been started. This department should be boosted, as it is one of great interest, and will gradually increase regardless of the wool tariff proposition, which should have no place now in our sheep shows.

Poultry Always Strong Feature

Poultry is always a strong feature at Denver, and this year was no exception. The poultry building was

(CONTINUED ON PAGE TWENTY-)

Every Big Four

Stands Ready to Give Results

After all, nothing counts but results. It's the number of acres plowed, and the good crops you raise that tell the story.

Big Four Tractors are producing results all over the world. There are more Big Fours in successful operation than any other four cylinder tractor made. The first four cylinder tractor ever built was a Big Four. Every Big Four represents the combined force of these "year after year" results. We know the Big Four is the very best tractor built.

Ask us to prove it.

A Size For Every Farm

Big Four "20" Big Four "30" Big Four "45"

MAIL THIS COUPON TODAY

Emerson-Brantingham Implement Co. (Inc.)
Good Farm Machinery
431 West Iron Street, Rockford, Ill.

Please send me free Big Four Catalog.

Name.....

Address.....

NOW! A 6 H-P ENGINE $99.35

LET me send you an engine to prove that you can own a WITTE cheaper and easier than you can do without one. Let the engine earn its cost, while you pay for it.

WITTE ENGINES

DIRECT FROM FACTORY TO USER!

Look at These Prices!

2 H-P, $39.45; 4 H-P, $75.50; 6 H-P, $99.35; 8 H-P, $149.90; 11 H-P, $218.90; 20 H-P, $389.50.

Other Sizes Proportionally Low.

Get my latest and best offer—all complete with my NEW BOOK, the finest in the engine business. Write me before you make arrangements to try any engine.

ED. H. WITTE, Desk D, Witte Iron Works Co.
1555 Oakland Avenue, Kansas City, Missouri.

No Need Now to pay double price for a good engine, or to take a poor, or doubtful one at any price. No extra cost to be sure.

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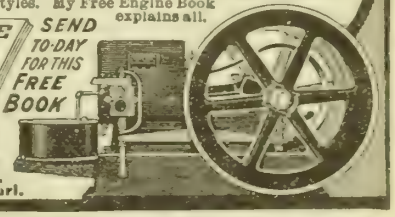

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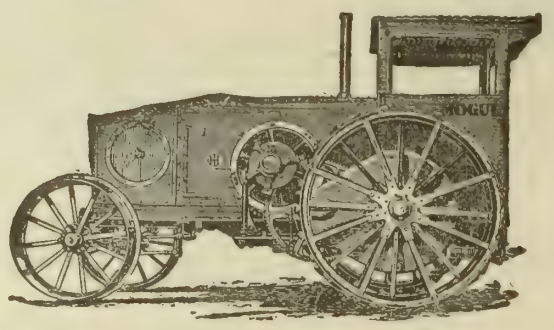

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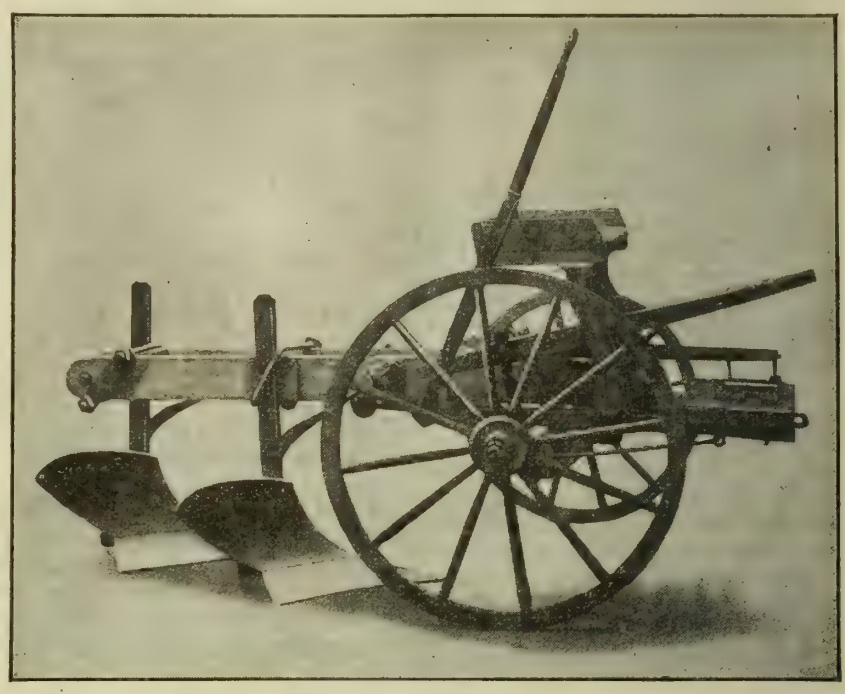
Development of the Plow

FOLLOWING the development of the plow from the primeval days, when it consisted merely of a forked stick, down throughout the days of the wooden share and mouldboard, the iron-pointed share and on down to the present scientifically constructed steel walking plow, we find that the various so-called improvements were merely means to promote the durability, or at most the efficiency, of the same old idea which had been conceived thousands of years before. The actual labor and the time expended in the operation of plowing had been but very slightly reduced, and these two points, above all others, mark the real development and perfection of the modern farm implement.

The first step toward this end was the introduction of the wheel attachment, which was mounted to the beam of the ordinary walking plow, with a seat for the accommodation of the operator, and some laborious means of raising and lowering the bottoms. While this feature proved to be more or less of a convenience so far as the comfort of the operator was concerned, it did but little to improve or facilitate the operation of the plow. The plowing of a given acreage still occasioned as much, if not more, time and labor, as this improved plow still turned but one furrow.

At this stage, in 1868, two farmers in Illinois designed and perfected the first gang plow ever built, and in so doing opened the eyes of the world to the possibilities contained in the development and perfecting of multi-bottom plows. After the introduction of the first crude gang plow various improvements were made from time to time, but nothing of special moment was introduced until several years later, when a plow embodying what is known as the modern bale construction was designed and perfected. With the bale construction was also embodied the first "toggle" joint and ratchetless lever ever put upon a plow, together with the lift spring for assistance in raising the bottom—thus originating the foot-lift principal. From this stage but little developed further to mark the progress of the plow until the advent and development of traction plowing.



The First Gang Plow

Finally the Engine Gang

Volumes could be written upon the many trials and tribulations which attended the development of the successful engine gang. The fact remains, however, that while the development of the engine plow had its romances the same as the final perfecting of the horse-drawn plow, yet the problems which the engine plow pioneers had to overcome were merely those of adapting the already perfect plow bottom to service of traction plowing.

We believe, therefore, that it would be superfluous to attempt to relate all the various stages of development through which the engine gang passed, but now that it has been perfected we are pleased to refer to it as the culmination of the plow-building art and offer it as marked contrast to the crude, but vitally important, original gang plow shown above.

How to know concrete

Find out the quality of materials that go into its make-up. Clean sharp sand, gravel and water are usually alike. The only other ingredient used—*cement*—is the thing that determines good concrete. Secure the right cement—high in tensile strength—and you are sure of securing right concrete work.

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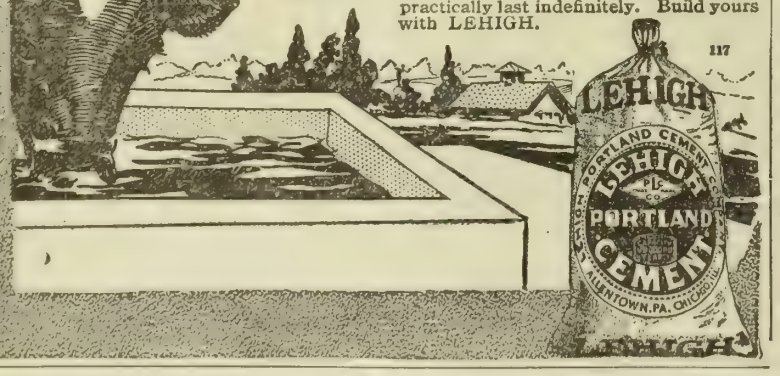

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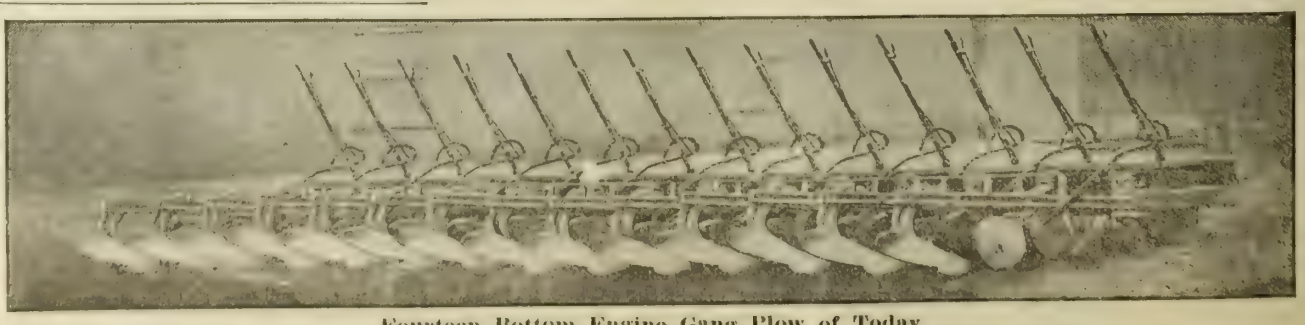

Fourteen Bottom Engine Gang Plow of Today

Of Interest to Our Women Readers

The Children Up in Heaven

"O, what do you think the angels say?"
Said the children up in heaven;
"There's a dear little girl coming home today,
She's almost ready to fly away
From the earth we used to live in;
Let's go and open the gates of pearl,
Open them wide for the new little girl,"
Said the children up in heaven.

"God wanted her here, where His little ones meet,"
Said the children up in heaven;
"She shall play with us in the golden street;
She has grown too fair, she has grown too sweet
For the earth we used to live in;
She needs the sunshine, this dear little girl,
That gilds this side of the gates of pearl,"
Said the children up in heaven.

"So the King called down from the angels' dome,"
Said the children up in heaven;
"'My little darling, arise and come
To the place prepared in thy Father's home,
To the home my children live in.'
Let's go and watch at the gates of pearl,
Ready to welcome the new little girl,"
Said the children up in heaven.

"Far down on the earth do you hear them weep?"
Said the children up in heaven;
"For the dear little girl has gone to sleep;
The shadows fall and the night clouds sweep
O'er the earth we used to live in;
But we'll go and open the gates of pearl.
O, why do they weep for their dear little girl?"
Said the children up in heaven.

"Fly with her quick, O angels, dear,"
Said the children up in heaven;
"See, she is coming! Look there! Look there!
At the jasper light on her sunny hair,
Where the veiling clouds are riven!"
Ah, hush, hush, hush, all the swift wings furl!
For the King himself, at the gates of pearl,
Is taking her hand—dear, tired little girl—
And leading her into heaven.

Our Home Chat

The little poem at the top of this column is published expressly for one sorrowing mother who has just lost a 7-year-old daughter. There is nothing we can say that is of much comfort to a mother who has just suffered such a loss—we realize that, but this seems to us such a beautiful picture of the joy of the little children who are gone from among us that we want her to read it. We have never seen this mother, but her beautiful letter about the death of her little Esther makes her seem particularly near and dear to us, and we know that every mother who reads these columns will send up a little prayer for her, too.

***

Are our rural schools meeting the demands of the patrons? This question is being discussed more and more throughout the middle west. At almost every meeting of farmers this question is among those taken up, and the answer is always "No." Then why not? Wherein does it fail? Here we find the patrons will differ in their answers, some saying that they do not teach high enough grades, some that the schools teach enough grades, but do not teach them thoroughly enough; some say that they teach too many subjects; some say that they teach impractical instead of practical things, and some have other complaints to make. How can we remedy the difficulties? Here we find an even wider difference of opinion. Some want the schools consolidated, some do not; some want taxes raised; some say they are too high already, and a system must be found whereby they may be lowered and the efficiency of the schools at the same time increased. What is the solution of all these various problems? How may we improve our rural schools without at the same time raising the taxes for their maintenance to a prohibitive amount? In this issue of the Twentieth Century Farmer are two letters from subscribers. Both of these women have children in school; both are vitally interested in the matter, and both are educated, intelligent women. Yet they hold opposite views on consolidated schools. What do you think about it? We would be very glad to hear from anyone who is interested enough to express an opinion. HOME EDITOR.

Township School Consolidation

The present system of rural education needs radical reconstruction, for it is not adequate to the demands of growing intelligence. If an ambitious youth desires to be taught along commercial lines or to study any higher branches, he must go away from home or coax his father to get him a driving horse. Finding such difficulties in the way, the great majority of country young people have no chance. Often, too, it happens that older boys review, for two consecutive winters the same lessons until they lose interest. They are wasting their time, when it is needed on the farm, so they leave school at 13, perhaps.

Also but few girls pursue higher studies. Rather than go to town to school, they become helpers at home. We often see girls with narrow lives of hard work waiting for marriage as an escape. How much better fitted they would be for homemaking if they had a broader view and their native intelligence were developed along the lines of business and preparation for a full, free, broad life. Out of the graduates of the Kansas schools of domestic science the majority are married and none are divorced.

Under the present system there is one teacher (often inexperienced) for thirty variously graded pupils. Higher studies cannot be taught by her. The solution lies in the consolidated township rural school. One large, permanent building should be erected near the center of the township, conveyances provided for the pupils, sheds built for the horses belonging to the pupils, about six specially qualified teachers hired, and courses provided in commercial studies, domestic science, practical experimental agriculture and other higher branches. County superintendents should visit monthly to revise and direct.

Farmers cry, "Expenses!" but I believe the cost would be a mere trifle above that of the present system and the results would be extremely gratifying to rural taxpayers, as well as to the mothers and the young people. MRS. W. K.

Iowa.

District or Consolidated Schools

To one having children of school age or being interested in the betterment of education, the discussion of school matters is absorbing, and now the principal subject of discussion seems to be, "Shall we retain our district schools or consolidate?" There is, in my opinion, much to be said in favor of each one.

If each district could afford to have its school house roomy, well ventilated, well heated and well lighted, with individual seats, shaded windows, cupboards for lunches and a large yard—two or three acres, at least—and a competent teacher in charge, we would be satisfied. But someone says, "Don't you want your children to have any higher education than the eighth grade?" "Yes," I answer, "I do." If my children wish to go on with their school work I want them to be able to do so, but

(CONTINUED ON PAGE SEVENTEEN)

The Victrola satisfies your love of music

The love of music is born in every one of us, and we naturally come to love the kind of music we hear the most.

In this day of the Victrola it is easy for every one to hear the world's best music—and not only to hear it, but to understand and enjoy it, for this wonder instrument gives to you a thorough appreciation of the masterworks of music.

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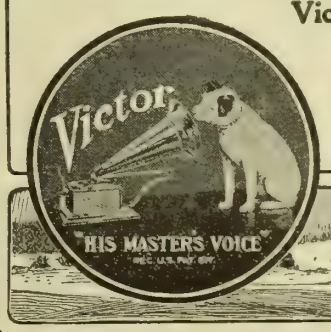

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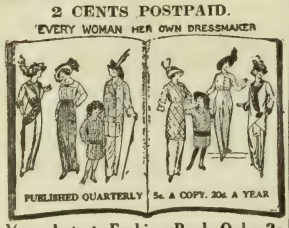

Very Latest Fashion Book Only 2c

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FOR the benefit of our readers who use patterns, we publish four times a year the well-known fashion book, **"EVERY WOMAN HER OWN DRESSMAKER."**

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OUR SPECIAL OFFER—IF you use patterns, or if you order any pattern shown in this or any other issue of our magazine, we will send you the very latest issue of **"EVERY WOMAN HER OWN DRESSMAKER" for 2c. Just send your address and 2c. to Pattern Department Twentieth Century Farmer, Omaha, Neb.**

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6367—Children's Dress—Any of the wash materials can be used to make this dress, with the collar, cuffs and belt of contrasting material. The dress closes at the front underneath a box plait and can be made with either the long or short sleeves. The pattern 6367 is cut in sizes 2, 4 and 6 years. Age 4 years requires 2¼ yards of 36-inch material and ½ yard of 27-inch contrasting goods.

6243—Ladies' Skirt—This skirt can be used to complete a coat suit, or it can be worn with separate shirt-waists. The skirt is cut in five gores and closes at the back. Serge, cheviot, broadcloth or whipcord can be used. The pattern 6243 is cut in sizes 22 to 30 inches waist measure. Medium size requires 3 yards of 36-inch material.

6305—Girls' Dress—Serge or linen can be used to make this dress, with the collar and cuffs of contrasting material. The dress closes at the front and is made with short sleeves. The shoulder edges extend over the top of the sleeves. The pattern 6305 is cut in sizes 6 to 12 years. Age 8 years requires 2¼ yards of 44-inch material and ¾ yard of 27-inch contrasting goods for the collar and cuffs.

6293 Misses' Dress—This dress can be used for a small woman as well as for a miss. It closes at the front and can be made with either the long or short sleeves. The three-gore skirt can be made with either the high or regulation waistline. The pattern 6293 is cut in sizes 14, 16 and 18 years. Medium size requires 3½ yards of 44-inch material and ¾ yard of 24-inch satin for the girdle.

6208—Ladies' Waist—Linen, madras or China silk can be used to make this waist, with the collar and cuffs edged with frilling. The waist can be made with or without the collar and with either the long or short sleeves. The pattern 6208 is cut in sizes 34 to 42 inches bust measure. Medium size requires 2 yards of 44-inch material, 3½ yards of edging or 2¼ yards of wide frilling.

5435—Ladies' Dress—A pretty frock, and one quite easy of construction, is shown in this design. The garment closes at the left side of the front and can be made with high or Dutch neck and long or short sleeves. Gingham, chambray or percale may be chosen for development. The pattern No. 5435 is cut in sizes 32 to 42 inches bust measure. Medium size requires 6⅝ yards of 36-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

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Look Here!

This Compass Watch is free. No fake about it either — it's really and truly free.

Get your father, mother, or big brother or some neighbor to subscribe for the Twentieth Century Farmer, or renew their subscription for one year at the regular price of $1.00, and we will send you this watch free. It's new and just out and will please you. It is guaranteed to run and keep accurate time.

A Watch and a Mariner's Compass are two indispensable articles to a proper equipment for hunting, fishing, outings, hikes or cross-country runs.

The "PATHFINDER" Watch combines these two necessities without sacrificing the efficiency or appearance of either.

It is a 14-size, thin model, German-silver nickel-plated case, open face, Arabic dial, with red minute numerals around outer margin, "pull-out" stem set, and is guaranteed a first-class time-keeper.

The unique location of the compass in a recess formed in the top of the watch crown obviates all necessity for increasing the thickness of the case or distorting the appearance of the watch to accommodate the compass, and at the same time the compass is far enough removed from the steel parts of the movement to prevent its being deflected thereby.

Every Boy Scout should have one.

Make up your mind to get it today.

Address,

Twentieth Century Farmer
OMAHA, NEB.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Daily Valentines

Just a little word of cheer
To some lonely heart;
Just a little deed of love
As the teardrops start;
Trick of eye or tone of voice
May clear up the way,
And make sunshine where but gloom
Else had filled the day.

Write your message as you will;
It can never be
Like the spoken word and look
Fraught with sympathy.
Send love's talisman abroad
Over sea and land;
But to home friends give the clasp
Of your helping hand.

Daily valentines that make
Life seem good to live.
To our near and dear ones are
Priceless things to give.
Like the sunshine and the rain,
They make fresh and sweet
Places barren, else, and rough
To their stumbling feet.

***

A Valentine Plan

Bessie Brown and I fell out;
I really don't know what about.
Or if the fault was hers or mine—
But I shall try to fix it right
By sending her, this very night,
A loving little valentine.
So Bess and I will doubtless be
The friends again we used to be.

***

A Valentine

Mother says the finest sort of a valentine
Is a very good "report," if it's mine!
She declares it's better far
Than the lace-trimmed bought ones are.
So I've quite decided she
Shall get that valentine from me.

The Editor's Corner

You children are writing such good stories now! It is not that the best stories are any better than they used to be, but there are so many that are about equal that it is hard to turn down any of them. There were three or four stories this time that really should be published, and we wish there were room for them.

There are some questions to answer, too. One letter said, "You say the stories must be true." This is a misunderstanding. The stories must be original, which means that they must not be copied out of books or made up by other people than yourselves, but they need not be true. Fairy stories or made up stories are all right, if they are good ones.

One story came labeled "honor story," and was sent by a little girl who had never sent in a story before. The honor department is for those who have written stories which have received prizes. Whenever they send in other stories worthy of prizes the stories are printed and an honor prize sent. There are now three members of this department — Ytole Norris, Orrie Campbell and Bertha E. Hayes.

There was also a request for a blue button. We do not have buttons or sides. All you have to do is to send in a story according to rules whenever you like, and if it happens to be, in our judgment, the best story sent in that week, age being considered, and is neatly written, correctly spelled and well written, you will get a prize. If someone has sent in a better one that week, you must try again some other time. And that is all there is to it.

HOME EDITOR.

(Prize Story)

An Exciting Adventure

By Ruth Todd Olney, Aged 8, Maryville, Mo.

One morning in January my papa asked me if I would take a chicken to my grandma, who lives only a short distance away. I have a big shepherd dog, whose name is Ponto, and he goes everywhere I go. When I had gone half way, on a porch there lay a big cat. The cat did not see my big dog trotting along. Whenever Ponto sees a cat he will run after it.

Poor kitty was dozing so peacefully, when Ponto slipped up and frightened her so badly she did not know what to do. As there was nothing by for her to run up, she saw me and thought she could make her escape by running up on my head.

You can guess how I felt. The cat was scratching my head; Ponto was barking, and the chicken was squawking. I did not feel like laughing. I grabbed the cat by the tail and pulled her off my head, and she made her escape by running up a telephone pole. I held on to the chicken and delivered it to grandma, who called me a brave girl.

(Honorable Mention)

The Lost Kitten

By Edna Bickel, Aged 15, Featherville, Idaho.

Old Mouser was running frantically up and down the stairs, looking every place where she thought the object of her search might be found. But all in vain, for no little kitten was to be found.

Little Elsia Day, Old Mouser's little mistress, awoke early next morning, and, hearing the old cat crying so piteously, went to the door, and Old Mouser went up to her and commenced rubbing against her. Elsia picked the old cat up and ran upstairs with her. Presently she came down crying, "Mamma, the little kitten is gone! Oh, where is it?" Then there was a big search all over the house, but no little kitten was found.

Just then the little White boy ran up the steps to the house and cried: "Old Tiny, our pet dog, has the prettiest little kitten in her basket." Then Elsia cried, "Mamma, may I go over and see it? It might be Mouser's little baby." Mamma consented, and away the two children ran to see Tiny's kitten.

"It is Mouser's baby! Oh, goody, goody!" cried Elsia, and she took the kitten over to Mouser, who was as proud as a mother could be to get her baby back again.

The White boy said that old Tiny had lost her puppies the day before the kitten was lost and was probably hunting for them when she saw the Days' parlor door open and walked in and found the little kitten and took it home and adopted it in place of the puppies.

My Pony

By John Wiebe, Aged 13, Bingham Lake, Minn.

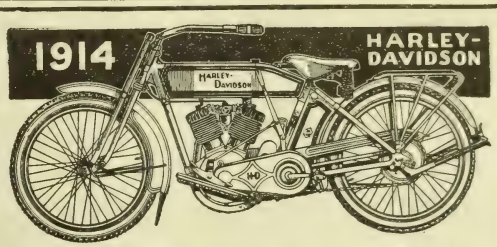
One day when my parents went visiting I had to stay home. When evening came we were all having a talk inside, when I heard my parents coming home. I looked out of the window and saw that something was running beside the team. I ran out to see what it was and found it was a dandy little pony. I asked if it was for me, and my father said, "Yes." Nobody knows how happy I was. I rode to the barn and tied it. I could hardly believe that I had a pony, but as sure as anything it was true. I gave it the name "Jim." He is 3 years old now. He has a long tail and is all black except one white stripe over his forehead. He is about four feet high and is a pretty little fellow. I have a cart and harness and it is such fun to drive with him.

Additional Stories

Ross Kinish, Florence, Neb.; Rose Kohl, Humphrey, Neb.; Vera Keller, West Point, Neb.; Hilda Fabian, Prague, Neb.; Karl Dreier, McCool Junction, Neb.; Viola Mullen, Dunlap, Ia.; Floyd Weimer, Overbrook, Kan.; Mary Phillips, Huntsville, Ark.; Fransena Schwartz, Luverne, N. D.; O. K. Watkins, Buffalo, Mo.

Picture Contest No. 10

Write a verse of four lines about this picture. Each of the two children writing the best verse about this picture will receive a book as a prize. Make your verse bright and original. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all given consideration, as well as the quality of the verse, in awarding the prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than February 28. Keep this date in mind and be sure your verses reach us. Last time over thirty verses came in too late. In one case a teacher sent in the verses of several pupils. We are sorry to have to discard these verses, but the date given is the one on which they must go to the printer.



Some things you can do with the Harley-Davidson that cannot be done with other Motorcycles

YOU can start the motor on all chain driven models at will, without even dismounting or putting the machine up onto the stand. A simple downward push on either pedal operates the Step-Starter and the motor begins to throb. (*The Step-Starter is a patented feature found only on the Harley-Davidson*).

Double Clutch Control

You can operate the clutch either with clutch pedal or by a hand lever. No need to let go of the grips that control the throttle and the spark or to take either hand off the handle-bars. Just a pressure of the toe or the heel and you engage or disengage the clutch.

Double Brake Control

You can operate the brake by back pedaling on either pedal or by a lever convenient to the foot. This foot control of both clutch and brake gives you practically automobile control of the machine, a distinctly new and very desirable exclusive feature.

Ful-Floteing Seat

You can ride over really rough roads in perfect comfort because the Harley-Davidson Ful-Floteing Seat (a patented feature) absorbs all the jolts, jars and vibrations.

Folding Foot Boards

When on tours and long rides you have a variety of positions at your command. The foot boards are long and accomodate a rider of any height. The pedals can also be used as foot rests if desired.

There are five models of the new Harley-Davidson ranging in price from $200 to $285. Catalog describing the models will be forwarded together with the name of the nearest dealer on request.

Harley-Davidson Motor Co., 892 A St., Milwaukee, Wis.

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Cyclone Sanitary Fence makes a permanent improvement that tends to neat, sanitary conditions. Built different from any other—heavy, closely-woven fabric that's weather proof.

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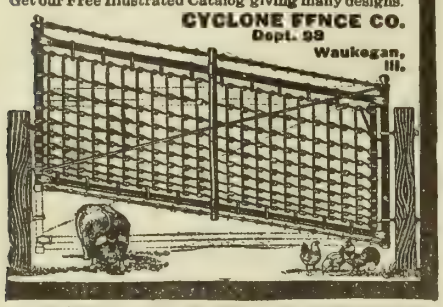

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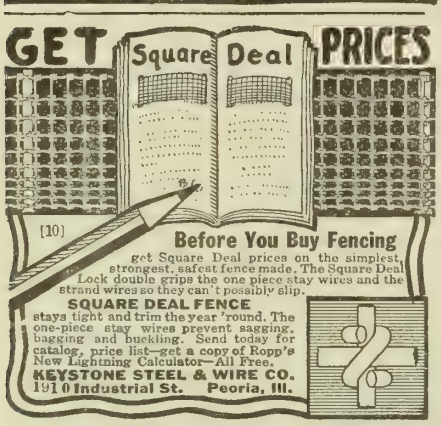

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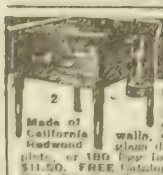

130 Egg Incubator and Brooder $10

If Ordered Together. Freight paid east of Rockies. Hot water, copper tanks, double walls, dead air space, double glass doors, all set up complete. Both incubator and Brooder $11.50. FREE Catalogue describes them. Send for it today or order direct.

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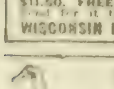

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LAND and Water Fowls. Farm-raised stock, with eggs in season. Send 2c for my valuable Illustrated descriptive Poultry Book for 1914. Write Henry Pfile, Box 69, Freeport, Ill.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

DUCKS grow fast and come into market soon. This is the one factor particularly satisfactory in duck raising. Take the Pekin, Aylesbury, which are both white, or the Rouen, which is dark, and you have a bird that at maturity weighs nine pounds for the drake and eight pounds for the duck. Take the Cayuga, and you get eight pounds for the drake. seven pounds for the duck. These ducks named are common ducks in our land, and it is easy to keep pure bred. The Muscovy duck also is not a difficult duck to find and is our largest duck, as in the pure bred the drake weighs ten pounds, the duck from seven to eight. These weights are standard, but I have known a pair of Pekin ducks, when full grown and fatted, to weigh twenty pounds.

So many persons, with the room to raise ducks, hesitate because they think duck raising for profit means having a creek or some small stream for them to run to. More ducks. with care, can be raised away from water than near it. Duck eggs, like turkey eggs, if the breeding stock is well fed and well chosen, will nearly all hatch, and will live without any extra care more than knowing how to keep them warm and fed on suitable food.

Water it is necessary for them to have, but little troughs of water are enough. These must not be allowed to go dry and must be fixed in such a manner that the young ducklings cannot get their bodies into them. A duckling wants to eat all of the time, but it chokes on even grass if it cannot get to water to wash grass and other food out of the plates in the roof of its mouth.

After the ducklings are past the critical age, then a mixture of bran and cornmeal makes an excellent diet, added to grass, for the raising of ducks means that they must have grass. If a grassy field or lot is denied them, then good grass sod must be furnished them in their inclosure, or something green be sown and kept growing for them.

Many farmer women complain that after they have raised a nice bunch of ducks to the selling age, the huckster comes along and gives them only the regulation price, 25 cents apiece. I grant this. It does seem too cheap. It is too cheap when one thinks of what those ducks weigh, and of how they will weigh when dressed, for the consumer must buy them by the pound, not by number, as the farmer woman sold them. At but 10 cents a pound, and they will not sell so cheap as that in the city, the duck she sold for a quarter would bring from twice to three times that much, and often more.

If the keeper of ducks would only make up his or her mind never to sell ducks alive and by the duck instead of the pound, but dress and sell the ducks themselves by the pound in the city, then duck raising would be worth while to any farm woman.

So many shrink from dressing a duck, and yet a duck can be just as easily dressed as a chicken. If you scald a duck you must hold it slightly longer in the water than a chicken; then wrap an old piece of blanket around it and let it steam a little, but the head must neither be put in the hot water nor under the blanket, as the feathers are usually left on the head. I have cleaned ducks easiest and quickest this way. Then I have dry-picked, then scalded and steamed for awhile in the blanket to get the down off.

Try dressing and selling a bunch of ducks on the market this coming year. No use to do all the work, take all the risk, then let others make the profit you need for doing so much.

Poultry Association

Nearly all of the state agricultural colleges have been giving what is called short courses for the farmer this winter, and the attendance of farmers, their wives, sons and daughters at these short courses is remarkable, as is the interest shown. At the Purdue (Ind.) course a poultry association of a new kind was organized. The aim is, while co-operating with other organizations in advancing the agricultural welfare of the state, also to conserve the interests of poultrymen. Some of the questions first noticed will be: Vigor of the flock; how to work for it; how to know it (this is most essential of all); proper housing; feed values; raising with least loss; selling to greatest profit, etc. Farmers who would not go into any of the special breed clubs, such as Plymouth Rock, Rhode Island Red, etc., will certainly join an organization of this kind.

To Know Roup

One would judge that every poultry keeper would know roup at first sight or sound, and yet many who have kept poultry for years do not know it, if the poultry editor must judge aright from the numerous queries she gets. Many are the failures in the poultry business because of this disease that shows up in its worst form usually during spring or fall months.

If it comes in the spring it comes at the very worst time, for this is the time you want strong eggs and plenty of them. Roup may first show itself to you by the unaccounted-for, sudden deaths of some of the chickens. Yet, had you noticed, the premonitory symptoms could have been seen in others of the flock. This is one way it has sometimes of appearing in the fall. But in the spring, if you keep close watch, you will notice the first symptoms—difficult breathing, open mouth, wheezing with or without exertion, maybe a rattling in some cases. These signs might mean simple influenza, but it is well to get the afflicted away from the well right now, for more often than not, it is

Tells why chicks die

J. C. Reefer, the poultry expert of 1610 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

Incubation Facts

An Incubator That Saves You 75c to $1.25 Every Hatch. The Only Scientific Heating System. Depend on This.

WHILE you stick to the old fashioned idea of the lamp on the side you are going to continue to have cold corners and bad luck. The X-Ray Incubator heats from the center. It keeps every inch of space perfectly heated always. It will give you better, bigger hatches. More than this

One Gallon of Oil Does for an Entire Hatch—One Filling of the Lamp

Why not study into this incubator matter a little. Use your brain. Send for our book and compare our construction with the old lamp at the side kind. Has two double glass panels in top—you can see eggs any time. Ventilate or turn eggs by simply lifting lid.

X-Ray Brooders Too

Same scientific heating system—the healthiest, cosiest home chicks ever had.

Direct to You and with no agent's or dealer's profit. Let us tell you the facts about really scientific incubation and prove them. Don't fail to get this knowledge. All put into our Big New Free Book No. 58 Drop post card for it today. We pay the freight.

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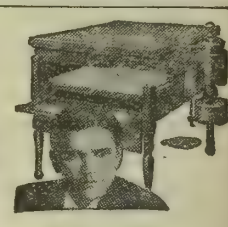
Chicks Worth Raising



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Simple, honestly built, self-regulating. "*Temperature did not vary more than one degree during entire hatch,*" says W. H. Gray, Canfield, Ohio. See the low-priced 1914 Queen. You cannot buy an incubator, at any price, that will do better hatching for you. Send for free catalog now.

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That's what my father said to me when I was a boy—and that's what I'm doing when I send you my Belle City hatching outfit. 276,000 users will tell you so. *I am giving you more,* when you compare my

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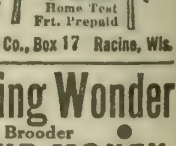
with any other incubator. Belle City has won Eight World's Championships and thousands have made 100 per cent perfect hatches. Send for my New Book, "Hatching Facts." It tells of big money making successes. My low price will surprise you. Write today.



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Incubator and Brooder

SAVE HALF YOUR MONEY.

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GEO. H. LEE CO., 961 HARNEY ST. OMAHA, NEB.

50 Leading Breeds pure bred chickens, ducks, geese, turkeys. Fowls, eggs, incubators at lowest prices. Catalog 2c. W. A. WEBER, Box 931, Mankato, Minn

the genuine roup, which next will show by watery discharge from nostrils and throat, and soon, in many cases, swollen and bulged eyes, ulcers in the mouth, depressed condition, ruffled feathers, sudden loss in laying. Not all cases may give forth that putrid smell from mouth and throat, but should you notice this in a few cases, or even one, you have genuine roup to contend with, and must act accordingly.

Poultry Hints

Gather the eggs carefully if you expect to set them. Too often they are shaken about and handled roughly, and this last of itself may be the sole cause of their failure to hatch. Eggs are often cracked slightly and the crack will not show. These will always break under the hen.

* * *

There is nothing the chickens enjoy better than a thick hedge near their poultry house in winter, and one any place handy in summer. A close hedge of any kind is a protection to the poultry house in winter and is not difficult to provide, and is a cool spot in and about which the fowls love to dust and hide on the hot summer days. Notice them, too, on the cold days hunt the sunny or wind protected side of a fence closely boarded. Some people never think of providing for the comfort of chickens by these cheap means.

* * *

If you would like to know something relative to the standard breed of chickens you keep, and you are not sure of where to go to get that information, you will nearly always be sure to get the right answer from the present secretary of the poultry association specially interested in the breed you keep. For instance, at present, here are the names of some of these secretaries: American Light Brahma club, Frank P. Johnson, Indianapolis, Ind.; American Barred Plymouth Rock club, H. D. Riley, Stafford, Pa.; Rhode Island Red Club of America, W. H. Card, Manchester, Conn.; National S. C. White Leghorn club, F. C. Groesbeck, Hartford, Conn.; National Buff Orpington Club of America, W. S. Brady, Richards, Mo.; American R. C. Brown Leghorn club, Mrs. W. W. Gale, New Haven, Conn.; R. C. White Wyandotte club, W. W. Brown, Station L, Cincinnati, O., and so on through Black White Faced Spanish, Minorcas and the various other classes of the breeds, water fowls, etc., etc., which are too numerous to mention here. But always, in addressing the secretary of these clubs, add the title something in this way: M. W. Nicholson, Secretary Pacific Coast Langshan Club, Oakland, Cal.

Of Inferest to Our Women Readers

(CONTINUED FROM PAGE THIRTEEN)

I do believe that a child who has thoroughly learned what is to be learned in the first eight grades has a good common education, fitting him to branch out and make a specialty of some business or profession.

From an observation of many years, I know few are well grounded in these eight grades, and the blame rests with teacher, parents and the children themselves. The teacher often wishes to pass as many children to as high a grade as possible and sometimes pads the percentages. The children and parents resent it if others in the same grade pass and they do not. So the pupil gets carried on till the highest grade is reached, when the state board gives the examination and it is out of the teacher's hands; then they are not able to pass. So they go over the same routine again in a disheartened, don't-care way and finally enter the high school unprepared.

Michigan is one of the most progressive states in the union, but it is backward in providing adequate playgrounds for its district schools. Our governor said recently that Michigan's little red schoolhouse must go. The consolidated schools must take its place. Would the consolidated school make better educated men and women? Would it make our children's childhood happier, healthier and sweeter? Would it remove the stain of filth that some country schools have? If so, we would welcome it gladly. Many have tried this plan and found it a failure. Some states have adopted it and found it successful, so far.

A member of the school board in our district, himself a teacher of many years' experience, told me he was in favor of consolidation for one thing especially. and that was that there would be so much less occasion for filthy talk and immorality, which were the curse of the country school. In city schools, he said, there was less of them, and in consolidated schools there would be less chance for them. I said, "Have you forgotten the Evanston scandals and those of many other cities? It is for this reason that I do not want consolidated schools. Think of the long rides to school in a covered wagon, with the opportunity for one child to soil the minds of all the others."

"But the driver would be there," he argued.

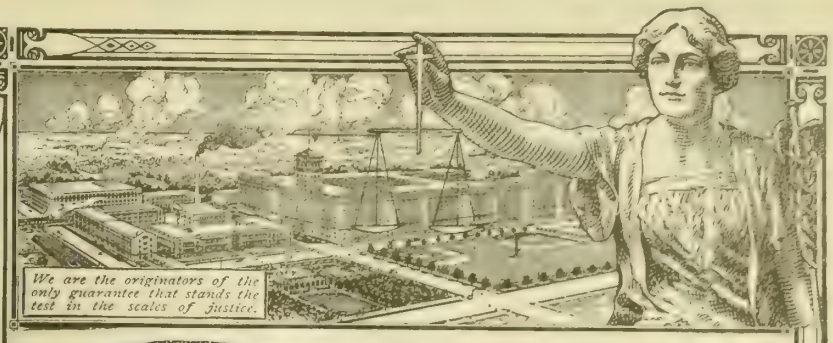
"Granted, but he would have to sit in front and manage the team. The noise of the wagon would drown the conversation inside. And, anyhow, what kind of man would he be? The route is usually given to the lowest bidder, who may hire a substitute if he likes. Would you want to take a chance on a man like that to watch over your child?"

There are two other points to be considered. Children taken into the wagon at the beginning of the route must get up very early. Even if they go to bed early, this does not give them the amount of sleep needed by a growing child and entails extra early rising on the part of the parents. And those living on the cross roads would have to wait in the cold sometimes for the wagon, as they would have to have direct routes and not turn aside for those living out of the way. Besides these things, the long, cold ride would be bad for a delicate child, and the hours would be too long for the little ones.

Think of all the pros and cons, parents, before you decide in favor of the consolidated school.

MADGE MILLAR.

Michigan.



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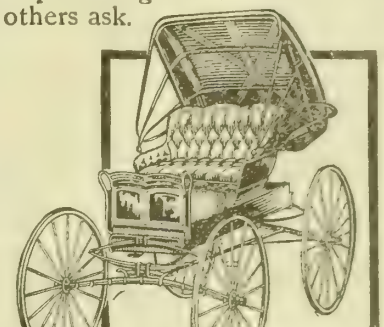
Our *Leader*, illustrated below, is the biggest selling buggy ever manufactured. More than 50,000 are in daily use. But we offer equal values in other buggies, surreys, runabouts and spring wagons. Every vehicle we sell is guaranteed to give perfect satisfaction always. Our enormous vehicle business enables us to furnish the fullest measure of quality, style and workmanship, at prices a great deal lower than others ask.

Our price for the splendid buggy illustrated below is **$61.90.** It has triple panel auto seat, genuine leather upholstering, highest type body construction, triple braced shafts, best wheels made, full wrought fifth wheel, real long distance self oiling axle. Shipped from a warehouse near you.

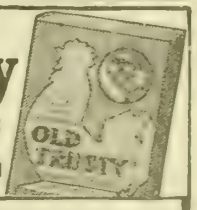
If you want to read the complete description of this and many other vehicle bargains, turn to the vehicle pages of our big General Catalog. Compare the quality and prices with others and remember the guarantee of satisfaction we give you.

If you haven't our big General Catalog, simply say "Vehicles— 65T69 on a postal card and mail to



Sears, Roebuck and Co., Chicago

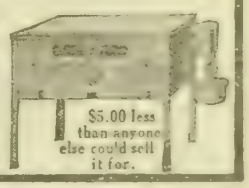
This Key to Poultry Profits Mailed FREE



This is the famous Old Trusty book that gave half a million people the right ideas for making chicken profits. Let me send it to you, too. We offer you no untried experiments. If the Old Trusty doesn't do its part to make you successful, you trade back. It's the highest grade hatcher made, at a price you can't resist, based on selling 100,000 machines this year. Write me *now*.

OLD TRUSTY Makes Big Hatches in Coldest and Warmest Weather — month after month, year after year!

Three or four times as many in use as any other. It's because it's practical—simple. Anyone can operate it. Highfalutin' instructions are not needed. For good average hatches in coldest winter as well as in summer, Old Trusty outranks all other incubators.



I give a 20 year guarantee—30 to 90 days' trial—pay the freight and will ship your hatcher the same day your order arrives. Write today for the book—now is the time to start. Address:

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Latest Book "Profitable Poultry," 128 pages practical facts, lowest prices on fowls, eggs, incubators, etc. 180 beautiful pictures. Latest improved methods to raise poultry. All about **Runner ducks**, 52 other varieties pure-bred poultry only 5 cents.
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Butcher your hogs, cure your meat with **Wright's Ham Pickle** and smoke it with **Wright's Condensed Smoke.** Sell meat by parcel post to city people. **LET UNCLE SAM BE YOUR ERRAND BOY.**

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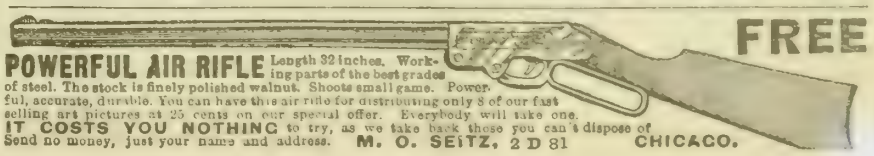
Wright's Condensed Smoke, a liquid made from hickory wood, for smoking all meats. A 75c bottle smokes a barrel of meat. Send names of five neighbors who cure meat for **Free Sample and Book.**

The E. H. WRIGHT CO., Ltd. 820 Broadway, Kansas City, Mo.



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IT COSTS YOU NOTHING to try, as we take back these you can't dispose of. Send no money, just your name and address. **M. O. SEITZ, 2 D 81 CHICAGO.**

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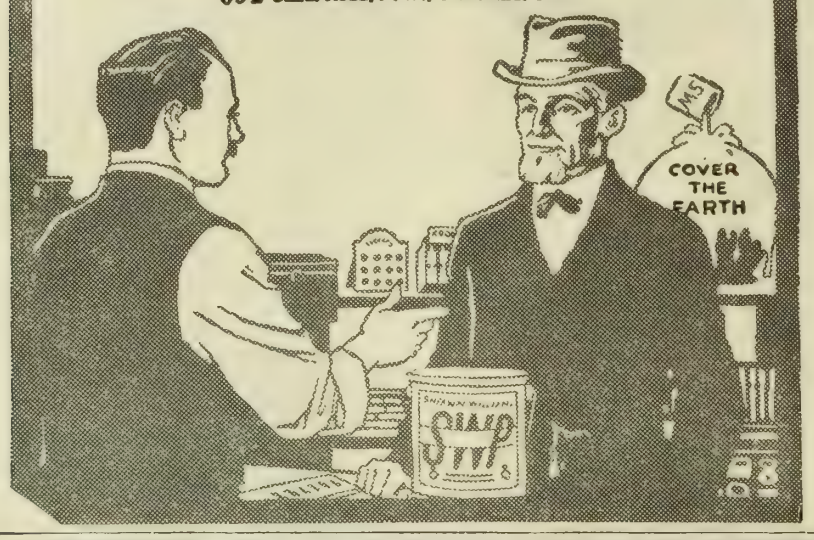

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Diseased Metropolis of Ecuador

By Frank G. Carpenter

GUAYAQUIL, Ecuador—Guayaquil is the New York of Ecuador. It is the chief port of the country. It has an export and import trade of more than $20,000,000 a year, and this will be quadrupled if the place can be made healthy. It is important to us that it should be so for it is the first port south of Panama. It is not as far from Panama as is New York from Chicago, and when the canal is completed it will be nearer Boston than from Boston to Liverpool. The town lies about sixty miles from the ocean. It is on the wide and deep Guayas river, up which boats can go during the rainy season for 200 or 300 miles. The town lies almost on the equator. It is under the shadow of the snowy peaks of Chimborazo and Cotopaxi, but it is surrounded by jungle. Just now it is afflicted with bubonic plague and yellow fever and these conditions will have to be wiped out before Ecuador can be allowed the free use of the Panama canal.

Must Clean Up Ports

The Ecuadorans have come to realize the seriousness of their situation. They know that their ports must be made clean or they will block the country's development. The government has been discussing the question for several years and foreign experts have been called in to make plans for the cleaning of Guayaquil. Dr. Gorgas has been here and given suggestions, and scheme after scheme has been proposed to remedy the evil. Just now a contract with J. G. White & Co. of New York and London is under way. That firm has had its engineers on the ground and it is ready to enter into a contract for a series of public improvements that will cost $10,000,000. This sum will be enough to do the things immediately necessary. It will pave the streets, put in sewers, increase the water supply and inaugurate a systematic upbuilding and renovation that will make the port safe for the traveler and trader.

Not a Healthy Place

At present Guayaquil is so dangerous that no one stops here who can help it. The new cases of bubonic plague now number ten or more every day and there have been seventy new cases of yellow fever reported within the last two weeks. The officials have begun to vaccinate for the plague and the moment the traveler lands he is grabbed by the doctor and the plague serum is injected into his arm. He then gets a certificate proving that he has been vaccinated, and he has to show this before he is allowed to go into the interior. There are two kinds of vaccination given for the plague. The one used here is the Haffkine process. It consists in injecting the dead cultures of the plague bacilli. The needle hurts as it goes into your arm and you have at the end a little pouch of juice containing some millions of bacilli under the skin. The arm is sore a short while, but the vaccine does not make you sick. This is supposed to render one immune from the plague for several months. The other form of vaccination is by the yersin antitoxin. It is given only to those who have caught the plague and is supposed to neutralize the poison in the system.

City Should Be Rebuilt

During my stay at Panama I had a long chat with Dr. R. C. Perry, the chief health officer, who is in charge of the sanitary conditions at the isthmus with regard to the ports along the west coast. He has visited every port from Callao to Panama and has spent much time in studying conditions at Guayaquil. He tells me that the only way in which this city can be cleaned is by practically rebuilding it. The town of today is swarming with the rats, the fleas from which carry the plague. The most of its houses stand close to the ground and many of them have wooden floors under which rats can burrow. The walls have wooden posts upon which are nailed laths of split bamboo. The framework is covered with stucco on the outside and plaster or boards on the inside. It makes a beautiful wall to look at, but the rats can crawl inside the walls and walk up the lathing.

Many of the poorer houses are built right on the ground. Dr. Perry says that they should be jacked up and placed on posts so high that the rats could not jump to the first floor. He says that the floors of the better class of houses should be of cement and that all houses should have cement foundations, as the rats will burrow under any ordinary floor.

Harvesting Ivory Nuts for American Buttons

Rats Are Everywhere

As it is now, according to Dr. Perry, Guayaquil has rats everywhere, and all of its rats have fleas. The bubonic plague is transmitted by these fleas biting such rats as have the plague, and then going from them to men, women or children and biting them. A flea that has bitten a sick rat will carry the plague in its system for ten or twelve days, and if it bites you during that time the plague bacilli will go into your blood. They will multiply rapidly, and within five or six days the chances are that you will die in horrible pain.

I asked Dr. Perry what kind of rats carry the plague. He replied: "Almost any kind, but there are three which are especially dangerous. One is the big gray Norway rat, another is the gray tree rat, which has a white belly and the third is a little black rat. The black rat is most common in Guayaquil, and the plague existing there comes from it. The rats which catch the plague often die; they will give the plague to other rats, and it sometimes becomes epidemic among them, although they run from it. If a rat dies of the

plague in a block or house, the uninfected rats of that block seem to know it, and they will desert the block and go somewhere else.'

Afraid of the Plague

I am afraid of the bubonic plague, and I shall not stop in Ecuador on account of it. I have seen a great deal of the disease in China and India. About twenty years ago I visited Hongkong and Canton, when the people there were dying at the rate of hundreds a day, and where there were so many deaths that there were coffin associations by which coffins were given out in the way of charity. During that plague 60,000 coffins were furnished by such associations.

The plague in China came from the rats, and it raged in the densely built warrens of the Chinese at Honkkong, where it has since broken out again and again. The English government there is doing all that is possible to control it, but the city will have to be rebuilt to make it absolutely safe; and, as Dr. Perry says, the same condition obtains here.

Should Guard Against Disease

It would be terrible if this plague should be brought through the canal to New Orleans, New York or Boston. It is wonderfully contagious, although it can be transmitted only by fleas and rats. Nevertheless, it raged throughout Europe again and again in the years between the sixth and eighteenth centuries, and it is said to have caused more deaths than any other epidemic that has populated human graveyards. It was this pest that Daniel De Foe described in his story of the great black plague in London of 1665 and 1666, and it is the same as that which ravaged Europe during the fourteenth century. Those two plagues are said to have come from China. The plague in Guayaquil was not known until about 1908, when it was brought in, some claim, from Paita, Peru, and others by certain Asiatic ships that called here. The people were warned of their danger by Dr. J. B. Lloyd, the American health officer, who was then stationed in Ecuador, and for a time he was allowed to try to control it. Later on he was repudiated by the Ecuadorian government and Dr. W. M. Wightman was sent in his place. Dr. Wightman took the yellow fever and died here. That was in 1909.

At that time Colonel Gorgas was much alarmed at the danger of the pest getting a foothold on the isthmus, and in order to keep it out of Colon he had more than a half million dollars' worth of small houses, that were said to be infested with rats, burned to the ground.

Yellow Fever Perilous

The danger of yellow fever getting into Panama through Guayaquil is a serious one, and this disease, also, will have to be wiped out before Americans will be safe in allowing our ships to come here or for travelers to go through the canal after leaving Ecuador. Already several Americans have died in Guayaquil and there are new cases now every day. It is not safe for any American to settle in Guayaquil to do business in its present condition. You will remember that Thomas Nast, the famous cartoonist, was appointed consul here and how he came to his grave. He died of yellow fever. I have spoken of the death of Dr. Wightman. He was supposed to be a yellow fever immune. A third prominent case is that of Major John A. Harman, the engineer who built the railway over the Andes from Guayaquil to Quito, and a fourth is that of Commander Bertolette of our gunboat Yorktown, who died only a short time ago.

Transmitted by Mosquitoes

The yellow fever comes from a kind of a mosquito that can carry it only after biting a yellow fever patient. After the mosquito bites a human being afflicted with the fever it gets the yellow fever itself; and it can then inject the yellow fever bacilli into your system if it bites you. I had a good chance to study this disease during the great epidemic at Panama in 1905. That epidemic came from Guayaquil, and it killed some of the officials who were working on the canal. I was at Panama several weeks during its height, and I frequently sat down to dinner with a man, only to hear a few days later that he had been bitten and, perhaps a week later, that he was dead. One of the most pathetic cases was that of a young architect named Johnson, who had charge of all the building then going on in preparation for our army of workmen. Mr. Johnson was a young man of about 25, of great ability and of a very lovable nature. He was engaged to a girl in Chicago and wrote to her daily. During my stay we frequently went out riding on horseback together, along in the evening, through the region known as the savannas, and he told me how he expected to go home in May and bring back a young wife to the isthmus. That was in March. I left Panama in April, and before the end of the month I received the news of young Johnson's death.

Malaria is Another Danger

Another danger at Guayaquil is from malarial fever, similar to that which caused so many deaths on the isthmus at the time of the building of the Panama railroad. This, the Ecuadorans call perniciosa and it is known to the Panamans as the Chagres fever. I had a severe attack of it when I last visited Guayaquil. Perniciosa comes from the bite of the anophele mosquito, which is very different from that of the stegomyia, which carries the yellow fever, and the stegomyia does not carry malaria. The former will breed in almost any wet place, but the latter is fond of rain barrels and it does not like dirty water. The anophele has its chief feeding time at night, and for the most part it lives out of doors. The stegomyia usually bites in the daytime, although it likes to keep out of the sun.

Neither of these mosquitoes is as big as the New Jersey variety, nor half as ferocious. Dr. Gorgas once told me that there were about 200 different kinds of mosquitoes in the world and that they cause many other diseases than those I have mentioned. There is one that will carry the elephantiasis. This is a little devil with a yellowish body and six yellow bands around its abdomen. It carries a kind of bacilli that forms worms in your blood. They make your legs swell and sometimes cause death.

Way to Eliminate It

Dr. Perry says the only way that yellow fever can be permanently wiped out of Guayaquil is by cutting down the vegetation, cleaning up the garbage, covering the rain barrels, putting oil upon the ditches and enlarging the water supply. The city now has good water, but the volume is not sufficient, and the water is allowed to be drawn only a certain part of each day. For this reason many families have storage tanks, which they fill while the water is running. The tanks are often uncovered, and are great mosquito breeders. Moreover, much of the water is kept in open barrels, and the garbage is left in uncovered cans or in open boxes until taken away. Later it is loaded upon a street car made for the purpose, and thus carried out to the crematory or incinerator. The covering of the garbage cans would take away a great deal of the rat food, and the elimination of the rain barrels and tanks will do much to wipe out the mosquitoes.

Guayaquil Now a City

I first visited Guayaquil fifteen years ago. It was then a town of 40,000 inhabitants. It has now from 80,000 to 100,000, and has greatly improved. The streets have been widened, and many of the new buildings are fine. They are of two stories, covered with stucco and painted all the colors of the rainbow. Many of them have balconies which

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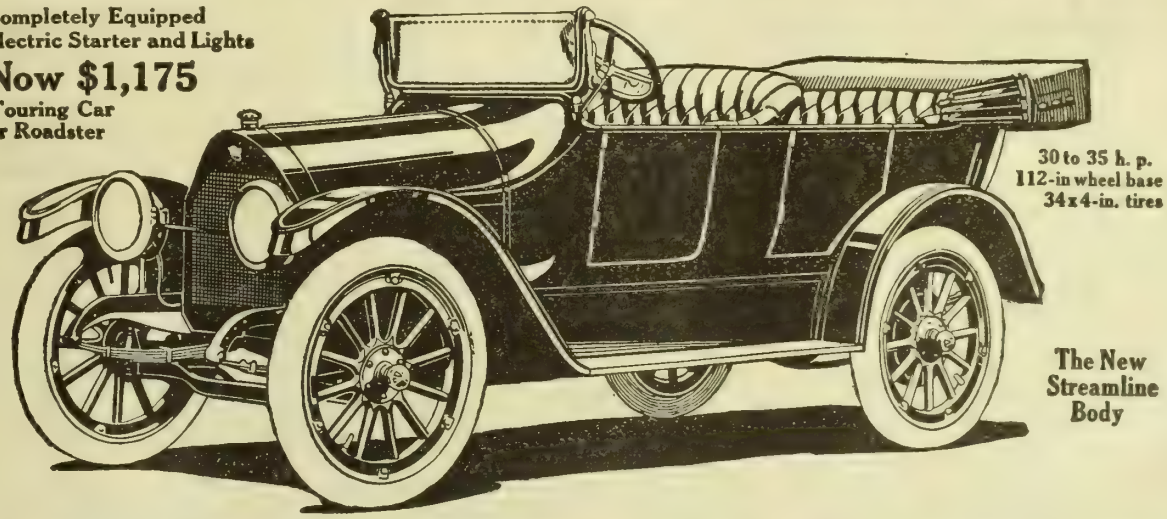

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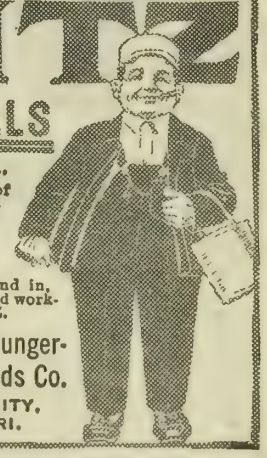

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reach out over the street, and not a few have galleries along the second story. The town has large stores filled with fine goods, and great warehouses containing bags of cacao, coffee and sugar awaiting shipment. It has an electric street car line and electric lights, both of which have been introduced since I was there. It has a theater and several moving picture shows, and altogether it is becoming quite modernized and up-to-date.

Guayaquil has several large banks that pay big dividends, and sugar mills, rice factories and coffee hullers. It has cables which connect it with all parts of the world, and a system of telephones, with long-distance connections to Quito, which is situated in the Andes, about 300 miles away. The railroad to Quito belongs to Americans, and was built by them, but Ecuador will soon have other railroads, built by French, English and the natives. One road is planned to connect Guayaquil with the oil fields at St. Helena, and another is projected that is to go from the port of Bahai de Caraquez to Quito.

The city has also a network of water transportation. The Guayas river system is navigated in the rainy season by boats like those on the Ohio or Mississippi, and they can travel as far as 250 miles inland. They go to the villages and plantations, and bring out cacao, ivory nuts, sugar, coffee and rubber. Cacao and ivory nuts are the chief exports. The country furnishes about half of the chocolate beans consumed by the world, and the buttons from its ivory nuts uphold the pantaloons of the nations. I am told that nine-tenths of all the foreign commerce of Ecuador passes through Guayaquil.

It is also said that the business here is in the hands of a few wealthy traders who would prefer to keep Guayaquil as it is, rather than to have it made habitable to foreigners who may compete with them. I doubt this, although I have heard the charge made many times. Politics also enters into the question, and likewise the rivalry between Quito and Guayaquil as to who shall have charge of the funds to be used in improving the city and country.

(Copyrighted, 1914, by Frank G. Carpenter.)

National Western Stock Show

(CONTINUED FROM PAGE ELEVEN)

comfortably full and the quality of fowls could not be excelled. The very cold, snowy weather of the Denver district had some influence with exhibitors in coming to the show, especially from a distance.

Pure-Bred Cattle Champions

The championships in the pure-bred cattle section were as follows

Champion Shorthorn Bull—C. A. Saunders, Manilla, Ia., on Cumberland Type.

Champion Hereford Bull—A. B. Cook of Montana, on Fairfax Sixteen.

Grand Champion Hereford Cow—A. B. Cook, on Champion Joy.

Grand Champion Shorthorn Cow—F. W. Harding, Waukashaw, Wis., on Lancaster Dutchess.

Grand Champion Angus Bull—Kansas Agricultural College, on Baldoon.

Grand Champion Angus Cow—W. J. Miller of Newton, Ia., on Barbara Woodson.

Champion Galloway Bull—S. M. Croft & Sons, Bluff City, Kan.

Champion Galloway Cow—S. M. Croft & Sons, Bluff City, Kan.

Champion Shorthorn Bull (western breeders' special)—Allen Cattle company, Huston, Colo.

Champion Carload Breeding Heifers—Stanton Breeding Farm.

Champion Shorthorn Cow (western breeders' special)—Allen Cattle company, Huston, Colo.

Champion Carload Breeding Bulls—Stanton Breeding Farm, Madison, Neb.

Grand Champion Feeders

In the feeder cattle division the grand championship went to the Jones Cattle company of Colorado on a 3-year-old Hereford steer.

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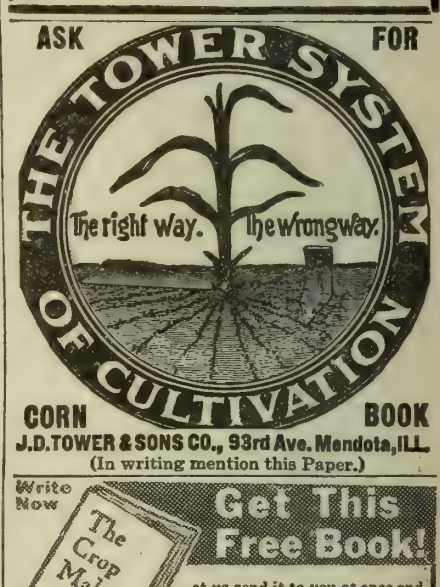

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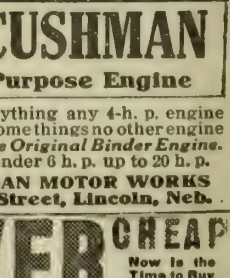

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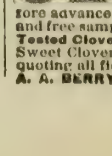

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Joel Hillman, proprietor of the famous "Harvey's" restaurant at Washington. D. C., says:

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Joel Hillman

TUXEDO actually *soothes* the nerves. It is just mild enough to keep your nervous system in poise, your muscles in tone. Unlike other tobaccos, Tuxedo *burns cool* and *slow.* There cannot be a speck of irritation in a pound of Tuxedo.

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Tuxedo

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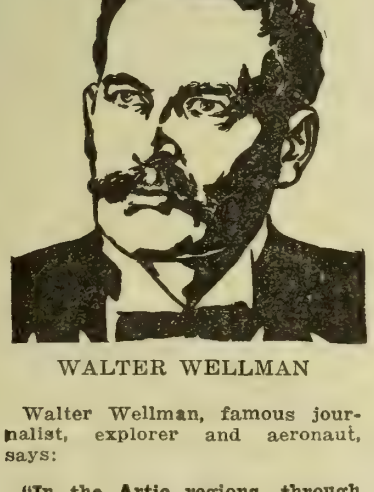

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Walter Wellman, famous journalist, explorer and aeronaut, says:

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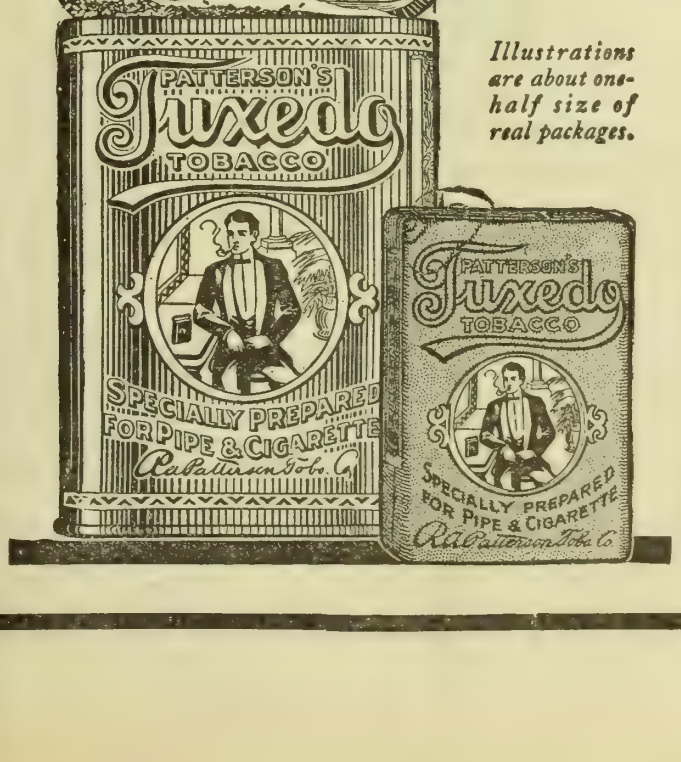
Walter Wellman.



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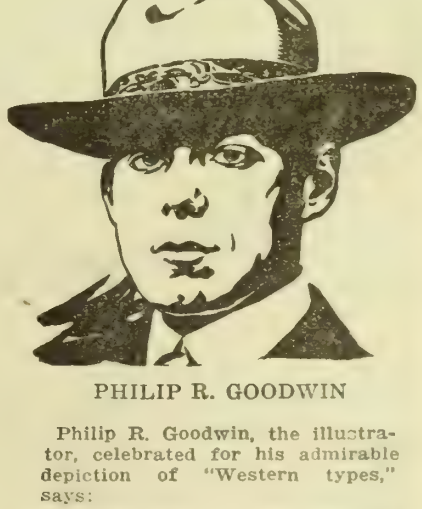

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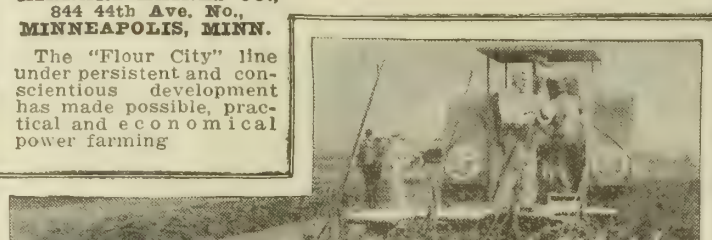

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This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Pig with a Cough

E. R., Iowa: We have moved from town to the country and have a few pigs about a year old. They are red, and one of them has a very bad cough. We penned him off from the rest and thought he was going to die, but he didn't. We feed him ground corn and shorts, well mixed with water, and ear corn morning and night. Will you please let me know what is wrong?

Answer—In nine cases out of ten a cough of this kind is caused by worms. Get your druggist to put up for you three powders composed of four grains of santonin and six grains of calomel each. Catch the pig, and when he opens his mouth to squeal put a powder on his tongue. Do this each morning before feeding him. You are feeding him properly.

Alfalfa for Silage

R. P. R., Missouri: I have read your paper for several months and have received much knowledge on different subjects from it. I would like to know a few things more about alfalfa. There are machines on the market for cutting alfalfa into lengths of one-eighth of an inch to an inch, and will also elevate it thirty feet or more high. Would alfalfa cut in this manner keep well in a silo? And, if it will keep well, would it be more valuable to feed in this way to hogs in the winter as it could be mixed with ground feed?

Alfalfa cut in this way would keep in a silo if you cared to put it up. However, there would be no economy in doing this, as alfalfa hay is fed with practically no loss, and is relished by stock in that form. The best way to feed alfalfa to hogs is described in an article on page 18 of our January 24 issue, entitled "Winter Care of Brood Sows." You will find this more economical, convenient and effective.

Hogs Die in Fits

S. E. C., Missouri: I would like to know how long hog cholera germs stay in a place after the hogs have been removed in the winter? I bought some hogs that seem to be all right in the morning, would eat all right, but would be dead at night. They seemed to take the thumps and pant and would fall over in a fit.

Answer—The question of disinfecting after hog cholera was fully answered in our reply to F. L. S. in the issue of January 24. We would be able to help you better if you had given us more information about your hogs, especially as to age. Shoats are sometimes affected in the manner stated by worms.

Doesn't Understand Single Tax

E. L. H., Nebraska: For some time I have been letting this single tax proposition bother me more or less. What is it, anyway? It is the imposition of all taxes on land values, no tax upon improvements of any kind. Why should this be? Has not the farmer a hard enough time to pay his share of taxes today? We are in favor of taxing everything at its assessed value. If owners of property are escaping their taxes—railroads and wealthy property owners in cities—get after them and make them pay their share.

If the single tax becomes a law, agriculture is a dead thing. Most of the farms would become the property of a chosen few millionaires, simply for the reason that a large per cent of the farmers today are merely making a living, and many a scant living at that, and many have their homes mortgaged and can hardly keep up interest and taxes. If this single tax was to merely catch the wealthy land owner alone, it would not be so bad, but it is the poor farmer that will be more badly crippled than he is today.

I cannot see why, if A and B have $30,000 to invest, and A puts $20,000 in land and $10,000 in improvements on that land, and B invests the $30.000 all in land, they should not be taxed the same. They are worth the same amount of money they were before they invested. We cannot cypher out why a merchant who rents his buildings—in fact, has not a building of his own nor any land values, yet has from $500,000 to a $1,000,000 worth of merchandise—or a bank that has a capital of a million, should be exempt from taxation, while close by is a poor laboring man who has a small house with a mortgage of half its value plastered on it, and he must pay taxes.

We are in favor of getting after people that do not pay their taxes. We are in favor of lightening the burdens of the farmer instead of loading him up with a heavy burden of taxes. If the single tax should become a law, and all land owners should have to turn over about all the land for taxes, how would the old, retired farmer, who gets his support off the farm, get a living? It has been asserted by some—even those who have made a study of it—that taxes on land would decrease. If from the land values today two-thirds of the taxes are raised, and one-third from other sources, why would it decrease the taxes on land if this one-third were taken off other things and placed on the land?

We can see no other way but that the single tax is rotten to the core, and gotten up for nothing more nor less than to benefit the moneyed men and to drive men from the farms. I, however, agree with our editor—that we have confidence in the ruling of our people along this line. And, furthermore, if from some crank or turn this should become a law, and it proved to be a disastrous one, it would only be a short time until it would be repealed. At the same time we think it is time for the farmer to wake up and take his place in the front rank. He plods along year after year in rags, old shoes and overalls, with a mortgage plastered on his home. When he looks out at the masses who tread the earth he can get little cheer from realizing that it is he who feeds these masses and if it were not for him all business would stand still. He is robbed of his belongings; he cannot price that which he buys or sells; he must take back pews in city churches; his clothes are too poor to admit him into society. But later it will be different. St. Peter will meet him at

the pearly gates and escort him to the front.

Editor's Note—St. Peter is no respector of persons. It would hardly be safe to depend alone on the fact that one is a farmer for entrance through the pearly gates.

Moving Fruit Trees

J. Y., Lexington, Neb.: I have some cherry and crabapple trees that I would like to move. They have been planted about five years, but are not very large. They are too close and do not do well. Could they be moved with success, and when would you move them? Please answer through your paper, as I am a reader of your paper.

Answer—Your trees may be transplanted with little or no liability of injury any time after the frost is out of the ground and before the buds are opening. Lift the trees as fully uninjured about the root system as possible; reset a little deeper than where taken out; tamp and water well in the replanting. If very dry weather follows, water once a week until the trees show a good foliage.

Buying Dairy Cattle

L. L., Nebraska: I had intended buying about ten Holstein heifer calves and one bull calf from ———— of Wisconsin to start a small dairy herd, but on reading the rules adopted by the State Sanitary board I don't know what to do. Are young calves subject to these rules and the tuberculin test, and must I stand the expense of having a veterinarian examine them, and how much would all these expenses amount to in order to comply with these rules? In other words, I should be very much obliged if you would please explain explicitly how to proceed in this matter through your paper, as others might be interested also.

Answer—The Nebraska Sanitary Rules provide that where breeding cattle are brought into the state they must have a certificate showing that they have been given the tuberculin test by a veterinarian authorized by the state veterinarian of the state in which the cattle were purchased. The buyer always buys subject to this test and the seller stands the expense of testing. Dairy cattle should never be bought in any other way than subect to the tuberculin test, as this is the only known method of determining whether cattle are free from tuberculosis. Always be suspicious if a seller refuses to furnish a certificate. We understand that the stock farm mentioned sells its calves tuberculin-tested. We have never heard any complaints made regarding their stock and we have always understood that the firm was thoroughly reliable.

Hints About Garden Work

We would realize greater yields and garden pests would be reduced to the minimum if rotation of crops were practiced more in the garden.

Straight, uniform rows in the garden are much easier to tend than the old-fashioned beds we used to hill up and plant garden products in. Besides, the smooth, level surface between the solid-planted products will retain a greater amount of the all-important moisture than the beds, so much of their surface being exposed to the sun and wind.

Any manure spread over the garden should be fine and easy to mix right into the very texture of the soil, as hard, lumpy fertilizer will even prove a detriment, rendering the soil more porous and easily sapped of its moisture.

Plant sunflowers early and shortly after they come through the ground plant such seeds as peas, beans, etc. When these last planted seeds germinate the plants will have a good trellis in the sunflower stalks and limbs. This utility, together with the fact that sunflowers form good poultry feed, makes them most desirable growths in the garden.

While the "early bird" often gets his feathers withered by a late frost, the small price of garden seeds makes it advisable for one to plant them just as early as the soil will work well; then, even if the seeds are lost, the loss will be light, while, if the first planting is successful, such early products come in mighty handy for use on the family table, and any surplus will sell for an extremely high price at that season.

To make a good bed for sowing cabbage seed in, pile old chunks of wood, brush and weeds on the spot where the bed will be, setting the heap on fire. After the fire has burned down, spade up the spot, turning the charcoal and ashes under. Smooth down the dirt and sow the seed. The heat destroys bugs and insects that prey on the plants, while the charcoal and ashes enrich the soil and also guard against insect pests. One should sow the seed if possible while the ground in this spot is warm, thus hastening germination. In case of cold periods, night or day, cover the bed with old gunnysacks, carpet, etc.

On nine out of every ten farms the garden could be made to cut a wider margin from the living expenses, to say nothing of the beneficial influence of its wholesome products on the health of the household. Most gardens are poorly fenced, thus allowing the poultry to damage the plants. Many gardens ought to be considerably enlarged, so that more implements could be used in their cultivation, which would greatly lower the cost of labor in production. This would also make it possible and necessary for the men folks to get out and help their wives tend this important part of the farm. Gardening is too often considered merely a woman's job, when the man, who relishes garden products as much as the woman, ought to get right out and help her dig around in the dirt, or do without his garden "sass."

Missouri. M. COVERDELL.

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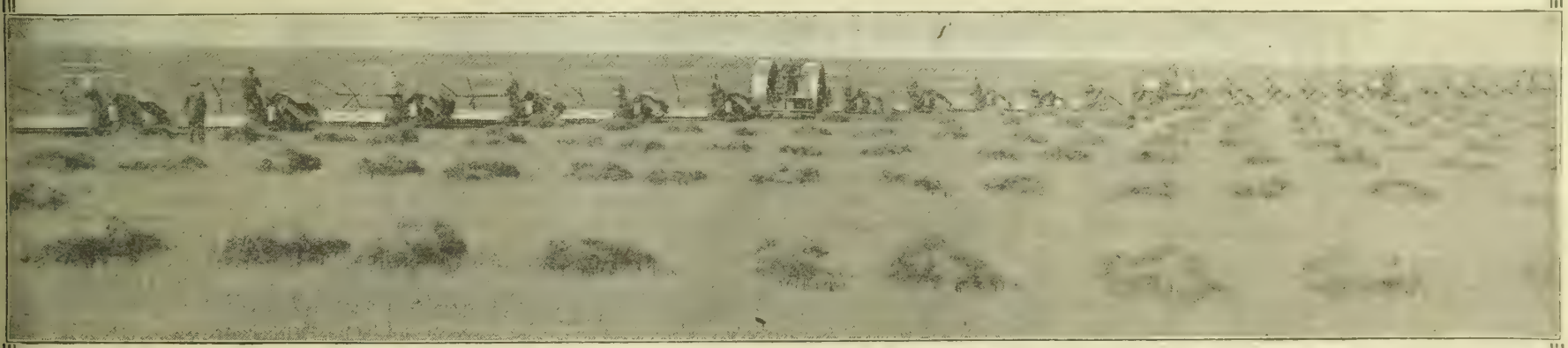
Is your Tractor furnishing all power necessary on your farm? Is it completing the circle of seasons to the extent that horses are not required? The Hansmann Hitches extend the service of your engine so that no other power is necessary. Unless your outfit is equipped with them, you are not getting the most out of your engine investment.



THE ABOVE IS A SCENE SHOWING THE HANSMANN BINDER HITCH IN USE.

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This Guide does more work automatically, is more adjustable, cheaper, weighs less, than any other engine guide on the market.

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A small machine which can be operated with a 1½-horse engine. Every farmer should have one. It will do the work of five men.

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IOWA SEED CO. Dept. 51 **Des Moines, Iowa**

Where to Sow Your Alfalfa

Money-Saving Ideas to Think About

MANY of our readers will undoubtedly sow some alfalfa the coming year. Wouldn't it be well carefully to look over the farm and sow this crop on the ground located to make the most out of the crop from all viewpoints? You are expecting this crop to be on that particular piece of land for a number of years; consequently the location on the farm will be very important.

You will use this crop for hay and pasture. To use the hay crop to the best advantage and with the least expense, your field of alfalfa should be located so you can get the hay to the feeding yard handily. We take it for granted that you are going to feed the hay on the premises; if you are not now doing that, get to that method as soon as you can, that you may derive the most from the crop.

This field should be so located that you may make use of it for pasture for your hogs. We often see fine alfalfa fields with no fence around them and the hogs down near the buildings in a lot where possibly there was a little grass in the spring, but in midsummer it is bare as a floor. This method of keeping your hogs is losing you many good dollars as well as running the risk of getting disease on your farm that will make serious trouble. Fence that alfalfa field with a good woven wire fence and keep there not to exceed five shoats to the acre. These pigs will get a large amount of feed from the field, just the kind of feed they need to make them grow and keep healthy, and you will cut as many tons of hay to the acre as you would if there were no hogs on the field.

Arrange this alfalfa field if possible to have adjoining it (and if entirely around it, so much the better) fields in which corn will be raised. If these corn fields can be of from ten to fifteen acres, well and good. In the fall you will be fattening a bunch of hogs; at that time of the year time is money if it ever is to the farmer. Just raise the fence between one of these corn fields and the alfalfa, let the hogs in, give them shelter and water and forget them. You will be surprised how they will grow and fatten, and this without the outlay of a single penny for hired help. Don't be afraid that you will lose some corn feeding this way. If the fattening hogs don't get it all, turn in the brood sows you are keeping for the next spring's farrow and let them clean it up. You will then be laying the foundation for strong litters the coming spring and distributing the manure as it should be distributed.

Take your pencil and do a little calculating; see how long it will take you to get back in actual cash your outlay for fence by the saving you make in time consumed in husking this corn and feeding it to the hogs. It won't take you many years to do this, not taking into account the many other benefits you get by having these fields so arranged and fenced.

You must all the time keep your eye on the net profit of the business and not on the amount you are taking in for this and that crop. By having your fields arranged as we have suggested you will be keeping the expense item down to a minimum and will be feeding your hogs to make the best possible gains. Give them a chance at the alfalfa and corn and they will balance their own ration.

Value Derived from Fencing the Fields

THE keeping up of the fertility of our soil is one of the most important matters our farmers have to consider. There are many ways in which we can do this. Careful study should be made of the different things we can do to keep our farms in the highest state of cultivation with the different fertilizers available.

But a few years ago it was a common thing to see at threshing time, at the tail end of the machine, a man with a team "bucking" away the straw and burning it—anything to get rid of it. The up-to-date farmer is looking as carefully after his straw as he is after his hay. His straw answers the double purpose of bedding for his stock and manure for his fields.

Much valuable manure is wasted by its not being properly distributed over the fields. On many of our farms much manure is wasted by its never getting to the fields, being dropped in the lots, and when the rains come it is washed away, possibly to be spread over the other fellow's field.

If our farmers really knew how much valuable fertilizer was in this way entirely wasted, we believe they would look more carefully to its being dropped where it could not be washed away. There is no better way to save this manure, or no way in which it can be so evenly spread as to have the farm animals run in the fields.

Many of our farmers now have all their fields fenced with woven-wire fencing that will hold anything they want to turn in; others have one or more such fields, with each field so fenced that when the crop is harvested you can turn in the hogs, sheep and cattle, and in that way get the benefit of all the grain grown into high-priced meat; not only that, on the land. Every pound not harvested will be picked up and turned but you will be keeping up the fertility of the soil to a greater extent than you think by the proper distribution of this manure. This great benefit will not be confined to a single year, but if the fence is properly put up you will be getting this benefit each year.

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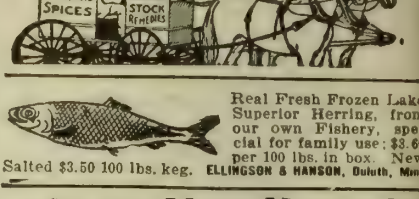

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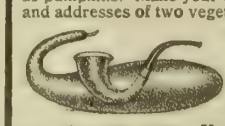

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Plowing Our Greatest Expense

Gasoline Tank Taking Place of Feed Box

It doesn't take an expert mathematician to show that the labor of turning the soil is by far the most expensive work that has to be done on every farm. That much every one admits. It is, of course, a necessary expense, but it seems high time that means were devised for reducing it. Although we have progressed in reducing the cost of most every other farm operation, the plowing tax is still today practically the same heavy burden it was several centuries ago. Aside from the invention of the steel plow, little, if anything, has been done to relieve the situation. We have become so accustomed to the slow, laborious process of turning the soil in the usual manner that improvement seems almost impossible.

But something is being done and it is time we were taking careful note of it. We believe it may be safely said that within the last eighteen months more has been accomplished in this respect than in all of the preceding ages and all the credit is due to the perfection of the internal combustion engine. Scarcely a week passes nowadays that we do not hear of some new tractor being brought out for general corn belt farm use, and not only that, but the majority of these engines are successes and are being sold at prices the average farmer can afford to pay. Not only do they plow, but plow deeper and better, cheaper and faster, than is possible with horses, to say nothing of the fact that they save help and assist in getting the crops in on time, thus insuring better yields.

Are we, as farmers, doing the best we can by ourselves if we do not at least investigate these engines and their possibilities for reducing our farming expenses? If we do not want to admit that we are no more progressive than our ancestors of a century ago, then the problem of reducing our plowing cost must have our immediate attention.

Welcome the tractor. Although a long time coming, it has come to stay and the plow share must yield to its forward march. It is up to us to study our individual requirements; if the tractor can meet them, then we must get into line and turn our expensive boarders—Dobbin, Tom, Nell and Jerry—out to grass and let the cheaper gasoline tank take the place of the feed box.

Engine Weather.

During the severe cold weather it is sometimes hard to start the engine on account of the fuel not properly vaporizing and mixing with the air to form a combustible mixture. It can be started by pouring a small quantity of gasoline into the cylinder. As most of the small farm-engines are not equipped with priming cups, the spark plug can be removed and the fuel put in through the opening. Hot water can be poured around the cylinder, provided that the cold water, from the jacket, has been drained out. It is a good plan to draw hot air from around the exhaust pipe up through the air opening of the mixer or carburetor. This can be done by placing a perforated tin or iron cage around the exhaust pipe and piping it to the carburetor.

Leisy Makes $96.07 Average

One of the most remarkable sales of Duroc-Jersey bred sows ever held in Nebraska was that of Robert Leisy of Wisner, Neb., on February 5. This sale was remarkable for several things. In the first place is was one of the cleanest, smoothest offerings that we have ever seen go through a sale ring. It was made up largely of spring gilts, and they were simply remarkable for their growth, quality and smoothness and the general uniformity that prevailed all through. Colonel Fred Reppert, the man who probably makes more sales than any other man east or west, made the statement that in all his years of experience he had never seen such a remarkable bunch of spring gilts go through any sale ring. There was just simply not a single tailender in the entire offering, neither was there a poor footed one, and the size and bone they carried was nothing short of marvelous. The top of the sale went to J. J. Kane of Wisner, Neb., at $200. This was on the gilt No. 17 in the catalogue, sired by Dusty Crimson and bred to Colonel 2d for March 15 farrow. This, without question, was the best gilt we have sold in years. The average on the entire lot was $96.07, and when you consider that such an average as this was made practically on an offering of spring gilts, with a $200 top, it goes to show that there was a mighty steady demand all through the sale. Below will be found a list of those sold, together with name of purchaser:

No.		Price.
1	R. Widle & Son, Genoa, Neb.	$102
2	L. K. Wharton, Allen, Neb.	137
4	William Moderow, Beemer, Neb.	102
6	Will Morgan, Wayne, Neb.	87
7	F. B. Nelson, Lindsay, Neb.	95
9	Julius Rieken, Elkhorn, Neb.	72
11	Harry Tidrick, Winside, Neb.	105
12	Joseph McGaughey, Wisner, Neb.	100
13	Otto Dunbier, Gresham, Neb.	75
14	T. J. Overboe, Allen, Neb.	110
15	Herman Toelle, West Point, Neb.	97
17	J. J. Kane, Wisner, Neb.	200
19	George Buskirk, Pender, Neb.	120
20	George Buskirk, Pender, Neb.	105
21	O. G. Smith & Son, Kearney, Neb.	100
22	L. J. Kuzel, Clarkson, Neb.	95
23	Herman Kuhl, Plainview, Neb.	102
25	J. N. Forbes, Plainview, Neb.	70
26	John Smootz, Wisner, Neb.	87
27	Will Lawrence, Plainview, Neb.	70
29	E. H. Carpenter, Fontanelle, Neb.	65
30	Peter Iverson, Winside, Neb.	62
31	Otto Rathke, Wisner, Neb.	125
32	J. T. Armstrong & Son, Clarks, Neb.	82
33	Oscar Boostrom, Madison, Neb.	77
34	C. Douglass, Allen, Neb.	60
35	Herman Toelle	105
36	Gus Krueger, Beemer, Neb.	72
37	Henry Kolmas, Pilger, Neb.	70
38	Henry Stuthman, Pilger, Neb.	72
39	Will Lawrence	110
39½	J. L. Payne, Wayne, Neb.	95
40	F. E. Merrick, Osceola, Neb.	160
41	H. Sass, Washington, Neb.	72

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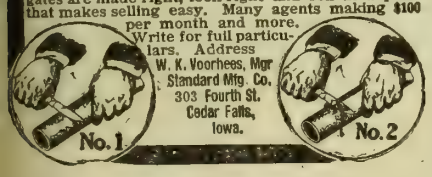

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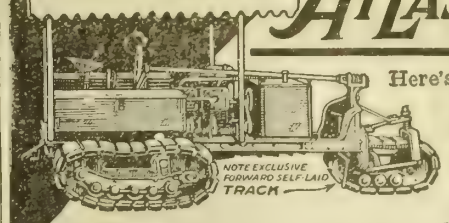

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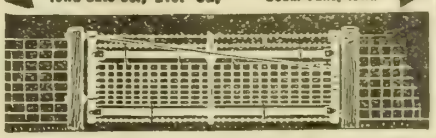

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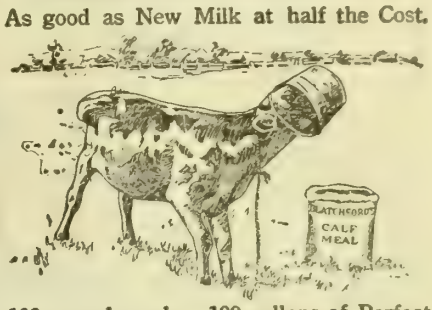

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Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Carpenter Makes $41.50 Average

E. H. Carpenter & Son of Fontanelle, Neb., held their bred sow sale at the farm near that place on February 2. A good crowd of breeders and farmers were present and were highly pleased with the splendid lot of hogs run through the sale. The gilts were about the growthiest we have sold this year. W. L. Propst of Plattsmouth, Neb., topped the sale on lot No. 45, a spring gilt by Prince Critic. This was without doubt the growthiest spring gilt that will go through the sale ring this year. Colonel E. Z. Russell officiated as auctioneer and did effective work. A list of those selling for $30 and over follows:

Lot No.	Price.
1—Clarence Wallace, Wisner	$70
2—Gus Krueger, Beemer	51
3—Joe McGaughey, Wisner	66
4—Henry Brand, Fontanelle	45
5—Fred Beermann, Fontanelle	45
6—Henry Lane, Fontanelle	55
7—H. A. Clark, Columbus	44
8—Adolph Schurman, Fontanelle	54
9—O. W. Taylor, Ames, Neb.	51
10—C. R. Richardson, Fontanelle	41
11—F. B. Nelson, Lindsay	36
12—Dennis Cook, Fontanelle	50
13—William Haverkost, Hooper	46
14—Robert Leisy, Wisner	54
15—O. W. Borcharding, Arlington	50
16—W. L. Probst, Plattsmouth	61
17—Fred Pfeifer, Hooper	51
18—Dave Douglas, Elkhorn	45
19—C. A. Cameron, Herman	40
20—Henry Stuthman, Pilger	40
21—George Wagner, Craig	37
22—George Colnon, Craig	36
23—G. N. Rose, Benson	35
24—George Richardson, Uehling	35
25—William Haverkost	40
27—J. L. Brown, Nickerson	36
28—William Haverkost	40
29—Fred Pfeifer	31
30—William Haverkost	35
31—Fred Pfeifer	33
32—J. N. Forbes, Plainview	37
33—S. W. King, Herman	35
35—Fred Wolf, Hooper	37
37—John Hanson, Herman	40
40—W. H. Olson	30
43—William Haverkost	30
4 —William Haverkost	33
45—W. L. Probst	72

Krueger Makes $68.50 Average

The sale of Duroc-Jersey bred sows held at Beemer, Neb., on February 4 by Gus Krueger of that place brought out a splendid crowd of breeders and farmers and resulted in the very satisfactory average of $68.50. The offering was an especially good one all the way through and merited every cent brought. The top sow was lot 1 in the catalogue. This was a tried sow by Wallace's Wonder and out of a Belle K. Junior dam. She was pronounced by good judges to be the best sow sold this season. She went to Clarence Wallace of Wisner, Neb., $270. A. R. Barnes of Petersburg, Neb., was the runner-up. Colonel Reppert did the selling, in his usual effective manner. Below will be found a list of the buyers, with prices paid:

Lot No.	Price.
1—Clarence Wallace, Wisner	$270
2—A. R. Barnes, Petersburg	132
3—Herman Toelle, West Point	125
4—William Moderow, Beemer	70
5—M. Sass, Washington, Neb.	50
6—Wiliam Harrison, Beemer	60
7—Henry Stuthman, Pilger	60
8—Robert Leisy, Wisner	60
9—H. V. Cronk, Waterbury	55
10—J. H. Wallace, North Bend	60
11—J. E. Hensley, Central City	72
12—M. Sass	60
13—E. L. Bush, Syracuse	72
14—Julian Rieken, Elkhorn	37
15—J. E. Hensley	67
16—William Harrison, Beemer	67
17—J. J. Kane, Wisner	115
18—Joe Sievers, Snyder	50
19—E. Taylor, Plainview	59
20—A. E. Agee, Waterloo	57
21—E. H. Carpenter, Fontanelle	60
22—Will Morgan, Wayne	55
23—F. B. Nelson, Lindsay, Neb.	45
24—H. H. Gripp, Snyder	50
25—W. H. Hensler, Beemer	49
26—M. E. Sheriffs, Wisner	36
27—N. J. Nelson, Newman Grove	75
28—J. T. Armstrong, Clarks	60
29—S. M. Hinkle, Genoa	50
29½—O. T. Boostrom, Madison	60
30—Henry J. Fee, Napier	40
31—Ed Miller, West Point	40
32—Ed Miller	40

Wallace's Durocs Average $85

One of the best Duroc-Jersey sales held this season was that of Clarence Wallace of Wisner, Neb., on February 3. This sale brought out the largest crowd of breeders that has attended any sale in this territory for years. The offering was in keeping with the crowd. It was one of the biggest, smoothest, best-boned lots ever sold from this farm. The star attraction was the grand champion sow Fancy Advance 2d. This great sow is not only a show sow, but she is also a producer. She went to J. J. Kane of Wisner, Neb., at $310, the United States Indian school at Genoa, Neb., being the runner-up. The demand was strong throughout the sale, and showed that those present fully appreciated the quality of the offering. Colonel Fred Reppert did effective work in selling. Below will be found a list of those sold, with name of purchaser and price paid:

Lot No.	Price.
1—J. J. Kane, Wisner	$310
2—Henry Stuthman, Pilger	127
3—J. E. Hensley, Central City	90
4—Ed Kerns, Stanton	115
5—Fred E. Merrick, Osceola	75
6—William Moderow, Beemer	105
8—F. B. Nelson, Lindsay	90
9—Gus Krueger, Beemer	110
10—Ed Bush, Syracuse	102
11—J. T. Armstrong & Son, Clarks	75
12—P. C. Anderson, Wisner	57
13—S. A. Baldwin, Ainsworth	82
14—Fred Sandahl, Wakefield	107
15—Harry Tidrick, Winside	85
16—Will Morgan, Wayne	90
17—Fred Swan, Missouri Valley, Ia.	80
18—William McClellan, Clarinda, Ia.	67
22—E. H. Carpenter & Son, Fontanelle	87
23—J. O. Bayne, Aurora	65
24—H. V. Cronk, Waterbury	82
25—J. E. Hensley	100
26—Wallace, North Bend	62
27—Herman Toelle, West Point	87
28—F. A. Lemmerman, Creston, Neb.	125
29—G. E. Samuelson, Osceola	60
31—R. Widle & Son	102
32—Henry Gripp, Snyder	82
33—O. G. Boostrom, Madison	65
35—Ed Kerns	85
36—James McGaughey, Wisner	65
37—W. H. Hensler, West Point	67
38—J. P. Anderson, West Point	57
39—A. R. Barnes, Petersburg	80
41—J. P. Anderson	40
42—P. Kuhl, Plainview	62
43—Will Lawrence, Wisner	42
44—F. E. Merrick	65
45—Allen Bauman, Norfolk	50
46—Allen Bauman	45
47—George Buskirk, Pender	102
47—Harry Tidrick	67
48—F. A. Baldwin	52

McCullough's Poland Sale

One of the very choicest offerings of Poland China hogs to be sold in the state this season will be offered at Central City, Neb., on February 28, by O. J. McCullough of that place. This is a strong, clean offering of big, smooth, high quality stuff, bred in the purple, and should receive the support of anyone wanting anything in this line. The offering will consist of seven tried sows, three spring yearlings, ten fall yearlings and forty spring gilts. One of the attractions of the sale will be Miss Big Columbus 2d, by Big Columbus and out of Miss Hadley by Big Hadley 2d. She is bred to Smooth Big Bone for middle of March farrow. This sow is an outstanding good one. In fact, she is a show sow all over and was good enough to win fourth at the Nebraska state fair last year. Another attraction is a tried sow by Long Boy and out of the dam Nellie Tecumseh 4th. This sow is bred to the splendid young boar, Columbus Again, son of the champion Columbus. Vera Jumbo, by Wade's Jumbo and out of Dude's Daughter, by J. S. Dude, is another sow that should command a good long bid. She is bred to Smooth Big Bone for a seventh of March farrow. A litter sister of this sow sold in R. B. Baird's last sale for $280. Other tried sows to be offered are by Price's Jumbo, A Wonder, Mabel's Wonder, Big Price and others. The spring yearlings are by Price's Giant and are bred to Smooth Big Bone, and they are good ones, too. The fall yearlings are by Price's Jumbo and Smooth Big Bone and are bred to Smooth Big Bone and Columbus Again. There are some mighty good prospects among these fall sows. They have the size, bone and quality and will develop into great brood sows. Spring gilts are by Smooth Big Bone, Price's Jumbo, Columbus, Big Master, Gold Dust Hadley and others. They are bred to Smooth Big Bone, Columbus Again and Gold Dust Special by Gold Dust Hadley. In looking over this young stuff we wondered how Mr. McCullough could get together such a splendid lot of young sows, but when we stepped over into another lot and looked over the splendid bunch of big, roomy, strong backed, heavy boned sows that he has in his herd, we readily saw how to account for the younger stuff. If you are looking for something good—something that will go out and make money for you, write for catalogue and arrange to attend this sale. If you cannot do so, send your bids to G. E. Hall of this paper and they will be taken care of.

Polled Herefords.

Some of the attractions in the sale of Hereford cattle to be held at Grand Island, Neb., on February 19 and 20 will be the Polled Herefords to be offered by E. H. Gifford of Lewiston, Neb. Among the good ones being offered by Mr. Gifford is Polled Improver 425197, calved January 1, 1913, sire Polled Pride 36345. This calf weighs 1,050 pounds, is a deep, wide, long, heavy-boned fellow with thick coat and exceptionally good in his hind quarters, flanked down exceptionally low. He combines both size and quality, is an easy feeder and has a splendid disposition. He has sixteen crosses of the best polled blood and has a splendid, smooth head. He is one of the best polled calves

of the breed and a herd header of high quality. Another good calf is Polled Promoter 433532, calved April 13, 1913, sired by Polled Critic 353464. He is also a large, heavy-boned calf for his age, and if properly cared for will make a very large, thick, low down, beefy bull. He is absolutely right in every way and is certainly deserving to head some good herd. Mr. Gifford is putting in several other good herd-header prospects, and we trust that anyone who desires to breed the horns off will keep these bulls in mind and arrange to attend the breeder's sale at Grand Island, Neb., on the date above named. If you have not already received a catalogue, write for the same at once to Robert Mousel, manager, Cambridge, Neb.

Glissman Holstein Sale

Another of the great Holstein-Friesian sales by Henry C. Glissmann of Omaha, the noted Holstein breeder, dealer and handler of this very popular breed of dairy cattle, was held February 3, 1914, at South Omaha. This was a most successful and interesting meeting of pure-bred dairy cattle advocates, representing fully a dozen states. It was practically a Holstein convention, a sort of Holstein camp meeting. Those who were not fully converted were seeking conviction and won over to the Holstein faith by merely being given an opportunity to buy a few. All kinds of big milk and butter records that a dairy cattle auctioneer is so full of were gulped down by the anxious audience without a wince or evidence of choking as fast as he could reel them off. Everybody was an intended or pretended buyer, and the only reason why there were not five times the number of cattle sold that were offered was that many of the far-away visitors had no assurance that they could get a carload under the usual method of buying one at a time. The crowd taxed the seating capacity of the pavilion and scores of interested persons were yet standing. This was a crowd of buyers, and the man who found no chance to get a big cow with a big bag and a big record contented himself in taking a calf, even a bull calf a few days old, rather than lose out altogether. There were sixty-five head of registered cattle sold. Ten bulls, from a few weeks' up to 3 years old, averaged $140; highest price, $240. Fifty-five females averaged $165. The highest price was $485—a beautiful cow, with the finest appearance of a big milker of any cow that was ever put through the South Omaha sales pavilion, fresh and ready to deliver the goods, eighty pounds of milk per day. Her 5-day-old heifer calf sold immediately following the cow to the same buyer for $115, thus making the cow and calf bring $600. Nineteen grade heifers and cows sold at an average of $122. This sale comprised only a division of the Glissman herd.

Stuthman's Durocs Average $54

The sale of Durocs held at Pilger, Neb., on February 6 by Henry Stuthman of that place was certainly held under adverse conditions. It was the coldest day of the winter and a storm prevailed practically all day, with the thermometer way below zero and a crowd necessarily small on this account. An average of $54 was made on the entire offering of forty-five head. A much better average than this would have resulted, had it not been for the storm, for the offering itself was a good one and composed of individuals that were of the highest quality, both in point of breeding and individual merits. The fact that the average above was made under these conditions was evidence of the fact that this statement is true. The top of the sale went to Herman Toelle of West Point, Neb., for $125. This was on a spring gilt and a mighty good one. She is the daughter of B. & C.'s Wonder and out of the great sow Sweet Rose 2d, the highest priced sow sold last year. Had there been a larger crowd present and the day more favorable it would probably have made a big difference in the average of the sale and competition would have been stronger on the better stuff. Colonel Fred Reppert was the auctioneer and certainly did effective work on the block. Below will be found a list of those selling for $30 and over, together with name of purchaser:

Lot No.	Price.
1—William Moderow, Beemer, Neb.	$ 87
2—G. N. Rose, Benson	70
3—F. B. Nelson, Lindsay	67
4—Clarence Wallace, Wisner	80
5—C. S. Smith & Son, Allen	75
6—C. S. Smith & Son	45
7—L. J. Kuzel, Clarkson	75
8—Gus Thies, Pilger	40
9—W. Taylor, Pilger	40
10—Will Morgan, Wayne	50
11—J. J. Kane, Wisner	105
12—Fred Ambrust, Pilger	48
13—T. J. Overboe, Allen	80
14—John Hanson, Herman	45
15—C. Douglass, Allen	37
16—George Patterson, Wayne	46
17—T. J. Overboe	48
18—F. B. Nelson	36
19—E. M. Roberts, Allen	42
20—Fred Ambrust	41
21—L. D. Ohman, Pilger	42
22—Gus Thies	39
23—F. W. Bowden, Wisner	46
24—M. O. Froistad, Newman Grove	52
25—Gus Thies	41
26—Herman Toelle, West Point	125
27—Dan Forbes, Plainview	72
28—L. D. Ohman	68
29—E. Taylor, Plainview	45
30—H. Kolmas, Pilger	55
31—E. H. Carpenter, Fontanelle	50
32—O. T. Boostrom, Madison	45
33—Gus Krueger, Beemer	60
34—George Buskirk, Pender	70
35—W. Taylor	30
36—George Patterson	35
37—W. Taylor	31
38—E. Taylor	47
39—Otto Rathke, Wisner	40
40—E. M. Roberts, Allen	36
41—George Patterson	35
42—W. Taylor	41
43—E. Taylor	48
44—E. Taylor	48
45—Gus Thies	36

Breeders' Hereford Sale

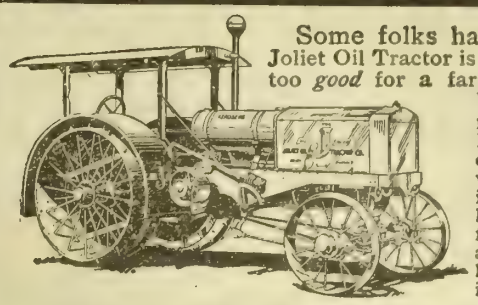
This is the last call for the sale of Hereford cattle to be held at Grand Island, Neb., on February 19 and 20, under the auspices of the Nebraska Hereford Breeders' association This sale will be made up of cattle consigned by a number of the very best breeders in the state. Every consignor has made it a point to consign nothing but his first class stuff, and we believe it will be an excellent opportunity for anyone who wants some first class cattle. The offering will consist of seventy-five head of bulls and forty head of females. Robert Mousel of Cambridge, Neb, is manager of the sale and has personally inspected everything going into the sale, and he says they are a splendid lot of cattle. The consignors to this sale are: O. E. Green, Genoa; G. C. Doeling, Surprise; John McConnell, Somerset; Elmer E. and N. T. Youngs, Lexington; E. C. Rodwell, Cambridge; Henry Smith, Octavia; F. W. Meus, Edison; O. J. McCullough, Clarks; Fred McClymont, Holdrege; E. H. Gifford, Lewiston; M. D. Meisenburg, David City; Arthur Smith, Lexington; Binger & Smith, Callaway; G. C. Clement, Ord. One strong feature of this sale is that it contains a variety of blood lines and gives prospective buyers a splendid opportunity to make selections from the best families of the breed. Write for catalogue to R. D. Mousel, Cambridge, Neb. Kindly mention this paper when writing.

Schwab's Duroc Sale February 18

George W. Schwab of Clay Center, Neb., will hold his regular annual sale of bred sows at his farm near that place on February 18. We are going to leave it to Mr. Schwab to tell our readers just what he has to offer. He probably ships more hogs on mail orders than any other breeder in the country. Here is what he has to say regarding his offering: "The catalogues of my annual bred sow sale to be held on February 18 are now ready for mailing out. This offering of forty bred sows and gilts is the equal of our former offerings. The tried sows are all good, useful individuals, sired by such boars as Red Wonder, Freed's Colonel, Buddy K. 4th Wide Awake, W. L. A.'s Perfection and others. The gilts are mostly by Buddy K. 4th Wide Awake, the grand hog that has done so much for this herd; W. L. A.'s Perfection, one of the best boars ever used in the herd; Crimson Wonder Top and several others. They are mated with Cremo, a yearling son of Queen Wonder; Gold Bond, a 3-year-old hog by Golden Model 2d; Buddy K. 4th Wide Awake, and a boar named Crimson Pedro by Uneeda Crimson Wonder. These four boars are the large, growthy, useful kind—"the big type." The gilts in the offering are very uniform, thrifty, smooth, on the brood sow makeup, and certainly look like young gold mines at this time. They have been fed and grown on such feeds as will develop them the right way and make large, strong, healthy litters. This breeding has for years proven highly satisfactory for us, and the offering as a whole is up to the standard, and every animal is mated for the best results, and as she would have been mated were she to stay in the herd. The catalogue, which is now ready, should be in the hands of all those interested in good, useful bred Duroc females at this time. It gives all particulars regarding the sale, age, breeding, general description of each animal, when she was bred and to what boar, with his breeding and all. If you are not on the Schwab mailing list you may get there by dropping him a postal asking for a catalogue and the catalogue will be sent you on very short notice. These females are sold and shipped, as in former sales, to those who cannot attend the sale in person, and to show that we are not afraid to ship our hogs anywhere, they will be shipped on approval, and the buyer is allowed to see them at his express office before he need pay a cent

(CONTINUED ON PAGE TWENTY-NINE.)

Is This Tractor Too Good?



Some folks have said to us, "Yes, your Joliet Oil Tractor is a wonder—it's great, *but* it's too *good* for a farmer!" We don't believe it. We consider that the farmer needs good power machinery. His heavy work tears the heart out of ordinary machinery as you well know. The Joliet Oil Tractor is built to give good service for a lifetime. *Dependability*, power, fuel economy, ease of operation and simple, staunch construction have won the Joliet Oil Tractor its reputation as

"The Packard of the Farm"

Remember this: The Joliet Oil Tractor costs *less* than most tractors of its size, weight and working capacity. It is as speedy as a motor truck. Ordinary tractors have a speed of from 2 to 4 miles an hour—and shake themselves to pieces doing it. The Joliet runs *8 to 10 miles an hour* with little or no vibration, due to the efficient spring suspension. The Joliet is the lightest tractor for its power ever built, being from ⅓ to ½ lighter than any other of equal power. It has such perfect bearings that an ordinary man can roll this 8,700 pound machine along the floor with *one hand!* Looks *impossible?* Let us prove it.

THE JOLIET OIL TRACTOR

Note These EXCLUSIVE Features

You won't find them combined in *any* other tractor for years—if ever. Here they are: Simplicity, light weight (200 pounds per horsepower), spring suspension of entire machine, roller bearings on all moving parts, selective type transmission, every axle, bearing and gear *dust proof* and always in oil, chrome-vanadium gears on nickel steel shafts, 4-cylinder heavy-duty *kerosene*-burning engine, automobile control throughout, road speed 8 to 10 miles per hour. Check up these features with any other tractor you know of, regardless of price. Then the true merit of the Joliet will stand out.

Our Free Trial

$600 puts a Joliet Oil Tractor at work on your farm. The $600 is simply to assure us of your good faith. We give you absolutely a *free trial* on your own farm and cheerfully refund your money if we don't make good. Remember, the strongest guarantee ever put behind *any* tractor is behind the Joliet. Let us send you all the facts about this wonderful tractor; the price, the terms, and the guarantee. The coupon brings everything. Mail it to us today.

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210 Benton St., Joliet, Ill.

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Address _____

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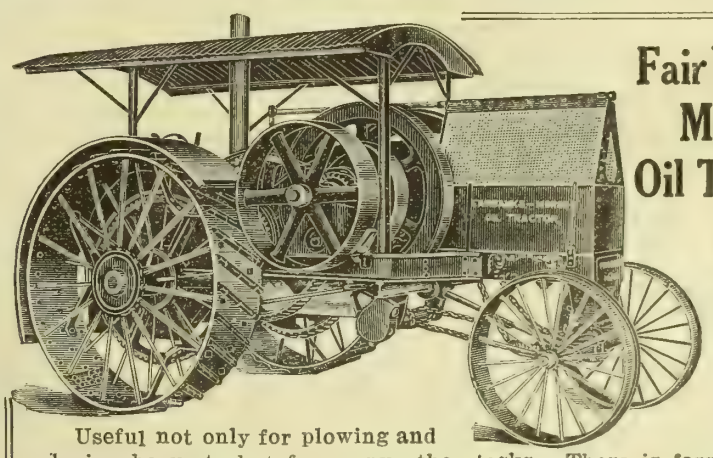
Size of Farm _____



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15 h. p. drawbar pull.

Useful not only for plowing and during harvest; but for many other tasks. There is farm work it can do for you in every season.

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Sawing Wood	Pulling Stumps	Harvesting	Grading
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Baling Hay	Plowing	Hulling Clover	Harrowing
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KANSAS CITY. OMAHA. CHICAGO.

Mention Twentieth Century Farmer

TEST YOUR SEED CORN

If six kernels, taken from an ear of corn, germinate properly on test, it is considered quite certain that all of the other kernels on that ear will grow. By testing a few kernels from each ear, you know for certain the good ears from the bad ears and one bad ear used for planting means the loss of 1000 stalks of corn—enough to much more than pay for a tester.

The **Lee Seed Corn Tester** has many numbered compartments into each of which you can put six kernels from an ear of corn. In three to four days you know positively which ears will do for planting and which will not germinate. You will save time and corn and loss of field space.

The Lee Tester is handy in size and convenient in use. It requires no artificial heat beyond the first filling with warm water. The numbered compartments are about two inches square and, in depth, just the thickness of a grain of corn. The whole tester is compact, neat and complete, only 18 inches square and from 2 to 3 inches deep.

Three sizes; 200-compartment $3.50; 500-compartment $5.00; 1000-compartment $7.50, express paid.

GEO. H. LEE CO., Omaha, Nebr.

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We tan the hide and make your coat for only $12.50. Complete coat (we furnish robe), $18.00. A square deal, all work guaranteed. We are pioneer tanners of this country of cattle and horse hides for coats, robes, rugs, harness, lace, leather, etc. Write for free booklet of information on handling and shipping hides; also price list.

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114 S. W. 9th St., Des Moines, Iowa.

Nebraska Hereford Breeders' Sale

115 Head of High-Class Cattle Will Be Offered for Sale at

Grand Island, Neb., Feb. 19 and 20, 1914

This offering will consist of 75 head of bulls and 40 females. They represent the natural increase of 15 of the very top herds of Nebraska. Nothing is being consigned but first class animals, and every breeder stands behind the animals he is putting in the sale. The consignors are: G. C. Doehling, Surprise, Neb.; Jno. McConnell, Somerset, Neb.; Elmer E. and N. T. Youngs, Lexington, Neb.; O. E. Green, Genoa, Neb.; E. C. Rodwell, Cambridge, Neb.; Henry Smith, Octavia, Neb.; F. W. Meus, Edison, Neb.; O. J. McCullogh, Clarks, Neb.; Fred McClymont, Holdrege, Neb.; E. H. Gifford, Lewiston, Neb.; M. D. Meisenburg, David City, Neb.; Arthur Smith, Lexington, Neb.; Binger & Son, Callaway, Neb.; C. G. Clement, Ord, Neb. The variety of breeding and the strong individual make-up of this offering will certainly afford exceptional opportunities. For catalogue address

ROBERT MOUSEL, Mgr.
CAMBRIDGE, NEB.

Auct's, Col. Kraschel, Col. Snell; Fieldman, G. E. Hall.

IMMUNE DUROCS AT AUCTION

At Kearney, Neb., Feb. 27, 1914

This will be an especially strong offering, carrying the best of blood lines and possessing exceptional individual merit.

There will be 18 head of extra smooth, growthy fall gilts, 14 sired by MODEL GOODS by Golden Model, and 4 by QUEEN'S WONDER by Crimson Wonder Again. The spring gilts are by MODEL GOODS, QUEEN'S WONDER and QUEEN'S WONDER AGAIN. The offering is bred to QUEEN'S WONDER AGAIN and MODEL GOODS, 2d. You will find this offering will speak for itself on sale day. For catalogue address

O. G. SMITH & SON, Kearney, Neb.

Aucts., Col. Ray Page, Col. Z. E. Russell; Fieldman, G. E. Hall.

McCullough's Columbus--Smooth Big Bone Offering of

BIG-TYPE POLANDS

SALE TO BE HELD AT

Central City, Neb., Saturday, Feb. 28, '14

This will be an attractive offering of the big type breeding and will be an opportunity to get COLUMBUS blood.

60 Head 13 Head by the Champion Columbus. One tried sow and twelve spring gilts in the sale by him. Some growthy spring gilts weighing around the 400 pound mark sale day to be sold. The blood of SMOOTH BIG BONE by Smooth Price, dam by Big Bone, will be strongly represented. For catalogues address

40 Spring Gilts
10 Yearlings
10 Tried Sows

O. J. McCULLOUGH, Clarks, Neb.

Col. Fuller, Auct., G. E. Hall, Fieldman.

Advice to Brood Sow Buyers

DURING the next month or six weeks thousands of brood sows will pass into new hands. How many of the buyers of these hogs have taken and will take the precaution to find out how these sows have been fed since breeding time by their former owner?

Each spring we hear complaint after complaint from the buyers of brood sows, saying that the sows they bought have done them no good, while the sows they have kept themselves are producing good, strong litters. We fully realize the fact that some breeders selling sows for breeding purposes do not feed them as they should be fed to produce good litters, but a large majority of these men have carefully fed these sows and when the buyer gets them good results will follow if he will do his part.

An important matter to be looked after by the buyer of a brood sow is that of feed. Find out from the seller how he has been feeding the sow and don't break off all at once and make an entire change of her feed. It is probable that you can't give her the same feed that she has been getting, but you can have at least some of it and the change should be gradual. A complete change is liable to throw the sow off her feed and may cause abortion, thus throwing to the wind your prospects of a good litter.

Many times sows are brought home and dumped into the lot with the other sows to make the best they can out of it and to hustle for their feed and their bed as well. If the sow is a gilt she will almost always be unable to get anything to eat for a day or two at least and then just what she may be able to steal between knocks from the other sows. An old sow is more likely to be a good scrapper and thus get along better.

Having a good bed is fully as important as having feed. You have probably gone out in the morning and found your new purchase humped up in the corner of a fence with a blanket of snow for a covering and wondered what was the matter if the pigs came weak, or if the sow got off her feed and lost her litter entirely.

We believe that far too often are the sellers of brood sows charged up with a failure of the sow to produce a satisfactory litter. We want to say to the buyer, look after the new sow carefully, give her a separate pen and sleeping quarters and see that she gets the necessary feed. Turn her in with the other sows for a while each day until she gets acquainted with them. By doing this you will be far more likely to get the much-desired litter for which you bought the sow and your confidence will be increased as to the possibility of buying a sow and getting from her a good, strong litter. The seller of the sow will do both himself and the buyer a good turn if he will write a letter to the buyer telling him just how the sow has been fed when these sows have been bought on mail order.

Horse Notes

Idleness is the enemy of heavy horses in the winter. Plan the winter's routine so the team will appear daily on the program.

The in-foal mare should be allowed a liberal amount of exercise if a strong, rugged colt is to be looked for.

Weight is not the only thing to be considered in the draft horse. Years ago light horses executed the same labor that is being done now by animals one-half as large again. It is a question of quality, constitution and stamina, and when this is found in combination with substance, the individual is a winner.

"Fat-Tailed" Sheep in Utah

There are several bands of the Persian fat-tailed sheep on the national forests of southern Utah. The large fat-tail sometimes weighs as much as forty pounds, and, like the hump on the camel, is a reserve supply of nourishment when food is lacking.

Yellow Poplar Valuable Tree

One of the largest and most valuable timber trees of the country is the tulip tree, known to lumbermen as yellow poplar. It is related to the magnolias, but is the only tree of its kind in the world.

Be Safe!

Don't take chances with spavin, splint, curb, ringbone, bony growths, swellings or any form of lameness. Use the *old reliable* remedy—

KENDALL'S Spavin Cure

Its power is testified to by thousands of users. At druggists $1 a bottle; 6 for $5. Ask your druggist for book, "Treatise on the Horse." Write

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An Indexed, 184-page Illustrated Book

By Dr. David Roberts, Official Veterinarian International and National Live Stock Shows. Tells about ailments of cattle, horses, sheep, hogs, chickens. Describes symptoms, tells what to do. The big, plain, practical book of home treatments. Over 70 illustrations. Descriptions of breeds. Full of valuable information. Get this book. It will give you a veterinary education. Sent prepaid or 25 cents.

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HOLSTEIN CATTLE

According to figures compiled by the department of animal husbandry of Illinois University a cow must produce 4,000 pounds of milk and 160 pounds of fat a year to pay for feed and labor. Every 1,000 pounds above this brings a yearly profit of $10. Thus a 5,000 pound cow earns $10 a year, an 8,000 pound cow earns $40, but when production reaches 10,000 pounds the profit is $63.

Systematic investigation confirms the wisdom of those who have taken up the Holstein-Friesian breed.

Send for FREE Illustrated Descriptive Booklets.

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High-Grade Cattle—High-Grade Farmers

***The pure-bred* Jersey Cow**

is one of the most high-grade animals ever developed by man. The high-grade farmer demands the high-grade cow. No breed equals the Jersey for the economical production of high-grade milk and butter. No breed equals the Jersey for intensive farming.

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WINELAND FARM JERSEYS

Bulls of serviceable age for sale, sired by Duke Raleigh by Noble of Oakland. Also a number of choice heifers bred to freshen soon. I can suit you in both quality and price.

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RED POLLS

Bulls and heifers for sale. Prices reasonable. Quality the best. Satisfaction guaranteed. Write your wants or call.

W. F. SCHWAB, Clay Center, Neb.

O. I. C. HOGS

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN** RFD19 **Portland, Mich.**

DUROC-JERSEY HOGS

SCHWAB'S DUROC-JERSEYS

A choice lot of spring and fall boars for sale; sired by Buddy K 4th, Wide Awake, Gold Bond, W. L. B.'s Perfection, Cremo and others. Also bred sows. Priced worth the money.

GEO. W. SCHWAB, Clay Center, Neb.

This paper will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises.

Breeders' Notes

(CONTINUED FROM PAGE TWENTY-SEVEN)

on them, and if they are not as good as expected, if they are not as ordered, or if they are not satisfactory in every way, you can return them and get credit in full—you to be the sole judge. Our hogs have been shipped to twenty-five states on this guarantee and have always given perfect satisfaction. There is no reason, if you want a bred sow or gilt, why you should not send us your order. We fully guarantee to please you, and you can buy them within your limits, and you are assured of getting what you order or no sale. Our stock is in perfect health and in splendid, thrifty condition. Send for catalogue at once.

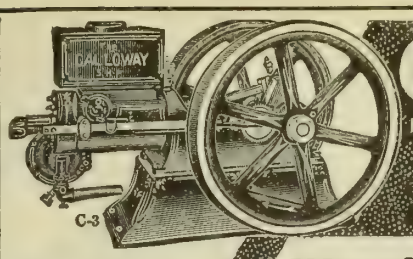
Durocs at Kearney February 28

A sale of Duroc-Jersey bred sows that should receive the attention of our readers is that of O. G. Smith & Son of Kearney, Neb. This offering is one that is good enough to command the attention of any breeder or farmer who is looking for some really good bred sows. One important fact in connection with this offering is that everything going in the sale is immune from cholera. They have been fed and grown with the idea of enhancing their future usefulness as breeders. There will be eighteen head of fall yearlings and twenty-two spring gilts. Fourteen of the fall yearlings are by Model Goods and four are by Queen's Wonder. The spring gilts are by Queen's Wonder, Queen's Wonder Again and Model Goods. The Queen's Wonder and Queen's Wonder Again gilts are bred to Model Goods 2d by Model Goods and out of Sell's Crimson Beauty, she by Crimson Wonder Again and out of H. A.'s Queen. These sows are bred mostly for early March litters. There are a number of fall yearlings and spring gilts that are extra good ones, and, mated to the boars mentioned above, ought to produce something good. Write for catalogue and arrange to attend this sale. If you cannot do so and want anything in this sale, send your bids to G. E. Hall of this paper and they will be handled with care. Kindly mention Twentieth Century Farmer when writing.

Pure-Bred Hampshire Hogs

Billie McFarland of Syracuse, Neb., is offering forty-three head of pure-bred Hampshire sows and gilts and ten fall boars for sale at public auction at Syracuse, February 20. The sows are safe with pig for March and April farrow. The boars are large enough for service. Mr. McFarland also has twelve head of extra good, sound, well broken mules, from 4 to 6 years old, weighing from 1,000 to 1,350 pounds, which will go in this sale. If you are unable to attend this sale in person, you may send your bids to either of the auctioneers, Thomas E. Deem or Theodore Guthrie. E. C. Stone, secretary of the Hampshire Record Association, will be present at this sale and personally guarantees to please anyone who cares to send in a bid in his care. Address any of these men at Syracuse Neb., lock box 314. Write for catalogue and further information at once, mentioning Twentieth Century Farmer in writing.

Some of the Hereford bulls to go in the Nebraska Hereford Breeders' sale at Grand Island, Neb., February 19 and 20. These bulls are consigned by O. J. McCullough of Clarks, Neb.



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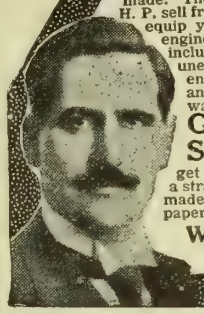

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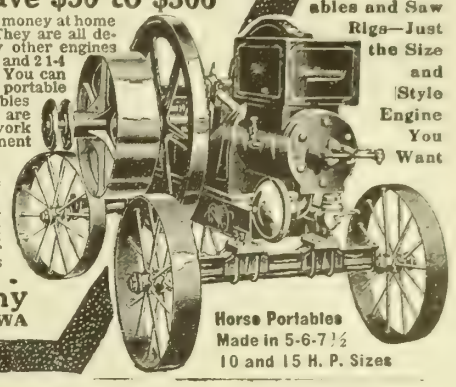

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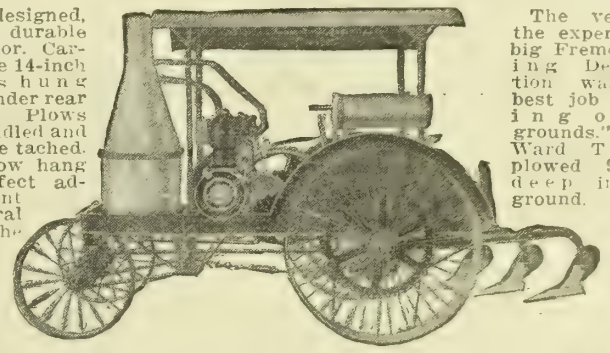

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AL. E. SMITH, - - LAWRENCE, KAN.

Review of Live Stock Market

By A. C. Davenport

FROM the standpoint of the seller, the cattle market last week was in a very unfavorable condition. The slack demand and the apathy on the part of the big packers so noticeable the previous week, was, if anything, more pronounced last week. All reports agreed that the meat coolers in all sections of the country were crowded with beef, while the consuming demand was distressingly small. Under such conditions packers were very poor buyers of cattle, being more interested in unloading the fresh meat already in storage than they were in adding to the surplus on hand by the purchase of additional cattle. For the lack of an adequate buying support values everywhere dropped off, prices at present writing being around 15@25c lower than the previous week on all but the choice to prime heavy beeves. The medium kinds, which constitute a large percentage of the receipts at all points, are 25@50c lower than the high point last month.

The unfavorable condition of the cattle market cannot be ascribed to excessive receipts, as shipments, taking the six leading markets of the country as a criterion, have been very moderate, showing a falling off of over 100,000 head for the year to date as compared withh the corresponding period of 1913. As the receipts of last year were by no means burdensome it follows that the supply is not blamable for the drooping condition of the market. On the contrary the whole trouble appears to lie in an unprecedened slack buying demand for cattle. Various causes are said to have contributed to the poor demand, among them being the mild weather, covering stretches of several weeks at a time, importation of liberal quantities of chilled and frozen carcasses from South America and Australia, and the free marketing of short fed eastern steers.

While the cattle trade for the last two weeks has been very unsatisfactory, as noted above, cattlemen are by no means discouraged, but, on the contrary, have the greatest faith in the future of the market.

Hogs Highest Since 1910

Hogs which were down the week before have made a sharp advance during the week just closing, reaching the highest point of the year to date. Light receipts and an active buying demand combined to force values upward, and the market at present writing is around 50c higher than it was at this time last month. That comparison, however, does not give as good an idea of the strength of the market as one made with a year ago, when hogs at this time in February were nearly a dollar per hundred lower than at the present time. Two years ago, that is, in February, 1912, hogs were over $2 per hundred lower than now. To make a still stronger comparison, hogs are now the highest that they ever have been at this season of the year with the single exception of 1910, which was the banner year for all time past, so far as hog values are concerned.

Hogs have really reached such a high point that some of the bulls themselves are becoming a little timid, and are beginning to fear that the market may prove top-heavy, and in the end decline from its own weight. This feeling has its origin in the facts brought out in the comparisons above, that the prevailing price is now excessively high for this season of the year. On the other hand the more courageous of the bull faction still stands by its colors, professing to believe that the market has by no means reached the top notch, although they are always ready for sudden and sharp declines of a temporary character to take place most any day. The strongest bulls are pointing out that hogs at the six big markets for the year to date show a decrease of 265,000 head as compared with the same days last year; also to the further fact that eleven markets show a decrease of 475,000 head for the year to date as compared with the receipts for the same time in 1912. Coincident with the decrease in the number of hogs coming forward are official figures from the various market centers showing that the average weight of hogs is running very much behind last year, in some instances over thirty pounds per head. The government estimate of the shortage in the supply of hogs in the country as a whole, and the Iowa report of a class from cholera of over 2,800,000 hogs in that state alone are important items of news. Owing to a shortage in local supplies the big Pacific coast cities are sending their buyers almost to the Missouri river in their quest for hogs to be sent west of the Rocky mountains. Every train load of hogs turned westward means just that many less for the eastern markets. All these reports are making the strong bulls still more bullish in their ideas. "If these facts and figures mean anything at all," say the bulls, "they mean that hogs have not yet reached the top."

The main argument of the bears is that prices are already as high or higher than the consuming public can afford to pay. They are going on the assumption that general business conditions are none too good, and that the purchasing power of consumers is likely to be limited.

Sheep Coming Too Fast

The sheep market has suffered along with the cattle market, having been in the dumps the greater part of the time during the last week or ten days. Conditions bringing about this situation are very much the same as outlined above in connection with the cattle trade. However, the sheep market has been laboring under the additional disadvantage of liberal receipts. As noted before in these columns it is well understood that there are a good many sheep and lambs on feed taking the country as a whole and feeders realizing this have been pushing their fat stuff to market more rapidly than the consuming public could take care of it. It seems almost strange that when cattle and hogs are showing sharp decreases in the number of head marketed sheep for the year to date actually show an increase of 88,000 head at the six big market points. To be sure that is not a large increase, but it was large enough so that some markets broke their January records. As noted a week ago in these columns, sheep men are by no means bullish in their views, and they will be highly pleased if the prices that prevailed during January can be maintained during February. However, at present writing the market on both sheep and lambs is lower than January's average. It has simply been a question of the sheep coming a little faster than the packers are able to force the product into consuming channels. So long as that conditions continues it is hardly reasonable to expect any improvement in present market values.

Sale Dates

Hereford Cattle

February 19 and 20—Nebraska Hereford Breeders' Association. Sale at Grand Island, Neb., Robert Mousel, Cambridge, Neb., manager.

April 15 and 16, 1914—Breeders' Combination sale at South Omaha, W. N. Rogers, McCook, Neb., manager.

Aberdeen-Angus Cattle

April 1 and 2, 1914—Charles Escher, Botna, Ia. Sale at South Omaha, Neb.

Duroc-Jerseys

February 18—George W. Schwab, Clay Center, Neb.

February 26—J. J. Kane, Wisner, Neb.

February 27—Blackburn Bros., Royal, Neb.

February 27—O. G. Smith & Son, Kearney, Neb.

March 2—L. J. Kuzel, Clarkson, Neb.

Poland-Chinas

February 10—W. J. Eavey, Geneva, Neb.

February 11—D. C. Lonergan, Florence, Neb.

February 20—A. E. Rich, Creighton, Neb.

February 24—Jacob Dietsch, Boone, Neb.

February 28—O. J. McCullough, Clarks, Neb. Sale at Central City, Neb.

March 6—William Ferguson, Scribner, Neb.

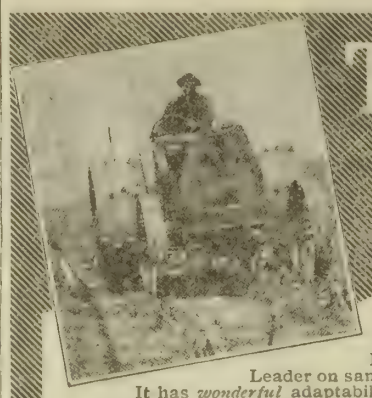
Hampshire Hogs

March 14, 1914—Roy Fisher, Winside, Neb. Sale at Wayne, Neb.

Shorthorns

March 11—E. H. Cosgrove, Farnam, Neb.

March 24—A. C. Shallenberger, Alma, Neb.



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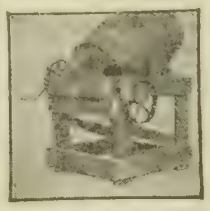

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25 SINGLE-COMB BROWN LEGhorn cockerels, scoring from 90 to 93½, $2 each; 100 unscored cockerels, $1 each. Hawkeye View Farm, Selma, Ia., Vanburen Co.

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CHOICE ROSE-COMB WHITE LEGhorn cockerels, $1 each; hens, $8 dozen. Kaveney Bros., Linwood, Neb.

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BUFF ROCKS—LEADING WINNERS at the big state shows. Write for circular. Mrs. James Christopher, Carleton, Neb.

BIG BUFF ROCKS, GOOD ENOUGH to win four firsts at big Nebraska shows; grand layers. Eggs for sale from $2.50 to $5. Mrs. Isaac Williams, Wymore, Neb.

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BARRED ROCK COCKERELS—LATE hatch, big bone, well marked, 6 and 7 pounds, $2; three for $5. Mrs. J. D. Stevenson, Benkelman, Neb.

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BARRED ROCK COCKERELS FOR Sale—Strong, well marked. Frank J. Drapela, R. 3, Clarkson, Neb.

FINE BUFF ROCK EGGS—$1 PER 15, $4 per 100. Address Mrs. John Tripp, La Porte City, Iowa.

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FIFTY GOOD SINGLE-COMB RHODE Island Red cockerels; prices reasonable. D. W. Kane, Wisner, Neb.

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BEST STRAIN GOLDEN AND WHITE Wyandottes. Eggs in season. Write for prices. Wm. Schreiner, Exeter, Neb.

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WHITE INDIAN RUNNER DRAKES, raised from $100 trio. Also Shetland ponies. Frank Healy, Bedford, Iowa.

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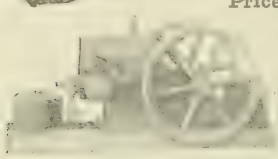

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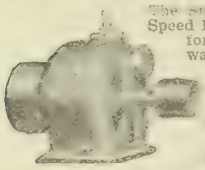

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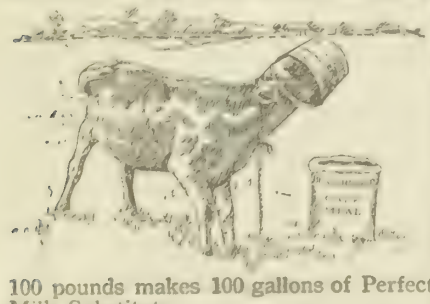

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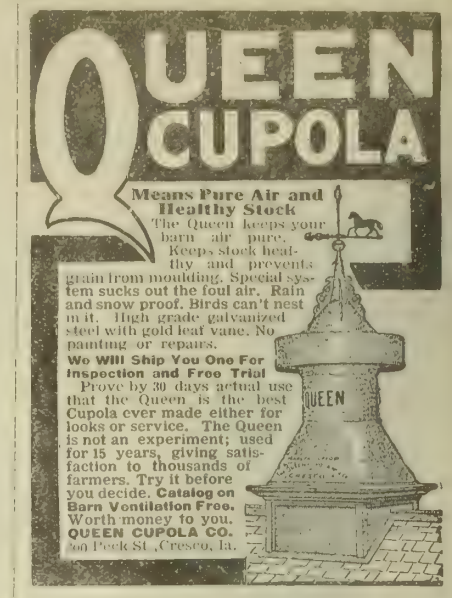
Who Pays Cream Station Costs?

NO ONE who has watched the methods of the cream-receiving stations in small towns can help but be impressed with the tremendous waste in the present system. Since the publication of the series of articles, "Creamery Problems in the Missouri Valley," we have received many letters from cream producers which confirm the logic of the facts presented. The eighth article, entitled "Why the Cream Receiving Station Must Go," has brought out more favorable comment than any single article of the series. This has led this paper to make further investigation of the cream receiving station system. Next week, in a special article, we will give our readers the experience of shippers under this system. That it is uneconomic and wasteful no one questions. There is no question about who pays the [illegible] overhead expense for erecting, equipping and conducting these receiving stations. There is a town in Nebraska of about 1,500 people which recently had six cream stations. Each station was in charge of an apparently ablebodied man, though the actual work done could easily have been taken care of by one man. The cream producer pays the bill.



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Danger! Look Out for Alfalfa Leaf Weevil!

This Insect Has Already Cost Utah Alfalfa Growers an Immense Fortune and Must Be Guarded Against

THE alfalfa leaf weevil is a snout beetle which was introduced into the United States from the country around the Mediterranean sea. By some unknown means it was carried into Utah, probably in household goods or packing. It has spread throughout Utah and into Wyoming and Idaho. The weevil was first discovered near Salt Lake City in 1904, where it damaged several acres of alfalfa, causing a loss of about half the first cutting and all the second.

In all probability, only a few, possibly only one pair of adult beetles survived the transporting from their native country to America, and it was six to eight years before they increased sufficiently to attract the attention of the farmer in whose field they were working. Even after they were discovered and seen in other fields several miles distant, it was not until three years later that the attention of the United States experiment station was called to them and not until 1908 that the Utah experiment station began working to control them. Even then, on account of scarcity of funds, the work progressed slowly.

In six years, from the time of their discovery until 1910, the infested area had increased until it covered a territory about sixty miles wide by seventy miles long, composed of Salt Lake county and the counties adjoining. By September, 1911, it had extended across Utah into Wyoming and Idaho. In 1912 the state of Utah lost approximately one-half its alfalfa crop, an immense fortune, all through this insect, which by this time had been fought for four years.

Every man who grows alfalfa should be on the watch for this pest. That is the best protection against it we can have. There is grave danger of its spreading to the corn belt states. Prof. E. G. Titus of the Utah experiment station, says he counted eighteen adult beetles in the vestibule of a sleeping car and has seen many more on freight cars. Thus the many trains running east and west from Utah can carry the beetles and spread the infection to our alfalfa fields.

Any farmer who finds any kind of an insect working on the leaves and stems of his alfalfa plants should at once get specimens of both insects and injured plants and send them to his state experiment station for identification. If the presence of the weevil is thus brought to the attention of the state departments they can begin fighting them immediately.

The alfalfa leaf weevil is a dark brown snout weevil about a quarter of an inch long. The adults are frequently speckled with black. It lives through the winter, hibernating in the stubble and under the trash left about the fields. It comes forth in the early spring ready to begin feeding on the tender alfalfa shoots. The egg-laying period begins early in April and continues through May and June, the exact length of this period depending on the season. With the sharp snout the female punctures the stem of the alfalfa plant and deposits the eggs therein, providing an excellent feeding place for the tiny worm, which soon hatches out. Four egg nests have been found in one stalk and as many as fifteen or twenty eggs. It is estimated that 75 per cent of all eggs laid are fertile. One plant has been found which sustained 1,300 eggs. It is not difficult to see how rapidly these insects increase. The adult beetle has some flying ability, and this helps to keep one locality from getting overcrowded.

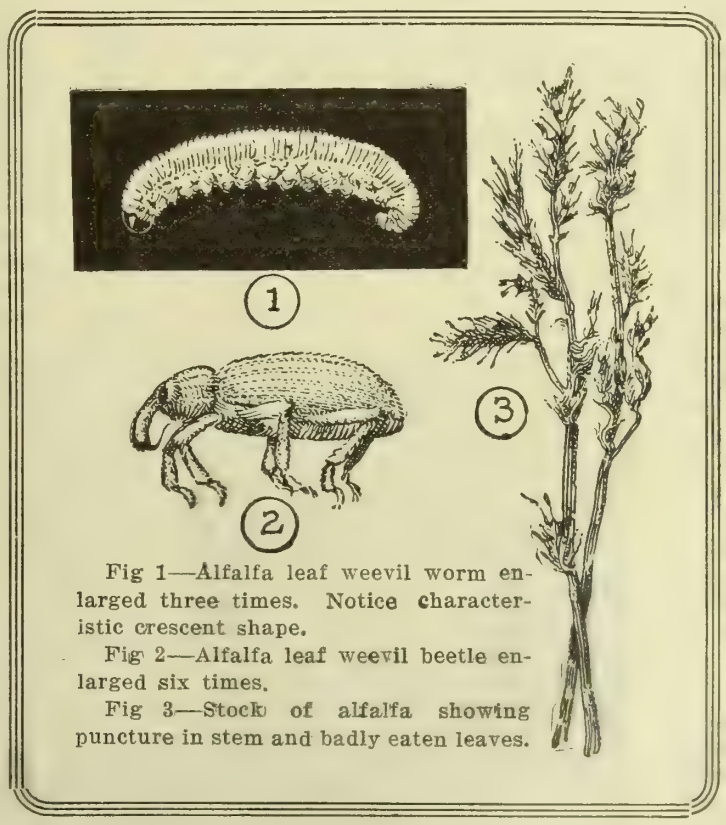

Fig 1—Alfalfa leaf weevil worm enlarged three times. Notice characteristic crescent shape.

Fig 2—Alfalfa leaf weevil beetle enlarged six times.

Fig 3—Stock of alfalfa showing puncture in stem and badly eaten leaves.

The larvae or worm goes through several stages in its development, gradually increasing in size, eating first on the inside of the stem, then up the stalk and into the tiny leaf buds. When full grown the worm is about half an inch long and is normally somewhat crescent shaped.

After having eaten the stems and leaves and finished this stage of its existence, the worm spins a tiny cocoon on the plant or ground and rests a while, finally emerging as a beetle. During the alfalfa season there are two such crops of beetles, all feeding on the alfalfa plants. The result of these attacks is usually the loss of about half the first cutting, and the plants are so badly damaged that they do not make any second growth.

Various methods of getting rid of these beetles have been tried in Utah. They have had the street sweepers from the cities out to sweep the fields and the sweepings have been burned and all rubbish cleared away which could give winter refuge. The first crop has been cut early and the hay burned. The keynote of the whole matter is, not remedy, but prevention. If you find any insect eating your alfalfa, send specimens of it in to the experiment station at once, and thus the pest may be combatted from the very beginning, saving perhaps housands of dollars for yourself and the other farmers in your locality.

We consider this alfalfa leaf weevil a serious menace to the alfalfa growers of the corn belt. If you discover any of these beetles, or any worm or beetle, in your fields, we If you discover any of these beetles, or any worm or beetle, in your fields, we hope you will send specimens not only to your experiment station, but also to us, as we want to keep in touch with the progress of this pest that we may be able to render the most efficient service to our readers in combatting the ravages of the alfalfa weevil.

Green Cabbage Worms

Soon little white butterflies will be flitting over the fields of young cabbage and cauliflower—pretty little things that make the poets seize their paper and pens and write spring poems. But these little white butterflies are laying the eggs that hatch into the most unpoetic green worms that destroy the cabbages. If the butterflies are caught and destroyed early in the season, there will be fewer worms to kill later on. If the worms are allowed to get a start, spraying with paris green will be the best protection for the cabbages—one pound of paris green to each ten gallons of water.

Cucumber and Squash Bugs

Plant more seeds than you expect to raise, and as soon as the plants come up dust them well with paris green and air-slaked lime. This is the best treatment for the common striped cucumber beetle. The squash bugs have to be picked off. Get the eggs, too, wherever you find them. These bugs suck the juice from the plants, sapping their vitality.

Later in the season, after harvesting the crop, it is wise to destroy the vines, thus lessening the annoyance from these pests for the coming year.

Buying Seed for Next Year's Corn Crop

Timely Little Reminders of Things to Be Considered When You Have to Buy Your Seed

By A. C. Hartenbower

DID you save your seed corn this last season? If you did not, reports from different experiment stations in the middle west go to show that it will be difficult for you to obtain satisfactory seed for planting next spring. The quantity of good seed to be had is limited; poor seed is even more plentiful than usual.

The first essential requisite in buying seed corn is to get it as near home as possible. Experiment after experiment has shown that a variety or type of corn yields almost in proportion as it is adapted to the locality in which it is grown; and, vice versa, the yield is decreased almost in the ratio as the seed is planted north or south of its source. Seed grown as near your home as possible, then, is the best for you to purchase. If you insist on sending to a firm at a distance, send east or west in preference to north or south.

If you have any doubt as to the advisability of purchasing seed corn as near your home as possible, a comparative test of both kinds will prove convincing. You want seed corn that will give you a large yield this year—not seed corn that you must adapt to your soil and climatic conditions—seed corn that may not give you a good yield until after several years of adaptation. It will be to your advantage, furthermore, to buy your seed corn from a neighbor, if possible, since community co-operation in growing the same variety of corn has been found desirable and profitable.

Know the Grower's Methods

The second essential requisite in buying seed corn is to make your purchase from a grower who practices approved methods of seed corn growing and seed selection. The personality of the grower of seed corn is as important in plant production as is that of the producer of high-class live stock in live stock production. The man from whom you buy your seed corn should be well acquainted with the characteristics of desirable corn, should practice modern methods of seed corn production and should use rigorous selection and careful storing.

The third essential requisite in buying seed corn is to buy it in the ear. Unless you are an exceptional expert, you cannot tell the kind of ears that have gone to make up a bushel of shelled seed corn. More than this, when you buy seed corn in the ear you have a chance to select for a certain type of corn—and how important this is! Uniformity in size, shape and other characteristics is greatly appreciated today—it is to your interest to grow corn of a type which meets your requirements of soil and climate. The man who sells the shelled seed corn may have put ears in that are not entirely adapted to your conditions.

Frauds in Shelled Corn

This is another disadvantage in buying seed from a distance. One of the biggest frauds that is worked on the unsuspecting seed purchaser is effected by selling seed corn shelled. Several examples of such fraud have been brought to my attention. Men have made it a practice to purchase "nubbins" at the lowest market price and then sell them shelled as first-class seed corn at a high price per bushel. The purchasers would not have taken the corn as a gift for hog feed had they seen it in the ear—but they bought it eagerly when it was shelled and placed on the market. It's high time that an end were put to this fraud. Nor is the deception all—the method used in storing the seed corn is important. While you cannot tell definitely how well corn has been stored when you purchase it in the ear, you surely stand a better chance than when you buy shelled seed corn.

The fourth essential requisite is to pay the

Well Formed Ears, with Deep, Well Developed Kernels

price. It costs money to produce good seed; a careful seed corn grower cannot grow his product at the same price per bushel that you grow your general field corn. If the seed corn grower demands a premium and you are certain that he has what you want, don't be afraid to reward him. More than this, this type of seed corn grower prefers to sell seed corn in the ear because he wants you to appreciate what he sells you. A man who uses bargain-counter methods in purchasing seed corn is surely "penny-wise and dollar foolish." Forget the price if the man has the kind of seed corn that you want.

When you have purchased your seed corn, whether you buy it on approval or not, the next thing is to select for type. Here the question arises, "Can I use the corn score card for this? Or, are ears which meet the requirements of the score card necessarily adapted to my use for seed?" It has been stated that the score card used for judging live stock is not well adapted to use for selecting breeding animals. Is this same statement possible in the use of the score card in choosing seed corn? Let us see. The man who chooses seed ears for planting will first of all determine the type that he considers adapted to his local conditions, and then the characteristics of the ears themselves as they compare with the pre-determined type. The score card is a valuable adjunct in selecting corn for seed, but it is not all. High producing ears are generally high scoring ears, but not necessarily so. Productive power should be the vital factor considered in choosing seed corn. Ears of corn that are well formed and have deep, well-developed kernels, such as the score card requires, are those which normally give high yields. Breeding experiments have brought out the truth of this statement.

Uniformity of the seed ears is important. Scrub corn will result from the mixing of types not uniform. When this uniformity is associated with a type suited to the local conditions a high yield is probable. To the novice it may seem extravagant to throw away high-priced seed corn ears, but experiments have shown that it is a profitable practice in the end.

Store in Dry Place

After a man buys a high-priced seed corn he should store it carefully. Many a good lot of seed corn has been ruined by improper storing. In the olden days grandfather hung the seed corn ears to the rafters of the smoke house or kitchen. This gave him a dry place, and since the corn was well dried out before he placed it there, he accomplished the desired result in storing seed corn. Seed corn should be stored after it has become dry in a place where it will not become damp; hundreds of bushels of seed corn have had their germinating power destroyed by becoming wet and then frozen. Freezing does not injure dry ears, but it is mighty hard on wet ones. If the corn when

Community Co-operation in Growing the Same Variety is Profitable

obtained is not thoroughly dry, having become wet in shipment, it should be hung in a warm room where the air circulates freely. A careful buyer should not think of purchasing seed corn that is wet, or which has not been properely stored; neither should a careful salesman ship anything but thoroughly dry ears.

Test for Germination

Before planting seed corn every ear should be tested for germination. Especially is this true this spring. Testing for germination insures a good stand, and this means a marked saving; it costs something to replant and there is a delayed maturity of the crop. Either the sawdust box or the "rag doll" method of testing may be used. Not less than six kernels should be taken from each ear before testing. Do your testing comparatively early. Do not put it off until the day you are ready to plant your crop. Putting off the testing of seed corn often means that it is never done at all.

If you pay your hard-earned cash for good seed corn, make up your mind to treat well the resulting crop. Good seed alone never did insure success in corn growing. You know that good live stock will not give a maximum production when subjected to "shabby" treatment; you expect to give this class of live stock better care than you give your grade stuff. The same thing is true with good seed corn. The plants coming from it demand better prepared fields, more careful planting and better cultivation than ordinary seed. But when given good treatment it repays its cost many times over; in fact, it is one of the greatest elements leading to success in crop production.

How Pure Seed Laws Help the Farmer

Good Laws Properly Enforced Make it Impossible to Sell You Weed Seed Unless You Want It

THERE are about fifteen states in the union which have laws regulating the sale of agricultural seeds. Among these are Iowa, Nebraska, North Dakota, Minnesota, North Carolina, Virginia, Oregon and Washington. Iowa was the first state to legislate along this line, and Nebraska was among the last, having passed its seed law in 1911.

There was no necessity for a law to punish a man for stealing from his neighbor until someone stole something. There was no need for seed laws until conditions became such that seed buyers and honest seed dealers needed protection. In years past it has not been unusual to find seeds labeled red clover or alfalfa which were from 10 to 50 per cent yellow trefoil or sweet clover. A few years ago either yellow trefoil or sweet clover could be bought for about 6 cents per pound, while clover or alfalfa were worth from 10 to 15 cents. Canadian blue grass, which costs about half as much as Kentucky blue grass, was sold for the Kentucky product or used to mix with it. Only an expert could detect such adulterations. Such conditions have caused the passage of pure seed laws.

Two Types of Seed Law

In general, the laws of the various states are very similar, mostly patterned after that of Iowa, which Nebraska copied exactly. The laws are of two types—those which prohibit the sale of certain noxious weed seeds and those which permit the sale of these weed seeds in small quantities, provided their presence is indicated on the label.

Nebraska and Iowa belong to the first class, prohibiting the sale of agricultural seeds which are not free from the seeds of dodder, quack grass, wild oats, Canadian thistle, wild mustard and cockle. The active enforcement of this law in Nebraska was begun February 1, 1914, by the appointment of a seed inspector, whose duty it is to inspect seeds offered for sale in this state.

On the list of noxious weed seeds which are prohibited from being sold, dodder will receive the most attention, as it occurs most frequently and affects our two most important forage crops. The reports of the United States Department of Agriculture seed testing division show that in years past there have been offered for sale in the Missouri valley states large quantities of alfalfa seed which contained dodder.

Weeds Originally Imported

Enormous quantities of alfalfa and red clover seed, as well as many grass seeds, are imported each year from European countries which have strict laws regulating the quality of seed which can be sold within their own boundaries, but no laws regulating what can be exported to the United States. About a year ago congress passed a seed importation act which will keep out inferior grades of seeds, but prior to that time this country has been a dumping ground for inferior European seeds—the "tailings" from their cleaning machines.

In this way the United States has become infested with dodder and other weeds which are natives of Europe. Now domestic-grown seed carries the seeds of these introduced weeds, and it is indeed time that we took action to bring about a cleaning-up process.

No farmer should consider using clover or alfalfa seed that contains any dodder seed, as the plant is extremely hard to eradicate and may cause the loss of the crop if in large quantities.

Dodder is a parasitic vine which winds itself about the stem of the alfalfa or clover plant and steals nourishment from them. It is a reddish brown, thread-like vine, having neither leaves or roots. The seeds vary in size, but are frequently too large to clean out if they once get into clover or alfalfa seed.

In order to eradicate dodder, isolated patches may be cut and burned. In case it is widely distributed, it may be necessary to cut and burn all the hay and put the field for several years in some other crop which will admit of open, clean cultivation. If dodder can be prevented from maturing seeds it can be more easily gotten rid of.

How the Seed Law Works

With the enforcement of the seed law, dodder seeds in clover and alfalfa will gradually disappear. When the inspector finds seed which contains dodder it will be condemned and ordered off the market. Wholesale dealers will soon refuse to buy seed which is not free from dodder, and the farmer will no longer be paying at the rate of from $10 to $20 per hundred for noxious weed seeds.

Every farmer should immediately take steps to rid his fields of dodder and other weed pests, especially if he produces seed for his own or his neighbors' use, or to sell to dealers. This is a thing which works in a circle. If the dealer sells good, clean seed to the farmer to sow, the farmer can produce clean seed to sell to the dealer.

What the Labels Mean

One of the most important provisions of this law is that it requires seed dealers to label all lots of one pound or over of agricultural seeds. If the seed is as good as the standard set by the law, or better, the label may bear the word, "Standard." If it is below the standard, it must tell what per cent is pure seed and also the per cent and character of the impurities. The label must also tell, when possible, where the seed was grown.

No farmer needs any better assistance in buying seeds than this—to be told exactly how pure the seed is. For instance, alfalfa to be marked "Standard" must be 96 per cent pure and 75 per cent germination. If such seed is offered for sale beside a lot of alfalfa which is only 80 per cent pure and 60 per cent germination, the buyer at once realizes the advisability of taking the better seeds, even at a few cents per pound higher price.

Heretofore it has been extremely hard to see any advantage in buying seeds marked "extra fancy" at 2 or 3 cents per pound more than seeds marked "choice" or "prime," when to the ordinary observer they looked exactly alike and in many cases were exactly alike except in price.

You Should Insist on Good Seed

It has actually been the ridiculous custom of some seed dealers, so anxious were they to give their customers what they wanted, to grade down cleaned seeds by putting back into them chaff, dirt and foreign seeds which had previously been cleaned out, in order to fill an order for cheap seed. Farmers can do a great deal toward bringing about better seed conditions by insisting on high-grade, clean seed, sold under a label giving information as to its character. The inspector will see that the dealer gives accurate information on his label by taking samples which will be tested in the state laboratory.

There is no question that the quality of seed offered for sale will improve rapidly with the enforcement of this law. No seed dealer can sell seed which is only 70 per cent pure and contains from ten to fifty different kinds of weed seeds, when he has to put this information on the label, any more than a grocer can sell granulated sugar mixed with fine, white sand if he has to tell his customers that the sand is there. Consequently, inferior grades of seeds will gradually disappear and only better grade seeds will be found on the market.

Our Friends, the Birds

Show me the field that breeds your harvest pest
Of chinch or weevil,
Where all the blossoms wither with strange evil,
Or where, in filmy tents,
The hairy creepers gorge in regiments
Your budding apple boughs;
Show your ancestral elms
Gaunt-limbed with leprosy, which overwhelms
Their green old age in death;
Or those swift locust clouds, whose breath
Blasts the ripe loviliness of spring!
Show these, and more
Than these, and cry on Ornis! She shall bring—
From hill and shore
And plain—her winged flocks and warbling broods,
And swinge away their deadly multitudes.

—Percy Mackaye, in the Century.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
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Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

According to A. H. Beckoff, county agent, 85 per cent of the farmers in Seward county, Nebraska, have their seed corn selected.

Representatives of the railway commissions of the states of Iowa, Missouri, Kansas and Nebraska are trying to secure from the Interstate Commerce Commission a lower freight rate on apples. According to the apple growers in the Missouri valley, it will be necessary to get a reduction in freight rates to compete with apples from the northwest.

The Shackleford good roads bill has passed the house by a vote of 282 to 42. It appropriates $25,000,000, to be divided, $65,000 to each state and the remainder among the states on the basis of population and the number of miles of post roads. Each state must co-operate by appropriating a dollar for every dollar furnished by the federal government. The bill now goes to the senate.

A farmers' exchange has been organized in Marion county, Missouri. Among the things listed are horses, mules, cattle, hogs, corn, oats, clover and alfalfa seed. In the first three weeks the business of the association amounted to $1,250. The exchange list is kept in the office of the county agent. There are no commissions, the purpose of the exchange being to bring buyer and seller together.

What One Little Pair of Bugs Did

Just one little pair of bugs in an alfalfa field some fifteen years ago. And they increased and multiplied and had a good time eating up the alfalfa, and no one paid any attention to them until there were so many that the alfalfa crop of a whole state was in danger. That is the story of the alfalfa leaf weevil as told on page 3 of this issue of the Twentieth Century Farmer. Then it was too late to save the fields of Utah, and now Idaho and Wyoming are affected and all our alfalfa fields are in grave danger. Money is being appropriated, men are working and studying, and for years to come we will live in terror of the alfalfa leaf weevil, even if we do not see our worst fears realized. Fortunes will be poured out of the state and national treasury to combat this little brown bug. Eventually we will conquer him, but not until many thousands of dollars are spent and lost on his account.

Suppose the man who first discovered the weevils in his field had found out what they were and warned his neighbors. Suppose the weevils' life history had been looked into by the men employed by our agricultural departments, who are paid to do just such work and would have done it had they been warned that the weevil was working in American fields. Suppose they had quarantined those fields and cleaned them and disinfected them until not a beetle remained in them. We would probably have heard nothing about the alfalfa leaf weevil and would not have realized what a danger we had escaped. Instead of this, the men in whose fields the beetles were busy paid no attention to them and the weevils flew gaily into adjoining fields, devastated them and increased to a point where it will take years to conquer them. Now they no longer depend on their wings to get about, but appear to ride at their ease in palace Pullmans. They seem to be anxious to see the country and may want to homestead in the corn belt. The only way to do if they try to make their homes with us is to be on the watch, catch them, warn our "crop doctors" and let them get busy. If any man sees a strange bug in his alfalfa field or finds evidences of the alfalfa being eaten this coming spring, in justice to himself, his neighbors and the other farmers of his state he should report this bug, sending specimens to his experiment station, or, they may be sent to us, if you prefer.

If you had trouble with any alfalfa pest last year, let us know about it. Alfalfa is one of our biggest and most important crops. It is invaluable to the farm and live stock interests of our middle western states. It is threatened by a grave danger, and the only way of combatting this danger is to take it at the beginning and work together against it. Co-operation is the big topic of the time. Let us put it into effect by co-operating against this threatened danger.

Editors and Free Passes

The editors of Nebraska are to be commended on the stand they have taken on the free pass question. The executive committee of the State Press Association has adopted a new rule on State Fair advertising. No passes will be accepted by the editors, and in the future the country press will deal with the State Fair the same as it does with the railroads and other institutions which formerly flooded the editor with free passes. Following is the resolution adopted by the executive committee:

That, Whereas, The so-called pass to the country editor seems to be a burning question of scandalous proportion with the management of the State Fair Association, and,

Whereas, The Nebraska Press Association is not a charity organization and its membership is composed of reputable business men, who are neither bribe takers nor bribe givers, therefore be it

Resolved, That this executive committee recommend that the newspapers of the state resent the imputation that it is a charity organization by declining all so-called courtesies that may be offered by the State Fair Association in the way of passes, and that in the future all notices and other forms of advertising for said State Fair Association be declined unless paid for at regular advertising rates.

Dairying in the West

The dairy train for the carrying of dairy information to the people has spread to the Rocky mountain country. Experts from the Colorado Agricultural College have organized a special dairy train on the Sant Fe lines in that state, which started February 16 and will spend ten days traversing various interested dairy sections, teaching the people how best to manage the dairy work on the western farm and ranch.

This train will consist of seven properly fitted cars for this work. It will also instruct on forage crops and the construction of the silo and the value of silage. This plainly emphasizes the growth of the dairy west and the great demand now for the dairy cow in districts heretofore regarded as the range cattle country.

Are you feeding a balanced ration that will produce both bone and flesh in your growing animals?

Where spraying is not practiced insects take one-half the apple crop. For the whole country this would mean 20,000,000 barrels.

Significant Cow Facts

Some significant facts were brought out in a recent cow test on a farm near Lander, Wyo. Fifteen cows were included in the test. The results show that 72 per cent, three cows out of four, of the pure-breds are profitable, while only 25 per cent, one cow out of four, of the grades show a profit.

The cow giving the lowest butterfat test of any in the herd (3.2 per cent) is by far the most profitable animal. This is strong evidence to the fact that the high testers are not necessarily the best cows. Many farmers have the erroneous idea that the most profitable cows must necessarily be the highest testers. The total yearly production is what counts. Hence the importance of keeping some record of each individual.

Why should any farmer feed a cow that does not pay for her board? Isn't it good common sense to keep tab on your cows so you may know whether they are paying their way or not?

Pugsley's County Fair School

Prof. C. W. Pugsley of the Nebraska University College of Agriculture suggests introducing into the county fairs of Nebraska in 1914 an exhibit from the agricultural college and experiment station. This exhibit would consist of a large collection of valuable and interesting material from the experiment station; also pictures thrown on canvas by lantern and slides illustrative of lectures to be delivered by extension department lecturers.

This is a new departure, but in the judgment of the agricultural college and its corps of instructors should be very interesting and profitable to young and old visitors at the fair. If this proves to meet the expectation of the agricultural college people and the county fair managements, it will be made a permanent feature of county fair attraction, and additional equipment will be provided to cover a larger field of exhibition than can now be considered.

The present proposition is to provide a canvas display under a tent 30x40 feet, fully equipped with exhibits of grains of all kinds, boxed and under glass; samples of soils, etc.—everything, in fact, comprising a good, well-balanced display, and such as can be made of educational value to the visitors. These displays will be taken to as many county fairs as apply for them at the actual cost of transportation, and local expense while on exhibition.

There are two very strong features in this enterprise. The one is that it will help the county fair in educating its people to become more interested in local agricultural enterprise and the importance of patronizing and taking part in the home county fairs. The other is that it would be a most practical, ingenious and effective advertisement for the agricultural college, which is entirely legitimate, and should be prosecuted with more vigor than in the past by everyone at all associated with or interested in this educational institution.

County Breeders' Association

The most profitable enterprise to which the stockmen and farmers of any county can give their time and attention is the County Breeders' Association. The breeding of good, pure-bred stock must be sustained by a liberal demand for this stock, either in the immediate locality where it is produced or from outside advertising. When a neighborhood or community has acquired the reputation of breeding pure-bred stock it has the advantage in sales over those sections or districts that are not so advantageously situated.

A community of breeders has it within its power to draw trade from outside by simply sticking together, by a little judicious co-operation in helping each other advertise. Buyers prefer stopping in a community of breeders in preference to hunting up one lone isolated breeder where they can see nothing but this one herd or flock. Organize a county association if there are not to exceed a half dozen breeders in the county, and hold combination sales in the disposal of your surplus animals.

A public sale two or three times a year may be held at some central point, under the auspices of the breeders' association, conforming in all respects to the rules and regulations adopted by the association. This is a good advertising medium for all its members and results in pointing the way to a centralized community of breeders which the public recognize as possessing purchasing advantages above and beyond that of the individual breeder. It is money to the breeder because it is comprehensive advertising. It is money to the buyer because he is afforded an opportunity to look over a community of herds in making his selections. It becomes a feature of educational interest to the public, and as a community advantage it teaches good fellowship and a higher appreciation of one's surroundings and business opportunities.

Organize the breeders' association because of the social and educational advantages it may be made to carry in building up an unprejudiced feeling among neighboring breeders. The discussions that may be developed through its meetings in the investigation of the topics of common interest to all of its members is one of the strongest features in favor of such an organizatcn.

Mares as Money Makers

What people are most interested in is a big profit on a small investment, or an easy money-making proposition where there is not much labor required, and the revenue-yielding incentive well grounded, certain and almost beyond question or doubt, except the possibilities of life and death, over which there is no seeming security other than insurance, which can be bought at reasonable cost.

What is there on the farm in way of live stock or machinery that will take the place of a team of good draft mares, or that will so fully pay their way? Besides the work they do, they produce each year a pair of colts, a prospective team, that at 3 years old will turn into the farm treasury something like $400. What other investment can the small farmer of small means engage in that will yield him such returns?

A team of good, big, strong mares will do as much work as a team of geldings, and will cost no more to keep, and when they are offered for sale have this one advantage over the horse—that they are producers and have a money-making power that the horse does not possess, and are thus worth more in the eyes of many buyers. That there is going to be an increased demand for mares of good size and good quality to be used in breeding mules there is every reason now to believe. This demand can only be supplied from the big class of mares, and there is not now a surplus of these.

There is, and will continue to be, an ever-increasing demand from the new homesteader, the little farmer, the man who has heard the call, "Back to the farm," and who is introducing himself to the soil in all its intricacies and responsibilities of cultivaton. The farm team is the first feature of necessity in the long list of supplies that he plans for his venture in agriculture, and he is very likely to have the idea of multiplication and production impressed upon him as a principle in farm operation, and of course will be looking for a team of mares.

Farming on a small scale is a business that means strict economy in all its investments and operations, because it is usually prosecuted on small capital. There is not much invested, but it is usually all the operator has, and often more than he really owns. He must economize, and his team power must help him in this feature of saving. It will pay every farmer, and especially the smaller farmers, to consider the big draft mare and remember that she is a sure money-maker.

Save the Heifer Calves

How often have we heard this proclamation issued, and how often have we seen its note of warning by the agricultural press. And yet we see and hear of the most flagrant and careless violations of good judgment and good sense by cattle owners and cattle breeders—men who are sacrificing to the veal trade their heifer calves of good breeding and inherited good quality. If all persons interested in the cattle industry could only appreciate what it means to have pure-bred stock; if they could only understand the value that all these better quality of heifer calves that are now being sacrificed for a few dollars in the veal market would represent in two or three years, when saved for breeding purposes, there would at once come a great change over the heifer market and heifer demand of the country.

There are two extremes in this heifer calf proposition. One is the advocacy of saving all heifer calves regardless of quality, a prohibition, in fact, of the slaughter of calves, especially females. This view is arbitrary and would result in great damage to the general cattle quality of the country. There are thousands of calves produced each year in every cattle-growing state that are not fit to reproduce their kind, and if continued for this purpose would add greatly to the army of scrubs that intelligence and skillful breeding are endeavoring to weed out and discard through the only legitimate and economical avenue of disposal—the beef market.

The ruthless, unbridled slaughter of good, well-bred heifer calves is a serious proposition, and one that cannot be controlled so long as the great army of feeders with interests directly in opposition to the preservation of the best, is permitted to have its way. The baby beef advocate encourages the feeding and slaughter of the best, and this feeder sentiment will prevail over the "Save the heifer calf" sentiment until such time as these choice heifer calves will command a price for their use as breeders distinctly above any price that the baby beef and veal calf demand can afford to pay.

The custom is now quite prevalent among the dairy cattle breeders and fanciers of putting the price of their choice heifer calves out of reach of the veal calf dealer. There is now a market for good, well marked dairy-bred calves of age to feed or wean that is making this class of cattle desirable to develop into milkers. The beef cattle breeders are approaching the same condition in trade for the choice, well-marked heifer calves of their several breeds. It will pay now to buy up all the choice heifer calves you have room to take care of, for future developments. It matters not whether they are representatives of the beef or dairy breeds. The demand for the better grades of cattle has started in earnest.

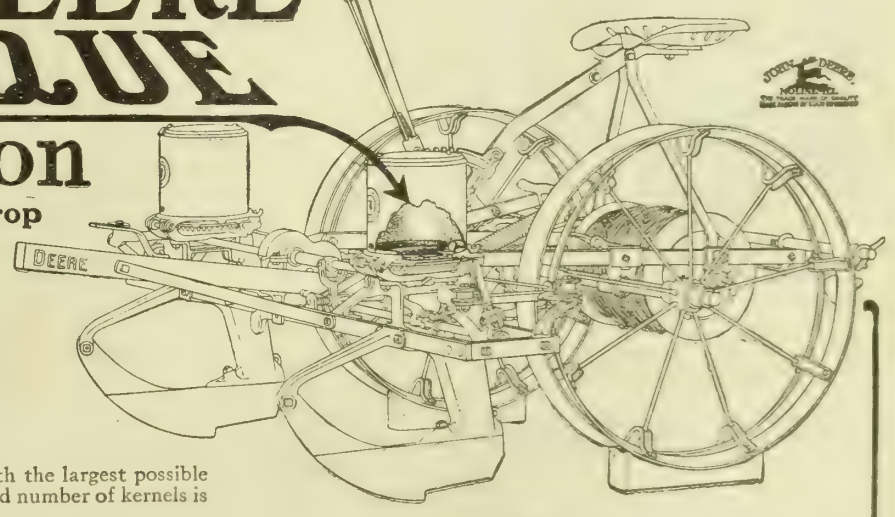
Some of the college professors are getting themselves into trouble. A prominent agricultural magazine publisher deplores the fact that some of the agricultural college professors are editing departments in farm papers, thus selling the standing given them by their official positions. On top of this comes a notice from a mid-west college that one of the professors in its engineering department has been asked to resign because he tested a mechanical apparatus for a private manufacturing firm and pronounced it good, which opinion he allowed to be quoted in its advertising matter.

JOHN DEERE OBLIQUE Selection

"Nothing takes the place of accuracy"

The "Natural" drop

This machine maintains high accuracy even with ordinary seed. With well selected seed its dropping accuracy is practically perfect.



Make your corn ground pay you with the largest possible yield, by making sure that the required number of kernels is in each hill.

The seed must be there. Every "miss" means just that much thinner stand. No amount of cultivation can make up for inaccurate planting. The loss of one ear from every hundred hills costs you the price of one bushel per acre.

For years the John Deere Company has concentrated on accuracy in planting devices. The "Oblique Selection" solves the problem.

The results of its use are so profitable that many corn growers have discarded the best of previous machines. It is as far ahead of the old Edge Drop as it was ahead of the round hole plate.

Make your spring planting the start of your biggest corn crop by accurate dropping. The John Deere "Oblique Selection" will do it. The machine is a splendid investment.

Free Book Gives Valuable Corn Facts

Write us today for free booklet "More and Better Corn". It tells you why the average yield for the United States is only 25 bushels an acre, whereas better methods have produced 125, 175 and even 255 bushels per acre in places. It also describes and illustrates the John Deere "Oblique Selection" Corn Planter. The book to ask for is No. D15.

John Deere, Moline, Illinois

JOHN DEERE

The Spreader with the Beater on the Axle.

Easy to load. Only hip high to the top and still has big drive wheels.

Here's the reason for the great strength, wonderful simplicity and good, everyday working qualities of the John Deere Spreader—

Beater and all driving parts mounted on the rear axle (patented). No strain on frame. No shafts to get out of line. No chains, no clutches, no adjustments. Only half the parts heretofore used on the simplest spreader.

Light draft because of few parts, the roller bearings and the beater and apron being driven directly from the rear axle.

BOOKS FREE Every farmer who asks about the John Deere Spreader will also receive "Farm Manures and Fertilizers". This book tells all about manure, how to apply it and how to double the value of each load by a proper system of top dressing. To get it ask for our Package No. Y15

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Empire Steel Wheels

Far stronger than wooden wheels. Cannot rot or bow. NO BREAKDOWNS. No repair bills. Life savers for horses hauling over muddy roads and soft stubble fields. Satisfaction fully guaranteed or money back quick. Write today for 30-DAY NO RISK TRIAL OFFER.

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Box 49F Quincy, Ill.

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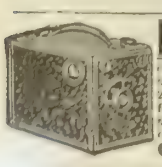

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GLOBE CO., Dept. 724, Greenville, Pa.

Hotbeds Are Easy to Make

By L. H. Cobb

THERE should be a hotbed on every farm. I suppose there would be if all farmers really knew how easy they are to make, and how little real expense. It is not necessary, nor really desirable, to use glass unless there is someone who can give such beds careful attention. Plants under glass will be practically useless unless air is given them as the weather permits, and they require so much attention that the average farmer cannot give it. I have seldom used glass at all in raising plants.

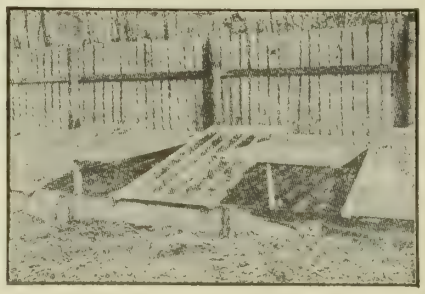
Your bed must be made right if you would succeed with it, and it is right here that most failures are made. It is not difficult to make them right, but it requires care as to details. A poor bed may heat up intensely hot all at once, and soon subside, or it may never heat at all. It may burn the plants up in spots and give no heat in others. A hotbed made right is about as certain to succeed as any undertaking where definite conditions produce a definite result.

The depth of the bed depends upon what you want to grow in it, and how early you want to plant it. A deep bed heats slowly and lasts a long time with an even slowly decreasing heat. A shallow bed heats up quicker and gets hotter at first, but will not last so long. For tomatoes or for early forcing of radishes I like a bed made about two feet deep, and not less than eighteen inches. For sweet potatoes and cabbage plants, where the beds are to be used late, I make them about ten inches to a foot. The bed should be eight or ten inches wider than you intend to make the frame.

The manure for the bed must be fresh horse manure, with not too much bedding. Never use manure that has heated until it blackened if you can get any other, for it has lost much of its heat, and do not use any that has burned until it is grayish, for it is perfectly useless. If it is not just about as wet as it will stand without water running out of it, water it, before piling, as you haul it. I always turned a hose on it as it was pitched from the wagon, one man handling the hose and seeing that it was all wet up evenly. Pile the manure the first time on high ground, so any surplus water shall have a means of running off, and you will not be able to get it too wet. It is a surprise to most persons who make their first beds how much water they need, but the regular steady heat depends on the moisture in the manure. Manure that is wet enough will not burn greyish in the bed, but will rot down gradually. When you stir the pile the first time if there are spots that are turning gray you have not given it enough water.

In a few days after the manure has been piled it will need to be forked over to mix up the first to heat with the other, thus making it heat evenly. Usually it begins to heat within twenty-four hours, and the second day can be forked over, but it will do it no hurt to remain a day longer. Fork over a second time, and then when it heats up again put in the bed.

In packing the manure in the bed care must be taken to get it as even as possible, and tramp it until it is as solid as you can get it. An even, solid bed heats evenly all over. Fill with manure to the very top of the hole you dug, and then cover with six inches of soil if for early radishes or tomatoes. Four inches will do for sweet potatoes. Put the frame on top of this soil, and then bank up a little all around it. Your bed will settle, but you must watch that it does not settle so any water from the outside can run down into



Glass-Covered Beds Must Be Well Ventilated

it. I have seen beds watersoaked after they had started to heat by having a stream of water from some ditch run into them. Look out for this, for a watersoaked bed will never heat.

Any kind of boards will make a frame, and the kind of cover you intend using will govern its making greatly. If you use glass, make a tight frame of good material, about eight inches high in front and sixteen inches at the back. If you are intending to cover it with a sheet of canvas when the weather is cold and let it go without any covering when the weather is mild, you can make any shaped frame. If you intend to use muslin or regular plant bed cloth, either on frames or in one large curtain, you will want the front lower than the back, and stays every little ways. I have used the plant bed cloth to good advantage, and frames made of it will last for years if they are kept in the dry when not in use. Some nights you might have to protect the beds by putting some heavier covering over them where the muslin or plant bed cloth are used, but seldom, unless you are starting them very early. I seldom use any covering over sweet potatoes, for the weather is getting mild before they should be planted. Plants grown under muslin or plant bed cloth get all the air they need, but the cover should be removed as much as possible to give all the light you can and harden them off, making them sturdy. Keep a hotbed well watered, for the moisture will temper the heat of the manure, but do not keep it saturated by continual little waterings.

Knowing the source and quality of your garden seed is about half the fight in producing a good garden.

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Ask any farmer who owns a Farmers' Favorite Grain Drill, and he will tell you that it would be impossible for any drill to do better work; that it will sow any seed from grasses and clovers to bush lima beans; that it puts the seed in the ground at an even depth; that it covers the seed right; that it is simple, easy on both man and team; that repair cost is small; that it does all claimed for it.

Farmers' Favorite Drills are made in both Grain and Fertilizer styles, with either Single Discs, Double Discs, Hoe or Shoe Furrow Openers. One-horse sizes up.

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Ward Fence Mfg. Co., 273 **Penn St., Decatur, Ind.**

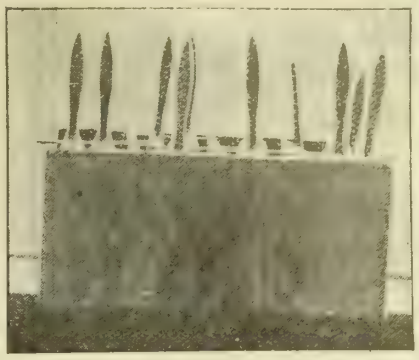
How to Keep Paint Brushes

Easy Way to Have One Ready for Use

IF AN up-to-date farmer were asked, "What is it you want and never have?" he might answer, "A paint brush that will paint."

It has been one of the most aggravating experiences of my life to find that nearly always a new brush, after being used, has been stowed away in the cellar or the barn and the paint on it allowed to harden. I believe that if we always had a good working brush on hand our outbuildings, fences, wagons and farm machinery would get painted oftener and would last a good while longer than they usually do. Very often, especially during the long winters, there occurs an hour or two in the morning or afternoon when one of the boys or the hired man could paint up one of the wagons, or perhaps the sills or doors in the parlor or kitchen. We look around, find the paint, also the brush, but the latter is as hard as stone. No use trying to soften it with turpentine. If the last man who used it had washed it in soap and hot water it would be all right now. But unless you stand over the boy or the hired man with a club he won't wash the brush. So I found that it was necessary to discover some easy way of keeping brushes that would not require much more effort than dropping them in the corner.

Finally I rigged up a water-tight tin box about two feet long, one foot wide and seven inches high. The box is divided into compartments by partitions which run from one side to the other, each partition being a little wider than the brushes it is intended to hold. Enough linseed oil is placed in the box to bring the level of the oil about five inches from the bottom. Bore a hole through the handle of each brush and thread the handles when not in use on a stiff wire a little longer than the compartment is wide. Let the ends of the wire rest on the sides of the box and the bristles of the brush hang down into the oil, which completely covers them. The bristles, however, do not touch the bottom. This arrangement secures two purposes—the bristles remain perfectly straight and soft and the



Handy Paint Brush Box

oil will keep them pliable indefinitely. The handles, of course, remain perfectly clean.

Brushes kept in this way are better than new ones, because after a brush has been used it works easier and lays on paint smoother than a new one. A painter will "break in" a new brush almost as reluctantly as we used to "break in" a new pair of shoes.

A tight tin cover for the box prevents the entrance of dust and dirt and keeps the oil from evaporating. The evaporation of the oil is so slow that it can, however, be disregarded.

Treating Seed Wheat

In recent years much wheat has been injured by closed or stinking smut. Loss from this source is deplorable, because it can be prevented so cheaply. Practically all the wheat loss from smut in Colorado is lost because of the ravages of the stinking smut. Within the last year, upon farms of which the experiment station had record, the portions of the fields which had the seed treated according to directions suffered practically no loss, and where the seed was not treated the loss varied from very little up as high as 75 and 80 per cent in extreme cases.

The cost of treatment is so cheap, so easy and simple to apply, that it would seem good policy to make an investment by treating all seed wheat for planting in the spring of 1914. The seed wheat should be run through a good fanning mill to remove all of the kernels which have the smut on the inside. These kernels are always light. Sound seed which has been run through the mill will probably have a large quantity of spores of the smut adhering to the outside. The formalin treatment kills these spores, thus protecting the crop from injury. The cost for treating the seed for an acre is only a few cents, and the saving sometimes means from 50 to 80 per cent of the crop. Can you afford to neglect seed treatment?

The Colorado experiment station keeps on hand at all times pamphlets giving complete directions for the treatment of seed. These can be obtained by addressing a letter to the director.

ALVIN KEYSER.
Colorado Experiment Station.

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finds out that coffee drinking is the unsuspected cause of various aches and ills—that

Steady nerves and a clear brain are often impossible to the regular coffee drinker.

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The Big Cylinder, the "Man Behind the Gun," the Beating Shakers which hold and beat the straw until all the grain is beaten out, are found only in the Red River Special. It will save your grain and not waste your time. You can't afford to have work done by incompetent and out-of-date threshing machines. The extra grain you save will more than pay your thresh bill. Write today for free copy of "Thresher Facts."

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You can clear an acre of stumps a day. 30 days' free trial. Guaranteed 3 years. Special introductory price proposition. Write today for big free catalog.
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"Took just 3 minutes to put very dull ax in perfect order" writes J. A. Sudan, of Newark, Del. DIMO-GRIT, the new artificial diamond sharpening wheels, quickly and easily sharpen plow points, saws, discs, sickles, ensilage knives, and all farm tools.

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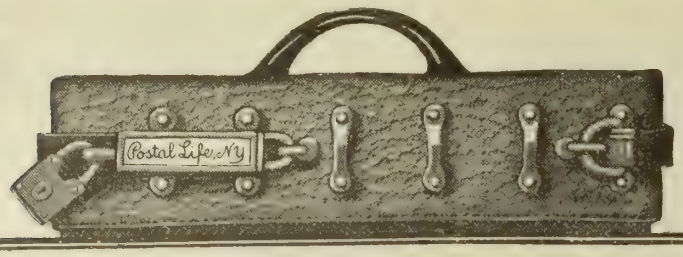
Metal frame, enclosed shaft drive, dust-proof bearings, runs easy as sewing machine. 25 times faster than grindstone, 20 times better than emery. Will not draw temper. Special attachments: forge, milk tester, jig saw, rip saw, lathe, drill, etc. Fully guaranteed. Write for free book on tool grinding and liberal free trial offer. Luther Grinder Mfg. Co. 843 So. Water St. Milwaukee, Wis

ELECTRIC Steel Wheels Save YOUR Back

Save draft—save repairs—save time—save horseflesh—save yourself. Electric Wheel Co., 53 Elm St., Quincy, Ill.



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In **subsequent** years you get the **Renewal Commission** other companies pay their agents, namely 7½%, and you also receive an **Office-Expense Saving** of 2%, making up the

Annual Dividend of 9½% Guaranteed in the Policy

And after the first year the POSTAL pays **contingent dividends besides,** depending on earnings as in the case of other companies.

Such is the POSTAL way: it is open to **you.** Call at the Company's offices, if convenient, or **write now** and find out the exact sum it **will pay you at your** age—the **first year** and **every other.**

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See How Easy It Is

In writing simply say: *Mail me insurance-particulars for my age as per* T. C. F. for Feb. 21.

In Your Letter be sure to give
1. *Your Full Name.*
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No agent will be sent to visit you; the Postal Life employs no agents.

Assets: nearly $10,000,000

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Are the best for corn cultivation
Are " " " potato "
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They avoid root pruning entirely
They slaughter all noxious weeds
They form the desired IDEAL mulch
Thus: they mature crops much earlier
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Special, adapted for Culverts, Tanks, Silos, Roofing, Siding and all forms of sheet metal work. APOLLO Roofing Products are sold by weight by leading dealers. Write for "Better Buildings" booklet.

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Grinders and have for **Thirty Years** but the **new** Ball Bearing, Fine Grinding, Light Running, Strong, Durable No. 12 is a Marvel. Grinds **ear-corn** or small grains, with **Appleton** or other 4 to 8 H P **Gasoline or Kerosine Engines.**

Silo Fillers, Huskers, Spreaders, Wind Mills, Towers, Wood Saws, Shellers, Jacks, Corn Pickers, Corn Snappers, Fodder Cutters.

Send today for **Free Circular** of this marvelous Grinder and other Goods.

GRINDERS

Buying Horses at Auction

Ways in Which Green Buyers Are Misled

"SEVEN years old and sound as a new-born colt, barring a car bruise on the left thigh!" At this a half dozen whips began to crack, and a nice little bay chunk comes galloping frantically up in front of the auctioneer's box.

How's this for a model? Guess he would fill the bill on any Fifth avenue wagon, wouldn't he? We're selling him sound and to work double. What do I hear to start him? One hundred fifty? All right, then, what will you start him at? One hundred twenty-five. Good! Let's go. Thirty! Now, thirty-five, you from Philadelphia! Forty? Thirty-seven fifty. Good! Now forty! No? Well, we'll sell him then, as we have 400 more to chug through here before night."

Everybody Comes to Town Horse Sale Day

"Wait a minute, colonel!"—this from the wearer of a big fur overcoat, hickory cane and diamond shirt stud, who has been biting vigorously upon an unlighted cigar. "That's my horse. He cost me a hundred and a half, and at that the farmer said I was stealing him. And I've fed him four days and paid the freight. You can't get that kind without putting up the money. But it's my funeral, so go ahead and sell him!"

"Men, that horse is worth more money. Forty? Forty. Good! Forty-two fifty? All right, he is yours at $140. Bring on the next!' At this the auctioneer hits the box with a piece of hose and another horse comes prancing in. Judging from the suddenness with which the deal was closed, we might fairly assume that this was a bona fide bid, and that the thirty-seven fifty bid was imaginary or made by a representative of the the owner who made the eloquent speech.

School for Horsemen

"Smooth-mouthed, sorrel mare, sound except a little boxy in the left nock, a trifle short in her back ankles, a few hairs off the heel and a speck in her right eye, but it's a long way from her eye to her heart, and she can see you a mile off. Sell her to hitch single or double. A nice lady's mare. Good anywhere and safe for anyone to drive. Alright! Let's go!"

And so it goes. A horse auction is veritably a school for anyone interested in horses. For the man who has an eagle eye and sound judgment it may be a safe place to make purchases, but woe unto the unwary or the slow thinker, for when horses are going under the hammer at the rate of one a minute there is no time for meditation. The people who are doing the selling have a habit of occasionally forgetting to mention all unsoundness. If the purchaser notices anything later which was not called, he can reject his purchase or demand a "bush" of the seller. Regular buyers on the markets are well aware of this. After the auction is over they examine their purchases carefully, and if they find anything that was not called in the ring they promptly reject them. The "innocent purchaser," however, who is not familiar with market customs, very often pays more than the animal is worth.

Waiting for Their Turn to Come

How Defects Are Called

A man at the entrance of the auction ring examines each horse just before it enters. He calls the age and mentions all defects which he can see. In doing this he often uses terms which mean but little to a person unversed in horse sale lore. For instance, let us analyze the description of the sorrel mare referred to above. She is smooth-mouthed. That means that she is somewhere between 9 and 30 years of age, the exact age being left to the bidder's judgment. "A little boxy in her left hock" is merely a nice way of saying that she has a bone or jack spavin, and this statement prevents rejection

on this ground, even if the spavin is the size of a turkey egg. Examination of the back ankles, which are said to be "a trifle short," may disclose a pair of knuckled joints, a condition commonly referred to as "cocked ankles." The "few hairs off the heel" may prove to be a wire cut which has left a mean scar and a partially misshapen foot. The "speck in the eye" may be very small or it may encompass most of the organ. In either case, the buyer cannot complain. And so it goes; the sorrel mare is sold, and unless the buyer finds some defect entirely passed over by the ring man he must accept his purchase.

All Kinds of Horses Go Under the Hammer

Now that he has bought the horse, he sees her hitched to make sure that she goes well and that her wind is good. If she should refuse to pull, he could reject her on the ground that she is "cold in the collar." If she pulls fairly well, but goes by jerks and with considerable weaving, he may reject her as a "green goer." Perhaps she trots and paces alternately; this gives the buyer a chance to reject her because she is "mixed-gaited." She is galloped once around the track and halted suddenly in front of the buyer. If she wheezes a little and her breathing is hoarse, she may be rejected for being "a little off in the air." If she roars so you can hear her fifteen or twenty feet away, she is sent back for "whistling at the crossing" and is termed a "bull."

Terms Used at Auctions

There are enough terms in common use at horse auctions to write a book about, and yet the majority of these terms mean practically nothing to a person not familiar with sale rings. A few of the more common ones might prove of interest here.

A "dimple on the shoulder" signifies a sweeney or some other depression, probably caused by some kind of collision in younger days. "Rough at the hoof head" or "hard at the heels" mean side bones; there may be one, two, three or four, and they may be any size, and still the above terms cover them in the guarantee. A "little round" signifies a curb of any size. "Full in the hock" is generally used to cover most any sized bog spavin, although some pernicious wag has started the custom of terming such a condition "a grasshopper kick on the hock." "Shaky on the knees" implies sprung knees and gives us a horse uncertain on his front pins. "A little quick in one hind leg" gives us the stringhalt. Such a horse is commonly referred to as a "crampy." A "fresh kick" refers to inflammation of some part which is evidently of recent origin, and it is generally added that "it does not belong there" and is warranted to go away. "Gilled" means a mare that has been injured in breeding. This defect is discerned by a rattling noise at the trot. A "blue eye" generally indicates that the organ has ceased to be of any use to the horse and that you are buying a half blind animal. "Beveled nippers" tell us to look out for a horse that chews wood, commonly called a "cribber" or "stump sucker."

If one knows all these terms and the many more in use, and knows horses from A to Z, then the auction ring is a safe place for him to spend his money. Otherwise better results would be secured by dealing direct with horse owners and producers in the country. H. J. GRAMLICH.

Parasitic Diseases

Parasitic diseases have caused serious losses among our domestic animals, and are often diagnozed as some other malady showing similar symptoms. Heavy rainfall serves to convey eggs and young worms from place to place. Animals pastured on low ground or on infested ground are quite liable to parasitic diseases.

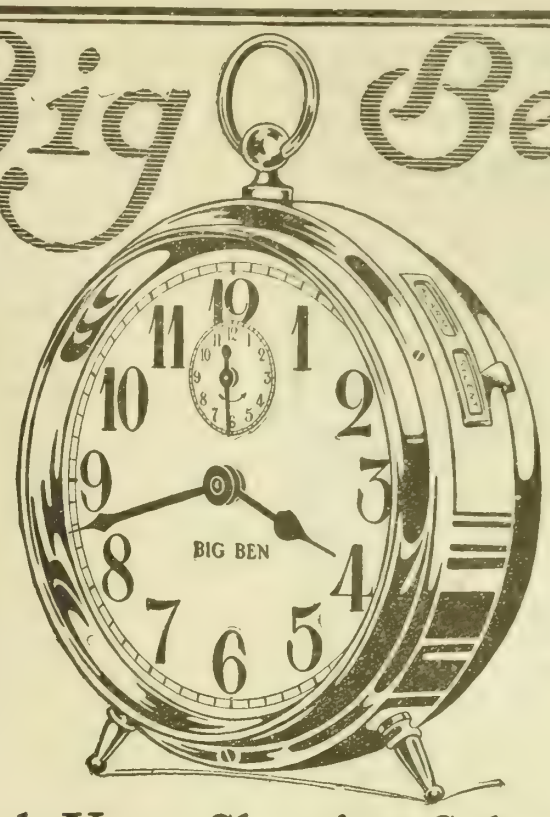
Medicine is often of little value in dealing with parasites. As soon as a dangerous parasite appears on a farm the healthy animals should be removed to high ground and allowed only pure water to drink. Pastures and yards where infested animals have been kept should be planted with cultivated crops for several years. Infested animals should have dry feed at frequent intervals and access to salt at all times.

Carcasses of diseased animals must be burned or deeply buried.—W. L. Boyd, Assistant Veterinarian, University Farm, St. Paul.

Something Worth Having

The other day a gentleman of our acquaintance made a startling statement. What he told us was too remarkable almost to be true. "How did you learn this?" asked another man in the group. "Mr. P—— told me," said the first gentleman. "Then," said the second, "it is true." Think of that! Wouldn't you be proud to be a man whose statement carries with it absolute belief? What an asset in business such a reputation would be! Well, you can have it if you want it. —American Boy.

Big Ben



Hitch Your Sleeping Schedule to Big Ben

Big Ben will wake you early enough for profitable before-breakfast action. His gentle get-up *call* starts the day with a *flying start* on thousands of farms.

For your accommodation he rings TWO WAYS. He'll get you up by degrees or in a hurry. Set him either way you wish—to give one long five-minute ring, or ten short rings at one-half-minute intervals, until you're wide awake.

He stands 7 inches tall; is triple-nickel plated over a tested implement steel coat, the handsomest and truest thoroughbred in the clock world. He has big, bold numerals and hands that show the time plainly at a glance, large keys that anyone can wind easily, and such a pleasant tone that you are glad to get up when he calls.

Big Ben makes early rising easy. He's the leader of the early morning brigade. His cheerful "good morning" ring calls millions of live wires to action. Thousands of successful farms are run on a Big Ben schedule. He starts you off right in the morning and keeps you right all day. From "Sun-up" to "Lights out" he regulates your day. He'll work for 36 hours at a stretch and overtime, if necessary. The only pay he asks is one drop of oil a year.

He is sturdy and strong—built to last a lifetime. Yet under his dust-proof steel coat is the most delicate "works." That's why his on-the-dot accuracy has won him fame.

Big Ben's wonderful sales are due to his having "made good." His biggest hit has been with folks with the "make good" habit. He stands for success—that's why you'll like him for a friend.

When 3,000,000 families find Big Ben a good clock to buy and 20,000 Jewelers *prove* he's a good clock to sell, it's evidence that he is worth $2.50 of *your* money. Suppose you trade $2.50 for him today.

If your Jeweler doesn't sell Big Ben, a $2.50 money order sent to his makers—*Westclox, LaSalle, Illinois*—will bring him to you in a hurry, express charges prepaid.

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ABSOLUTELY GUARANTEED

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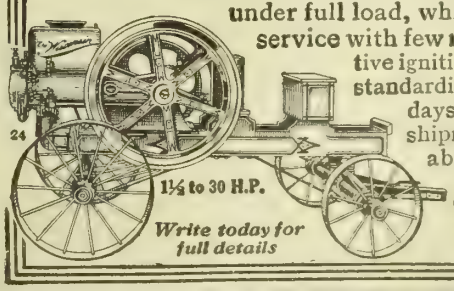

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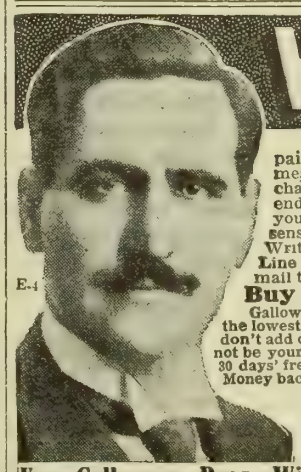

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Please send me your spreader catalog, New 1914 Special Offer and "A Streak of Gold" book free, postage paid.
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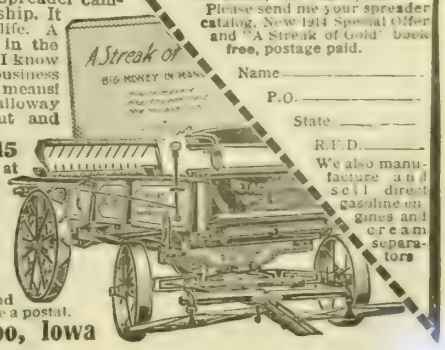

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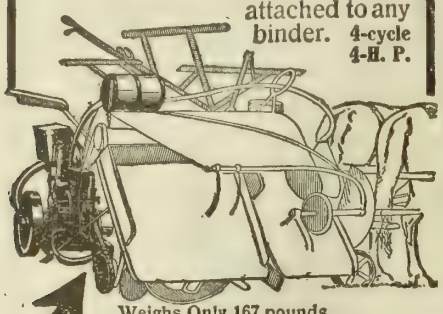
Save a Team During Harvest — Run Your Binder with 2 horses and a

Cushman Engine

Better than 4 horses without the engine. Team simply draws machine. Engine does all operating. Sickle never stops when bull wheel skids. Easily attached to any binder. 4-cycle 4-H. P.



Weighs Only 167 pounds

Quickly detached for any other farm power work. Delivers full 4 H. P. Speed changed while running. Has patented clutch pulley with sprocket for chain drive to double sprocket on binder. Schebier Carburetor. Also 2-cylinder 6-H. P. up to 20-H. P. heavy duty, light weight specialty farm engines. State size wanted.

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The Original Binder Engine

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Hot and cold running water for country homes. Complete system ready to install $37.50. Easily installed by anyone or money refunded. Enjoy the comforts of life!

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Money-Making Farms 21 states; $15 to $50 an acre; live stock and tools often included to settle quickly. More for your money in productive land near good markets here today than elsewhere on earth. Get the facts. Big Illustrated Bargain Sheet free. E. A. Strout Farm Agency, Station 3128, New York City.

35 BUSHELS PER ACRE was the yield of WHEAT

160 ACRE FARMS IN WESTERN CANADA FREE

on many farms in Western Canada in 1913, some yields being reported as high as 50 bushels per acre. As high as 100 bushels were recorded in some districts for oats, 50 bushels for barley and from 10 to 20 bushels for flax. J. Keys arrived in the country 5 years ago from Denmark, with very little means. He homesteaded, worked hard, is now the owner of 320 acres of land, in 1913 had a crop of 200 acres which will realize him about $4,000. His wheat weighed 68 lbs. to the bushel and averaged over 35 bushels to the acre.

Thousands of similar instances might be related of the homesteaders in Manitoba, Saskatchewan and Alberta.

The crop of 1913 was an abundant one everywhere in Western Canada.

Ask for descriptive literature and reduced railway rates. Apply Superintendent Immigration, Ottawa, Canada, or Canadian Gov't Agent.

W. V. Bennett, Room 4,
Bee Building, Omaha, Neb.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

The Humming Bird

The ruby-throat has wings,
But the rose has none;
Up from the flower it swings,
And floats in the sun.

A flame with wings, it floats,
Like a flower that God set free,
Fashioned of silvery notes
Caught from a moonlit sea.

Ruby-Throated Humming Bird

There are about 400 kinds of humming birds, but we only know one of them, and that is the ruby throat. If you have ever seen this tiny thing hanging in midair beside a flower, you will know why it is called a humming bird. The wings vibrate so fast that you cannot see them, holding the bird poised in the air as if by magic and making a humming noise something like a bee. The humming bird is often supposed to feed on honey, but what he is really and truly after when he plunges his needle-like bill into a deep flower cup is not so much the honey as the litle insects that hide within so deep that no other bird can reach them. His long tongue stretches out even beyond his bill, and no insect has a chance of escape.

The humming bird's nest is built high on a tree and contains two tiny white eggs. It looks like a little knot of moss set on the upper side of a limb. The mother bird hatches the eggs; she has no red patch on her throat as the father bird does, nor have the young birds the first year. While she is hatching the eggs, the father bird keeps busy bringing her food and driving enemies away, for he is a great fighter. His movements are so swift that the human eye cannot follow them, and his long, sharp bill is like a sword, so he can drive away birds and beasts much larger than he is.

If you have a trumpet vine over your porch you are likely to have a number of these little birds as visitors. They are not a particle afraid of you and will sometimes even eat from a spray of flowers held in your hand. Even though you may never have seen a humming bird, it is likely there are some about your home. They are but little larger than a bee would be if it had feathers, and they move so fast you can hardly see them. Watch and see if you do not discover a ruby throat some summer day.

HOME EDITOR.

(Prize Story.)

A Very Kind Deed

By Mary Ehman, Aged 14, Hargisville, Colo.

This story which I now am going to tell happened many years ago in the days when Indians were scattered among the woods and the white people lived near by. There was a family by the name of Mr. and Mrs. Brown and their son, Freddie, living near a tribe of Indians who were camping in the woods. Mr. and Mrs. Brown were always afraid of the Indians, but nothing had happened for years.

One day while they were eating dinner a knock was heard. Mr. Brown went to the door, and there stood an Indian with a wounded knee. Mr. Brown was fond of trapping and caught many fur-bearing animals. This Indian had been hunting, and while walking had

Ruby-Throat

stepped into one of Mr. Brown's traps, which had hurt his leg. Mr. Brown let the Indian in and gave him his dinner, and then doctored his knee. The Indian stayed for several hours and then went back to his tribe. Just before going he gave his rifle and beads to Mr. Brown's son. He also gave many thanks to Mr. and Mrs. Brown.

A long time after this, while Mr. Brown was out looking at his traps, a bunch of Indians sprang on him and took him to their camp, tied him to a tree and were going to burn him up. Mr. Brown just begged the Indians that they would let him go and say goodby to his wife and child, and said he would be right back. So the Indian that had been to Mr. Brown's some time ago begged the chief, "Let him go," and said he would stand tied up by the tree till Mr. Brown returned.

The chief gave a horse to Mr. Brown and told him to hurry back. Mr. Brown hurried as fast as his horse could go and kissed his two best friends goodbye and told them what had happened. His friends felt miserable. His wife just held him and would not let go, but he was a strong man and got away from her. She went out and shot the horse, but that could not keep him back and he ran back to the tribe as fast as possible.

When Mr. Brown got there the fire was burning already, for they now thought Mr. Brown wasn't coming and were going to burn the Indian that stood in the place of Mr. Brown. As soon as the Indians saw Mr. Brown they untied the Indian and tied up Mr. Brown again. They then made this Indian (that was tied up) a chief for his bravery. As soon as he was made chief he hurried to Mr. Brown and let him out of the fire. The other Indians now were wild over this, but the chief stood before them and told how kind the man had been to him one time, and he wanted him to live, as well as himself. So then Mr. Brown was set free and went to his home again and told how kind the Indian was to set him free. His wife and child were glad to see him. I think this was a very kind Indian.

Note—In awarding the prize to the writer of the above story we think a little explanation is necessary. The events of the story are more than improbable and the writer shows a lack of familiarity with the habits of the Indian. Nevertheless, the story is told in such an interesting way, is so evidently original and displays so much ability on the part of the writer in getting her thoughts expressed that we think it worthy in spite of its improbability.

(Honorable Mention.)

Ten Little Pigs

By Louise Hagan, Aged 10, Pitkin, Ark.

I live on a farm in Arkansas in the Boston mountains. We have a big hog. One day we missed her and thought she must be in the field, but when I went down to the barn to hunt for eggs I heard a queer sound in the stable, so I looked in, and there she was with some little pigs. I was afraid to go in alone, so I ran up to the house and told papa. He put on his hat and went to the barn and found six of the cutest little pigs you ever saw, one white one and some spotted ones. After a while he went out to feed the old hog and found four more red ones, making ten in all. She had carried a lot of straw and made her a fine bed, and the others had been covered up with the straw.

I like to watch the pigs get up to their table and eat. Some of them haven't very nice manners. They will shove the others away and snatch their dinner from them. The old mother is very proud of her babies and will come and tell us about them.

Story of My Life

By Arthur Baker, Aged 13, Bennington, Neb.

I am a fox terrier. My name is Nemo and I like to go hunting. When I see my master come out of the house with his gun I run and jump about him. We go hunting quite often. We have killed over fifty rabbits and two coyotes this winter. One coyote bit my front leg and I could not walk for several days. After I got well I would always run up to my master when I saw a coyote.

I love my master very well; he feeds me meat. My master is a storekeeper; he is building me a house. It is going to be made of cement blocks. I like to play with my master's little girl; she is 5 years old. When she started to school I was very lonesome without her. I run and meet her every night after school. One day as I was going to meet her a wagon ran over my leg. When my leg healed I could not walk very well. I have been with my master for ten years and he says he would not part with me.

Additional Stories

Everett Van Horn, North Loup, Neb.; Louis P. Romershauser, White, Neb.; Rex Miller, Lexington, Neb.; Mabel Dial, Hershey, Neb.; Opal Haggard, Trumbull, Neb.; Madge Squires, Decatur, Neb.; Leslie Oliver Weston, Norway, Ia.; Francis Lamb, Stuart, Ia.; Josephine M. Cooney, Lawler, Ia.; Grace Keyser, Randolph, Ia.; Estle E. Jones, De Kalb, Mo.; Macie Bass, St. James, Mo.; Mary E. Coulter, Clyde, Mo.; Dora Crook, Center, Utah; Lillian Eklund, Winthrop, Minn.; Sam Schroeder, Mt. Lake, Minn.; Imogene Crosby, Deming, N. M.; Elsie Anderson, Alamosa, Colo.; Ada Jaynes, Roscoe, Tex.; Rufina Reitober, Viola, Kan.

Of Interest to Our Women Readers

Flowers of the Dark

After the last high cloud is ashen cold,
The last bright landmark dwindled strange and far,
They bloom across the dusk in broken gold
Beneath the first faint star.

Some by the river, some upon the height,
One in a little cleft 'twixt hill and hill—
Luminous, lovely, while the the brooding night
Shelters them warm and still.

Homes, blessed homes! here clustered, here apart,
On the gray gloom unfurling, rose by rose;
Each with a crimson hearth fire at its heart
They tenderly unclose.

Till all the land's a garden fair and still,
And far, a toiling pilgrim, I can mark
One in a little cleft 'twixt hill and hill—
My flower of the dark!

—Nancy Bird Turner, in Ainslee's.

Our Home Chat

At a public meeting of housewives held recently one speaker said that she once knew a girl who worked her way through college, and that a large part of her income was made by writing "hints to housekeepers" for the popular home magazines. This girl was not an experienced housekeeper, but she had a good imagination, and she said that the more wild and impractical the hints were the more readily they sold. Another girl, who had had real experience in home management and discovered many little shortcuts that were practical, was unable to sell her ideas to the magazines. Thus are the household discovery columns of your magazine often filled.

Any intelligent woman who keeps house for a few years learns a number of little ways whereby her labor may be lightened and its results made satisfactory. On account of differences in character and circumstances, every woman does not make the same discoveries that every other woman does. For this reason there is no better way of increasing your efficiency as a home keeper and manager than by associating with other women engaged in the same work and exchanging experiences with them.

There never was a healthy, successful women's club that did not help its members in just this way. The problems of the home come first with any real woman, and when two or three of them are gathered together you will always hear discussions going on and experiences being recounted of meeting the difficulties that confront us and overcoming them.

No one can help you live your life and do your work so successfully as your neighbor, and to no one else is your experience so interesting and valuable. The meeting of a club of neighbors to sew and chat thus becomes a source of inspiration to each of its members, and the time spent in attendance is more than made up in the increased interest it gives in the work of the home and the little time and labor-saving methods unconsciously learned.

The charge is sometimes made—by men—that these clubs often become merely spreaders of malicious gossip. This is most unjust. Malicious gossip should be guarded against like a contagious disease, but the women on the farm ordinarily have too much of real interest to talk about to waste their time on anything so barren of profit as gossip. HOME EDITOR.

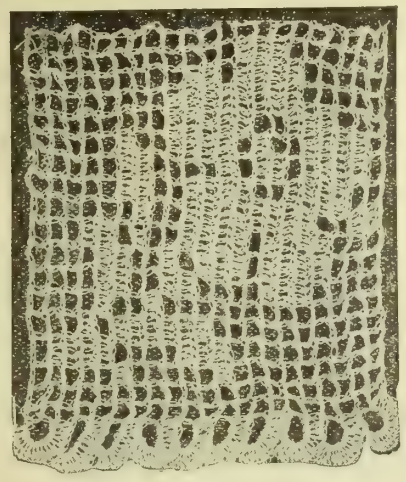
Primrose Filet Lace

This lace is made from No. 50 linen thread. Eight flowers make one yard of lace. If one wants a pattern for a lace six inches wide, yet not at all tedious to make, I feel sure that this pattern will prove satisfactory.

Make a chain of fifty-two stitches.

First Row—Make 1 tr. in 6th stitch of chain, ch. 2, miss 3, * 1 tr. in next stitch, ch. 2, miss 3, 1 tr. in next stitch. Repeat from star to form 18 spaces; turn.

Second Row—Ch. 5, * tr. in top of tr., ch. 2, 1 tr. in top of next tr.



Repeat from star to form 14 spaces, 1 tr. in each stitch of next space (4 in all), 3 spaces as before, ch. 6 and fasten with d. c. at beginning of 1st row, ch. 3; turn.

Third Row—14 trs. under ch. 6, 1 tr. in top of each tr., 3 spaces, 1 space of trs., 14 spaces; turn.

Fourth Row—9 spaces, 1 tr. in every stitch of next space (4 in all), 3 spaces, 1 tr. in every stitch of next 2 spaces, 3 spaces, ch. 6 and fasten with d. c. between 4th and 5th trs. of scallop, ch. 2; turn.

Fifth Row—14 trs. under ch. 6, 3 spaces, 1 space of trs., 1 space, 4 spaces of trs., 9 spaces; turn.

Sixth Row—5 spaces, 3 spaces of trs., 2 spaces, 2 spaces of trs., 1 space, 1 space of trs., 1 space, 1 space of trs., 2 spaces, ch. 6 and fasten between 4th and 5th trs. of scallop, ch. 2; turn.

Seventh Row—14 trs. under ch. 6, 4 spaces, 1 space of trs., 3 spaces, 4 spaces of trs., 6 spaces; turn.

Eighth Row—12 spaces, 2 spaces of trs., 4 spaces, ch. 6 and fasten as before, ch. 2; turn.

Ninth Row—14 trs. under ch. 6, 4 spaces, 1 space of trs., 1 space, 2 spaces of trs., 4 spaces, 3 spaces of trs., 3 spaces; turn.

Tenth Row—2 spaces, 4 spaces of trs., 1 space, 3 spaces of trs., 1 space, 1 space of trs., 1 space, 2 spaces of trs., 3 spaces, ch. 6 and fasten same as before, ch. 2; turn.

Eleventh Row—14 trs. under ch. 6, 3 spaces, 2 spaces of trs., 2 spaces, 4 spaces of trs., 1 space, 4 spaces of trebles, 2 spaces; turn.

Twelfth Row—3 spaces, 8 spaces of trs., 3 spaces, 2 spaces of trs., 2 spaces, ch. 6 and fasten as before, ch. 2; turn.

Thirteenth Row—14 trs. under ch. 6, 7 spaces, 4 spaces of trs., 2 spaces, 4 spaces of trs., 1 space; turn.

Fourteenth Row—1 space, 3 spaces of trs., 1 space, 2 spaces of trs., 1 space, 1 space of trs., 9 spaces, ch. 6 and fasten as before, ch. 2; turn.

Fifteenth Row—14 trs. under ch. 6, 6 spaces, 4 spaces of trs., 1 space, 1 space of trs., 2 spaces, 3 spaces of trs., 1 space; turn.

Sixteenth Row—2 spaces, 3 spaces of trs., 2 spaces, 5 spaces of trs., 6 spaces, ch. 6, fasten, ch. 2; turn.

Seventeenth Row—14 trs. under ch. 6, 6 spaces, 8 spaces of trs., 4 spaces; turn.

Eighteenth Row—4 spaces, 4 spaces, 4 spaces of trs., 1 space, 2 spaces of trs., 7 spaces, ch. 6, fasten, ch. 2; turn.

Nineteenth Row—14 trs. under ch. 6, 10 spaces, 3 spaces of trs., 5 spaces; turn.

Twentieth Row — 5 spaces, 2 spaces of trs., 1 space, 1 space of trs., 9 spaces, ch. 6, fasten, ch. 2; turn.

Twenty-first Row—14 trs. under ch. 6, 9 spaces, 1 space of trs., 8 spaces; turn. Repeat from second row. MRS. GILBERT.

Pin Money from the Garden

There are advertisements in every newspaper, and in many journals devoted exclusively to women's interests calling for home workers on aprons, shields, belts, etc., and I have known more than one farmer's wife or daughter who has eagerly sent for the materials, which are furnished "free," and after following directions minutely and spending many weary hours in making up the articles, received no returns at all, because of some defect in her work, apparent only to those who had given out the material, and thus made her deposit and had her labor for nothing.

I have never been "bitten" by such fakes, even though I have needed money as badly as anyone, and have earned it, too, but I depended upon work which did not leave me at the mercy of someone not at all interested in my welfare, and who could be reached only by tiresome correspondence. My way of "earning money at home" has been to cater to the appetites of the people who could appreciate good things to eat, prepared with careful regard to purity of ingredients and cleanliness in putting up and who paid me a fair price for the goods I sold them.

I had always been praised by my friends for the catsups, pickles and other relishes that I served on our table, and many a jar found its way as a present to them, till one more thoughtful than the others suggested that I sell some to her, as she would not accept any more as gifts. I was only too glad to do this, and placed a price on each jar, can or bottle corresponding to what the grocer asked for factory stuff of a similar kind and not only sold to my friends, but to strangers as well.

To obtain customers among those who did not know me nor my prod-

(CONTINUED ON PAGE THIRTY-ONE.)

Wall Paper at Half Price

If you plan to paper this spring, send a postal for our big, free, money-saving catalog showing actual samples of latest wall papers, with colored illustrations of finished rooms papered with each style according to latest ideas in decorating, for each room in your home.

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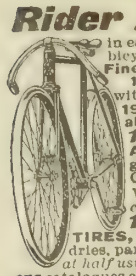

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Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6074—Boys' Russian Suit—The blouse closes at the front and is becomingly plaited, while a belt holds it in place. The neck is finished with a turndown collar. The sleeves are plaited to correspond and may be left plain or finished with a band cuff. The trousers are finished with legbands or elastics. The pattern 6074 is cut in 2, 4 and 6 years. Age 4 years requires four yards of twenty-seven-inch material.

6209—Ladies' Skirt—Serge, cheviot or broadcloth can be used to make this skirt, which is cut in three gores and is made with the high waist line. The closing is made at the front. The pattern 6209 is cut in sizes twenty-two to thirty inches waist measure. Medium size requires two and five-eighths yards of forty-four-inch material, or two and five-eights yards of fifty-four inch.

5217—Ladies' House Dress—Many women prefer the house dress to a kimono and here is an excellent pattern for making such a garment. This garment closes at the front and can be made with either the long or three-quarter length sleeves. The skirt is cut in seven gores. The pattern 5217 is cut in sizes thirty-two to forty-four inches bust measure. Medium size requires five yards of thirty-six-inch material.

6299—Ladies' Dress—A dress waist with a full vest, a small collar and a peplum is here joined with a two-piece skirt to form a costume. Plain and figured crepe, plain and figured linen, messaline, both plain and figured, and gingham of the same style will be effective developed by this design. The dress pattern, No. 6299, is cut in sizes thirty-four to forty-two inches bust measure. Medium size requires four and five-eighths yards of thirty-six-inch material.

6059—Ladies' Shirtwaist—Here is a pleasing example of the new style plain shirtwaist. The waist is made with a square yoke front and back to which the body of the garment is gathered. Linen, madras, pique or silk may serve splendidly for development. The pattern 6059 is cut in sizes thirty-four to forty-two inches bust measure. Medium size requires two and three-eights yards of thirty-six-inch material.

6140—Girls' Dress—Serge, cheviot or linen can be used to make this dress with the collar, cuffs and belt of a contrasting material. The dress closes at the front in Duchess style and is made with a two-piece skirt. The pattern 6140 is cut in sizes 6 to 12 years. Age 8 years requires two yards of forty-four-inch material and three-quarters yard of twenty-seven-inch contrasting goods.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

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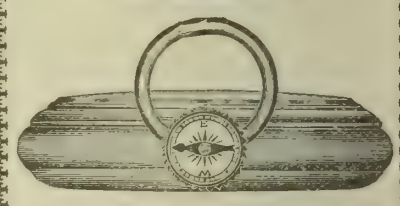

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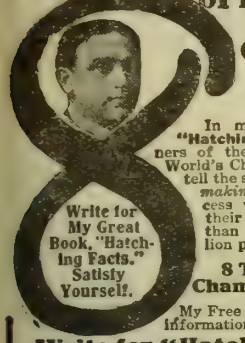

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

TWO farmers may be living side by side as near as a moderate sized farm might allow. One may count a big profit every year from the flock he feeds, the other count nothing worth while at all, though he may feed as well as his neighbor; in fact, he might feed better, but carelessly, and this in part makes the difference. Then when spring time comes the farmer on the profit side will report big hatches both from hens and incubators, and show everywhere ground overrun with lusty chickens, while on the other farm the hatches are slow, with perhaps only about fifteen or twenty chickens out of 100 eggs.

While there might be in certain cases other reasons for the losing flock, the real cause generally is lack of vigor in the majority of the fowls composing it. In the one case the farmer kept his flock up to the highest point of vigor; in the other the fowls from one or several reasons had been allowed to weaken until the flock at large was far below par in vigor, and this lack had become hereditary. Year after year I have seen the same old routine of loss. First, too many adult fowls dying off in the spring from cold, indigestion or roup, which is usually inherent in a nonvigorous flock, and more often than not the real cause of the continued lack of vigor year after year. Later too many of those strong enough to survive past chickhood will grow light, the feathers will get dead or scanty, the head may in instances take on the "crowbill." Backs may hump up, breastbones crook, showing the lack of good circulation and nerve force. These will be found dead some morning in the coop or lying around where they suddenly dropped over dead. Then, when the cold days of fall come on, the roup and digestive troubles may again appear, or, if some epidemic comes on the grounds, then the death rate will be high because of no resistive power. It is often a wonder how this farmer manages to keep over much of a flock at all, but some members of even a non-vigorous flock will manage to survive for a couple of years.

When the flock shows such a persistent lack of vigor it is usually best to sell it off to a last hen and put in new stock known to be vigorous. Then work to keep it that way; or, one might select some hens showing plainly they have had the vigor to survive and show up strong, then add the new members to these, being sure to put in vigorous blood on the male line.

The rules for keeping a flock vigorous are simple, but this does not say they are always easy to follow, because there must be no haphazard feeding, housing and allowing sickness or any signs out of the normal to go unnoticed for one day in the flock. Vigilance along these lines, and knowing how to meet emergencies when they appear, are what counts. Don't get the idea in your head that a chicken is only a chicken and a few more or less sick don't count, because it does when it comes to counting the profits at the end of a season, and when the neglect has undermined the vigor of the whole flock, then you have trouble with chickens always on your hands.

The poultry industry is of too much importance to the country at large to neglect the flock and allow its lack of vigor to keep it sick and a losing proposition, for such a flock, if the farmer feeds it at all, scarcely pays for its feed. It should, by all right, be thought as honorable to keep the poultry flock vigorous as the sheep, hogs or any other farm animals.

The Incubator

Every spring complaints come in of the new incubator not working properly—that is, the incubator is thought to be to blame. The fertile eggs die at any stage before hatching, and often those that do hatch are weak. At first suspicion falls on the eggs, but if the trouble is repeated it appears that the machine or its caretaker are at fault. If the machine is set up right and the thermometer true, then the fault must lie with the operator, who fails to understand how to apply directions. There are parties owning incubators who never learn. It isn't in them to do anything with regularity. The turning of the eggs is neglected, the flame is either too high or too low, the lamps are never filled until the smell of smoke announces that the wick is dry. Such persons give any machine a bad name.

But if your machine persists in giving you poor hatches and you are running it carefully, it would be well to look after that thermometer and make a test of it. A fall often puts a thermometer out of business, and you may not guess it. You might be running the heat entirely too low or too high, and this would be of all causes the worst for the hatch. Say the thermometer was constantly showing from 100 to 103, when at the same time the heat was running as high as 109 in the incubator, as it could do, and you might not guess it. In this case the results are bound to be bad. It is well to borrow a thermometer known for a certainty to be all right and test your own with it. If the thermometer proves not at fault, next it will be a good idea to get some extra advice from the manufacturer of the incubator. Somebody, of course, must give the new incubators a start, but it is handiest to rely on the old and long-tested.

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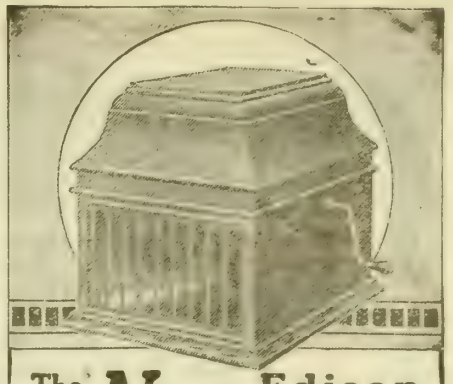

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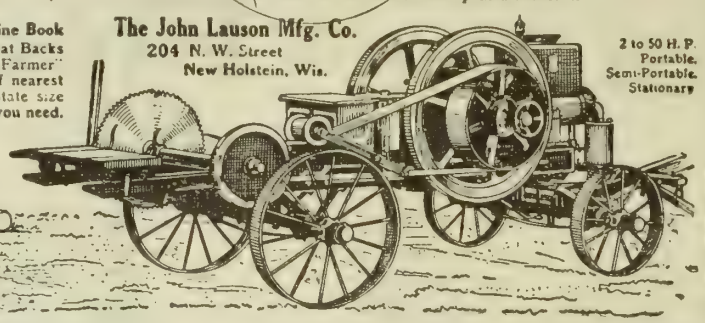

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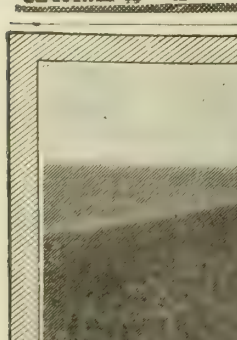

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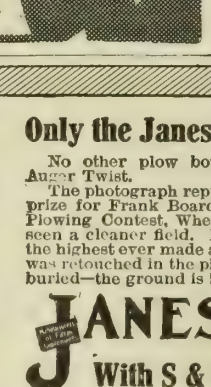

Only the Janesville Can Do Work Like This

No other plow bottom can duplicate the work of the S & S Auger Twist.

The photograph reproduced here shows the work that won first prize for Frank Boardman, of Wheatland, Ill., at the Wheatland Plowing Contest, Wheatland, Ill., Sept. 27, 1913. You have never seen a cleaner field. His plowing score was 99 per cent perfect—the highest ever made at any accredited plowing contest. Nothing was retouched in the photograph—not a stubble in sight—all trash is buried—the ground is broken thoroughly.

JANESVILLE PLOWS

With S & S Auger Twist Mould Boards Turn the Furrows that Grow Bumper Crops

It's the work in the field that counts. That's why the Janesville won the sweepstake prize in all plowing contests entered at Grant Park, Wheatland and Big Rock, Ill., last fall.

The first prize at Grant Park, Sept. 27, 1913, was won by a 14 year old boy. Skilled plowmen did their best in previous contests and could not win until they used the Janesville.

A Janesville plow means better crops—less work—lower cost per acre. It is light in draft, flexible, of course, but it's the bottom that does the work. The S & S bottom is on all Janesville Plows, including walking plows.

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It's a truly elaborate piece of literature. Shows photographic views of field work that won prizes—with complete story of every contest. Immensely valuable. Copy mailed free to anyone who writes.

Janesville Machine Co., 33 Center Street, Janesville, Wis.

Ecuador and the Great Canal

By Frank G. Carpenter

GUAYAQUIL, Ecuador — Guayas river is to South America what the Columbia and the Yukon are to our continent. It is the biggest stream which flows into the Pacific, and in rainy season it turns the lowlands from here to the Andes into a great swamp or lake. Where the ships come in from the ocean the river is sixty miles wide, and as you sail up to Guayaquil you seem to be passing through a great inland sea. The water is as thick as pea soup and of much the same color. The Andean floods bring

The Great Cathedral

down patches of green, and great trees may be seen floating out to the sea. In coming in you pass the Island of Puna, where Pizarro first landed; and about sixty miles farther up you find yourself in front of this port.

The river is now a mile wide and twenty-six feet in depth; and it gives a good and safe harbor for steamers. Just now it has but little shipping on account of the plague, but there are hundreds of dug-outs, canoes, rafts and cargo boats in which the Indians bring their wares from the interior to sell. The ocean vessels anchor far out in the stream, and are unloaded by lighters. The only wharves of the city are those for small craft. Nevertheless they extend for a mile or two up and down the west bank of the river, and are backed with great warehouses and stores which are open at the front so that you can see everything in them as you go along the street.

Guayaquil Imposing City

From the ship's deck Guayaquil is imposing. It is a town of about 100,000 people, and as the most of its houses are of only one or two stories it covers a great deal of ground. It has wide streets and buildings that at first sight seem to be of stone or of brick covered with stucco. They are really of wood, plastered over and painted ,and most of them have walls of bamboo cane upon which mud has been spread and smoothed down with a trowel. The city has some public improvements. It has an electric street car line and electric lights. It has public squares which are beautifully kept, and its hospitals are as good as can be found in South America. It has a half dozen newspapers, several high-priced hotels and it does an export and import business amounting to $18,000,000 or $20,000,000 a year. It is, in fact, the New York of Ecuador, and if it could be made as healthy as Panama it might be a great resort for tourists and trade.

But before I go further, let me tell you something of the South American republic, which is to be brought to our doors by the Panama canal. Heretofore the steamships from our Atlantic coast have had to go more than 10,000 miles around by the Strait of Magellan to reach it. When the canal is open New York will be nearer by ship to this port than it is now to Great Britain. Boston will be only a little over a week from any part of Ecuador, and our gulf ports will be still nearer. As it is now, Guayaquil is less than 800 miles from Balboa, and the railroad that is building from the Bay of Caraquez to Quito will bring the capital of Ecuador to within three days of Panama. The contract for that road has been let to a French company. The trains were in operation last year over about forty miles of track, and the road should be completed by the time of the opening of the great ditch at Panama.

The word Ecuador means equator, and Ecuador is a land of the equator. That hottest line on the globe passes through it and the whole of it lies in the tropics. The country is a triangle, surrounded by Colombia, Brazil and Peru. It lies on the west coast of South America, in the shape of a fan whose handle is in northern Brazil and whose scalloped rim is washed by the Pacific ocean.

Ecuador Little Known

Next to Colombia, Ecuador is the nearest republic to us, and still it is one of the least known. Parts of it have never been surveyed and today the estimates of its size range from the bigness of California to that of Texas. The most authentic figures now place it at 116,000 square miles, an area equal to that of Ohio, Virginia and Indiana combined.

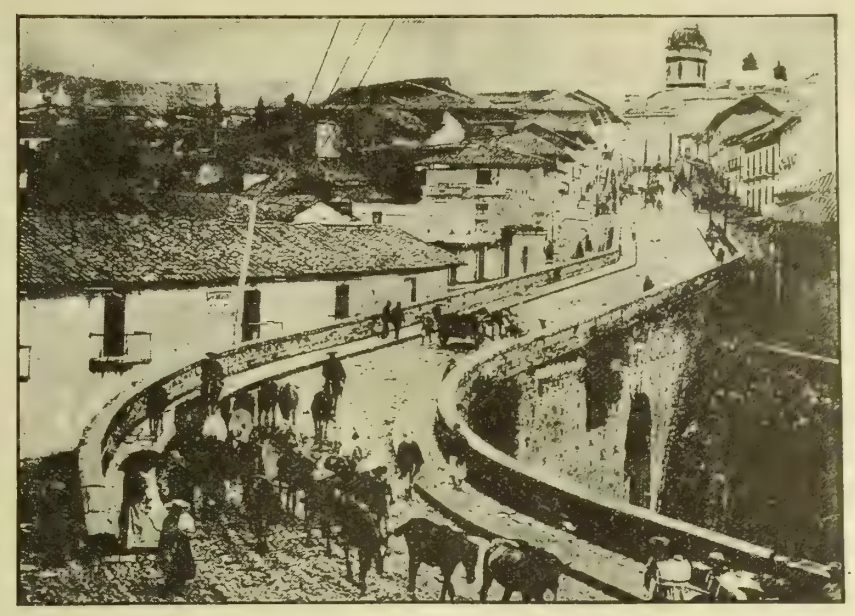
The most of the country is taken up by the Andes. The coast line is low and a tropical vegetation extends from the ocean back to the foothills. The Andes cross the country from north to south in two great ranges, upholding between them a series of beautiful valleys, in which about nine-tenths of the natives now live. These valleys are higher above the sea than Mexico City and they have a climate more like that of New York or Ohio than of the equator. Quito, the capital, is situated in one of the highest of these Andean valleys. It is 9,500 feet above the sea, or almost two miles above the altitude of Washington city. In that city the weather is like October or our Indian summer all the year round.

On the eastern side of the Andes the land slopes from the temperate zone to a tropical wilderness. It reaches the tributaries of the Amazon, and some of the streams of Ecuador flow into that mighty river. Indeed, it is said that Quito is only four days by mule from streams that flow into the Amazon system. The government is now building a railroad system from the plateau to one of the Amazon tributaries and this road will open up a rich mining region with lands suited for sugar cane, cacao and coffee.

Ecuador has some of the greatest volcanoes on earth. The great series of

valleys of which I have written is walled up by twenty-one peaks, ranging in height from three to four miles, and there are seventeen other peaks which are more than two miles in height. When I last visited Guayaquil the air was filled with ashes that came from one of Ecuador's ten active volcanoes. For this reason the houses have to be small. They are built to withstand the earthquakes, the wooden timbers being so joined that they can sway with the trembling of the earth and not break.

One of the great tourist routes of the future will, I believe, be to Quito. The ships will come via Panama to the Bay of Caraquez and the tourists will go over the French railroad, a distance of 186 miles up to the capital, or they will come to Guayaquil and take the American-built road from there over the Andes. The Guayaquil-Quito road is now in operation. The fare is $17.50 each way, and the trains require two days for the journey. You cross the Guayas river early in the morning and by 6 o'clock are moving from the railroad station at Duran, through seventy miles of tropical lowlands. There are pastures containing herds of fat cattle, cacao groves, loaded with their squash-like fruit, which hangs close to the trunks and branches, and many little villages with houses on piles so that the first floors have to be reached by a ladder. The houses are thatched with broad white leaves tied to a framework of bamboo cane. The floors are of cane, and the cracks are so many that the women do not need to sweep, for the dirt of the household falls through to the ground or the water. You pass little banana plantations, go through forests loaded with orchids, and finally stop at Bucay, which is fifty-seven miles away. The speed of the train so far has been not quite twelve miles an hour, and you have risen to an altitude of less than 1,000 feet. In the next three hours you rise 3,000 feet, to Huigra, and from there go on up, up until at last you reach Urbana, which is 11,841 feet above the sea. This is the highest station on the road. You stop over night during this journey, and it takes you about the whole of two days to come to Quito, the Ecuadorian capital.



One of the Main Highways of Quito

Preparing for a Boom

I am told that Quito is preparing for a boom when the canal is completed. It hopes to become a tourist resort for both winter and summer. It is one of the healthiest cities on earth, and if J. G. White & Co. can make a healthy gate to it, it will no doubt have visitors and excursions from all over the world. The city has now 100,000 population. It has several hotels. It has electric lights and telephones, and there is talk of putting in a street car line to be run by electricity generated from the rivers nearby.

The town lies on the slope of a volcano, and there are a dozen other volcanoes in sight, among which are Cotopaxi and Chimborazo, each of which rises about two miles above the plateau. I am told that you can take an automobile in Quito and ride to the crater of the volcano behind it.

Quito has fine government buildings and enormous churches and convents. It has colleges, a cathedral and a theater subsidized by the government with troupes that come from up and down the coast. One of the odd features of the theater is the boxes for people in mourning. These have shutters which fit down over them in such a way that the inmates can see out over the slats or by moving the shutter a little can look down upon the audience without themselves being seen. When in deep mourning it is customary for the afflicted to use the slats only, but later on the whole shutters are gradually opened.

As a tourist resort Quito has many interesting features. It is one of the historic cities of the new world. It was founded almost a hundred years before the Boston cows began to outline the first streets of that city. The Indians had a capital there when Pizarro came; and Atahuelpa, the Inca monarch, who was killed by Pizarro, had a home there whose roof was plated with gold. The city then contained vast treasures, which were buried by the Indians in order that they might not fall into the hands of the Spaniards. The city of today has a considerable Indian population, although most of its people are whites. The Indians come in from miles around to trade, and the crowds in the market are of a dozen different tribes and of many picturesque costumes. The most of them are very religious, and they go from church to church saying their prayers. Only a few of them can read and write, but they are superstitious and are largely controlled by the priests.

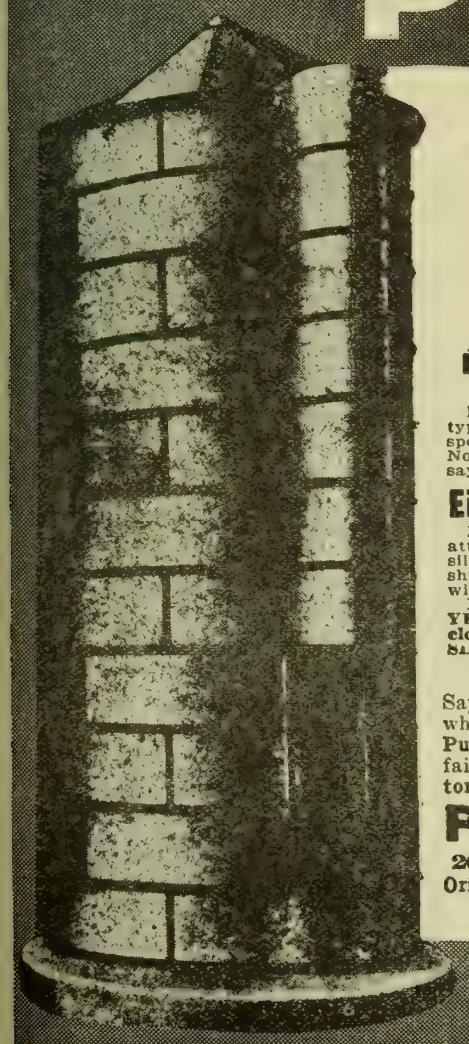
Protestant Bar Lifted

Until recently Ecuador was altogether Catholic, and until about eighteen years ago its constitution prohibited any other worship. Since then laws have been passed giving full religious liberty, and the Protestants have sent in missionaries and tons of Bibles have been carried over the mountains and scattered throughout the land. The principal religion is still Catholic, and it will probably always be so, although the introduction of the purer and better Catholicism of North America will change the church from what it now is.

The people of Ecuador are now in the throes of a revolution. The outs are try-

(CONTINUED ON PAGE TWENTY)

LEARN WHAT THESE MEN HAVE TO SAY about the PERFECTION METAL SILO



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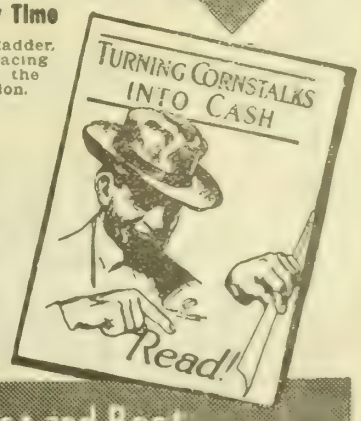

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is made so good in my factory that I will send it anywhere in the United States without an expert to any inexperienced user for a ninety day free trial to test against any make or kind that even sells for twice as much and will let the user be judge, because it's the most modern—the most sanitary—the most scientific—the cleanest skimmer—the most beautiful in design of any cream separator made today and I have seen them all. Write me and I will tell you how to make money in the dairy business when the pastures are dried up in summer. I did it on my own farm and know. Get my proposition now. It's so good that no dairyman who owns two or a hundred cows can afford to be without it. All I ask you to do is to first get my proposition before you decide to purchase any cream separator of any make, kind or at any price. Just drop me a postal. Address

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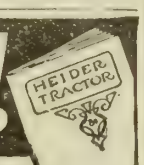

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Our free book proves by actual figures that you save money by selling your horses and buying a Heider Tractor. Tells how to make your farm pay more. Don't delay, write at once.

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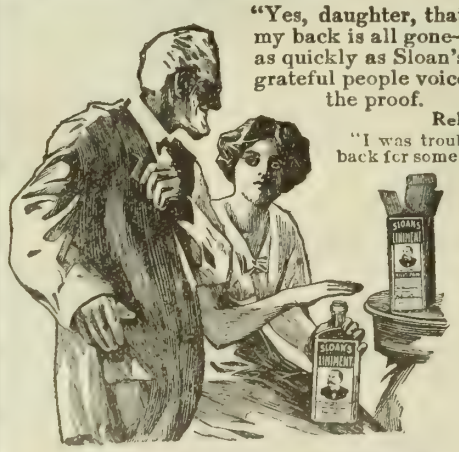
"Yes, daughter, that's good stuff. The pain in my back is all gone—I never saw anything work as quickly as Sloan's Liniment." Thousands of grateful people voice the same opinion. Here's the proof.



Relieved Pain in Back.

"I was troubled with a very bad pain in my back for some time. I went to a doctor but he did not do me any good, so I purchased a bottle of Sloan's Liniment, and now I am a well woman. I always keep a bottle of Sloan's Liniment in the house." — *Miss Matilda Cotton, 364 Myrtle Ave., Brooklyn, N. Y.*

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"We have used Sloan's Liniment for over six years and found it the best we ever used. When my wife had sciatic rheumatism the only thing that did her any good was Sloan's Liniment. We cannot praise it highly enough." — *Mr. Perigo, Des Moines, Iowa.*

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"I was ill for a long time with a severely sprained ankle. I got a bottle of Sloan's Liniment and now I am able to be about and can walk a great deal. I write this because I think you deserve a lot of credit for putting such a fine Liniment on the market and I shall always take time to recommend Dr. Sloan's Liniment."—*Mrs. Chas. Rouse, Baltimore, Md.*

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Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Sheep Queries

T. A. H., Iowa: We would be pleased to have answers to the following questions:

First—Is there any way to free sheep from ticks but to dip?

Second—Is dipping safe in cold weather, and will it give them a setting back in fattening?

Third—We were advised by a sheep man to mix sulphur with the salt to destroy the ticks. Will it do it? Is there any danger attending it? What should be the dosage?

Fourth—We are feeding ensilage to our lambs. Is a small amount of mold dangerous? If so, in what way would it affect them? Is ensilage that is slightly frosty or frozen dangerous to lambs or sheep?

Answer—First, no reliable way but to dip in some of the disinfectant dips.

Second—Dipping is not practical in cold weather and can be recommended only in warm or moderate weather.

Third—The sulphur fed to sheep for ticks has been recommended by some persons who claimed good results. We have tried it both as an inward and outward application or treatment, but could not testify to receiving any benefit whatever. Feeding sulphur is not free from a possible injury. Sheep should not get wet when using sulphur, and should be well sheltered or housed. I have seen sheep poisoned and die from getting too much sulphur fed in salt for tick extermination. This was due largely from being hungry for salt, and too much sulphur being exposed to the salt-hungry sheep. A teaspoonful of flowers-of-sulphur would be a full dose for a sheep for any purpose. The lime sulphur dip has been recommended for extermination of ticks.

Fourth—I would not recommend the feeding of moldy or rotten feed of any kind to an animal, unless to the hog which seems to relish decayed feeds, and so far as we know has been able to live through their use. Lambs and sheep in general should not be fed diseased, decayed, frozen or rotted feeds. I feel sure, however, the frosted or frozen silage would not injure them if fed immediately after being thawed.

Hired Farm Help and Rural Schools

C. L. D., Iowa: It will please me if you will print the following, taken from the Sioux City Journal:

I read in your edition of the 26th an article, "Hope to Improve Seed Corn," in which the superintendent of schools proposes to educate the Iowa farmer in corn raising. I am very glad to see such interest in behalf of the poor benighted farmer. I am always glad to see the good work go on, and think he should install a color contest in the town school to get the merchants interested, so they could select their dry goods, and so we could buy calico cheaper. Also a mathematics contest to interest the bankers and get them interested in mathematics, so they would do better bookkeeping. Then we could get a small loan at a lower rate of interest.

We see that all classes of business and professional men are anxious to come out and educate the poor farmer to raise better crops, to reduce the high cost of living. We all know they can give the farmer all sorts of advice about how to farm, but cannot tell him where he can get a hired man at any price, and that is the vital question. The average farmer of Iowa knows how to increase the proceeds of his farm 100 per cent if he could get reliable help at a long price. When we see farms of from 120 to 200 acres worked by one lonely man, who stops every man who goes by his place and asks him if he knows where he can get farm help, we cannot expect the best results from the soil. If a few of the farm instructors who live in towns or cities would come out in the country, roll up their sleeves and get to work under the direction of the average farmer they could increase the production of the food supply more than they can by telling the farmer what they do not know about farming.

The rag doll tester is all right. So are many other methods of testing, all known by the farmers. The worst feature of the article referred to is the insinuation that farmers are such chumps that they do not know that they could not raise corn with seed that would not grow. M. E. BLAIR.

Let me say a hearty "Amen!" Not so much because I think the farmer needs less instruction, but because I know how very desperate is his need of more hands to work. Throughout western Iowa, where I am personally acquainted with farm conditions, there is only one "crying need," and that is help. Give us the help, male and female, and we will very soon show you the increased crops, improved stock, good roads and more calves, for which things the city folks cry aloud continuously, forgetting that they are not made without hands. Jesus told His disciples to give Him proof of their love in that they "do His commandments." He didn't say preach, or teach, or write, or talk—he said "Do!" Someone please prove his love for the farmer by doing chores a while and then he will know exactly why we are not raising more calves.

We try to keep up with the times. We have read many thousand articles on farming and stock raising in the last few years. The reason why Mr. Blair's letter seemed so remarkable to us is this—it is positively the only one we have ever seen which gives a prominent place to the one problem that so sorely affects us on the farm and drives many unwilling ones into the towns. The remedy, we believe, lies in the improvement of the rural schools, but we do get mighty tired of waiting for it to come. Can't you hustle it up a little more or suggest something not quite so slow?

Editor's Comment—These letters are both right to the point. The writers have ideas. The hired help problem on the farm is a mighty live question. It is also a many-sided question. Let us hear from others on this subject. C. L. D. comes close to the root of the matter when he suggests that improvement of the rural schools is the remedy. What relation does the rural school have to the solving of the "crying need" for help on the farm?

Carbolic Acid for Abortion

J. H. K., Colorado: A few years ago you recommended the use of carbolic acid for cows in cases of abortion. We used it with success as far as the health of the cow was concerned, restoring her to her milk, but she never had another calf—came in and was served, but had no calves. We would like your advice as to whether it was the acid, as we wish to use the same treatment on some heifers if it is safe to do so.

Answer—Your question has been submitted to a competent veterinarian, who says that he has never known the carbolic acid treatment to affect cows as you describe, and thinks that the fact this cow has no more calves comes from some other source, but is unable to say what it is. You will be safe in using the carbolic acid treatment on your heif-

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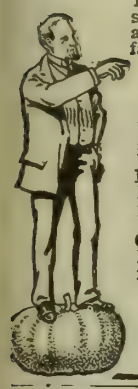

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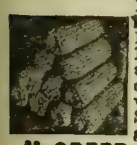

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ers. This remedy has frequently proved effective for abortion, and with no bad after effects.

Feeding Lambs in Wyoming

T. B. H., Sheridan, Wyo.: Captain Scott K. Snively will soon ship to South Omaha a consignment of two or three carloads of lambs, a culling of the best from a flock of 10,000. Mr. Snively purchased in Johnson county, Wyoming, early in the fall and brought them to the ranch near Sheridan for a course of systematic feeding. This first small shipment is in the nature of an experiment. If they sell, kill and dress out right he will wire his foreman to follow immediately with a heavy shipment.

Of special interest to all stockmen of the northwest is this undertaking of Mr. Snively, who has been in the stock business for nearly a half century and has long advocated winter grain feeding for Sheridan county stock. He says he has gone into the game on a big scale because he believes there is money in the feeding business conducted in the manner he has adopted.

Mr. Snively's lambs were at first put on pasture of alfalfa stubble and native grass. There they were grazed for two months. At the time of delivery of the lambs to Captain Snively they averaged a fraction over fifty-seven pounds. When they were taken off pasture and put in the feed lots the bunch had gained about 80,000 pounds in weight. The feed lots consist of square feeding pens, where the rations are distributed in troughs. Outside of these grain pens alfalfa hay is provided by being fed through the fence inclosing the lambs, where they have easy access to it without trampling over any part of it; in this way there is no waste. One grain-feding pen is provided for two hay-feeding pens. At first the lambs had to be driven to the grain troughs, but as soon as they became accustomed to their surroundings there was no trouble. They now rush for the troughs as soon as the gates are thrown open.

There are eight of the hay pens at the Snively plant, and four grain pens. In addition there is the "hospital" pen. Any lamb not doing as well as its feeder thinks it ought to, is lame or in any other way needs attention, goes to the hospital and, like a sick child, is "pampered" a little until it regains its former vigor.

The 10,000 lambs are divided among the eight hay pens. One bunch at a time is let into the grain-feeding pens and fed. In these pens are troughs forty or fifty to a pen, sixteen feet in length, one for each twenty-five lambs. The lambs are fed twice each day, morning and evening, and at regular hours. The rations are carefully measured and distributed and the lambs are left in just long enough to clean up the grain. To make the lambs clean up quickly, keeping them always a little hungry, is one of the chief aims of the scheme. The least bit of overfeeding will throw a lamb off its feed and give him a setback, hence the care to not overfeed.

When the lambs were first put on feed they did not know grain, and it was necessary to coach them carefully in its consumption. They were given only a taste at first, with a little salt to get them to taste it at all. Gradually, as they took hold of the grain and began to like it, the ration was increased. Now the lambs are getting a little over a pound of grain daily and are considered to be on "full feed." If it were desired to rush them the allowance could be safely increased to a pound and a half a day, but Captain Snively prefers a slower, steadier gain. Alfalfa hay, however, has been increased in allowance and the lambs are each now consuming a little more than two pounds per day of alfalfa.

The lambs have now been on grain fee for about seventy-five days and are getting very close to the shipping point and a desirable place on the market, as their owner expects them to average better than eighty pounds when unloaded at South Omaha.

Nearly a million pounds of grain and between 600 and 700 tons of hay will be necessary for the completion of the lambs for the market. Nine men are

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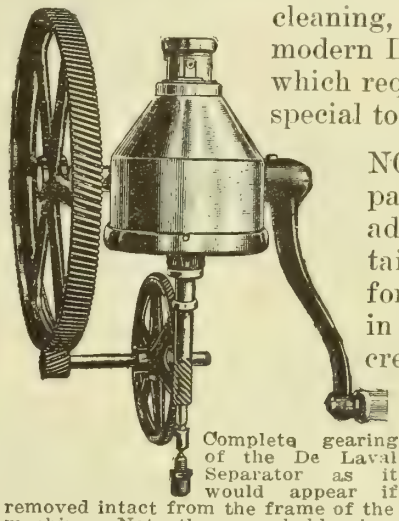

Complete gearing of the De Laval Separator as it would appear if removed intact from the frame of the machine. Note the remarkable simplicity of construction.

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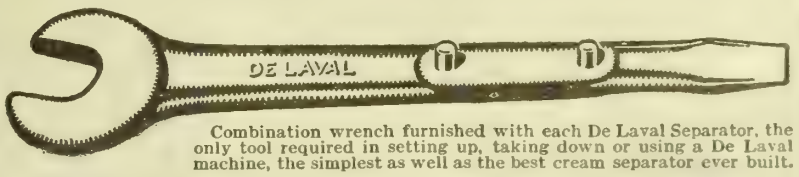

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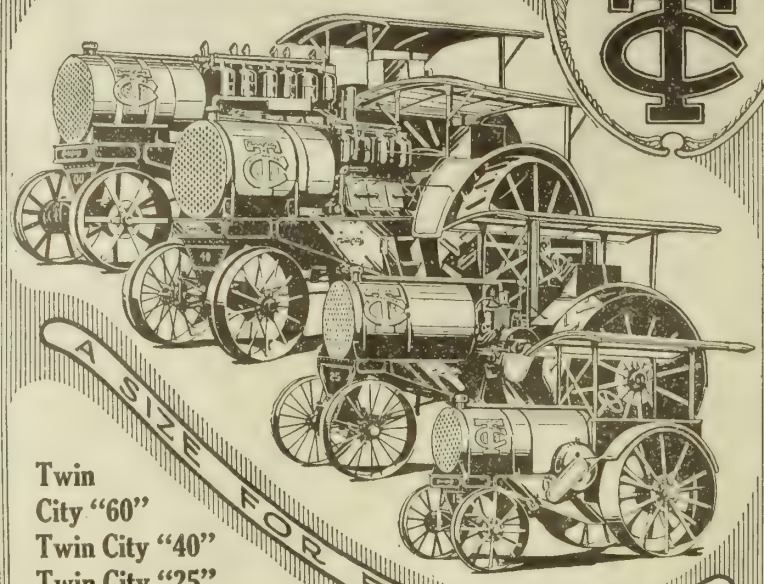

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steadily employed in feeding and caring for the lambs and in hauling hay and grain to the pens.

Double Cropping in Southern Iowa

M. C., Iowa: I doubltd the profits from a piece of land of only ordinary fertility by proceeding as follows:

The ground was stirred thoroughly in early spring. This had been in corn the previous season, but if a field has been in small grain the year before, thorough disking and cross-disking will prove about as good.

The harrowing also was thorough, and was followed by a heavy seeding to oats, about four bushels to the acre being put on the land. This was to induce a closer growth of the plants than where oats are sown for the grain, these being intended for roughage.

I have tried both broadcast and grain-drill planting in seeding oats, and while the grain drill is a trifle more expensive than broadcasting, I believe it is worth the difference, as it puts the grain on evenly, places every grain at a uniform depth and insures every one being covered. The crop withstands a drouth better than with broadcasting, and the growth is, of course, more vigorous.

These oats were given another thorough harrowing to cover them, and they grew rapidly, being ready to mow July 3. At this period the grain in them was just passing from the "milk" to the "dough" stage of growth. Raked into windrows after a light curing and immediately put into shock to prevent excessive curing, this forms one of the finest winter roughages I ever fed—all the tender, juicy blades clinging to the stems, and the rich succulence of these stems being retained in the product, while the highly nutritious qualities of the grain were cured and stored away with the roughage.

This oat stubble should have been stirred just as soon as the first crop was removed, but a dry period made it impossible to stir the soil again till July 29, when we restirred the land well, seeding to millet, at the rate of about three pecks of seed to the acre. As an experiment, a goodly sprinkling of corn was sown with the millet, and this proved a fine combination. The millet was cut just before the heads were well filled with grain, thus avoiding the objectionable large, woody stalks and an excess of grain, either of which is a serious drawback in feeding millet. In case an early frost catches the millet before it is mown, I cut it as soon thereafter as possible, and find that one frosting is not especially damaging to it, if it is handled properly afterward.

To those who say this method of cropping the land unduly drains it of its vitality, I reply by stating that this same piece of land produced from fifty to sixty-five bushels of corn to the acre the next season after this double-cropping system. Herein lies the philosophy of the plan: Both crops are emoved from the land at a period of growth when the strong elements required to mature them and fill the heads with grain have not yet been utilized. It is extremely doubtful if the two crops drain the soil of any more vitality than would a single crop left on the ground till fully matured and headed out, considering the fact that, in addition to the elements required for the development of the crop, a growth of worse than useless weeds springs up after the single crop is removed.

Editor's Comment—The writer of the foregoing lives in southwestern Iowa, near the Missouri state line. Have any of our readers tried anything of this kind? Let us hear from those who are doing things out of the ordinary.

Ecuador and the Great Canal

(CONTINUED FROM PAGE SEVENTEEN)

ing to depose the ins, and the president, General Leonidas Plaza, may or not be deposed. When I was here last the president at the head of the administration was Don Alfaro, who afterward came back from Panama and lost his life in trying to recapture the office. Alfaro was a born revolutionist, and he had many narrow escapes. At one time he was captured by the rival party while on one of the little Ecuadorian men-of-war and escaped by swimming to the shore on a barrel. At another time he lived for weeks in the wilds of Ecuador and Colombia, being hunted by the state troops.

The president gets a salary of $1,000 a year. He rules his country through a cabinet, which, with seven other ministers, forms a council of state. There is a congress elected by the people. The president has the power of veto, but congress can pass laws over his veto. Just now one of the chief public questions is the improvement of the ports, and another is the building of railroads. Both of these involve the expenditure of considerable sums of money and the holding of influence and power. It may be that this is one of the causes of the revolution.

Canal Will Greatly Aid Trade

The opening of the canal and the cleaning up of Guayaquil will greatly increase the trade of this country, and it ought to materially improve its business with the United States. The foreign commerce already amounts to $22,000,000 or $23,000,000 a year; and, at present, Great Britain leads all countries in sales. In 1909 the imports from that country amounted to more than $3,000,000, being something like $800,000 more than those of the United States. In 1910 they were more than $200,000 more than ours, and that notwithstanding the American imports were more than double those of Great Britain.

About all of the British goods came by way of the Strait of Magilan and this has been so of most of the goods from Europe, which constitute by far the greater part of the trade. With the opening of the canal we shall have much the shorter haul, and the trade should come to us.

As it is now Ecuador is getting most of its cotton goods from the United Kingdom. More than three-fifths of its woolen goods come from there, and of its shoe leather, about one-third comes from Germany and a little more from the United States. In boots and shoes the United States leads as it does also in lard and wheat flour, as well as in coal, although considerable is imported from Australia. As to machinery it is now coming from the United States, the United Kingdom and Germany.

The exports of Ecuador amounted last year to a little less than $14,000,000, and about $10,000,000 worth of them went to France, Germany and the United States. The principal commodity was cacao and ivory nuts, the former selling for over $10,000,000 and the latter for something like $2,000,000. In addition there was rubber to the amount of $1,000,000. The cacao and ivory nuts come almost altogether from the tropical lowlands along the Pacific and the chief port for them is Guayaquil. A great part of the land about here is given up to cacao; and I am told that there are few plantations which do not net as much as 12 per cent per annum, and that some are bringing four and five times that amount. The cacao bean is that from which chocolate is made. The fruit grows on a tree, which is much like an immense lilac bush. It is ragged and gnarly and the fruit, which is shaped like a squash, grows on the stem or close to the branches. When ripe it is of a lemon color and the seeds within are of a reddish brown. The seeds are the beans of commerce. They are about as big as a lima bean and of much the same shape. There are from twenty-eight to thirty of them in each fruit. They are washed out of the pulp that surrounds them, and then dried and packed up for shipment to all parts of the world.

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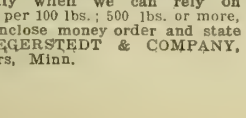

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Pin Money from the Garden

(CONTINUED FROM PAGE THIRTEEN.)

ucts, I took a basket of samples and called on all the housekeepers living in the better parts of the town nearby and got enough orders the first day to encourage me to keep up the canvass. Where anyone had receptacles that were empty I took them and made such a deduction as the jar or bottle was worth, and I also allowed customers the privilege of returning empty "containers," this counting for considerable advantage in getting orders, as there is a great accumulation of such from year to year that is worse than clutter when it is not used.

We put up horseradish, charging 90 cents a dozen for half-pint jelly glasses, the glasses to be returned. The vinegar we used was made at home from apples, sugar, yeast and water, and could be guaranteed pure, and we did not adulterate the horseradish with turnips or potatoes, as is so often done, and it kept its taste and color till the last bit was used. For restaurants and hotels we put the horseradish up in quart Mason jars, charging 25 cents, exclusive of the jar. This part of my business extended over seven months of the year, and roots were dug in the fall and put in boxes with earth, so as to have them ready to use when the ground should be frozen, and the small sprangles that were too small to grate were put back in the moist earth to be used as sets to plant.

The first year we had only a few dozen glasses to sell, but after that we could supply the demand. It was the same with catsup, pickles, etc. The first year we only had the surplus from our home garden and truck patch, but the next spring we planted a good deal more than we would require for home use, and had an abundance of cabbage, tomatoes, onions and cucumbers to work up, and no part of the farm paid so well as the ground planted to these vegetables. We later added jellies, preserves and canned fruits, and believe that a demand for such can be easily created, in a large enough measure to keep more than one woman busy to supply it, if near a town where every home does not have its own garden and fruit.

I know one woman who lived near us who every year sold salted cucumbers—pickles and brine—so that she realized enough to get many articles of use and beauty for her home and for herself, and had she also put up dill pickles and the sweet and sour variety, too, and chopped or mixed pickle, she could have made much more, as she could have pleased more customers. That is one secret of success in this line; have a variety of articles, each the best of its kind, so that you can suit many customers. Remember there are many men of many minds, and many different tastes. I am sure that it is better to depend on the home garden to furnish money than to waste time and energy on faraway work that only brings disappointment at last, even if you have to study the likes and dislikes of friends and strangers to make sales. If you want to do such work this coming season you must plan for it and choose your seed now. L. D. S.

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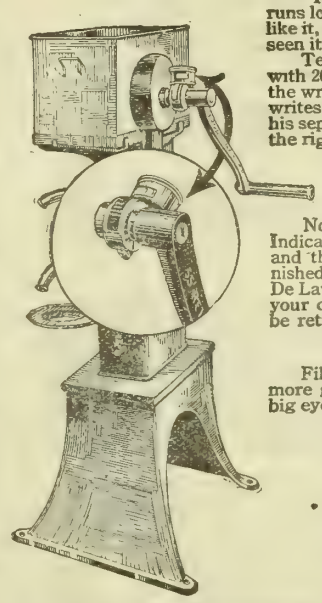
Tests made at Purdue Experiment Station showed that one dairyman with 20 cows lost $524.10 in one year by turning his separator crank the wrong speed—he guessed at it. Another dairyman with eight cows writes that he lost $18.50 *in one month* by guessing at the speed he turned his separator. No human being can turn the handle of his separator the right number of times unless he has a Stewart Speed Indicator, which shows him exactly the number of turns he is making to the minute.



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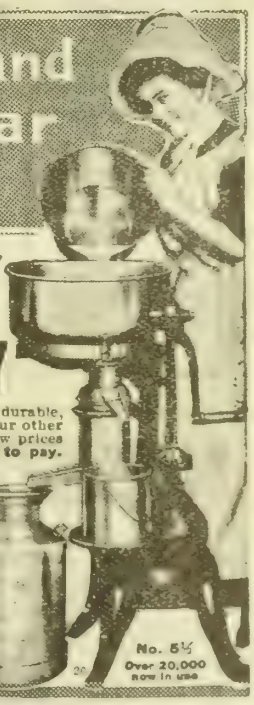

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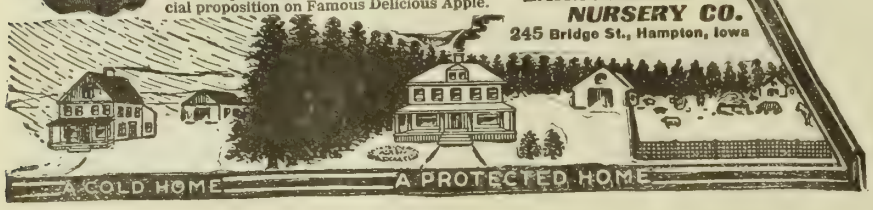


Bigger Stomach for the Hog

IT HAS been a matter of frequent remark on our farm that hogs are eating more alfalfa hay, grazing more on alfalfa than when we first began growing the plant. A larger use of alfalfa by the hogs is most noticeable in winter, when they have the run to stacks or the hay is fed to them in racks in the yards. Discussing the question, we have about come to the conclusion that the stomachs of our hogs are becoming enlarged to accommodate the larger use of this forage plant.

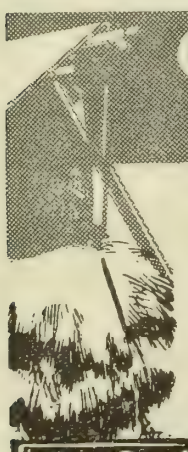
It is a well known fact that our domestic animals, and plants as well, "change their ways," adapt themselves to changed conditions that surround them. The different breeds of horses are said to have a common origin. The heavy draft breeds in horses and the beef breeds in cattle have been developed by being raised on the abundant and succulent pastures in Europe and grown under such conditions reach their greatest excellence.

On our farm from 1871 to 1900, a period of twenty-nine years, some twenty generations of hogs have been raised, their food of a most condensed nature, being almost entirely corn, with very little in the nature of forage, and that usually a rye pasture for a brief time in summer, but in winter nothing in the nature of forage (hay) was fed. Naturally, the stomach of these hogs in these some twenty generations became of a size to best contain, assimilate and digest this condensed food.

Commencing in 1900, the conditions surrounding our hogs have been entirely changed. There is a large alfalfa field, in which the hogs range at will during the growing season. The alfalfa is so abundant that the field is mown three times each season and seemingly produces as much hay as adjoining fields not pastured. It is noticeable as the years come and go that the hogs seem to graze more than in the beginning, but the most noticeable feature is the increased amount of hay which they consume when the grazing season is over. In the practically ten generations of hogs which have been bred and raised on the farm since we began the growing of alfalfa it is believed that each succeeding generation has made a larger use of alfalfa, and in order to do so the stomach and possibly the intestines have become enlarged to care for and help digest this bulky food. Our hogs have always been fond of both growing alfalfa and alfalfa hay, but are making a larger use of hay than in the beginning. We have not indulged in the weighing of rations, not even the corn fed, but we seem to be getting much better results—more pork from the corn fed than when the diet of the hogs was almost exclusively corn.

Is it unreasonable to suppose that after many generations of hogs, fed largely as possible on alfalfa, we may breed hogs which will make a still larger use of this plant, thus insuring healthier animals and cheaper pork production?

S. C. BASSETT.



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PUT a 1914 Harvester side by side with any Hay Carrier you've ever considered—you'll buy the Harvester. It's twice as big and two times as heavy as ordinary fork carriers. It handles with ease loads that would soon put the ordinary type of carrier out of commission. Don't buy *any* Carrier until you know ALL about

Harvester Hay Carriers

New Models—for Steel, Wood or Cable Track

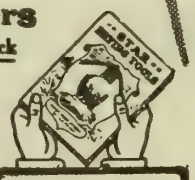
There's a Harvester for every requirement—three types—fork or sling style. Reinforced at every point where strain comes. Handles hay whether you drive in or unload from the end of the barn and without re-roping or changing pulleys. Few parts—great strength—minimum repairs.

Many other points beside these. Inform yourself. Learn about the 1914 Harvesters before buying a Hay Carrier.

Write us for our new "Hay Tool Book." We'll send it by return mail with *the name of a dealer in your locality.*

HUNT, HELM, FERRIS & CO.
83 Hunt St., Harvard, Ill.

Star Goods
All Guaranteed
— STAR Stalls, Stanchions, Litter and Feed Carriers, Harvester Hay Tools, Star Hoists, Cannon Ball Hangers, etc. *Write for particulars.*



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It tells all about Hay TOOLS

$10.00 Factory to Farm

NO AGENTS NO MIDDLEMEN

12 in. Double Shin S. B. Plow
with Extra Share all Soft Center, 13 in. Rolling Coulter, $1.00 extra.
$10.00

Plows Only
14-in. $9.15
16-in $9.95
18-in. $10.95
Sulky Plow $25
Gang Plow $39
1000 other articles.

Big Catalogue FREE

SEE WHAT IT MEANS

64-Tooth Lever Harrow $8.50
96-Tooth Lever Harrow $12.75
14-in. Imp. Lister $17.75
14-in. Sulky Lister $30.00
8-ft. Rake $16.00
Sewing Machine $9.00
Best Sewing Machine Guaranteed equal to any $50 machine, $17.50
Steel Range, high closet and Reservoir $19.50
Good Top Buggy $29.10
12-16 Disc Har. $17.00

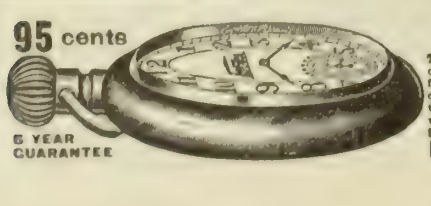
Walking Cultivator 4-Shovel, $11.70; Riding Cultivator, $20.50; Corn Planter, complete with 80 rods of wire, $30.25

Special Catalogues of Buggies, Harness and Steel Ranges

HAPGOOD PLOW COMPANY, 136 Front Street, ALTON, ILLINOIS

The only plow factory selling a full line of Implements direct to farmers at wholesale prices.

95 cents



5 YEAR GUARANTEE

Railroad Watch

To advertise our business, make new friends and introduce our catalogue of Watch bargains we will send this elegant Railroad watch by mail post paid for **ONLY 95 CENTS.** Gentlemen's size, full nickel silver plated case, locomotive on dial, lever escapement, stem wind and stem set, a perfect timekeeper and fully guaranteed for 5 years. Send this advertisement to us with **95 CENTS** and watch will be sent by return mail post paid. Satisfaction guaranteed or money refunded. Send 95c today. Address

R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO.

Evergreen Trees for Windbreaks

The evergreen tree, in its many varieties, forms the best windbreak for the western prairie of any tree that is a successful grower in the Missouri valley country. The pine, spruce and cedar can be traced all over the western and Rocky mountain districts by their native tendency to the soil and climate. This answers the question, "Will they grow?" more satisfactorily and definitely than any tree planter or nursery dealer can emphasize by all the assertions that he knows from his experience.

It is important to observe care in the handling of these trees from the time they are taken out of the ground until they are again replaced permanently to be developed into a tree for service. Of course, it is important to know that you are planting a tree by nature and habits adapted to your locality. There is plenty of death liability in the mere uprooting of a tree and replacing again in the ground. But when there is coupled with this the drying of the roots, the exposure to the open air and the retarding of the natural conditions of vitality by separation from the soil, where the little, fiberous roots have been engaged in feeding the tree, this risk is one that demands the closest of care.

The evergreen tree is believed to be especially sensitive to the effects of the drying influence of the air on the roots, as the sap hardens into a rosin and will not change by again coming in contact with the soil, but persists in a slow but steady decline until death. The guarding of the roots of the evergreen tree from the drying influence of the air is advocated by planters of experience as the only precaution to be observed in getting good results in the transplanting of this species of tree.

As a windbreak the evergreens can be planted six to ten feet apart, using any of the standard varieties, and secure in a few years a solid growth that the wind cannot penetrate. The branches interlock and produce a solid green wall that defies storm, wind or snow to have any effect. There are many such examples of evergreen windbreaks in the states of Nebraska, Iowa and Illinois that, when one is on the opposite or inside from the wind, no matter how strong the force of the wind, there is not sufficient current produced to disturb the unfolding of a newspaper.

As a thing of beauty, as a feature of improvement to be admired and as a farm home decoration, there is nothing that approaches the evergreen grove around the building site. Long lines of evergreen trees on the public road approaches to any farm add thousands of dollars to its value and are the greatest advertisemen in calling attention to the farm as a home.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Kuzel's Duroc Sale

With this issue of Twentieth Century Farmer we are starting the advertising of L. J. Kuzel of Clarkson, Neb., who will hold his regular annual sale of Duroc-Jersey hogs at his farm near Clarkson, Neb., on March 2. The offering that Mr. Kuzel has to make at this time is an especially good one, being composed of individual animals that have either proven their worth as breeders or come from a line of ancestry that guarantees their going out and making good in this respect. The offering will consist of seventeen tried sows and twenty-three spring gilts. Eleven of the tried sows are bred to King Echo Top and five to Proud Wonder Junior. Five of the spring gilts are bred to Proud Wonder Junior and eighteen are bred to Lucy's Select. King Echo Top is a son of that grand old sire Echo Top King; Proud Wonder Junior is a son of Belle's Crimson Wonder, and Lucy's Select is a son of G. & C.'s Chief and is a strongly bred Chief Select boar. One-third of the offering is sired by King Echo Top, one-third by Proud Wonder Junior, and the balance by Model Wonder 3d, Wallace's Wonder, Model Goods, Crimson Boy, Red Wonder, Gold Dust Chief and others. One thing about this offering is that you will not find them overloaded with fat, but in just good breeding condition. They have been grown right, are bred right, and the sows are mated right to produce the very best results. We have been thoroughly in touch with Mr. Kuzel's herd for a number of years and we know the methods he pursues in the developing of his hogs and also the business methods he employs in dealing with his customers. If you are looking for something in his line, we have no hesitancy in recommending this offering. Remember the sale will be held at his farm, south of Clarkson, Neb., on March 2. The farm can be reached either from the town of Howells or Clarkson, on the Northwestern, or from Schuyler, on the main line of the Union Pacific. If you have not already received a catalogue, write Mr. Kuzel at Clarkson, Neb., at once, mentioning Twentieth Century Farmer. If you cannot be on hand sale day and wish to buy something, send your bids to G. E. Hall of this paper and he will give them careful attention.

McCullough's Poland Sale

This is the last call for the Poland-China sale of O. J. McCullough, to be held at Central City, Neb., on February 28. We want to place particular stress on this offering because we know it to be a good one. In fact, it is the best lot of hogs that have ever been offered for sale from this farm at any one time. There are certainly some exceptional individuals in the sale, and in fact practically all of them are good enough to go into any pure-bred herd. Mr. McCullough has been breeding Poland-Chinas for a great many years, and this bunch of hogs is certainly evidence of the fact that he has been pursuing the right methods in his breeding operations. As to type, his hogs are big enough to suit the most exacting. Along with this, they have a commensurate amount of quality and possess plenty of bone and are right up on their feet. The offering will consist of sixty head. There will be seven tried sows, three spring yearlings, ten fall yearlings and forty spring gilts. The tried sows are by Columbus, Long Boy, Wade's Jumbo, Price's Jumbo and others; the yearlings are by Price's Giant, Price's Jumbo and Smooth Big Bone; the spring gilts are by Smooth Big Bone, Price's Jumbo, Columbus, Big Mastiff and Gold Dust Hadley. These sows are bred to Smooth Big Bone, Columbus Again and Gold Dust Special, a son of Gold Dust Hadley. Remember, this sale will be held at Central City, Neb., and Colonel H. S. Duncan will be th auctioneer. Mr. McCullough gets his mail at Clarks, Neb., and his catalogues are now ready for mailing out and may be had for the asking. Write him for catalogue, mentioning this paper. Bids sent to G. E. Hall, who will represent Twentieth Century Farmer, will be handled with care.

Herefords at South Omaha in April

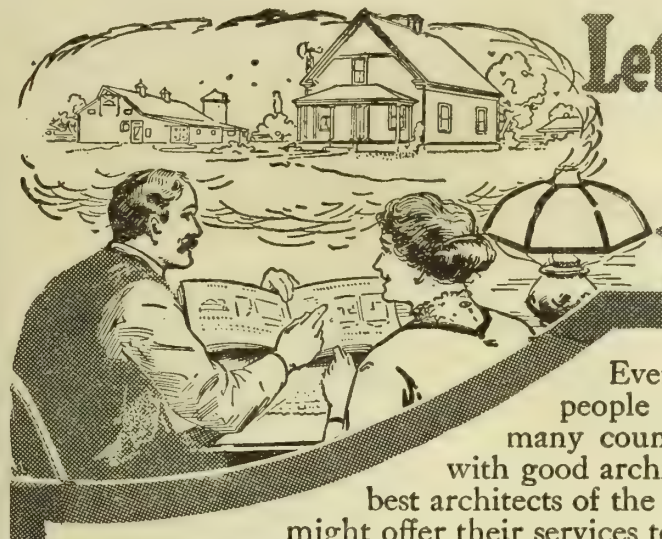
The combination sale of Hereford cattle to be held at South Omaha, Neb., on April 14 and 15 under the management of the veteran breeder of Hereford cattle, W. N. Rogers of McCook, Neb., will contain a splendid lot of highly useful individuals, consigned from some of the leading herds of the corn belt. If you are going to be in the market for some good cattle, here is an opportunity that should not be overlooked. For further information write W. N. Rogers, manager, McCook, Neb. Mention this paper when writing.

A Great Hereford Opportunity

On March 25, at South Omaha, Neb., breeders of Hereford cattle will have an opportunity presented to them for buying some good stuff such as is seldom afforded. This is due to the fact that on this date W. N. Rogers, the veteran breeder of Hereford cattle at McCook, Neb., will dispose of his entire herd of Beau Donald and Monarch Herefords. This herd has won more prizes than any herd in the state, and has borne a reputation that is nation wide for the great scale and high quality that characterizes it throughout. There are many individuals going in this sale that could not be bought for any price were it not for the fact that Mr. Rogers is retiring from the business. Catalogues will be ready for distribution on March 1. Get your name on their mailing list and watch these columns for further announcements.

Smith's Immune Duroc Sale

Eighteen head of fall yearlings and twenty-two spring gilts, and every one immune, constitutes the offering of Duroc-Jerseys to be sold at Kearney, Neb., on February 27 by O. G. Smith



Let Hewitt-Lea-Funck help you plan your house or barn

Every month we are helping hundreds of people to plan their homes. We knew that many country folks were not able to get in touch with good architects—and so we employed some of the best architects of the Pacific Coast and Middle West, that we might offer their services to the farmers and people in small towns.

Our charges for the services of these architects are very small—a mere fraction of the usual charges for such work. When the building materials are bought from us the money paid us for service of this kind is refunded. Write for our special plan sheet (see the coupon) and send us a rough sketch of the way you want your house or barn laid out, and let us give you our suggestions.

We have a plan book that is full of good ideas for you

Our plan book is the most practical and sensible book of the kind ever published. It was issued purposely for people who know the value of a dollar—who want a good, comfortable home; nice looking, but not fussy. Quite likely, you'll find a plan in this book that just suits you. Books not nearly so good are sold at 50c to $2.00. Yet 10c is all we ask you to send for this valuable book, to cover postage.

Save as high as 60% on lumber —buy direct from the producer

Too many middlemen come between the mill and your lumber dealer—that's why his prices are so high. We cut out every single middleman and sell you direct at our mill price—a price that's the very limit of lowness because the raw materials come from our own forests in the famous Puget Sound Region. Our lumber is straight-grained, free from sap and large knots, doesn't warp or shrink. It's beautiful material.

Quick shipments from stock

We carry huge stocks of lumber in pile. Our warehouses are groaning with their stock of millwork, awaiting your orders. Special orders are also turned out without delay. Our standard rule is "orders must go within 48 hours of receiving." Seven railroads carry shipments to destination. There is much rivalry between these roads. They give our shipments their best attention. Two weeks or less is the usual time on deliveries West of the Mississippi.

HEWITT-LEA-FUNCK CO.
460 Union Ave., Seattle, Wash.

Satisfaction guaranteed or your money back

We always quote delivered prices. No extras. We will arrange it so you needn't pay till you've seen the lumber. We assume risk of your being satisfied. Guarantee your material to grade better than trust or combine standards—the standard local dealer follows; and guarantee to save you money.

Send for estimate

Send us your carpenter's bill of materials, if you can, even if you aren't ready to build. No charge or obligation for this work. Be sure to let us know if we can be of any help to you in planning your building. At any rate mail the coupon today for catalog and general price list.

Write for Plan Book send 10c and this Coupon

Hewitt-Lea-Funck Company
460 Union Avenue, Seattle, Wash.
(Be sure to write plainly)

Please send the following:—
( ) Book of Plans (for which 10c in stamps or coin is enclosed).
( ) Catalog and General Price List Lumber and Millwork. Free.
( ) Special Silo Folder. Free.
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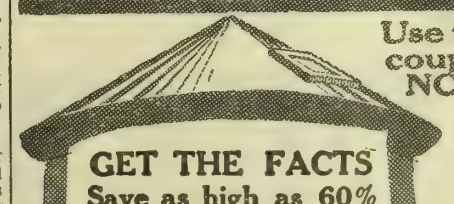

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Save as high as 60% on a clear fir silo

by buying of us at one profit, above manufacturing cost.

Seattle Silos are made of famous Puget Sound fir from our own forests and worked in one of our six great mills; for our one-piece silo staves we use only the choicest timber. Close and straight-grained. Free from sap and large knots; wonderfully durable.

Seattle Silos

have patented swinging doors

These doors are quick detachable; no lifting; easily swing in or out; door bars form strong ladder from which, by our original arrangement, hoops are easily tightened.

Send coupon for folder. On a single silo we can probably arrange to give you practically carload shipment price. To one farmer in each township we have a very special offer. Write today. Use the coupon opposite the hand.

Hewitt-Lea-Funck Co.
460 Union Ave., Seattle, Wash.

BARGAIN DAY ON CUTS

You can buy any cut in the Twentieth Century Farmer for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as we have only one of each kind. Address,

TWENTIETH CENTURY FARMER, Omaha, Neb.

IMMUNE DUROCS AT AUCTION

At Kearney, Neb., Feb. 27, 1914

This will be an especially strong offering, carrying the best of blood lines and possessing exceptional individual merit.

There will be 18 head of extra smooth, growthy fall gilts, 14 sired by MODEL GOODS by Golden Model, and 4 by QUEEN'S WONDER by Crimson Wonder Again. The spring gilts are by MODEL GOODS, QUEEN'S WONDER and QUEEN'S WONDER AGAIN. The offering is bred to QUEEN'S WONDER AGAIN and MODEL GOODS, 2d. You will find this offering will speak for itself on sale day. For catalogue address

O. G. SMITH & SON, Kearney, Neb.

Aucts., Col. Ray Page, Col. Z. E. Russell; Fieldman, G. E. Hall.

McCullough's Columbus--Smooth Big Bone Offering of

BIG-TYPE POLANDS

SALE TO BE HELD AT

Central City, Neb., Saturday, Feb. 28, '14

This will be an attractive offering of the big type breeding and will be an opportunity to get COLUMBUS blood.

60 Head 13 Head by the Champion Columbus. One tried sow and twelve spring gilts in the sale by him. Some growthy spring gilts weighing around the 400 pound mark sale day to be sold. The blood of SMOOTH BIG BONE by Smooth Price, dam by Big Bone, will be strongly represented. For catalogues address

40 Spring Gilts
10 Yearlings
10 Tried Sows

O. J. McCULLOUGH, Clarks, Neb.

Col. Fuller, Auct., G. E. Hall, Fieldman.

KUZEL'S DUROC SALE

40 Head of Brood Sows to Be Sold at the Farm Near

Clarkson, Neb., March 2, 1914

This is a select draft of bred sows and gilts from my herd and I am putting in nothing but what I would consider good enough to keep in my herd. These sows have been grown right, and I know they will go out and make good for you. One third of them are sired by KING ECHO TOP, one third by PROUD WONDER JR. and the balance by MODEL WONDER 3d, CRIMSON BOY, WALLACE'S WONDER, RED WONDER, GOLD DUST CHIEF and others. They are bred to KING ECHO TOP, PROUD WONDER JR., and LUCY'S SELECT by Chief Select.

Write for catalogue at once. I will promise to show you the "goods" on sale day. Sale may be reached either from Schuyler, Howells or Clarkson.

L. J. KUZEL, Clarkson, Neb.

Auctioneer—Col. Ray Page. Fieldman—G. E. Hall.

POLAND-CHINA HOGS

IMMUNE POLAND-CHINA GILTS

We have a splendid lot of spring gilts for sale, sired by Blue Valley and Blue Valley's Orange by Big Orange. They have been given the double treatment and are immune from disease, and all bred for early spring farrow. Satisfaction guaranteed.

THOMAS F. WALKER & SON, Alexandria, Neb.

HOLSTEIN CATTLE

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

RED POLLED CATTLE

RED POLLS

Bulls and heifers for sale. Prices reasonable. Quality the best. Satisfaction guaranteed. Write your wants or call

W. P. SCHWAB, Clay Center, Neb.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection

Purebred Registered

HOLSTEIN CATTLE

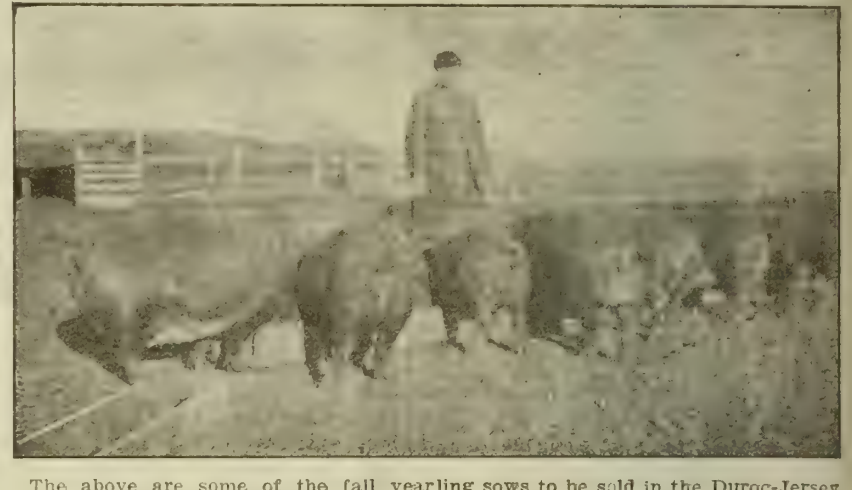
In the production of milk and butter the larger the cow the larger the profit, other things being equal. The principle has been established through the investigations of government experts and is generally recognized.

When a cow's milking days are over, size is still an important factor. The big Holstein-Friesian, weighing anywhere from 1,000 to 1,500 pounds with her clean white fat well distributed through her muscular system, proves a most profitable dairy beef animal.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro, Vt.

& Son of that place. It is unnecessary for us to enter into any description of this herd and the proprietors, for they have been in the business long enough to need no introduction at our hands. The quality of hogs they have been producing and the prominent part they have taken in the making of Duroc history in Nebraska is evidence of the fact that when they have anything to sell it must necessarily be something worth while. The offering at this time is sired by Queen's Wonder, Queen's Wonder Again and Model Goods. The fall yearlings are a splendid lot of big, smooth, growthy, strong-boned, strong-footed young sows. These sows are bred mostly to Queen's Wonder Again and Model Goods 2d for March farrow. The spring gilts are bred either to Model Goods 2d or Queen's Wonder Again. In this connection it might be well to make a little explanation in regard to the herd boars in service in this herd. Model Goods is a Choice Goods bred boar, out of a Golden Model dam and one of the best breeding boars that has ever been in service in this herd. Queen's Wonder is a son of Crimson Wonder Again and out of H. A.'s Queen. Queen's Wonder Again is a son of Queen's Wonder. You have a combination of blood lines here that simply cannot be bettered very much, and along with it you have a lot of individuals that are just simply good enough to go into any man's herd. They are the right kind and have been grown out in the right way and will make good as breeders. Write for catalogue at once and attend this sale. If you cannot do so, send your bids to G. E. Hall of this paper. Kindly mention Twentieth Century Farmer when writing.



The above are some of the fall yearling sows to be sold in the Duroc-Jersey sale of O. G. Smith & Son at Kearney, Neb., on February 27. Look mighty good, don't they?

North & Robinson's Stallions

If you are contemplating the purchase of a stallion or some first-class draft mares, you will make no mistake in getting in touch with North & Robinson, importers and breeders of Percheron, Belgian and Shire stallions and mares at Grand Island, Neb. This is one of the largest breeding firms in the west and they produce and handle a class of horses that certainly meet the popular demand of farmers and horse breeders of the present day. They have the largest breeding farm in the country, located at Bridgeport, Neb., where they have a large number of brood mares and where they raise a splendid lot of big, strong, rugged colts each year. They grow to big, strong, rugged individuals, because they are bred right and grown in a manner that is bound to enhance their future usefulness as breeders. They are the big, heavy-boned, drafty kind that cannot help but go out and make good if given a fair chance. They have a choice lot of imported stallions on hand also. These horses were brought over early and are thoroughly acclimated. Get in touch with this firm if you want anything in their line. They certainly have the goods and will treat you right. Write them for further particulars, mentioning this paper.

Wolf Bros.' Prize Winners

The time is rapidly approaching when many horsemen will begin to consider where they are most apt to find what they want in the way of a stallion or some high-classed brood mares. In this connection we want to call the attention of our readers to the firm of Wolf Bros., importers and breeders of Percherons and Belgians at Albion, Neb. This firm has been a strong prize winner at the leading shows of the west for a number of years, and their winnings in 1913 show that they are making rapid strides in the class of horses they are handling. Here is a list of some of their winnings: Nebraska State Fair, 1913—Percheron stallion, open class: First, second and third in 2-year-olds; junior championships and first for best five stallions. Percheron mares, open class: First in 3-year-old mares and the grand champion mare was imported and sold by them. Belgian stallions: First in yearlings; first, second and fourth in 2-year-olds; first, third and fourth in 3-year-olds; second in 4-year-olds and over; senior champion and junior champion stallions. National Western Stock Show at Denver, Colo.—Percheron stallions, open class: Third in yearlings; first and third in 2-year-olds; first in 3-year-olds; first for five best stallions and reserve champion Percheron mares; Second and third in 2-year-olds; second in yearlings. Belgian stallions: First in yearlings; first and second in 2-year-olds; first and second in 3-year-olds; senior champion and junior champion stallions. Write to Wolf Bros., Albion, Neb., for further particulars as to what they have to sell. Kindly mention Twentieth Century Farmer.

Kane's Durocs Average $54

J. J. Kane's sale of Durocs held at Wisner, Neb., on February 9 resulted in an average of $54 on the entire offering. The offering of hogs driven through the ring was an especially good one and would have brought more money under more favorable conditions. Quite a few breeders were present, but a number were kept away on account of the in

GRAIN BELT BRAND

Vegetable Hog Potash

Don't starve your hogs to remove worms; try this: Send for sample of our product; then select six growing pigs, feed them all the grain, oil meal, tankage and milk they can eat, then place before them in dry trough sample of Hog Potash and see how they eat it. Worms cannot live where it is fed regularly. Sold at prices of good salt. Send today for sample and descriptive circulars.

Agents wanted in unoccupied territory.

Manufactured by

UNION STOCK YARDS COMPANY South Omaha, Neb.

O. I. C. HOGS

THIS

O.I.C.

SOW WEIGHED 932 LBS. AT 23 MONTHS OLD

IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **G. S. BENJAMIN** RFD79 **Portland, Mich.**

DUROC-JERSEY HOGS

SCHWAB'S DUROC-JERSEYS

A choice lot of spring and fall boars for sale; sired by Buddy K 4th, Wide Awake, Gold Bond, W. L. B.'s Perfection Cremo and others. Also bred sows. Priced worth the money.

GEO. W. SCHWAB, Clay Center, Neb.

MULE-FOOT HOGS

Blue Ribbon Mule Foot Hogs

Largest herd in U. S.; the most hardy, prolific, healthy and quick growing breed; they bring top prices on market; for breeding buy the best and start at the top; 350 for sale. Jno. Dunlap, Box 406 Williamsport, Ohio.

clement weather of the two preceding days. The top of the sale was lot 1 in the catalogue, Herman Toelle of West Point, Neb., being the purchaser. A $54 average, with a $110 top, shows that the demand was reasonably strong all the way through. Colonel N. G. Kraschal did the selling. Below will be found a list of those sold, together with purchaser:

Lot No.	Price.
1—Herman Toelle, West Point	$110
2—Robert Leisy, Wisner	70
3—Will Harrison, Wisner	51
3½—William Moderow, Beemer	82
4—James Raabe, Wisner	36
6—Harley Long, Beemer	41
7—A. J. Clark, Wisner	53
8—F. B. Nelson, Lindsay	75
9—D. W. Kane, Wisner	65
10—R. M. McGuire, Wisner	42
11—George Buskirk, Pender	55
12—Herman Toelle	79
13—Joe Fleming, Wisner	33
14—George Buskirk	80
15—Clarence Wallace, Wisner	100
16—F. W. Bowden, Wisner	55
17—John Raabe	47
19—A. J. Clark, Wisner	42
20—John Raabe	50
21—Will Harrison	49
22—Henry Kolmas, Pilger	55
24—M. O. Froistad, Newman Grove	56
25—Gus Krueger, Beemer	100
26—R. S. McGuire	62
27—Otto Rothke, Wisner	52
28—R. S. McGuire	47
29—R. Widle & Son	87
30—F. W. Bowden	60
32—William Murphy, Wisner	55
33—Will Harrison	50
34—Lloyd Rogers, Walthill	41
35—Harvey Chilcott, Pender	45
36—Will Harrison	40
37—Owen Kane, Wisner	72
38—Joseph McGaughey, Wisner	67
39—Harvey Chilcott	60
40—John Raabe	44
41—Harvey Chilcott	60
42—D. W. Kane	41
43—Robert Leisy	60
44—O. T. Boostrom, Madison	46

Froistad's Durocs Average $43

M. O. Froistad's sale of Duroc-Jersey bred sows at Newman Grove, Neb., on February 11 made an average of $43 on the entire offering. The day was cold and disagreeable, which no doubt kept a number away from the sale. The offering was a clean one, with sows in good breeding condition. J. M. Bosh of Clarks, Neb., topped the sale on lot No. 1 in the catalogue at $72.50. With more favorable weather conditions, the results of the sale would have been more satisfactory. A list of those selling for $35 and over follows. Colonel N. G. Kraschal did the selling:

Lot No.	Price.
1—J. M. Bosh, Clarks, Neb.	$ 72
2—Matt Froistad, Newman Grove	52
3—J. E. Hensley, Central City	50
4—Andrew J. Nelson, Newman Grove	58
5—John Horn, Bradish	46
6—Fred Beckman, Albion	55
7—A. G. Satre, Newman Grove	45
8—F. B. Nelson, Lindsay	40
9—G. M. Acton, Newman Grove	44
10—Ed Clark, Tilden	43
11—Ed Clark	40
12—A. G. Satre	46
13—Henry Lee, Bradish	44
14—Henry Stuthman, Pilger	42
15—F. B. Nelson	42
16—G. M. Acton	45
17—A .R. Barnes, Petersburg	62
18—Seiner Field, Newman Grove	51
19—Ben Mickelson, Bradish	37
20—Ed Clark	44
21—Frands Nielson, Fremont	45
22—F. B. Nelson	41
23—Herman Toelle, West Point	50
24—Andrew J. Nelson	40
25—J. M. Bosh	55
26—G. M. Acton	40
27—Ben Mickelson	40
28—A. G. Satre	38
29—Iver Lee, Newman Grove	43
30—A. F. Lemmerman, Creston	47
31—F. B. Nelson	40
35—A. G. Satre	42
38—Elmer Anderson, Wayne	38
39—A. G. Satre	37
40—Ed Clark	35
42—Andrew Anderson, Newman Grove	35
43—Andrew Tomsing, Newman Grove	38
44—Oscar Froistad, Newman Grove	35
45—Oscar Froistad	37
47—Oscar Froistad	36

Nelson Makes $54 Average

The sale of Duroc-Jersey hogs held at Lindsay, Neb., on February 10 by F. B. Nelson of that place brought out a splendid local crowd and also quite a number of breeders from a distance. This was virtually a Valley King offering, as almost the entire offering was either sired by or bred to him. The get of this boar driven through the sale showed that he was able to deliver the goods as a breeder as well as in the show ring. He is breeding a big, strong-backed, smooth, heavy-boned type that cannot help but prove popular. A. R Barnes of Petersburg, Neb., topped the sale on lot No. 2 in the catalogue, a daughter of Uneeda Crimson Wonder bred to Valley King. The average on fifty-six head was $54, which shows a very healthy demand. A list of those selling for $35 and over follows:

Lot No.	Price.
1—Will Moderow, Beemer	$ 80
2—A. R. Barnes, Petersburg	100
3—Tom Norskov, Lindsay	64
4—Robert Leisy, Wisner	70
5—Bert Peterson, Lindsay	48
6—Bert Peterson	49
7—H. E. Christiansen, St. Edward	55
8—Ed Connelly, Lindsay	63
9—M. O. Froistad, Newman Grove	70
10—N. J. Nelson, Newman Grove	80
11—C. J. Christiansen, Newman Grove	43
12—Bert Peterson	38
12½—George Buskirk, Pender	68
13—Frands Nelson, Fremont	60
14—William Tomison, Lindsay	48
15—Wolf Bros., Albion	52
17—Henry Stuthman, Pilger	50
18—William Tomison	70
19—M. J. Ramacker, Lindsay	55
20—Clarence Wallace, Wisner	70
21—F. H. Green, St. Edward	61
21½—A. W. Lamb, Albion	50
22—Herman Briggs, Clay Center	58
23—J. J. Kane, Wisner	60
24—C. J. Christiansen	40
25—Andrew Christiansen, Lindsay	50
26—Martin Nelson, St. Edward	36
27—M. J. Ramacker	54
28—Fred Beckman, Albion	70
29—Mike Sweeney, Lindsay	39
30—F. I. Houtz, Albion	39
31—Wertzel Bros., Lindsay	76
32—A. W. Lamb, Albion	76
33—L. J. Kuzel, Howells	63
34—J. L. Horton, Clearmont, Wyo.	70
35—Marius Nelson, Newman Grove	40
36—Wolf Bros.	45
37—C. J. Christiansen	39
39—Bert Peterson	40
40—Jess Connelley, Lindsay	42
41—Bert Peterson	36
42—M. J. Ramacker	44
43—C. E. Peterson, Genoa	50
44—E. H. Carpenter, Fontanelle	42
45—Frank Tluskas, Lindsay	39
47—Mike Sweeney	42
49—Art Nelson, Lindsay	40
50—Nels Peterson, Lindsay	41
52—Frank Falk, Newman Grove	37
54—R. Widle & Son, Genoa	85
55—Herman Toelle	60
56—Chris Nelson, Genoa	40
57—August Swanson, St. Edward	50

Sale Dates

Hereford Cattle

April 14 and 15—Breeders' Combination sale at South Omaha, W. N. Rogers, McCook, Neb., manager.

March 25—W. N. Rogers, McCook, Neb., dispersion sale, South Omaha.

Aberdeen-Angus Cattle

April 1 and 2, 1914—Charles Escher, Botna, Ia. Sale at South Omaha, Neb.

Duroc-Jerseys

February 26—J. J. Kane, Wisner, Neb.

February 27—Blackburn Bros., Royal, Neb.

February 27—O. G. Smith & Son, Kearney, Neb.

March 2—L. J. Kuzel, Clarkson, Neb.

Poland-Chinas

February 24—Jacob Dietsch, Boone, Neb.

February 28—O. J. McCullough, Clarks, Neb. Sale at Central City, Neb.

March 6—William Ferguson, Scribner, Neb.

Hampshire Hogs

March 14, 1914—Roy Fisher, Winside, Neb. Sale at Wayne, Neb.

Shorthorns

March 11—E. H. Cosgrove, Farnam, Neb.

March 20—William Ferguson, Scribner, Neb.

March 24—A. C. Shallenberger, Alma, Neb.

SAVE-THE-HORSE

(Trade Mark Registered.)

THE TIME IS NOW

All the winter long, the troubled owner of a lame horse reads our advertisements. Then, day after day slips away, while he talks, laments, listens, takes advice and hesitating—FAILS TO ACT—till the Springtime is on him and his horse is not yet able to work. Meantime the thrifty, prosperous, resolute man, reads, considers the evidence carefully—Decides Promptly— and his horse is working in, say, ten days to two weeks. That's exactly what happens every winter.

We Originated the treatment of horses by mail—Under Signed Contract to Return Money if Remedy Fails—and every minute of every day for eighteen years our advice and treatments have been on the way wherever mails go and horses are. Our charges are moderate. Spring work is near. Write

Our Latest Save-The-Horse BOOK is a Mind Settler—Tells How to Test for Spavin—What to Do for a Lame Horse—Covers 58 Forms of Lameness—Illustrated. But write describing your case and we will send our—**BOOK**—Sample Contract and Advice—**ALL FREE**—to (Horse Owners and Managers—Only.)

TROY CHEMICAL CO 16 Commerce Ave., Binghamton, N. Y.

Druggists everywhere sell Save-the-Horse WITH CONTRACT or sent by us Express Prepaid

This Coupon Is Good for Prof. Beery's Introductory Course in Horsemanship FREE!

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PROF. JESSE BEERY, Box 76 Pleasant Hill, Ohio

Please send, free of cost, to the address below, Prof. Beery's Introductory Course in Horsemanship

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Bad Habits Cured

By Beery System

Refusing to lead.
Running away when halter or bridle is removed.
Getting fast in the stall.
Pawing in the stable.
Pawing while hitched.
Crowding in the stall.
Fighting halter or bridle.
Tender bitted.
Pulling on one rein.
Lugging on the bit.
Lunging and plunging.
Refusing to stand.
Refusing to back.
Shying. Balking
Afraid of automobiles.
Afraid of robes
Afraid of clothes on line
Afraid of cars.
Afraid of sound of a gun.
Afraid of band playing.
Afraid of steam engine.
Afraid of the touch of shafts or harness.
Running away.
Kicking
Biting. Striking.
Hard to shoe.
Bad to groom.
Breaking straps.
Refusing to hold back while going down hill.
Scaring at hogs or dogs along the road.
Tail switchers.
Lolling the tongue.
Jumping fences
Bad to hitch to buggy or wagon.

To all men *owning horses*, who answer this advertisement, I will positively send my introductory course in Horse Training and Colt Breaking ABSOLUTELY FREE.

World's Greatest System of Horsemanship

Twenty-five thousand FARMERS and horse-owners have taken my regular course and found that *it does the work.* Even if you have only *one horse*, it will pay you to master my wonderful system. The Beery Course is the result of a lifetime's work as a tamer and trainer of horses. As one of my students has said, "The horse has never been foaled that Prof. Beery cannot handle." My record proves it.

Master Any Horse

The Beery Course gives you the priceless secrets of a lifetime—enables you to master any horse—to tell the disposition of any horse at sight—to add many dollars to the value of every horse you handle—and my students are all good traders.

Break a Colt in Double-Quick Time!

You can do it by my simple, practical, humane system. There is a lot of money in colt training.

Make $1,200 to $3,000 a Year

Many of my graduates are making big money as professional horse trainers at home or traveling. I made a fortune traveling and giving exhibitions. You have the same opportunity.

BEFORE TRAINING

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My Graduates Are Doing Wonders

A. L. Dickinson, of Friendship, N. Y., says: "I am working a pair of horses that cleaned out several men. I got them for $110, gave them a few lessons, and have been offered $400 for the pair." Fred Bowden, R. R. No. 2, Keokuk, Iowa writes: "It's worth many times its cost." I have many similar letters from graduates all over the world.

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PROF. JESSE BEERY
Box 76, Pleasant Hill, Ohio

HORSES

Percherons and Belgians

Our New Importation of Percheron and Belgian Stallions and Mares has arrived. They are the best we have ever owned. We also have a splendid lot of American breds They are the big, heavy-boned, drafty kind, with style and action. Come and look them over. We know you will be pleased. **A Certificate of Soundness Given with Each Animal.** We invite correspondence.

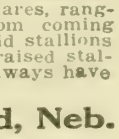
WOLF BROS., Albion, Boone County, Neb.

Percherons, Belgians and Shires

Imported and Homebred Stallions and Mares, ranging in age from coming two-year-olds to matured ages. We have a lot of two and three-year-old stallions weighing from 1900 to 2100 pounds; among them a fine lot of pasture-raised stallions—the kind for the western breeder. A fine lot of mares for sale. Always have stock for sale—never sold out. Write for prices, descriptions, etc.

NORTH & ROBINSON CO., - Grand Island, Neb.

Foaled and grown on the farm, offered at farmer's prices. Eight coming 2-year studs, 9 coming 3-year studs, 8 3-year-old and over studs, registered Percheron Society of America. Of the big type with substance and from French ancestry on both sides. Just east of Omaha. **FRED CHANDLER, Rt. 7, Chariton, Iowa.**



80 Imported Percheron and Belgian Stallions and Mares on Sale

My exhibit comprises the largest number of big, heavy-boned, 2000 to 2400-pound stallions to be found in the United States. The Cedar Rapids Jack Farm is the jack metropolis of the world. All nations buy jacks here. The majority of the best mules in the United States are the results of the past twenty years' improvement inaugurated and carried on here. Write for catalogs. Come to me when you need stock. I will make it worth your while.

W. L. De CLOW, Cedar Rapids Stallion and Jack Farm, Cedar Rapids, Iowa.

JACKS AND JENNETS.

Eighty large-boned, black Mammoth Jacks, 15 to 16 hands standard, guaranteed and priced to sell. The kind all are looking for. Also good, young Percheron stallions. Reference, five banks of Lawrence. 10 miles west of Kansas City, on Santa Fe and U. P. R. R.

AL. E. SMITH, - - LAWRENCE, KAN.

50 Mammoth Jacks and Jenents

A lifetime experience in breeding the large, thick, big-boned, good head and eared kind that produce the good Missouri mule. Two extra good Black Percheron 4-year-old Stallions.

G. M. SCOTT, Rea, Missouri

JERSEY CATTLE

WINELAND FARM JERSEYS

Bulls of serviceable age for sale sired by Duke Raleigh by Noble of Oakland. Also a number of choice heifers bred to freshen soon. I can suit you in both quality and price.

H. C. YOUNG, Lincoln, Neb.

Review of Live Stock Market

By A. C. Davenport

UNFORTUNATELY for the selling interests, nothing has transpired during the last week to materially alter conditions governing the cattle trade. On the contrary, the market has continued in a more or less slumpy condition, the same as it has been for the last three weeks or more. As pointed out before in these columns, there is no good reason for the lack of snap and life to the trade except that the supply has been somewhat in excess of the demand. Examination of figures will convince anyone that so far as the supply is concerned it has by no means been excessive. Some operators on the market are inclined to lay the blame for the unsatisfactory condition of the trade in the importation of Argentine beef, but since January 1 the total importations of beef from that country have amounted to an equivalent of only 15,000 head of cattle, being much less than had been anticipated. In other words, the importations equal only about one good day's run at the Chicago market. It will be readily granted that these importations have a greater influence on the market than their real importance would merit, still as an offset against them the six large markets of the country show a decrease in receipts since the first of the year of 98,000 head of cattle. As receipts last year were by no means excessive, it will be readily seen that the marketing of cattle this year, even after allowing for Argentine importations, is by no means large. It would therefore follow that the lack of snap in cattle must be due rather to a shortage in demand than to excessive receipts, and that is the view taken of the subject by the majority of stock men. There are a number of things that will materially reduce the consuming demand for beef, such as a lack of employment and consequent dull times, mild weather, etc., but aside from the mild weather, none of the usual causes for decreased demand have been especially conspicuous, and it is an unanswered question just why the country is not more eager for beef.

Cattlemen still hold to the opinion that the country has been unloading its cattle more rapidly than usual at this season of the year as shown by the small proportion of really fleshy and well finished beeves. It is these half-fat and less desirable kinds that have been the slowest sellers. On the other hand, the better grades of cattle have been in such light supply that they have sold fairly well. Last week as high as $9.55 was paid for well finished beeves at Chicago, the highest price on record for February. When it comes to a matter of price there is really not much complaint from stockmen, as the market is high compared with years gone by, the cause for complaint being limited principally to the dullness of the trade, as noted above.

In spite of the prevailing apathy of buyers the majority of cattle men have not yet abandoned the belief that prices, although already high, will go still higher before the end of the winter season. They are basing this belief on the assumption that supplies in the country are being rapidly depleted. As a matter of course, the question of an advance in the future will depend largely upon the demand, as it is pretty hard to advance prices on a dull market.

Hog conditions have not changed to any very marked extent. Prices have been dodging about a little from day to day, but taking the last week as a whole final changes have not been very marked. Hogs have within recent days sold the highest since September and October and the feeling on the market has been strong so far as the selling interests are concerned. Receipts continue to run behind last year, six markets showing a decrease for the year to date of over 200,000 head. While this is not very important it is really a good bull argument when taken in connection with reports of supplies in the country. It might be noted that the receipts at this time last year were much smaller than the previous year. The bulls in the hog trade are still bullish, while the bears are not overly sanguine. They admit that the market shows a good deal of strength and does not readily yield to the bear tactics of buyers. As a matter of course, the conservatives will make some allowances in their estimates regarding the future of the market for the fact that current prices are already high.

Sheep and lambs have not shown very much change as compared with recent weeks. The demand has been good, but receipts have been very large at most points. For the year to date there is an increase in receipts of sheep and lambs at the six big markets of 75,000 head. On account of the free movement of fat stuff to market prices have been held down in spite of free buying on the part of packers, still prices for the month to date have shown little change, buyers putting back one week about what they took off the previous week. In other words, it has been a see-saw market, up one week and down the next, with the traue reasonably active at current prices.

Sheepmen are not looking for any great change in the future, as they anticipate pretty liberal receipts of fat stock for some little time to come and unless the demand should prove to be much better than anticipated it would be only reasonable to expect values to continue about where they have been during the last two or three weeks.

Hog Cholera Celebration

The best of evidence that the range country and the accredited range states are engaged in revolutionary methods in the matter of crop growing and live stock breeding is plainly recognized in some of the public-spirited enterprises that are being planned in the state of Colorado.

At Monte Vista, Colo., there was held February 10, 1914, a banquet, a celebration of the close of the first year of the existence of the Monte Vista Hog Growers' Association. The bill of fare at this banquet as far as possible was prepared from pork and pork products grown in the San Luis valley. In commenting on this occasion, the Denver Record Stockman gives the following information on the enterprise leading to the organization and what it has accomplished:

"The Monte Vista Hog Growers' Association was incorporated upon the suggestion of Dr. George H. Glover, state veterinarian, for the purpose of making a united effort to stamp out hog cholera in that section of the state. This was the first really organized effort ever made in the United States toward the elimination of this disease. A veterinarian was employed, and under his direction the hog raisers cleaned up and disinfected all places where hog cholera appeared, and strict quarantine has been enforced. So successful have been these efforts that, while in 1912 the losses from cholera amounted to nearly 50 per cent of all herds, with a monetary loss of at least $75,000, the loss for 1913 has been less than 250 hogs, and the greater part of these has been among hogs shipped into the valley from outside the state."

Paying for Weed Seed

Many farmers are paying as much as $1 per pound for the opportunity to plant on the farm several pounds of weed seed each year. Others do not pay as much for the opportunity to sow the seed, but the cost of eradicating these weeds costs them many hours of labor and no small amount of money. The manner in which they avail themselves of the opportunity varies, but to give a specific and true example—an actual occurrence:

Two samples of alfalfa seed are offered for sale, one for $20 per hundred and the other for $16 per hundred. Sample No. 1 tests as follows: Weed seeds, none; chaff and dirt, none; germination, 94 per cent perfect. Sample No. 2 tests: Weed seed, 7 per cent, much of which is sweet clover, which is not very noticeable to the average farmer; chaff and dirt, 2 per cent; germination, 80 per cent perfect.

If you buy 100 pounds of No. 1 you get ninety-four pounds of seed that will grow, at a cost of $20 or a cost of $21.28 for 100 pounds of perfect seed.

For No. 2 you pay $16 for 71 pounds of perfect seed, or $22.54 for 100 pounds of perfect seed.

In the above case you pay $1.26 for the privilege of planting seven pounds of weed seed on your farm. Even greater variations than the above can be given. Every man should know how good the seed is that he is planting.

S. B. NUCKOLS.
Colorado Agricultural College.

Horse-Power vs. Man-Power

From experience with tread mills in British prisons we know accurately the mechanical equivalent of hard labor. It is a climb of 8,640 feet each twenty-four hours. If the average weight of a man is 150 pounds, he can do approximately 1,200,000 foot-pounds of work each twenty-four hours. A horse-power for twenty-four hours is approximately 48,000,000 foot-pounds. It would require forty men to yield a continuous horse-power, and their wages would be $80 per day, or $28,800 per year. An electric motor to do the work of forty men would consume not more than $180 worth of electricity per annum, and in many cases the bill would be very much less on account of better rates. It is therefore obvious that men were never intended for use as generators of power.

F. J. RANKIN.
Colorado Agricultural College.

LANDS

MEN OF AMBITION PROSPER IN the southeast. Small capital with energy will accomplish wonderful results. Dairy, stock, fruit or poultry will make you independent. Land sells from $15 an acre up. Growing season from 7 to 10 months' duration. Modern schools, good highways and churches. The "Southern Field" magazine and farm lists on request. M. V. Richards, Land and Industrial Agt., Southern Ry., Room 94, Washington, D. C.

FOR SALE—500 IMPROVED FARMS—Orchards, fruit, corn and grain. Write for list. Merchant Atchison, Mankato, Minn.

The Market Place
FOR THE BUYER AND SELLER

POULTRY—Cochins

FOR SALE—PARTRIDGE COCHINS, pure blood. Mrs. C. E. Wonderly, Benedict, Neb.

Leghorns

25 SINGLE-COMB BROWN LEGhorn cockerels, scoring from 90 to 93½, $2 each; 100 unscored cockerels, $1 each. Hawkeye View Farm, Selma, Ia., Vanburen Co.

ROSE-COMB BROWN LEGHORN cockerels, Indian Runner drakes. Otto Frahm, Fort Calhoun, Neb.

CHOICE ROSE-COMB WHITE LEGhorn cockerels, $1 each; hens, $8 dozen. Kaveney Bros., Linwood, Neb.

WILL SPARE A FEW MORE SINgle-comb White Leghorn pullets, April, 1913, hatched, Yesterlaid arm strain, $1.50 each now. Am also taking orders for hatching eggs to be delivered later from my pure Pekin ducks, $1 for 11. Mrs. Merton J. Casson, Neola, Ia. R. 1.

Langshans

WHITE LANGSHAN COCKERELS—$2.50 and $2 each. Eggs in season. Henry Neidig, Madison, Neb.

FULL-BLOOD BLACK LANGSHAN cockerels for sale. C. C. Cunningham, Kennard, Neb.

BIG-SCORED BLACK LANGSHAN cockerels, $2.50 each, guaranteed. H. Osterfoss Farm, Hedrick, Iowa.

BLACK LANGSHAN EGGS—CIRCUlar. Jake Hetrick, Wahoo, Neb.

Minorcas

STEARNS' ROSE-COMB BLACK MInorcas. Lay large, white eggs and lots of 'em. Eggs for hatching—pen 1, $3 per 13; pen 2, $2. Cockerels, while they last, at $5. A. F. Stearns, Norfolk, Neb.

Orpingtons

SINGLE-COMB BUFF ORPINGTONS, Cadwell strain—size, vigor, type and color, with ability to lay; 85 per cent fertility. Baby chicks, 25c each; guaranteed eggs, $2.50 and $1.50 setting; lots, $6 per 100. Instructions for home-made oxygen vitalizer with every $2 order. Catalogue free. Gene Huse, Norfolk, Neb.

SOME SINGLE-COMB WHITE ORpington pullets, cockerels and year-old hens for sale reasonable. Eggs for hatching. C. Higinbotham, Central City, Neb.

PRIZE-WINNING BUFF ORPINGTON eggs. Mrs. Cook, Eddyville, Neb.

SINGLE-COMB BUFF ORPINGTONS, Cook strain. Eggs, $2 per 15. Geo. A. Agnew, Central City, Neb.

BIG, VIGOROUS CRYSTAL WHITE Orpington cockerels, $2 and $5 each. David Garvis, Lyons, Neb.

Plymouth Rocks

BARRED ROCK COCKERELS—"Thompson's Ringlets" direct; also choice Silver Campines and Buff Orpingtons. All birds shipped on approval. Archdale Farm, Fremont, Neb.

WHITE ROCKS, BRED FOR EGGS and size. Eggs, 15, $1; 100, $4. George Clauson, Mead, Neb.

WHITE ROCK EGGS—$1.50 PER 15, $5 per 100. Mrs. Harry Butler, Bellwood, Neb.

BARRED ROCK COCKERELS—Early hatched, $2 to $3. Mrs. C. B. McCorkle, Albion, Neb.

POULTRY—Plymouth Rocks

EGGS—BARRED ROCK, WHITE Rocks, Buff Orpingtons, White Leghorns, Brown Leghorns, Black Langshans, Toulouse geese. Mrs. Frank Davis, Holbrook, Neb.

CHOICE BARRED ROCK PULLETS—Heavy-boned and well barred, $1 each. Eggs, $1 per 15 or $5 per 100. F. G. Selden, Rising City, Neb.

BUFF ROCKS—LEADING WINNERS at the big state shows. Write for circular. Mrs. James Christopher, Carleton, Neb.

BIG BUFF ROCKS, GOOD ENOUGH to win four firsts at big Nebraska shows; grand layers. Eggs for sale from $2.5 to $5. Mrs. Isaac Williams, Wymore Neb.

BARRED ROCK COCKERELS—LATE hatch, big bone, well marked, 6 and pounds, $2; three for $5. Mrs. J. D Stevenson, Benkelman, Neb.

SUPERIOR QUALITY BARRED PLY mouth Rock eggs. Davis Bros., Lincoln Neb.

BARRED ROCK COCKERELS FOR Sale—Strong, well marked. Frank J Drapela, R. 3, Clarkson, Neb.

Rhode Island Reds

FIFTY GOOD SINGLE-COMB RHODE Island Red cockerels; prices reasonable D. W. Kane, Wisner, Neb.

EGGS FOR HATCHING FROM SIN gle-comb Rhode Island Reds, $1, fifteen $5, hundred. Mrs N. Brodahl, Box 3, Wahoo, Neb.

SINGLE-COMB REDS, WINNERS AT Omaha and Blair. Eggs at $1 and $ per setting. Otto Timm, Bennington Neb.

SINGLE-COMB REDS—LARGE dark, even color; heavy layers. Egg circular free. Scott Covalt, Box O, Council Bluffs, Ia.

SINGLE-COMB RHODE ISLAND RED cockerels, $2 up; Barred Rocks, $1.25 up Fawn and White Runners, $5 a trio Mrs. J. P. Rhea, Arlington, Neb.

Wyandottes

WHITE WYANDOTTE EGGS FOR hatching. Best blood in America. Won highest honors Nebraska State Poultry show 1914. Send for mating list. Oscar L. Bock, Council Bluffs, Iowa.

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WE CAN LOAN YOU MONEY TO buy a fine farm in North Dakota for $30 an acre, with buildings on, if you have enough money to buy seed, work horses, feed and machinery and can pay $2 an acre down. Call and see us or write and tell us what you have to start with. Wm. H. Brown Co., 5 N. La Salle St., Chicago, Ill., or Mott, N. D. Agents wanted.

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SILVER LEAF SEED CORN, WHITE—I have a lot of sure-grow seed corn that I will deliver on board cars at St. Paul, Neb., for $1.50 per bushel; 55 bushels to the acre in 1913. Same corn tipped and shelled $2 per bushel. L. E. Larsen, St. Paul, Neb.

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Without any obligation on me send me free and prepaid your booklet, "Profitable Dairying," and your special free-tariff prices on the imported Melotte Cream Separator. Also full details of your free trial, monthly-payment, no-money-down offer.

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The Melotte bowl hangs down from a single perfect bearing and spins like a top. It will continue spinning for half an hour after you stop turning crank unless you apply brake. Patented self-balancing bowl is entirely automatic. You can't get it out of balance and so perfect is the balance that it is impossible for it to vibrate and effect the skimming efficiency like other separators. The bowl chamber is made of special cast iron, porcelain lined with white bath tub enamel. The Melotte is easiest to clean, perfectly sanitary and will last a lifetime.

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TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, February 28, 1914 | Number 690

Bright and Breezy

Followed Colors

"And I suppose, like a brave soldier, you followed your colors?"

"Yes; whenever there was a battle, I noticed that the colors were flying, so I fled, too."

One Missing

A farmer wrote as follows to a distinguished scientific agriculturist, to whom he felt under obligations for introducing a variety of swine:

"Respected Sir: I went yesterday to the swine show. I found several pigs of your species. There was a great variety of hogs, and I was astonished at not seeing you there."

From Many, One

"This is our most valuable fowl," said the amateur hen farmer.

"A fine bird," remarked the visitor, trying to look wise.

"Yes, indeed. We have named her E Pluribus Unum."

"Why the name?" the visitor questioned.

"She came from the only egg that hatched of fifty in the incubator."

A Different Animal

In the census office at Washington acts against the law are recorded under a few main heads, such as murder, burglary, etc. A woman who was working there recently ran across the crime, "Running a Blind Tiger." After a puzzled moment, she placed it under the list, "Cruelty to Animals."

Cynical Mother Fish

A mother fish was swimming with 3,000 or 4,000 of her offspring, when one of them swallowed a big, juicy worm and—whisk! shot up and disappeared.

The other little fishes had often witnessed this phenomenon. Now one of them said:

"Is it unhealthy to get caught, mamma?"

"Oh, no, my dear—far from it," the mother fish cynically replied. "All our tribe increase 80 or 90 per cent in weight on being landed."

Never Too Old to Learn

Some Indianapolis people who have a cottage in Brown county near Nashville were entertaining a young woman from the city. One evening the dogs were barking furiously.

"That's a rabbit," said the man of the house.

A short time later the dogs barked again.

"There's another rabbit," said the man of the house.

"Oh, my," said the young woman. "I never before knew that rabbits barked like that!"

Plenty of It

While presiding over a church conference a speaker began a tirade against the universities and education, expressing thankfulness that he had never been corrupted by contact with a college. After proceeding for a few minutes the bishop interrupted with the question: "Do I understand that Mr. X—— is thankful for his ignorance?" "Well, yes," was the [illegible] you like." "Well, all I have to say," said the prelate, in sweet and musical voice, "is that Mr. X—— has [illegible]

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Easy Money for the Farmer

EVERY man thinks the business in which he is engaged is the hardest there is—that it requires the most brains, energy, perseverance and pluck of any business under the sun. The one thing on which most men seem united is that the farmer has the easiest time of anyone. All he has to do is to put a few seeds in the ground in the spring and then go out in the fall and gather in a bountiful harvest, which he can sell for a fabulous price. Nine out of ten city business men think there is very little more to it than this.

This attitude of the ordinary business man toward the farmer's life has evidently been worrying a certain stockman and orchardist out in Utah, for he has written a fable about it and sent it in to us. Next week we are going to publish it. It is worth reading. Don't dodge it, thinking it is fiction and therefore not worth your time. It is not fiction at all; it is a statement of good, hard facts, and while it may amuse you, you will [illegible] to read

Prattle of the Yougsters

Case of Inheritance

Father—Robert, why is it that the little Smith boy, who is so much younger than you, is ahead of you in school?

Robert—I dunno; I s'pose his folks is smarter than mine.

Too Late to Stop

"Bobbie, if you eat any more of that candy you will surely be sick."

Bobbie (keeping on)—I would have been sick anyway when I was only half way through what I've eaten already.—Life.

Which One?

A man rang the bell of Willie Budd's house one day, and Willie, aged 8, answered.

"Is Mr. Budd in?" asked the man.

"I'm Mr. Budd," said Willie; "or do you want to see old Mr. Budd?"

About Right

On his teacher's request that he give the class his ideas on the subject of "Bravery," little Johnny delivered himself of the following:

"Some boys is brave because they always plays with little boys, and some boys is brave because their legs is too short to run away, but most boys is brave because somebody's lookin'."—American Boy.

It Might Have Been

A noted Sunday school worker, living in Kansas, was once asked to talk to the children on the subject of temperance. He is very earnest in the cause and wears a bit of blue ribbon as a badge of his principles. Rising before the school, he pointed to his bit of blue ribbon and said, "Now, can any of you children give me a reason why I am not a drunkard?" There was no reply for a moment; then a childish voice piped out, "Cause this is a prohibition town."

Worked Mother

Edith, aged 5, watched her mother longingly as she took the toothsome tarts from the oven.

"Mamma," she said, "won't you play you are my grandma?"

"Certainly," answered the mother.

Edith went out on the porch and then quickly returned.

"Grandma," she said, beguilingly, "may I have a tart?"

"No, dear; they are for supper."

"But don't you know you said you'd play being my grandma, and grandmas always give little girls what they want."

She got the tart.

Jolt for the Lady

Five-year-old Bessie recently spent the night with a woman friend of her parents.

Everything was sweet and beautiful until bed time came, when little Bessie dropped to her knees and clasped her hands, fully expecting the prompting that she usually got at home.

But there was no prompting from the hostess, and long was the silence. Finally Bessie realized that it was up to her.

"Please, Lord," she softly said, "you will have to 'scuse me tonight. I can't remember my prayers, and the lady I'm staying with don't [illegible]

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Who Pays Cream Receiving Station Cost?

Why is it Necessary, with Expense of Its Agent, Equipment and Traveling Men, to Check It Up?

ONCE there was a farmer who had a small herd of fine, pure-bred cows, of which he took the very best of care. Every Wednesday and Saturday he poured the clean, well-cared-for cream into well washed and scalded cans, which he thoroughly aired before filling; placed the cans on his wagon and drove to the nearest town, a little place of some 500 inhabitants, where he disposed of this good, clean cream to one of the five cream receiving stations located there, pocketed his check and drove home satisfied. He never questioned the honesty of the agent at the station, never doubted the fairness of the test given his cream, and was in every way a desirable customer.

One of his nearest neighbors had a few scrub cows. They had not been bred as dairy cows and were not fed any particular ration, nor given any special care. The tale of how they were milked and cared for would not be a pleasant story for the consumer of the cream. This cream was placed in cans just as they came from the receiving station, where they had simply been rinsed out with cold water. Whenever the farmer happened to be going into town he would gather up what cream happened to be standing around and take it along, and he got just as much per pound for this cream as his neighbor did for his clean cream.

Making the Kicker Happy

In fact, he got more, for he was what is known as a "kicker." If his test ran a little low, he would threaten to take his cream to some other agent, and he frequently kept his word and was constantly changing from one agent to another. The agents at these stations got paid a commission on the cream collected. They were not essentially dishonest men, but they had their living to make, and competition was strong and they had to collect as much cream as possible to make that living; therefore, when this kicker took his cream to the same station that his neighbor patronized the agent wanted to keep him happy so he would continue to bring his cream there, and he "fudged" on the test, giving the farmer a little more money than was really coming to him.

Of course, all the cream that is sent in from a station is checked up at the central plant, and the agent's tests must run pretty nearly correct. To make this right the agent has to get even in some way. How could he do it? Why, by taking a little off the tests of those who did not look into the matter too closely. That is easy. So before long the farmer who had good, clean, well-cared-for cream was not only not getting a premium for taking care of his cream, but he was even paying a little profit to his neighbor who was too lazy to take care of his cream. Encouraging, isn't it?

Why Dairying Did Not Pay

Feed was pretty high that year and help hard to get. Cleanliness costs something. The farmer who had the clean dairy began to figure a little and decided that dairying did not pay enough to compensate him for all his trouble, so he went out of the business—just sold his cows and went to crop farming. He read several good farm papers and took a dairy journal or two, and these papers were always telling how well dairying paid and how it conserved soil fertility, and they gave all kinds of information about taking care of the cows, how to feed them and how to care for the cream, but they did not tell the farmer how to market his cream so he could make a good profit on it. That is why this farmer went out of the business.

If he had gone into this marketing question closely he might have discovered some things that would have surprised him. At the time he quit the dairying business he was getting 30 cents per pound for his butter-fat. That is a pretty good price, but feed was high, and you see he was not getting quite a fair test. Of course, by constantly watching his tests and making a row about it every time they went a little low, he might have scared the agent into giving him more money for his cream, as the other man did. But this farmer had enough troubles anyhow without wanting to fight over every can of cream he sold. Most of us have.

Where the Money Went

However, if he had studied the question of where the profit on his cream went, he would have found the situation to be something like this: There were five creameries maintaining stations in the little town where he marketed his cream. Each company had a station, for which it paid rent; a man to look after it, who was practically idle every day except Saturday, and had to make enough on commissions that day to take care of him all week; the stations were heated and equipped. Each creamery had men on the road, to whom they paid good salaries, to see that they got their share of the cream produced in the locality, and one of these high-priced traveling men visited the receiving station of each company at quite frequent intervals.

When the cream was shipped to the central stations, it was necessary for the companies to test it again to make sure that the station agent was not claiming more than was due him; therefore each pound of butter-fat was weighed twice. It seems strange that one weighing is not enough for it.

On every hundred pounds of butter-fat the farmer shipped he paid approximately the following expenses: Agent's commission, $2.20; traveling men, 45 cents; station maintenance, 60 cents; total, $3.25. Besides this somebody has to pay the creamery's legitimate profit, the freight on the cream, the exchange on the drafts and also to pay for the cans in which the cream is delivered. These last expenses have to be paid in any case, but this $3.25 per hundred all comes out of the farmer's profit on his hundred pounds of butter-fat and goes to pay for maintaining the cream station. Besides this $3.25 there is the interest on the station equipment, which costs at least $25, and in the case of a steam outfit close to $100.

Station Agent's Position

Now, why is it necessary to have the cream receiving station, with its agent, equipment and traveling men to check it up? Why not ship direct to the creamery? Start something like this and see what happens. The agent for one of these stations has an easy job. It doesn't pay much, to be sure, but then neither is there much to do. At any rate, the agent generally wants to hold his job. He will come to you and say: "You don't want to ship direct to the creamery; if you do they won't give you fair tests. At first, perhaps, they will give good tests, but as soon as you get confidence in them

(CONTINUED ON PAGE TWENTY-TWO)

Best of Fertilizers

DID you ever try love as a mortgage lifter? A bigger crop of good cheer would lift and liven farm life all along the line. The scientific sharps at the agricultural stations assert that cattle fatten faster and do better if kind words and gentle treatment are mixed with their feed. Did you ever try that on the loved ones at home?

The most useless man in any community, country or city is the man who loves no one and hates himself. To increase the crops, to create more enjoyable conditions on the farm, I entreat the farmer to love somebody. If you cannot love anybody else, love your own wife—more than you do.

Why should any farmer feel more kindly for his stock than he does for his wife? Why have a tank heater for the stock tank and no hot water in the farm house kitchen? Why let your wife freeze her hands and break her back thawing out a frozen pump to get a little water to heat on the back of the dinky kitchen stove, in an old dish pan that she bought with her own butter and egg money three years ago? Don't you think that you could install suitable conveniences for her without making yourself liable to a fatal attack of enlargement of the heart? In this I allow you all just credits and set-offs for your only excuse. I admit that you can sell the cattle for real money. But none of the high-browed professors from the state agricultural college ever gave a truer tip than the one that follows:

Farming will never be what it ought to be until there is proportionately as much improved labor-saving machinery in the farm house kitchen as there is in the fields. And when the women get it they will not let it lie around exposed to the weather as you men do.

Illinois. W. H. MILLER.

Running Water Supply for Farm Homes

All Farms Can and Should Have It, but Care Should Be Used in Selecting System

THROUGH a question recently sent out by the Missouri State Board of Agriculture to several hundred women of the state it was learned that the women of Missouri felt that the most needed improvement from her standpoint was some system of running water for the home. Fifty-three per cent of the women who answered this inquiry agreed on this point.

The farm woman who must carry water from a well, even if that well is just a few steps from the back door, must work almost twice as hard to accomplish the same amount of labor as the woman who has running water in the house.

There are several methods of getting a water supply. For those who happen to be blessed with a spring on a nearby hill the problem is easily solved. E. Courtney of Tolland county, Connecticut, found a large spring on the hill back of his place. This he directed into a concrete reservoir, which was made at odd moments by the help on the farm. It was necessary to run pipe for about a quarter of a mile to reach the buildings, but after this was once laid the water supply thus secured was found to be worth much more than it cost.

His wife does not need to go out of doors in conducting any part of her household duties, except hanging out the clothes. She has running water in her kitchen, in her laundry and in the bath room. Her dishes are washed without her taking any unnecessary steps. After the dishes are brought to the sink she remains there until they are all washed and wiped.

On Monday the washing is done up in about half the time that it formerly required. For with running water she had but to install a hot water tank connected with the stove, and by the time breakfast is over the water is hot enough to run directly into the boiler and into the washt

Sewerage System Necessary

When there is running water some sort of a sewerage system is almost absolutely necessary and it is not nearly so hard to get the men to put in a sewerage system when there is running water as when the water is carried. Instead of carrying the dirty wash water in pails out to the backyard, where it forms a mud-puddle. all that Mrs. Courtney needs to do now is to pull out the plug and let the water run into the drain.

The pleasure and the value and the health that the Courtneys derive from the bath room they say much more than pays for the system of running water.

It was five years ago that this reservoir was put in, and no trouble or expense has been experienced either with the reservoir or the pipe line since then.

Pumped with Gasoline Engine

O. Wheeler of Sonoma county, California was not quite so fortunate. He had a large hill near his home, but there was no spring there. He put in a concrete tank, however, that holds about 5,000 gallons and covered it with an ordinary shed roof. He sunk a well about 100 feet away and installed a small gasoline engine. By operating this engine about every other day it provides enough water for the house and for all of the uses of the farm. Mrs. Wheeler has a small filter in the sink through which all of the water that is used for drinking is run. This is a necessity which a great many farmers who do have systems of running water quite often overlook.

In addition to having a hard water supply, Mrs. Wheeler also has a supply of soft water under pressure. The house is so arranged that the water can be run from the roof into a large wooden tank about fifteen or twenty feet from the back door. From here it is piped into the laundry, which is in the basement of the house and which is several feet below the bottom of the tank. In other words, she has a cistern on top of the ground.

Now, of course, if the Wheelers lived in Minnesota this cistern on top of the ground would need to be protected from frost, but in California no protection is necessary. This protection, however, would be easy, and the only additional expense would be for a house to enclose it and perhaps some insulating material around the tank, such as sawdust or straw.

This Concrete Tank on the Hill Supplies Running Water for the House and Poultry Yards

Windmill Furnishes Power

W. H. Barr, who lives only a short distance from Mr. Wheeler, has an elevated tank at the rear of his house, on top of which is mounted a windmill. This windmill furnishes the water supply for both the house and the 2,000 chickens. A windmill is a very economical way of pumping water.

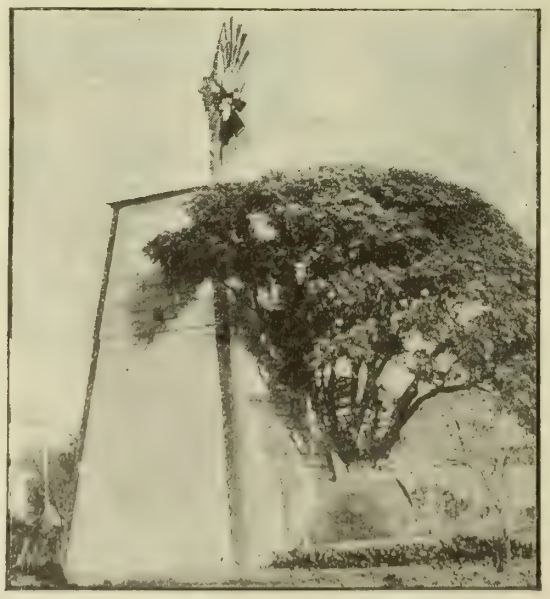
G. G. Youker has a system very similar to that of Mr. Barr, the only difference being the power—instead of using a windmill he uses an electric motor. The motor is of one horsepower capacity and costs $1 a month to operate. In addition to using this motor for pumping the water for the home supply, Mrs. Youker hitches her washing machine to it on Monday morning. It is so arranged in the pump house that the washing machine can be easily attached. The electric motor starts by the turning of a switch, and she finds it not only a great convenience, but a pleasure to use it.

Air-Pressure Systems

If you do not happen to have a hill handy and do not like the idea of an elevated tank, you can still have a water supply. The development of the air-pressure system has now reached such a stage that really no farmer can afford to be without his own water supply under pressure.

The most common system is to store the water and the compressed air in the same tank. It is this system with which I have had experience myself. About two years ago we had a large tank placed in the cellar which was connected with the pump operated by a small pump engine in a pump house about fifty feet from the home. This experience was in Wisconsin, where we used a furnace to heat the house several months of the year. We did not use a wood stove in the kitchen, so we had the hot water tank connected with the furnace. A single coil of pipe was suspended just above the coal in the fire box. The water running

An Above-Ground Cistern



Enclosed Tank, with Windmill Above

This Electric Motor Pumps Plenty of Water

through this was heated and so we had during the winter a constant supply of both hot and cold water, in the kitchen, the bath room and the laundry. It was necessary to pump this tank full about twice a week, but this required very little work, and all that I needed to do was to start the engine and then stop it in fifteen or twenty minutes. It was no trouble at all to stop the engine, so when I was not able to stay around the house until the pumping was finished my wife would turn off the gasoline and close the oil drops.

Another very important consideration in having a supply of running water on the farm is the fire protection it affords. There are thousands and thousands of dollars of farm property destroyed every year because of insufficient fire protection. With a good water pressure system, the farmer, or the farmer's wife, will find it very easy to put out the average fire if it is discovered very soon after it has started, but when there is no water pressure on the place the average person gets so excited that he does not know what to do and the result is the fire gains headway and a large loss results.

Anyone who is attempting to operate a sanitary dairy now-a-days can scarcely do without a water pressure system, and, of course, when a pressure system is provided for the dairy there is very little added expense to secure the water for the house.

Several Things to Consider

There are at the present time several good systems of air-pressure water works on the market for the farm home which have proven thoroughly successful. In selecting such a system it is largely a matter of personal choice, and the choosing of the one which seems best adapted to the conditions under which it must be put into use. The cost of none of these systems is excessive, and they are especially economical when the benefits to be derived from them are considered.

The home-made systems are all very good, but the newer air-pressure systems have been worked out carefully by experienced men and offer many advantages at a small cost that one could not hope to secure with a home-made outfit. If you figure on installing a water system, you will feel well repaid for your efforts if you make a thorough investigation of the various systems before selecting one.

There are several things to be considered in making this selection. It should not disfigure the landscape; it should be protected from extremes of temperature; it should be located so as not to be a menace to life or property in case of accident; it should be a permanent rather than a temporary affair; it should be so constructed that it will keep out dust, foreign matter, etc.; it should keep the water aerated so that it will not become foul or stagnant; it should be ample for fire protection; it should be compact, simple and easy to operate. If you spend your money for a water system, all these points should be considered.

A CORN-BELT FARMER.

Helping Farmers vs. Helping Agriculture

County Farm Demonstration Work Should Be Broader and Supported by All the People

By S. C. Bassett

THE president of a commercial club in Nebraska, at the annual club banquet, discussed the subject of farm demonstration in an able manner. The speaker was a broad - minded, public - spirited man and yet in the discussion of the subject it is made to appear that farm demonstration which is being introduced in the state and which efforts are being made to introduce in his county is in the interests of the farmer, or, as it is often expressed, "to help the farmer."

In his address the speaker said: "The last congress appropriated approximately $5,000 for the purpose of furthering the interests of the farmer by demonstrating the best methods, etc." Again he said: "The only mission of the Nebraska Agricultural Commission" (composed of bankers, grain dealers, centralized creameries, railroad companies, etc.) "and that of all commercial organizations can be to promote, co-operate and assist."

It is high time to recognize the fact that all efforts to teach scientific agriculture or a knowledge of agriculture in our schools and colleges, that all efforts to promote farm demonstration work, are not solely in the interests of the farmer, and it is also high time to cease using in connection therewith the term "helping the farmer."

Farmer Can Take Care of Himself

Farmers are not the only persons directly interested in these matters, and the farmer as an individual is not in need of help in the sense that commercial bodies should contribute to a fund for his special benefit and relief. The average farmer in the state is as efficient and successful in the management of his business as is the average man engaged in avocations other than farming.

Secretary Mellor of the State Board of Agriculture is authority for the statement that "70,000 land owners and 50,000 tenants in Nebraska raised crops in the year 1913 aggregating $280,000,000." Analyzed, this means that the value of the crops thus produced is equal to an average of approximately $230 for each man, woman and child in the state, or $2,300 for each farm of 249 acres, an average of $10 per each acre of farm land. Does not this showing illustrate efficiency and good management on the part of the 120,000 farmers of the state? Can an equal or even a less number engaged in occupations other than farming make as good an average showing for their business for the year 1913?

Situation in Buffalo County, Neb.

As a further illustration let us take the county in which the writer resides. Fifty per cent of the people of Buffalo county reside on farms. There are 2,179 farmers in Buffalo county. The cashier of one of the oldest established banks in the county is authority for the statement that the total of the deposits in Buffalo county banks is $2,887,000, and that approximately $2,000,000 (70 per cent) of this amount is farm deposits—deposits of farmers —an average of approximately $900 per farmer. Does not this showing, even though in part an estimate, indicate thrift, economy, good management on the part of the farmers of the county?

In the year 1869 the valuation of all property in the county, for purposes of taxation, was $125,000. In the year 1912 the valuation in the county for like purpose was $37,000,000. Whence came this enormous increase of wealth in the county? The only answer is, "from the farms of Buffalo county," for we have practically no other source of wealth production.

Who, by labor and toil, economy, efficiency and good management wrung all the great wealth thus represented from the soil and made it available to all the people of the county? There is but one answer—"the farmers of Buffalo county."

Farmer Does Not Know Everything

The farmer does not know it all. He has much to learn of scientific agriculture, of better methods in the management of his farm. On the other hand, men engaged in other lines of business do not know all about the management of their business, and when the talk is of "helping the farmer," there are just as good reasons why farmers should contribute to a special fund to employ a commercial demonstrator to do demonstration work among those engaged in business or lines of work other than farming as that commercial interests should contribute to a special fund for demonstration work "to help the farmer." The commercial interests in our cities and villages would feel deeply insulted did farmers seriously propose to contribute to a fund to support a commercial demonstrator in order to "help our commercial interests," and there are many self-respecting farmers who "reciprocate the feeling" when the talk is about "helping the farmer" in farm demonstration work.

Agricultural Interests Need Developing

There is just one basis on which farm demonstration work in a county ought to be established and that is on the basis of "helping agriculture," helping to develop our agricultural resources." Whatever helps agriculture, whatever assists in developing our agricultural resources, helps all the people, for we are all dependent upon agriculture, not alone the farmer, but the business man, the professional man in our towns and the laborer as well. In fact, those who are engaged in business, those who dwell in towns, are more vitally interested in an increase of crop production than are the farmers themselves, for from the surplus, from such increase, their revenues will be increased.

If farm demonstration work proves helpful to agriculture in a county, it will be helpful to all the people of the county, and all should contribute to its support, and this can best be done with most justice to all by means of a public (county) tax.

When the subject of farm demonstration work was first presented to the people of Buffalo county, in the year 1911, Gibbon township, at the annual township meeting, voted and collected a special tax for its support in case it was adopted.

The writer is in favor of agriculture being taught, largely as nature studies, in our rural schools, to a greater extent in our high schools, to a still greater extent in our normal schools and university. He is in favor of the establishment of county agricultural high schools, well equipped with instructors, apparatus and with plenty of land, where such education may be given along advanced lines and be well within the reach of all. He is in favor of scientific agriculture, of better methods in farming, of farm demonstration work in a county, all based upon "helping agriculture," the development of our agricultural resources and all supported by public tax or by appropriations from our state and national treasuries, to which appropriations we all would contribute.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

T. E. STURGESS - - - - - - Editor
G. W. HERVEY - - Associate Editor
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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75

REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.

CHANGE OF ADDRESS—Both old and new address must be given.

ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.

COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Father always poo-poos when mother tells how hard she has to work. But father would rather take a licking than try to dress one of the children.

"About 63 per cent of the food value of the corn crop is in the ear and 3 per cent in the stalk," said a placard in the dairy pavilion at the recent Nebraska Dairymen's Association meeting. It further read, "Doesn't this suggest a silo?"

Every family should have a strawberry patch. Three hundred plants set out well and cared for ought, during an average season, supply a family of ordinary size with fresh fruit during the berry season and enough surplus to can and preserve for winter use.

"The cow is the most efficient machine in the milk factory. Why should the milk producers of Illinois be willing to operate machinery which has been discarded by milk producers in other states?" is a question asked by a speaker at the Illinois State Dairymen's Association. While admitting that in the first stages of tuberculosis the product of the cow is not noticeably diminished, yet he states that on account of the ease with which this disease is transmitted from one animal to another it is a most serious menace and in its eradication lies the only hope of making Illinois a successful state in spite of its natural advantages. Not only is this true, but unless Illinois stamps out this disease entirely it is a menace to neighboring states.

Kenyon's Hog Cholera Serum Bill

At the request of the swine breeders of Iowa, Senator Kenyon of that state has introduced in the senate of the United States a bill providing for the inspection of hog cholera virus and serum. The bill as introduced places the matter in the hands of the Department of Agriculture and provides that the secretary shall make such rules and regulations as may be necessary in carrying out its provisions.

Without doubt the greatest question now confronting the swine growers, relating to the treatment of hog cholera with the serum, is how to get serum that is known to be potent. The bill introduced by Senator Kenyon provides for inspection by the government. This paper believes that inspection will not fill the bill. We believe that all serum sent out by any manufacturer of serum should be tested by government inspectors and the container sealed and labeled by such inspector.

We believe that the Kenyon bill is weak, in that it does not provide for testing as well as inspecting. No one can tell by inspection whether or not serum is potent. A careful test, honestly made, is the only way by which the potency of serum can be determined. The farmers of the corn belt have lost many thousands of dollars during the last two years by using serum that was found, by test, to be no good. It is the duty of the government to protect the farmers against this poor serum, and the only way it can protect them is to provide for a rigid test to be made by inspectors under the direction of the Department of Agriculture.

We have many serum plants in different states and unfortunately among them, as in all other businesses, are men who will perpetrate a fraud and send out poor serum. When this is done serious loss is sure to occur if virulent virus is used in the simultaneous treatment. The honest manufacturer of serum can't tell whether or not his serum is potent without testing it.

If we are right in the position that all serum should be tested by government inspectors, could not the farmers be saved many thousands of dollars by the government using these inspectors to make this serum in conjunction with the various states, as well as to inspect and test it, and by selling it to the farmers save the commercial man's profit. Is this practical? This paper is frank enough to say that it is not convinced that this is the best and most practical thing to do.

We believe that the Kenyon bill is also weak in that it provides that "no person, firm or corporation shall deliver for interstate shipment, etc." Why not include the state plant, if it shall engage in interstate business? The big end to be gained is the standardizing of all serum and virus. The state plants of the different states are making and sending out large amounts of serum and virus. They should be under the same control and restriction as the commercial plants.

Naming Fruits and Vegetables

It has long been a matter of disagreement among gardeners and fruit growers as to the names of some varieties of fruits and vegetables. The question of standardization of the varieties has been taken up by the Department of Agriculture with a view of classifying both well known and less well known varieties and giving them names by which they may be generally identified.

The markets of the world need some such system of standardization to get rid of a large number of names that indicate practically the same variety. In order to get this plan into practical working order, the bureau of plant industry at Washington requests anyone having a variety of fruit or vegetable for which he does not know the correct name to write for such information.

The correct naming of the varieties is a matter of more importance than most growers realize, since on account of the confusion now existing relations are often strained between retailer and consumer. The grower and retailer should both be protected by proper naming of the different varieties of produce so that the packages may contain what the consumer thinks he is buying instead of something totally different. As an illustration of the confusion existing at the present time, the department mentions the fact that there are only about twelve varieties of cabbage, but that these twelve varieties possess as many as 300 different names.

The Aberdeen-Angus Association has issued its herd book, volume 22, a very complete record and book of information for all breeders of pure-bred Angus cattle. The business of the association is in a flourishing condition. There has been an increase of nearly 100 per cent during the last two months. Sales have been active and good prices received.

The chinch bug is more effectively destroyed during the winter months than later. The best method at this season is to burn the dry grass and leaves along the roadways and fields.

Caught by Contracts

It ought to be borne in mind always that notes in certain forms which one gives to a certain person may pass into the hands of other persons, and that these third persons can collect them without regard to any collateral agreement which the maker may have had with the one to whom he originally gave the note. Men are often astonished at this. It used to be a custom of certain swindlers to go through the country selling some domestic article and to take a note, which they prepared, from the purchaser—at the same time assuring the purchaser that it would not be collected except upon certain conditions and the fulfilling of certain guaranties with respect to the article. Then these swindlers would take the notes, discount them in a bank and disappear. When the notes fell due the maker was compelled to pay them, and was astonished to find that all the collateral agreements and guaranties were of no benefit to him.

The rule to follow is that if one makes a contract in writing he should put into it everything relating to the contract in any manner; there must be no agreements or understandings on the side. If there are any such suggested, put them into the written paper with the other things. Another suggestion that has been repeated over and over again is to read carefully every paper that you sign.

Aberdeen-Angus Cattle

The Aberdeen-Angus cattle breeders and handlers are feeling quite jubilant over the show ring achievements of this breed at the shows of 1913, and are enthusiastic over the prospects for 1914. The introduction of an Angus milch cow class at the International for next December is very commendable, since all cattle owners and breeders concede that the milk and beef qualities in the bovine race cannot be separated without serious damage to the breed.

It is a good thing to have the beef cow with enough motherly qualities and mother character to be able to raise her own offspring unaided. The development of such a quality will never count against the beef cow of any breed, but will help to find her a place on any farm where beef cattle are produced. Increased milking quality is distinctly appreciated by all breeders and handlers of beef breeds of cattle.

They are trying to scare the American hen off the job now by shipping in Chinese eggs. This Chinese product is in transit a month; the eggs are small, ungraded and many of them off color. At no price will they rival the big, white eggs, well packed in neat cases, properly graded and fresh from the American farm.

Every choice heifer calf should be held at a price out of reach of the veal calf dealer. It is better to sell a scrub heifer calf for veal than to menace the herd with it.

Use More Grease

Of all the people doing business, the farmer is the most careful and economical in the use of grease. It is seldom that the farmer touches grease, and yet there are few kinds of work demanding a more frequent use of it. The farmer is a user of more kinds of tools than any other artificer. If he is not a mechanic it is his own fault, and his own disadvantage and loss, because he handles and operates all sorts of tools, machines and implements usual to the common mechanic.

The farmer, above all other tool handlers and tool users, works at a disadvantage. It matters not how careful he tries to be in the care of his tools to keep them dry, he will find occasion to go out in the rain, snow or damp and use the saw, auger, chisel or other tool, and if it is not carefully dried and oiled or greased it is very apt to rust from this exposure.

No farm tool need rust out, used or unused. Every farm tool, implement and machine should be oiled, greased or preserved from dampness, wet and rust. They should be carefully wiped when used and then be ready to lay aside. Grease is the best application and lasts longer than most oils. All hand tools of the edged sort should have a dry place to be stored in, and kept in this place when not in use, and by all means carefully cleaned, wiped and greased when put away.

The machines of the farm—mowers, reapers, etc., should be put in out of the weather and oiled, greased, cleaned off, preserved from rust and decay. See how many machines and tools there are on the farm that are intended for use next spring and summer that are now under roof and not in the least liable to the damaging influences of rust. No farmer can afford to rust out his farm equippage, no matter how much he is making in feeding cattle and hogs or raising grain.

Increase Alfalfa Acreage

There is a general tendency among land owners throughout the Missouri valley states to increase their alfalfa acreage. This is due to many reasons, all of which appeal to the money-making sense of the farmer. The fact that this crop is the most bountiful producing crop from the standpoint of feed and commercial value that the farmer can grow on his land is the evidence that appeals to the land owner, as all owners of land like to see their investments yielding a visible revenue above taxes and interest, and the alfalfa acreage is pointing the way to successful investments.

There is no hay or forage crop grown on the farm that will yield as large a value of feed per acre as that obtained from alfalfa, all costs and expenses considered. It is a hay, feed and pasture that satisfies the demands of all kinds of live stock. It is economical from this same standpoint, because it so fully covers all these demands reaching over the entire year with the live stock. A farm should be figured with its live stock demand in guaging its acreage of alfalfa, unless it has the advantages of easy transportation at its command for marketing a portion of its crop as hay.

The commercial feature of this crop must be taken into account with the land owners when they are apportioning their farm lands to crops. Alfalfa hay has taken a very pronounced and important position in the hay markets of the country, and there is no evidence that it will be obliged to yield to any other competing feeds; in fact, it is gaining in popularity everywhere, on the farm and on the city hay markets. The tendency is to grow more alfalfa, and this is emphasized by the widespread influence it is steadily acquiring.

Alfalfa seed is the important consideration with the grower. The high price of this seed in recent years, owing to its scarcity and the great demand for it, has curbed the disposition to increased acreage more than all other influences. The dry weather of 1913 encouraged seed production in this plant, and the second and third crops were in many instances reserved for seed. The seed yield over Kansas and Nebraska is reported very good, both in quantity and quality, and is now on the market at a much cheaper rate than for many years. The best of alfalfa seed that has stood the test of the pure seed experts is selling from the retail seed dealers to the farmers at $9.50 to $10.50 per bushel. This, when compared with $13 to $14 per bushel, looks encouraging to the farmer who has land to seed to this crop.

It is reasonable to believe that this large seed supply and lower prices will stimulate a much larger acreage than has been sown for many years. The tame grass hay acreage of the country is steadily and surely drifting toward alfalfa.

Farmers, Keep Bees

There should be a few colonies of the honey bee kept on each farm as a matter of economy in aiding and assisting in fruit polenization. The farm apiary should be recognized as a necessity, not a luxury. There is no article of diet or food better suited to the general demands of the human organization than the nectar gathered by the honey bee. As a matter of saving the waste of the farm there is a great deal said nowadays, and very properly, too, but frequently the discussion is directed to crops and the things that man neglects to do at the right time and do properly.

There is a very valuable waste in the form of nectar in the flora of grasses, plants, fruit bloom, etc., that is seldom thought of and very seldom any provision made for its saving. Just what this is worth in dollars and cents to the 160-acre farm can only be approximately guessed, but an estimate of 500 pounds at 15 cents per pound—only a very small part of the product—would amount to $75. This would be the work of five colonies of bees, allowing for all kinds of bad seasons and unfavorable weather for the crop and its harvesting. Some colonies double this amount under very favorable conditions.

There are two very substantial reasons why every farm should have an apiary installed and its work carefully looked after. First, every family enjoying the advantages and privileges of farm life should get out of it all the sweetness and nectar that nature affords, because there are some hardships and disappointments that go with farming, as is the case with most other occupations. Another very good reason for the apiary on the farm is the money advantage it affords in turning the waste of nectar produced by the flora of the crops and plants into an article of merchandise. It is just so much added to the proceeds of the farm each year that otherwise would not be had.

The need of a more strict system of management on the farm in the matter of saving the waste is apparent, and the study of farm management will soon suggest all these little side issues that can be added without interfering with the main features of crop industry.

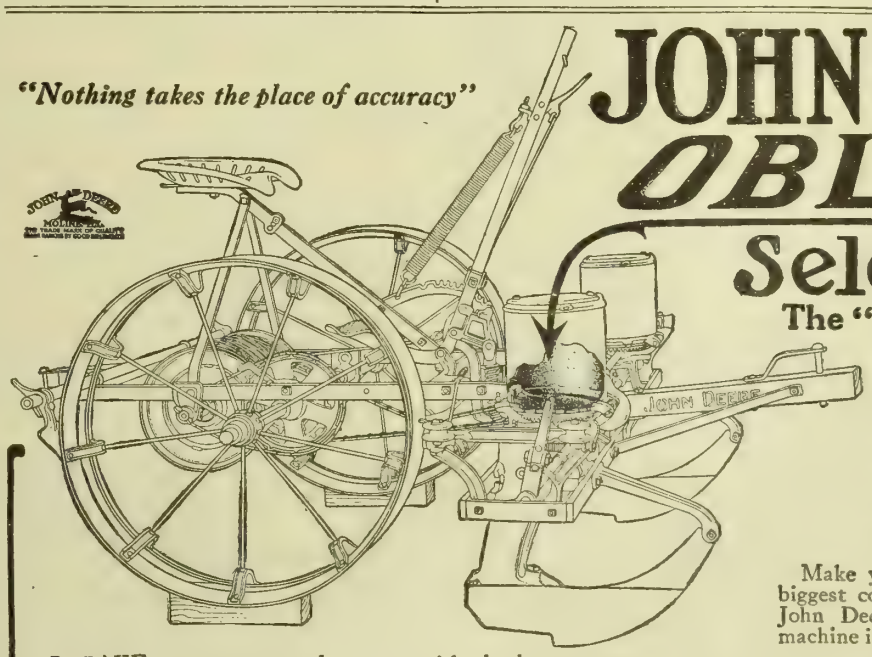
Tuskegee, Ala., is the center of education and progress for the colored population of the United States. The institute there has been training the more progressive members of the race in the trades and professions. Now the Negro Farmer, a paper devoted to the interests of the colored tiller of the soil, has made its appearance, with headquarters in Tuskegee. Long life and success to it! The white men made a mistake when they brought the colored people over here, out of their natural environment, and the only thing we can do about it now is to give them our assistance and encouragement in making the most of themselves under their adverse circumstances. It is said that there are about 2,000,000 colored farmers in this country. It is a matter of no small importance to us that they be good farmers, and we hope the Negro Farmer will help and encourage them to be such.

There is just as much, and more, reason for rolling the soil in the garden as there is in rolling the cropped fields. A good hand roller can be formed for this purpose by filling an old stovepipe with cement, inserting a bolt in each end of it for attaching the iron straps that hold the handle by which the roller is pulled. A six or eight-inch tile will serve the same purpose.

"Nothing takes the place of accuracy"

JOHN DEERE OBLIQUE Selection

The "Natural" drop



This machine maintains high accuracy even with ordinary seed. With well selected seed its dropping accuracy is practically perfect.

MAKE your corn ground pay you with the largest possible yield, by making sure that the required number of kernels is in each hill.

The seed must be there. Every "miss" means just that much thinner stand. No amount of cultivation can make up for inaccurate planting. The loss of one ear from every hundred hills costs you the price of one bushel per acre.

For years the John Deere Company has concentrated on accuracy in planting devices. The "Oblique Selection" solves the problem.

The results of its use are so profitable that many corn growers have discarded the best of previous machines. It is as far ahead of the old Edge Drop as it was ahead of the round hole plate.

Make your spring planting the start of your biggest corn crop by accurate dropping. The John Deere "Oblique Selection" will do it. The machine is a splendid investment.

Free Book Gives Valuable Corn Facts

Write us today for free booklet "More and Better Corn". It tells you why the average yield for the United States is only 25 bushels an acre, whereas better methods have produced 125, 175 and even 255 bushels per acre in places. It also describes and illustrates the John Deere "Oblique Selection" Corn Planter. The book to ask for is No. D 15.

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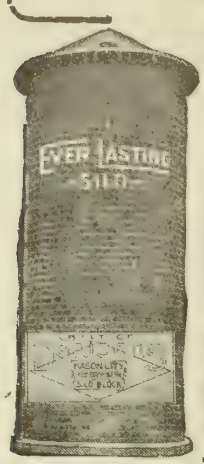

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BLOCKS

And that cost is no greater than that of a temporary structure, one that may, with its contents, go up in smoke or fall in a wind storm just at the time you need it most. Over 5000 Hollow Clay Block Silos now in use prove their superiority.

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to show you these Silo Blocks Write us the size silo you want. We will gladly send you complete information about cost and construction.

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He stands ready to turn it over to you this very day—without asking you to pay a red cent down. Put it up on your farm—use it 60 days or six months—if you are mighty well satisfied with it, pay for it. If you are not, return it to your dealer. We will buy back from him every gate you try out if it doesn't sell itself to you.

We guarantee this gate to be the strongest made today anywhere. Built of heaviest High Carbon Steel Tubing Galvanized. Easily withstands shock of wildest steers or stallions—breachy cows—meanest bulls. Guaranteed for three years. If, by chance, your dealer is not supplied, write us at once for full details, low prices and terms.

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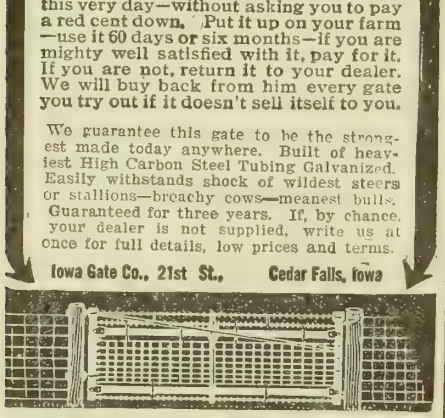

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The Growing of Sugar Beets

It Has Made Scott's Bluff County Prosperous

SOME years ago an effort was made to grow beets extensively at Valley, in eastern Nebraska. Large tracts were grown on the lands of the Ames Cattle company and other lands in the vicinity. From lack of sunny weather and too much rainfall, the sugar percentage in beets was too low for profit.

In Scott's Bluff county, in far western Nebraska, the higher elevation, the cooler nights, the greater number of sunny days, the natural fertility of the Platte valley lands and benches, all combined to create superior natural advantages for the profitable growing of the sugar beet.

To grow the sugar beet at a large profit, since the fixed charges are nearly as much on the growing of a ten-ton crop as on a larger crop, it has been found imperative to build up the soil by crop rotation. Beets follow alfalfa to good advantage. In Germany it has been found that beets could be grown every year for a long period of time, provided heavy annual applications of manure could be made. It is, therefore, the policy of the best farmers in the Scott's Bluff district to grow beets as one crop in a rotation, following alfalfa. Beets may be grown for two years with lessened product and profit, sometimes for three years, particularly if an application of manure can be made before the third crop.

During 1913 about 14,000 acres of beets were grown for the Scott's Bluff factory. For the crop the factory contracts to pay $5 per ton for such beets as will test 15 per cent sugar. While the factory may accept and grind beets testing a less percentage, it reserves the right to reject any falling below 15 per cent. This right, however, is rarely exercised, as the factory has been desirous of securing beets in sufficient quantity to keep the factory fully occupied. The capacity of the factory is over 300,000,000 pounds of beets in 120 days of twenty-four hours each. The output of sugar in the season just closing has been approximately 50,000,000 pounds.

It has been found that ground must be very carefully prepared and placed in such superior condition as to make it possible to secure a perfect stand of beets. Perhaps the methods employed by E. P. Cromer of Gering, one of the better growers, will illustrate methods usually followed. Using rotation of alfalfa, followed by all the manure that can be secured, the soil is placed in the best possible tilth in the effort to secure a perfect stand of beets. The hand labor of handling the beet crop is usually sublet to Russian and German families or to Japs at $20 per acre for the season. For this sum the laborer agrees to thin, hoe and perform all the hand labor necessary for the cultivation of the crop, and in the autumn to top the beets and throw them in piles for convenient loading. The owner or renter of the land supplies and performs all team work. A single man can perform the hand labor for twelve acres, thus earning in five months $40. Many of the Russians, however, have families, and their wives and children work with them in the field. Since American families do not usually care to work their wives and children in the field, this hand labor falls therefore to the families of Germans, Russians or to Japs. Since the fixed charges for the preparation of the soil, the purchase and planting of the seed and the hand labor are just the same for a crop of eight or ten tons per acre as for a crop of fifteen or twenty tons per acre, the importance of maintaining the fertility and of perfect methods of cultivation will be readily apparent.

The sugar factory desires to commence operations as early as possible in the autumn. Their chemist therefore tests samples of beets from different growers from day to day through September, and as soon as the sugar percentage rises to 13½ per cent instructions to dig are given. Beets are dug very rapidly through the month of October and into early November. As a favor to the farmers, they are allowed to haul their beets to beet dumps constructed along the railroad. All the company can handle from day to day are run up over the dumps and loaded on cars and sent to the factory. The others are weighed over the company's scales and then piled in dumps near the railroad. The beet pile near Gering last year was one-quarter of a mile long, 300 feet wide and seven feet deep. Day after day all through the season strings of heavily-laden teams drove in, weighed and threw their loads on this big beet pile. Piled in this mass beets develop a little warmth, and only about a foot of the surface and sides suffer from frost. It does not hurt the sugar content to freeze, but freezing and thawing gradually lessens the percentage of sugar. There were twenty-four such beet dumps on the system, the others, however, not as large as the pile at Gering.

The beet tops sell at from $3.50 to $4 per acre for feeding purposes. They have been found fattening and useful when fed to cattle and horses. The beet pulp is also utilized and fed mostly to cattle. Not being able to sell all of the beet pulp to feeders, the sugar company buys stock cattle and feeds alfalfa hay and beet pulp until cattle are in good condition to ship. Cattle so fed bring nearly the price of corn-fed beef.

With a crop of fifteen tons per acre, Mr. Cromer received pay for all team and hand work performed and a margin of $1,500 on forty acres of beets. Mr. Cromer farmed 120 acres in his crop rotation, growing alfalfa, beets, grain and potatoes. To utilize his beet tops and surplus hay Mr. Cromer fed cattle, purchasing them on the Denver market and finally shipping to Omaha. Mr. Cromer regards rotation of crops and some method of stock feeding for the purpose of securing manure as essential in successful beet production.

The employment of a large amount of labor and developing a cash crop has made money abundant in the community. The banks loan freely at 8 per cent.

E. F. STEPHENS.

Farm Separators

There are a number of very good reasons why a farmer should own and operate a cream separator. The other day, while addressing a meeting of Illinois dairymen, Prof. C. E. Lee of Wisconsin enumerated the following:

1. There is little or no loss of skim milk, which, of course, has a high feeding value.

2. There is less danger of introducing such contagious diseases as tuberculosis into the herd if the milk is skimmed at home and only the milk produced upon the farm is fed.

3. Time is saved by not hauling whole milk to the factory.

4. Less products have to be cared for upon the farm.

5. There is a wider market for cream than for milk.

Farm House Lighting Idea

The farmer who possesses an automobile with an electric self-starter may have electric lights on his premises without any additional expense. The small battery which is used to operate the motor when cranking the car can be connected onto the house lighting system and will furnish all the light necessary for the home without injuring the battery. No attempt should be made to operate heating apparatus from this battery.

Speaking
Of Lunch

the wife said, "Bring home a package of

Post
Toasties
---Sure!

Toasties are wonderfully good at any meal, and somehow seem to match the appetite of both home folks and guests.

Bits of selected Indian Corn, delicately seasoned, cooked, rolled thin and toasted to a rich golden brown—that's Post Toasties.

Fresh, tender and crisp, ready-to-eat direct from the package. With cream and a sprinkle of sugar—

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Toasties sold by grocers
—everywhere.

Suggestions to Tree Planters

How and Where to Plant

TREES ignorantly or carelessly handled discourage the planter, who on his part not only loses the money and labor which he put into the effort, but his failure is discouraging to his friends and neighbors, and to that extent impairs the development of the country.

It has been our observation that the farmer is oftimes more careful about planting his trees than about the cultivation and protection of them after they are planted. He rouses himself to a special effort at planting time, and, having planted with the same care that his father exercised in some eastern state, he feels that he has done his whole duty, and gets busy with his crops and other duties and forgets that trees and plants handled under semi-arid conditions need a great deal more care and attention than trees planted in the eastern or middle states. No farmer would expect to raise a crop of corn if he simply carefully planted and then neglected it.

Actuated by his desire to help his customers attain success, the average nurseryman endeavors to pack his trees and have them reach his customers in condition to grow, not only as a point of commercial honor, but to build up his business. The grower and the shipper having done this, it is incumbent upon the planter in a responsive way to do all he can to attain success.

If the trees when received from the railroad station are not in proper and perfect condition to grow, there should be an immediate report made to the nurseryman who made the shipment. The time to take up questions in regard to damage and loss is at that time, and not after a season of partial neglect, to write back to the shipper and state that his trees must have been weak in vitality because the planter had failed in securing a satisfactory growth. If the farmer goes to the store to purchase a bill of dry goods, implements or machinery, he usually examines it at the time of purchase and satisfies himself that he is securing what he is paying for.

Where to Plant

While the commercial orchardists in most districts prefer a northeasterly slope, the family orchard should be near the house, without reference to slope. In other words, do not put a family orchard on a remote corner of the farm simply to take advantage of a northeasterly slope. The writer has orchards planted on all slopes, as well as uplands and bottom lands, and usually the orchards do well in all locations. The location as to slope is not as important as the care the orchard receives after planting.

We thoroughly believe in windbreaks to the south, west and north of the orchard. A north windbreak lessens the extreme rigor of the winter winds. The windbreak on the south and west lessens the ardity of dry winds in summer, and a row of lofty-growing trees on the east prevents the rays of the sun from raising the temperature too quickly after a frosty night.

Since the average farmer has more work than he can possibly handle, he should utilize his team as far as possible in preparing ground for planting. After having thoroughly plowed the ground and done all that can be done by plowing, pulverizing and harrowing, part of the hand labor of digging holes can be saved by cross-marking and then running the lister to the utmost depth possible to attain, then planting the trees at the intersection of the cross-marking. In semi-arid regions it is well to plant fruit trees six or eight inches deeper than they stood in the nursery row. Plant without the use of water until the earth has been filled in three inches over the roots and thoroughly tamped. Leave a basin surrounding the tree. If the soil is not sufficiently moist add two pails of water to the tree. After this water has soaked away, then cover this wet surface with three or four inches of earth, leaving the surface loose. Never tamp the wet soil. Plow and cultivate the ground in such manner that the slope of the ground is toward the tree, then heavy, dashing summer rains throw an increased percentage of water to the trees. After cultivation ultimately and gradually allow the ground to become level.

Treatment of Trees When Received

Bundles should be properly opened and the roots soaked in water. While waiting to plant it is well to bury the trees in the ground temporarily in such manner that the moist, mellow earth will come in contact with all the roots and trunks and thoroughly protect them from the air. If by reason of delay the trees should be shriveled when received, they can be brought out in safety by burying them entirely in moist earth, root, body and branch, for two or three days. It sometimes happens that the weather after planting is very unfavorable; the evaporation may be very rapid. Trees that have been planted can take up very little moisture from the ground, no matter how much water you apply, until they have made granulations for new root growth. Under such conditions the sap within the trees or plants may be rapidly exhausted before granulations have

(CONTINUED ON PAGE TWENTY-ONE)

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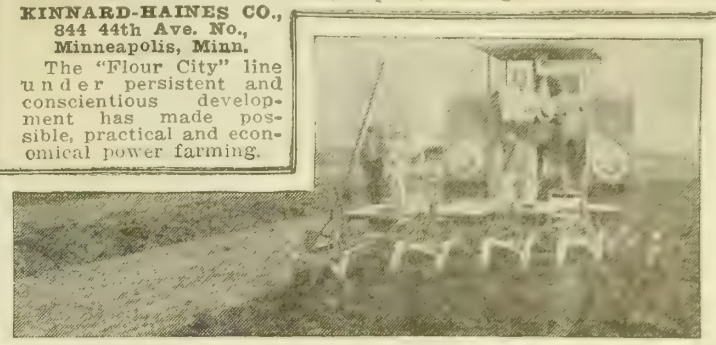

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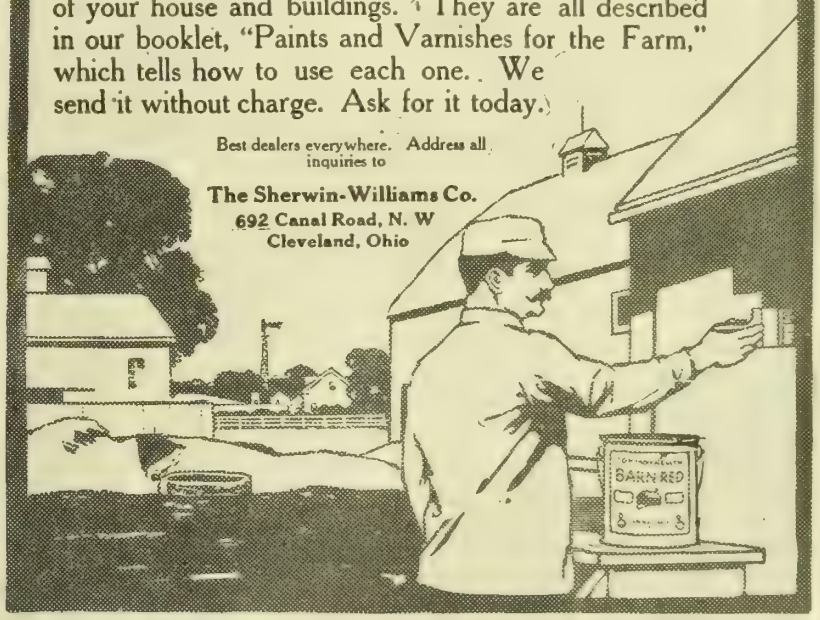

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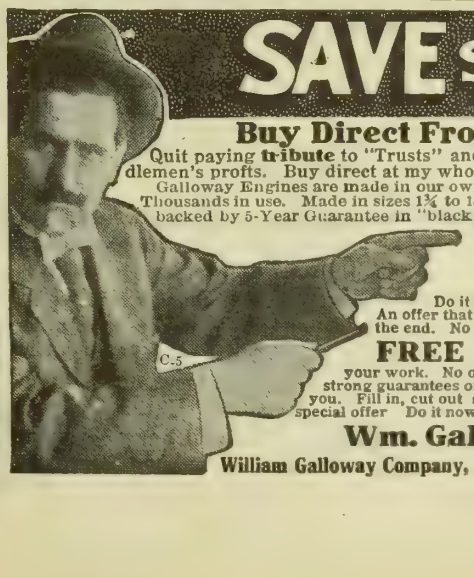

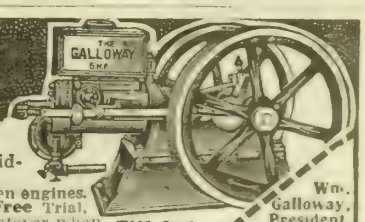

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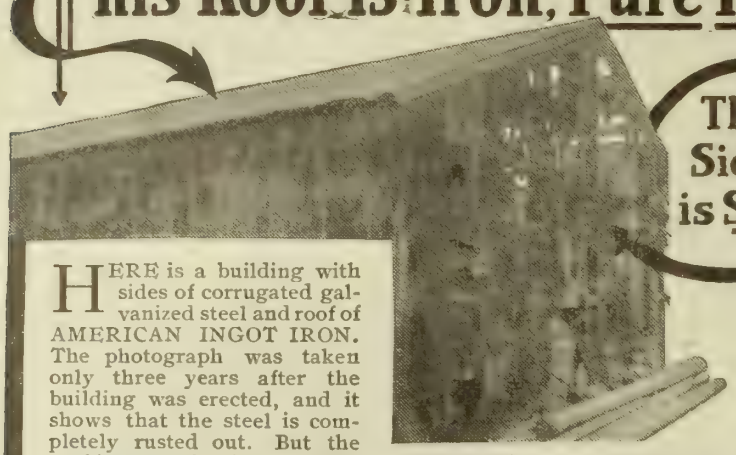

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HERE is a building with sides of corrugated galvanized steel and roof of AMERICAN INGOT IRON. The photograph was taken only three years after the building was erected, and it shows that the steel is completely rusted out. But the roof is as good as it was on the day it was laid because AMERICAN INGOT IRON is the *purest* and therefore the most resistant to rust ever placed on the market. The rust producing impurities have been reduced to less than one-sixth of one per cent., causing it to endure for years and years after steel or impure iron of the same thickness has entirely gone to pieces.

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RECOMMENDED BY BEST EXPERIMENT STATION TESTS. Makes 10 to 15% more good feed than any other type. **Five years absolute guarantee. Five years paid-up insurance** against cyclones, windstorms and tornadoes. **Send postal for big new book, "Turning Cornstalks Into Cash," free.** We deal direct, have no dealers, appoint no agents. One hundred different sizes. One factory price on each. **Write today. Get the Book.** Address:

PERFECTION METAL SILO CO., - - - - TOPEKA, KANSAS.
2006 Jefferson St. We are the Original and Sole Manufacturers. Largest Metal Silo Factory in the World. Forty Years' Experience in Metal Work.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

OLD SEED CORN 4 leading varieties. Tested and guaranteed.
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COW PEAS Write for SAMPLES and Prices. Address, **JAS. S. EVANS & SONS, Vandalia, Ill.**

Possession is Only Nine Points

By Faye N. Merriman

"BUT you promised," protested his wife, tearfully.

"I know I did," retorted Mr. Morse, crisply, "but I did not know last fall that I should need a new barn this spring, and I can't build a house and barn both."

"I don't see what is the matter with the barn you have now," continued the little lady, who sat opposite him at the breakfast table. "It was only built a few years ago."

"It is not large enough for one thing, and I can think of many improvements that might be installed in a new barn impossible in the old one. I pride myself on my up-to-date machinery and farming apparatus and I must have other conveniences to match."

"Well, I should think you would want the house to match, too," his wife retorted bitterly. "This little, old, unpainted shack looks like nothing so much as a horrid little beetle even beside the old barn. I can't imagine how it will look beside the new one."

"A new house is unnecessary," said her husband, coldly. "This one does well enough for purposes of eating and sleeping, and that's all I do in it. A barn is a business proposition—an entirely different thing."

"But you promised you would build me a new house this spring," repeated his wife, her lip quivering. "If you knew how ashamed I am of this unpainted cabin, and how hard it is for me to do the work here you would keep your promise. It is so dark and the ceilings are so low I feel oppressed every minute I am inside."

"These few rooms ought to make the work lighter," argued her husband; "you ought to be thankful that you haven't a fine, big house to take care of."

"I suppose I ought to be thankful just to be alive," she returned bitterly, "even if my life is totally unlovely and I have none of the dainty, beautiful clothes or surroundings that I had before I was married. But someway I don't feel particularly thankful."

Mr. Morse rose abruptly. "I hope you are not going to get into the habit of continually complaining," he said, crossly. "Let's consider the subject of a new house closed. It is impossible just now. Perhaps in the fall—"

His wife wearily flung out a hand to silence him, and, looking a little ashamed, he crossed over to the door. At the threshold he paused.

"After the carpenters are through with the barn," he said, "I will have them put in a new window or two in the house."

Mrs. Morse did not answer. After he had gone she clenched her hands wrathfully. "I won't have new windows put in," she choked, "I won't have it; then there never would be a new house! Oh, I wish, I wish—" And she threw her head down upon the table and sobbed bitterly.

Presently she wiped her eyes upon a dingy kitchen apron and surveyed the small, unprepossessing kitchen with an expression of positive hatred. A long table, loaded now with greasy dishes, filled the room like a calf in a baby buggy, leaving barely enough room between it and the walls for the ugly wooden chairs. There was no sink and no other table; there was not room for one, and the huge range had an air of shrinking back as closely to the wall as possible in order to furnish an inch or more of needed space. The unplastered walls were covered by tacked-on wall paper, dainty once, but drearily dingy now, and the floor was covered with worn linoleum, from which the design was scrubbed quite away.

Snowy curtains at the small windows and covering the cupboard seemed only to emphasize the unattractiveness of the rest of the furnishings, and with a sigh Mrs. Morse arose and commenced gathering up the dishes preparatory to washing them upon one end of the table upon which the meal had been eaten.

When they were married, three years before, there had been an understanding that a new house would be erected at once, but it had been put off from spring to fall and from fall to spring again until Myrtle

AFRAID TO EAT
Girl Starving on Poorly Selected Food.

"Several years ago I was actually starving," writes a Me. girl, "yet dared not eat for fear of the consequences.

"I had suffered indigestion from overwork, irregular meals and improper food, until at last my stomach became so weak I could eat scarcely any food without great distress.

"Many kinds of food were tried, all with the same discouraging effects. I steadily lost health and strength until I was but a wreck of my former self.

"Having heard of Grape-Nuts and its great merits, I purchased a package, but with little hope that it would help me—I was so discouraged.

"I found it not only appetizing, but that I could eat it as I liked and that it satisfied the craving for food without causing distress, and if I may use the expression, "it filled the bill."

"For months Grape-Nuts was my principal article of diet. I felt from the very first that I had found the right way to health and happiness, and my anticipations were fully realized.

"With its continued use I regained my usual health and strength. Today I am well and can eat anything I like, yet Grape-Nuts food forms a part of my bill of fare."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Morse was beginning to lose heart. Her piano awaited her at home, together with numerous boxes filled with things taken from her own room, but upon one pretext and another she had delayed their shipment, much to the astonishment of her parents, who wrote occasionally even yet concerning the matter. But no woman likes to admit the vanishing of her rosy dreams, and the secret of the bare cabin was one which Myrtle jealously guarded from the folks at home. Much as she longed to see them, she was glad that several states separated them and made visiting impractical. Still, she knew that they would come, that they longed to see her and must be hurt and wondering at the postponed invitation.

She finished her dishes just as the rural mail carrier, in his rattling buggy, came whistling down the lane. Glad of the excuse for a little respite, she ran down to the gate for the mail.

"Hear Tod's goin' to build another barn," the carrier commented as he sorted out the letters and papers. "He's a great boy for buildin' barns, Tod is." He glanced up from the letters and over her head at the house.

"You'd better ask him to let you move in when he gets it built," he chuckled dryly, with a glance in which pity and honest admiration were mingled, for even the unutterable drudgery that had been hers could not entirely banish the roses from her cheek or the beauty of line from face and figure.

Mrs. Morse murmured a reply, and with her cheeks flaming, ran back to the house. So the neighbors were jesting over the situation and pitying her! The shame of it!

Choking back the sobs, she picked up the one letter addressed to herself and opened it. It was from her mother and toward the end it said:

"Your father is coming west in July and proposes that I accompany him. It is a business trip primarily, but we will find time to stop and visit our little girl if she wishes to see us."

"Wishes to see us!" Her cheeks burned again at the thought that her mother should ever have to doubt her welcome. She ran down to the barn with the letter and showed it to Tod. To her disappointment, he glanced over it indifferently.

"Better make some excuse," he flung to her as he went on hitching the team to the plow; "we have no place for them and it will be in the busy season."

Her face flared with resentment and an angry retort flew to her lips, but she checked herself wearily and crept back toward the house. What was the use of breaking one's head against a stone wall? It only hurt the head and affected the wall not a whit.

Nothing more was said about the proposed visit or the new house, but a coldness sprang up between the couple, whose relations had never been to congenial at best since the honeymoon had waned.

One day, in the latter part of May, Mr. Morse announced curtly that business would take him away for a couple or three weeks, and gave a few final directions about the barn, which should be completed during his absence.

The day after his departure Myrtle wandered out to the new structure for the first time, having avoided the place as she had recently avoided her husband's presence. As she stepped inside a sigh of admiration came from her lips. The main part of the barn, where the machinery was to be stored and indoor farm work done in inclement weather, was large, light and roomy. The broad windows, the airy spaces, were in sharp contrast to the cramped confines of the dwelling. With curling lip she remembered the jesting words of the rural carrier. Then an idea occurred to her that left her gasping. For a few moments she hesitated and then ran to the head carpenter breathlessly.

"Could you put a light partition here, and here, and here?" she asked, pointing.

"Sure," he answered; "want to make a six-room cottage of it?" He chuckled at his own wit, but leaned against his ladder in astonishment when she nodded in reply.

"Sure we can do it," he answered again, when convinced that she was entirely sane, "but what will Mr. Morse say?"

"I'll attend to Mr. Morse," she replied, tossing her head with a new spirit. Then, walking very erect, she went into the house and wrote a telegram requesting that the piano and boxes be sent immediately.

Sending the telegram necessitated a trip to town, and while there she purchased huge rolls of tan and green burlap and quantities of scrim and cretonne, while she ordered an oak dining table, with its accompanying sideboard and chairs, and a complete bedroom set, to be sent out to the farm, charging the account to her husband.

By the time she drove into the yard the carpenters had finished the partitions, and although it was past time for them to go, stood around waiting curiously.

She shook her finger at them gaily. "Run along home now," she ordered, "but if you like you can come over tomorrow and help me out a little."

The next day the walls of the recently arranged rooms were covered with the burlap, upon which designs were stenciled. Bright and dainty curtains were hung everywhere and finally the new furniture moved in. Meanwhile the old furniture had been removed from the house and stained or painted into respectability and was installed piece by piece as it was finished.

Myrtle refused to think of the impending interview with her husband and allowed the days to drift by in enjoyment of the new surroundings. The fruit trees were all abloom and she had filled the room with their fragrant presence, when one afternoon as she sat gently rocking behind the daintily curtained window she saw a shadow fall across the floor and her husband stood in the door, his face like a thundercloud.

"What does this mean?" he thundered, glancing about the interior.

"It means light and comfort and happiness for me," she said, tranquily, although she was inwardly trembling.

"It means that you will pack up these things and move them back into the house immediately," he corrected, grimly.

Myrtle sprang to her feet. "It means nothing of the kind," she said; "possession is nine points of the law, and I'll go home before I'll move back into the house again."

"Go home?" he asked blankly.

"Yes, I'll go home," she said hotly. "If I can't have a spot where I can entertain my parents, I'll go home to them."

"Nice place to entertain," he remarked, "in a barn!"

"Lots of people live in a barn in

Saving You $220

On Reo the Fifth

This year we offer you a saving of $220—of 16 per cent.

The 1913 Reo the Fifth sold for $1,395, completely equipped, including electric starter. This years' car, even better equipped, sells for $1,175.

Tires and electric starters both cost less this year. But most of this saving comes through factory policy.

Three years ago Mr. R. E. Olds built this great chassis as his final car. And he said that it marked his limit. Many thousands of these cars have been sold since then, and against each car we made a charge to cover all the machinery we bought to build this car.

Now that investment has been all wiped out. We now figure only factory cost, and the saving goes to our buyers. That is one result of building one perfect car and confining our output to it.

Streamline Body Electric Starter

This year we adopt the streamline body, which is now European vogue. This beautiful body is the coming type. The angle dash is going.

We use the best equipment made for electric starting and lighting. In every way the car's equipment is modern and complete. The finish is perfect. The upholstery deep and rich.

And this car alone has the one-rod control. No levers in the driver's way.

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Reo the Fifth is famous as an honest car. It is built throughout in a careful, costly way. We add in these ways to the necessary cost about $200 per car.

The steel is twice analyzed. Our materials are made to formula. Our gears are tested in a mammoth crushing machine. Each driving part, as a margin of safety, is given 50 per cent over-capacity.

Each engine gets five long and radical tests. Close-fitting parts are ground over and over to give utter exactness. Nothing is ever hurried

We use 15 roller bearings. We use 190 drops forgings to avoid risk of flaws.

Cars of this model are kept running night and day, covering thousands of miles, to reveal any possible weakness.

The result is the utmost in a well-built car. An almost trouble-proof car. Small cost of up-keep. A car built to run for years and years as well as it runs when new.

No car in this class compares with Reo the Fifth for a man who buys a car to keep. Thousands of men now know this.

Sold by a thousand dealers. Write for name of nearest dealer. Also for catalog.

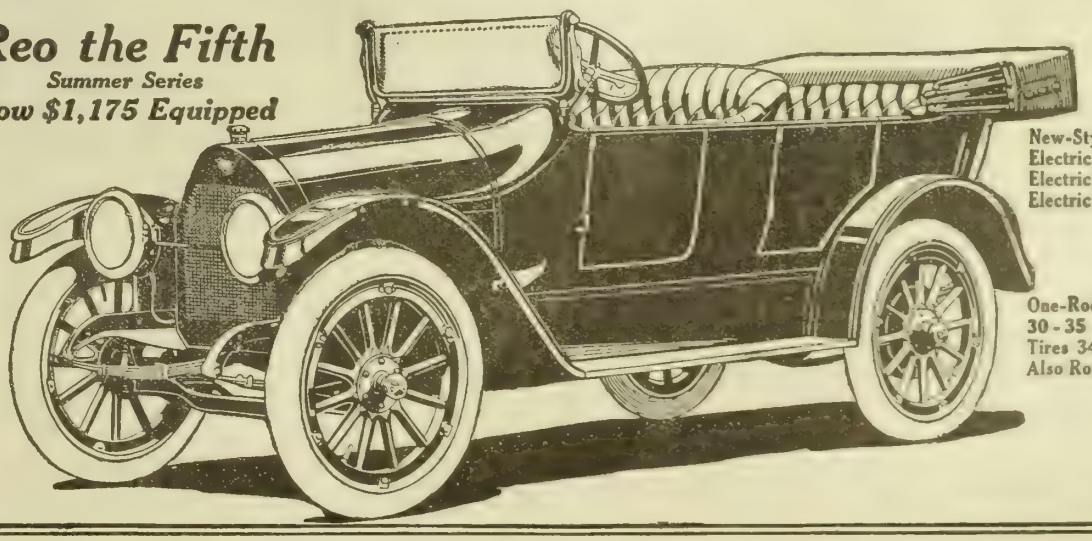
Reo Motor Car Company, Lansing, Mich.

Canadian Factory, St. Catharines, Ont. Canadian Price, $1,575.

Reo the Fifth

Summer Series

Now $1,175 Equipped



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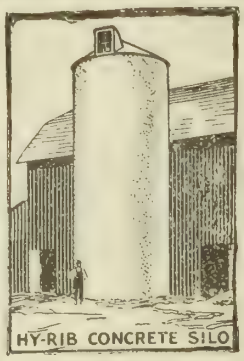

Hy-Rib Concrete Silos

Are low in cost, permanent and give general satisfaction everywhere. Built without forms, they require only the usual simple scaffolding and the ordinary farm labor. Walls are absolutely waterproof and are not injured by silage juices.

For farm buildings of every kind, Hy-Rib construction is simple, economical, permanent, fireproof. Hy-Rib combines within itself reinforcement, forms, lath and studs. It comes in large sheets, easily handled.

Free—Book on Hy-Rib Concrete Silos and Farm Buildings.

For Reinforced Concrete Roads

RIB METAL, as shown below, consists of a panel of rigid steel bars, handled as easily as a single bar. Imbedded in the concrete, it prevents cracks in roads and pavements. Also used for culverts, sewers and conduits.

TRUS-CON ARMOR PLATE protects expansion joints in concrete pavements, so that the exposed edges do not chip off under traffic.

Free—Book on Concrete Roads and Pavements.

CONCRETE SILO CO.

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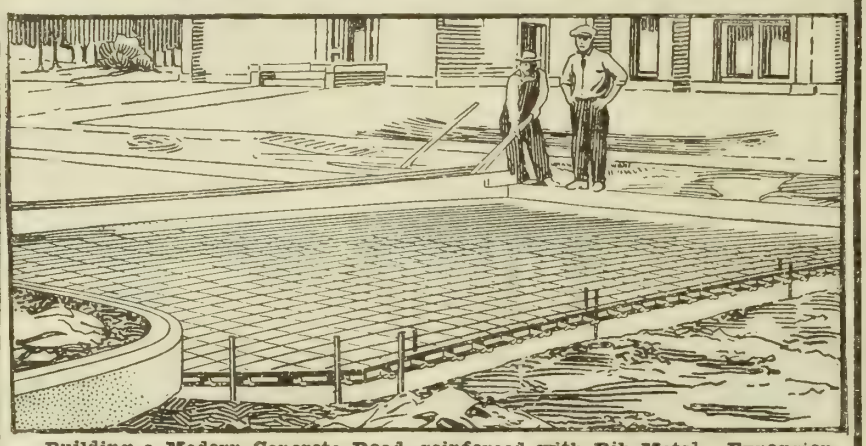
Distributors for TRUSSED CONCRETE STEEL CO., Detroit, Mich.



Building a Modern Concrete Road, reinforced with Rib Metal. Expansion Joints protected by Trus-Con Armor Plates.

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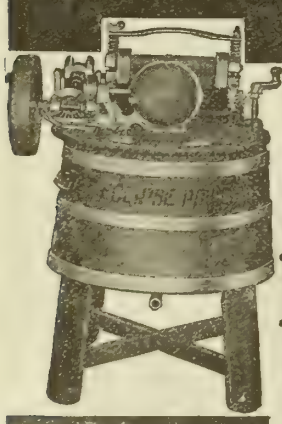
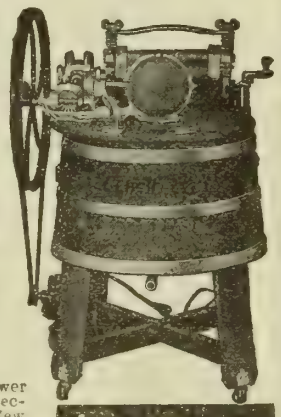


The "Eclipse" Power Washer couldn't possibly be made better or to work easier. After you've seen it you'll put your O. K. on it.

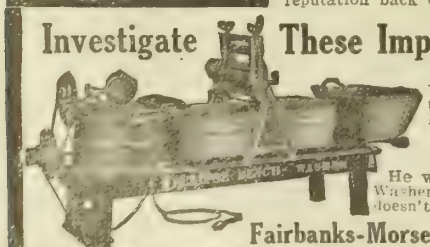
Handsomely finished. Natural color cypress tub. Hoops and mechanical parts in aluminum bronze, best lasting finish. All mechanical parts subject to strain are malleable, no chance of breaking. Metal frame ball-bearing wringer positively strongest made.



FAIRBANKS-MORSE CO.

have a reputation of high repute and when they endorse or place a product on the market you can depend on it as the HIGH STANDARD with their reputation back of it.

Investigate These Improvements



The "Eclipse" Power Washer, "Eclipse" Electric Washer and our New Improved "Eclipse" Platform Washer.

Ask Your Dealer or Write

He will have to admit when you insist on an "Eclipse" Washer that you know what you are talking about. If he doesn't handle it write us direct.

Fairbanks-Morse Co., 9th and Harney Sts., Omaha, Neb.

AVERAGE 17c A POUND FOR YOUR HOGS

Butcher your hogs, cure your meat with **Wright's Ham Pickle** and smoke it with **Wright's Condensed Smoke.** Sell meat by parcel post to city people. **LET UNCLE SAM BE YOUR ERRAND BOY.**

Wright's Ham Pickle, a scientific combination of meat curing materials all recommended by Dept of Agriculture. A $1.00 box cures a barrel of meat.

Wright's Condensed Smoke, a liquid made from hickory wood, for smoking all meats. A 75c bottle smokes a barrel of meat. Send names of five neighbors who cure meat for **Free Sample and Book.**

The E. H. WRIGHT CO., Ltd. 820 Broadway, Kansas City, Mo.

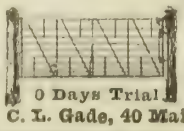
KHERSON OATS The heaviest yielding early variety—

Great smut and drouth resister—due to seed with "My seed every bushel, absolutely free from smut, carefully reclaimed. Prices low. Get Booklet, No 10, describing this great oat and my higher yielding seed corn. **C. RAY MOORE, Box 105, KELLERTON, IOWA.**

"THE MAN WHO DOES THINGS WITH CORN"

When writing to advertiser kindly mention Twentieth Century Farmer

Stronger Than Three Woven Wire Gates



Solid steel bars instead of woven wire. Double automatic latch locks gate. The whole gate raises over snow banks. Also manufacture steel Farm Fence Posts.

0 Days Trial

C. L. Gade, 40 Main St., Iowa Falls, Ia.

the summer time," she said, suddenly cool again.

"But what will the neighbors say?"

"Nothing worse than they said before. It was a neighbor that suggested the idea that I move into the barn."

Without a word he turned from the place, and she saw through the window that he had re-entered the rig and was driving off. With the tears streaming down her face, she dragged out her trunk and commenced to pack. But it was soon time for the preparation of the evening meal and when it was upon the table Tod came in and ate silently. But after the men had trailed out he crossed over and stood awkwardly by her chair.

"Possession may be nine points, Myrtle," he said, "but I've got the tenth and deciding point here. Want to look at it?"

And he spread the plans for a new house out upon the table.

Nebraska's Pure Seed Law

New Inspector Takes Up Her Duties

MISS LOUISE ALLEN, formerly seed inspector for the state of Washington, has recently been appointed seed inspector for Nebraska and has taken up her duties of examining the stock of seed on hand at the wholesale houses of the state, acting under Nebraska's new pure seed law. This is a good law, and,

Louise Allen

with strong enforcement, should be of great benefit to the state at large.

This law covers the sale of agricultural seeds, principal of which are alfalfa, barley, blue grass, brome grass, clovers, corn (sweet and field), flax, millet, oats, rye, sorghum, timothy and wheat.

Every parcel, package or lot of agricultural seeds containing one pound or more offered or exposed for sale in the state of Nebraska for use within this state shall have affixed thereto, in a conspicuous place on the outside thereof, distinctly printed in the English language, in legible type, not smaller than eight-point heavy Gothic caps, or plainly written, a statement as follows:

The name of the seed.

The name and address of the seedsman.

Statement of purity if below standard fixed by law.

Marked standard, if so or above.

Place where grown.

All agricultural seeds must be true to the name under which they are sold.

Seeds containing noxious weed seeds, such as dodder, quack grass, wild mustard, Canadian thistle, wild oats, corn cockle, cannot be sold or offered for sale in this state.

Certain other weed seeds shall be considered as impurities in agricultural seeds if present to the extent of more than 2 per cent, but such seeds can be sold if labeled to show the percentage of such seeds present.

Sand, dirt, chaff, broken seeds and seeds not capable of germination are also considered impurities. Seeds below standard, except in the case of noxious weed seeds, can be sold if labeled to show the percentage of impurities and germination.

The law fixes a fee of 50 cents for making the analysis of seeds submitted to this department.

The penalty for the violation of the pure seed law of Nebraska is fixed in the law.

The enforcement of this law is in the hands of the food commission and the department is now fully equipped to handle such seeds as are submitted for analysis.

Address all samples of seed for analysis and requests for copies of the law to Clarence E. Harman, deputy commissioner, Lincoln, Neb.

Get Our New

Catalogue

of Furniture, Draperies, Rugs and Kitchen Ware.

With this book in your home you can buy by mail from the large assortments of Omaha's quality furniture store just as well as if you came into the store. We want you to visit us when in Omaha, but in the meantime write us for the catalogue.

Beaton & Laier Co.

415-17 South 16th St., Omaha.

NEW IDEAL SEED CORN TESTER

Test your corn in the same soil you plant your crop. It is the only correct way to make a test. Most complete outfit made. Racks keep trucks of testing and when not testing a splendid drying rack for fall use. $6.00 buys a 420-ear tester and rack. Write for catalogue.

SHRAUGER & JOHNSON,

410 Walnut St., Atlantic, Ia.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Said a little wandering maiden

To a bee with honey laden,

"Bee, at all the flowers you work,

Yet in some does poison lurk."

Queen

Worker

"That I know, my little maiden,"

Said the bee with honey laden;

"But the poison I forsake,

And the honey only take."

"Cunning bee with honey laden,

That is right," replied the maiden,

"So will I, from all I meet,

Only draw the good and sweet."

—Anonym us

Drone

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write with ink, on one side of paper only.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department. Twentieth Century Farmer, Omaha, Neb.

The Editor's Corner

The bird stories are over. There are ever and ever so many more kinds of birds in the corn belt than we told you about, but if you learn all those kinds you will have a good start toward becoming acquainted with your bird neighbors. Spring is nearly here. In less than a month the first venturesome robins and bluebirds will be here calling and calling from tree top to tree top. Watch the birds as they come and learn to know them. If you see a bird that you do not know, watch him carefully, notice his color and markings, learn what you can of his habits, listen closely to his song, and write in to the editor of this department, giving as full a description as possible. We will be very glad to tell you his name if your description is good enough so we can recognize him. A number of you have bird guides. There were ever so many letters received here asking where they might be obtained, and no doubt numbers more bought them in your home towns. These will help you know the birds and you will get a great deal of pleasure out of them during the coming months.

Within a few weeks we will start a new series of stories, which we hope you will like as well as you did the birds. HOME EDITOR.

(Prize Story)

Herding Cattle

By Wesley Mansfield, Aged 13, Cedar Rapids, Neb.

I herded cattle in western Nebraska. My chief companions were my two dogs, Snip and Jack, and my pony. He was a very beautiful pony—all black but one white foot, and as tame as a kitten, and could go very fast. My dogs were shepherds, very kind and smart. I used to go as far as ten miles from home with these cattle.

In order not to have to drive them home at night, there was a large corral to put them in out there. Every evening about 7 o'clock my old dogs and pony and I would go home. The way I passed the time away, I had dug a cave under some roots of a tree near the creek and had some story books in the cave to read.

One afternoon about 3 o'clock it started to rain and hail and the wind blew very hard. My cattle started to drift with the storm. With my faithful dogs and pony, I tried to stop them, but could not. The storm ceased about 5 o'clock, so I started them back to the corral, but when I got to the creek it was running so fast I could not cross. As luck would have it, my cave was on this side of the creek. Some of my dinner was left and I ate it for supper. The cattle laid down and I staked my pony out and my two dogs went into the cave with me to sleep. It was nice and dry in the cave. Some might think I would be afraid, but with my two dogs I knew I was safe.

I woke up the next morning just as the sun was rising over the hills. It was a very beautiful sight. The creek had gone down. I crossed the creek and corraled the cattle and went home to get some breakfast.

(Honorable Mention)

A Bear Story

By Willie Splichal, Aged 9, Cheney, Neb.

I am a cub bear. I live in a large den on the mountain. I was told to stay in until I was old enough to go out. My brother went out and a man killed him. One day my father and mother were out, so I thought I

(CONTINUED ON PAGE NINETEEN)

Picture Contest No. 11

Write a verse of four lines about this picture. Each of the two children writing the best verse about this picture will receive a book as a prize. Make your verse bright and original. Tell us what you would say and do if you were in their places. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than March 8. The winners in contest No. 10 will be announced in the next issue.

"RANGER" BICYCLES
Have imported roller chains, sprockets and pedals; New Departure Coaster-Brakes and Hubs; Puncture Proof Tires; highest grade equipment and many advanced features possessed by no other wheels. Guaranteed for 5 years.
FACTORY PRICES direct to you are less than others ask for cheap wheels. Other reliable models from $12 up. A few good second-hand machines $3 to $8.
10 DAYS' FREE TRIAL We ship on approval, freight prepaid, anywhere in U. S. without a cent in advance. DO NOT BUY a bicycle or a pair of tires from anyone at any price until you get our big new catalog and special prices and a marvelous new offer. A postal brings everything. Write it now.
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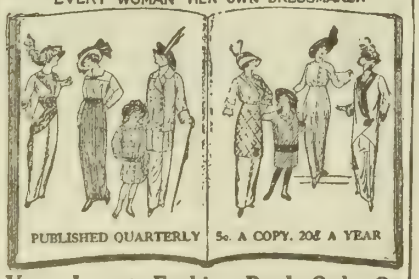

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Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6218—Ladies' Four-Gore Skirt—This is a good model for part of a costume or for use with separate waists. It may have the normal waist or the high style of finish. It has four gores, with a tab extension at the knee in front and a wide panel effect in the back. It is here the closing is placed. The skirt pattern No. 6218 is cut in sizes 22 to 30 inches waist measure. Medium size requires 4⅜ yards of 36-inch material. Width of skirt at lower edge 2⅝ yards.

6063—Girls' Dress—This dress closes at the front and may be made with long or short sleeves. The collar, cuffs and belt are of contrasting material. The frock is quite easy to make and may be constructed of wash goods or woolen goods. The pattern 6063 is cut in sizes 6 to 12 years. Medium size requires 3⅛ yards of 36-inch material and ¾ of a yard of 27-inch contrasting goods.

6337—Ladies' Waist—Linen, madras or China silk can be used for this waist. The waist can be made with either the long or short sleeves. The vest can be used or not as preferred. The pattern 6337 is cut in sizes 34 to 42 inches bust measure. Medium size requires 1¾ yards of 44-inch material, 3 yards of narrow lace plaiting and ¾ yard of wide plaiting.

4634 Ladies' One-Piece Apron—Gingham, percale or chambray can be employed in the construction of this nice appearing and serviceable apron, which can be made with or without sleeves and is simple to fashion. The pattern 4634 is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size will require 4¾ yards of 27-inch or 3¼ yards of 36-inch material.

5630—Ladies' Apron or House Dress—Linen, gingham or percale can be used to make this dress, with the trimming of insertion. The garment closes at the left side of the front. The pattern 5630 is cut in sizes 32 to 42 inches bust measure. Size 36 requires 5½ yards of 36-inch material or 4⅛ yards of 44-inch goods, with ¾ yard of insertion.

6205—Girls' Dress—Any of the woolen materials can be used to make this dress. The dress is made with the long shoulder effect and the long or short sleeves can be used. The dress closes at the front. The pattern 6205 is cut in sizes 6, 8, 10 and 12 years. Age 8 years requires 3⅛ yards of 36-inch material or 2⅜ yards of 44-inch goods.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

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Of Interest to Our Women Readers

Ranch or Man?

Pretty Molly Perkins took a homestead in the west;
Her quarter of a section was the loveliest and best,
And proudly did her heart beat in Molly Perkins' breast.

Pretty Molly Perkins lived alone upon her claim,
But the men for miles about her soon heard about this dame,
And they called at Molly's homestead with marriage as their aim.

And there was one among them—his name was just plain Jim—
But he was tall and handsome, and wondrous strong of limb,
And Molly soon admitted that she thought a heap of him.

But Jim would have a wedding without four year's delay,
Which meant that Molly's homestead must just be thrown away,
And Molly thought about it for many a troubled day.

So pretty Molly Perkins just thought and thought and thought,
And she grew more undecided the more her hand was sought—
And that's the situation the last word that we caught.

—Arthur Chapman in Denver Republican.

Our Home Chat

"The ability to cook and manage a home well is hereditary," stated the man emphatically.

"What makes you think so?" asked the woman.

"Why, several things. For instance, my wife's mother is a fine cook, seamstress and homemaker, and my wife is, too, and from the time my daughters were little tots they took to housework like ducks to water. And I've known a lot of cases of that kind."

"But each of these women you mention," said the woman, "was brought up by a mother who loved her work and took pride in doing it well. None of them lived in a household where the home work was considered degrading drudgery, did they?"

"No," said the man, "None of my family or my wife's looked at it that way."

"Well, then," said the woman, "you can hardly be sure the ability is inherited. It's training—unconscious, perhaps, but training just the same. You remember how Tom Sawyer got the fence whitewashed? The boys made fun of him when they thought he had to do the work against his will, but when he convinced them that he was doing it for fun they paid for the privilege of helping him. It's the same way with the family. If the women hate their work and complain about having to do it, the girl children will hate and avoid it, too. But if the women talk about it as if it were a game they liked to play, the children will be in a hurry to join in it and will take pride in doing it well."

"Maybe you're right," said the man, "but I still think it is an inherited gift."

The woman got the last word, as usual. "Maybe you're right, she said, "but I'd be willing to guarantee that any girl brought up in your family would be a good housekeeper, no matter what her ancestry might be." HOME EDITOR.

Be Your Own Paper Hanger

The cost of hiring a professional to hang paper is just about as much as the cost of the paper. Besides, such men are hard to get just when you most want them, and some of them, rushed as they are during the busy season, have the disagreeable habit of promising days or even weeks before they appear, yet you must have your rooms dismantled, ready for them. By doing the work yourself this unpleasant feature is avoided, and by choosing some rainy day the man of the house can easily learn the knack of doing the hard part. Of course, you think if it were not for the ceiling, it would be easy enough, but after a little practice the "gude man" will declare it the easiest part, because there is no pottering with fitting around casings.

Have a long plank laid upon chairs or boxes upon which to stand. A new broom or whisk broom will serve to brush the paper down in place. Any old soft brush, such as a whitewash brush, will serve to spread paste. Stir up flour and water, just enough water to get the flour smooth. Then pour over boiling water until it thickens and is clear. Do not set it on the stove to boil, as this injures the adhesive properties. If the walls are new or have been whitewashed, wash over with vinegar to destroy the lime.

Have a long table or board upon which to work, and cut all the strips of ceiling before commencing, laying them in regular order in a pile. Paste half of the first strip, then fold the end over to middle, with the pasted sides together. Shove to one side, paste the other half and fold end upon middle in same way. Have an assistant help hold the strip, which is only half length as folded. Open up one end and put it in place in the upper right-hand corner of the ceiling, and each strip should be cut so as to come down on the side wall four inches at the ends. In putting it on let the same amount lap down the side wall along its entire length. This is the most difficult part of the process. If the ceiling has been papered before, it is easy to mark just where the old seam came. If not, measure and mark with a pencil a straight line just where the first lap should come. The extra allowance to come down the sides may be quite useful if the wall is not quite plumb, thus saving any chance of a bare spot when the border is put in place.

As fast as you get the ceiling strip in place, brush it down tight with the brush or broom and keep working from right to left, unfolding the pasted part as necessary and holding up the end not yet used by placing a roll of paper under it. Some prefer to fold the pasted strip back and forth in small enough folds that they can rest on a shingle. This is more easily held up, but it is harder to unfold.

Cut and paste the second strip, trimming the edge that goes next to the last strip after it is folded. Put it on in the same way, matching the edge carefully to that of the last strip. Continue till the ceiling is covered.

The side walls will require more cutting and fitting, and it is well to save all scraps, for they may fit in nicely somewhere. Measure the side wall so that two or three inches will come under border. This will leave good margin for keeping every notch so that it will be covered with the border. Take the upper part of the first strip in both hands and fasten it at the top so that it will fall evenly at the sides. Put in place and with one stroke of the broom fix it firmly down through the middle of the strip; then work out sidewise from this until every portion is secured. The next strip must be trimmed on the side that goes next to the last, this being done after pasting to insure that the edges are well stuck. If there is at any time trouble at the seams, a common bed castor rolled over them will make them firm. It is better to wait ten minutes after the strip is placed before this finishing is done, as the paste is less liable to press out.

After the side walls are covered cut the border in strips several feet long, folding back upon the pasted side as with ceiling. Commence any place convenient, but not in a corner. It is advisable to choose a point least conspicuous, for if the line is continuous the figure may not match at the joining. Work from right to left, and if the ceiling is found to sag a little in places fix your border straight along the line of the lowest point; then it will not wrinkle, and if there is a place where it does not quite fit up to the ceiling line the lap of ceiling down the side will conceal the defect.

Avoid starting a hot fire in a newly papered room, as it may contract so rapidly that it will crack.

Never paper a room without first removing all the old paper. This is easily done by first soaking the old paper with a brush or cloth dipped in hot water; in a few moments it will be loosened so that it can be peeled off.

A little powdered alum added to the paste just after the boiling water is poured in is considered by some an improvement.

Have plenty of clean cloths at hand upon which to wipe your fingers and to keep the pasting board clean.

Do not get frustrated if your first strip of ceiling tears a little. You can paste the pieces on so it will never be noticed. But be sure that your guiding line is straight, and that the inner edge of the strip follows it; otherwise there will be trouble with every strip put on.

See that the edges have enough paste, but not so much that it will squeeze out when the seam is pressed down.

BESSIE L. PUTNAM.

Sour Cream Nut Cake

I am a reader of Twentieth Century Farmer; have taken it for several years and feel as though I couldn't be without it. I tried the recipe for cream nut cake the editor gave and it proves to be wonderful. I am sending my recipe for sour cream nut cake, hoping Mrs. M. may read it also:

Break two eggs in a cup. Fill up with cream, not too thick. Put into a mixing bowl and add one level teaspoonful of soda and one cup of sugar. Beat well. Add enough flour to make a stiff batter, mixing in one teaspoonful of vanilla and the nuts. Get 15 cents worth of English walnuts; take half, chop fine, moisten with water and sift over them a small quantity of flour to prevent from settling to the bottom.

Ice the top of cake with powdered sugar mixed with water. Moisten with cream and put the half walnuts on top. This makes a very good nut cake. MRS. E. McC.

Nebraska.

Youthful Spenders

A widow charged with a trust estate for three children recently told the court that the expenses of the three are $50,000 a year. In the account of one of the boys was a charge for three dozen bottles of champagne, and a hunting trip that cost $2,500. If the boys ever amount to anything, they may justly regard themselves as self-made men.—Youth's Companion.

The General says:-

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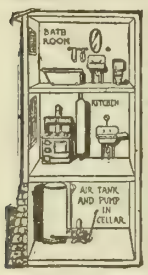

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On the South American Desert

By Frank G. Carpenter

PAITA, Peru—I am 850 miles south of Panama, on the northern edge of the great South American desert. My last letter was dated in the jungles of the Ecuadoran tropics. This comes from a country as dry as any part of the Sahara. The coast about me is all sand and rock, and the Andes mountains, which lie close behind, are as sterile as the driest part of our great western plateau. The first port after leaving Guayaquil is Tumbez. It belongs to Peru, but it lies just over the Ecuadoran line and is an oasis of green.

Beyond Tumbez the desert begins, and it extends from there southward down the western coast of the continent for a distance as long as that between the Atlantic ocean and the Great Salt lake. Its length is 2,000 miles. It borders the whole of Peru and takes up all northern Chile, extending almost to Valpariso. In no place is it more than eighty miles wide, and yet it is 2,000 miles long. At its eastern edge it is lost in the Andes, which are without vegetation clear to their tops, where the rocks are lost in the snow.

I have seen something of the other great deserts of the world. I have been on the edge of the Kalahari desert, in South Africa, in Morocco, Tripoli, Algeria and Egypt. I have sailed along the coast of Arabia and know something of the desert of Gobi, on the edge of Mongolia. None of them is like the Peruvian desert, and none seems to be so fated a desert for all time to come.

This desert is shut in between the ocean and the great wall of the Andes. Those mountains rise almost precipitously from this long coastal plain and they are among the highest on the earth. They are so high and so cold that they squeeze the rain out of the winds from the east that bring all the moisture, and it flows down their eastern slopes. The winds here all come from over the mountains, but the water has been squeezed out of them on their way, and when they flow down the western slopes of the Andes they are as dry as a bone. Their load has already been dropped. It has covered eastern South America with tropical verdure. It has filled the valleys of the Amazon and the Prana with the greatest water supply known to man, and has made the larger part of this continent bloom like a garden.

No Need for Umbrellas

On the side of the Andes, in this strip of 2,000 miles, about the only water comes from the melting snows on the tops of the mountains. It seldom rains. Paita has not had to use an umbrella for the last twenty-two years, and waterproof coats and rubber boots would be a drug in the market anywhere from below Tumbez to far beyond Antofagasta. Indeed, the only fertile regions of the desert are where the snow-fed rivers from the mountains cross it and flow out to the sea. There are fifty-five such streams along the coast of Peru; and the cultivatable territory watered by them has an area of 1,500,000 acres. Two-fifths of this is irrigated and already in use, and it produces some of the finest crops of the world. It is at present the most important part of Peru; it feeds most of the people and supplies a vast deal of exports. The government is now considering the further development of this region by the extension of the irrigation system, and it has had American engineers here going over the ground.

One of the richest of these desert valleys is that of Piura, which is not far from Paita. Here the lands are irrigated by the Piura river and they grow great quantities of cotton, sugar cane and grain as well as every kind of fruit that we have in California. There are oases along every stream between here and Callao, and Lima is the product of the Rimac, which gathers the snows of the Andes and spreads them in the shape of water out over the plains.

Paita a Desert City

I am writing this letter at Paita, the port for the Piura oasis. It is a desert city, with streets of sand and one and two-story houses made of a framework of wood poles and bamboo canes, over which is spread a mixture of sand and mud that dazzles one's eyes. Indeed, most of the houses are of mud and fishing poles smoothed down with stucco. The walls are painted all the colors of the rainbow. The custom house, where I stopped when I came to the wharf, is bright green, and when I passed through the plaza behind I faced a big church of sky blue surrounded by buildings, some of which were as yellow as gold. This church looks out upon the plaza, which contains about the only vegetation in the whole town. This is a garden as big as a bed quilt, filled with stunted palm trees and thirsty-looking tropical plants. There is no water to be seen outside that of the ocean, and much of the drinking supply is peddled about upon donkeys in ten-gallon kegs from house to house.

The most of the traffic of Paita is upon donkeys. I saw caravans of them bringing vegetables, sugar and rice to the port, and when I went to the post-office I walked by the side of the mail wagon, which was really a dray drawn by a mule.

Chief Port of Northern Peru

Notwithstanding all this, Paita is the chief port of northern Peru, and it promises to grow very fast when the canal is completed. It will certainly need some sanitation before it can be made a safe port for our great waterway. Just now the town swarms with fleas. It has had bubonic plague in the past, and its buildings are such that they would form a paradise for the plague-carrying rats. Near the custom house a large warehouse is now going up. The building already has the form of a framework of poles, upon which they are tacking canes of split bamboo. It rests on the ground and the rats will be able to climb up the walls as on a ladder. The streets here are not paved, and the sidewalks are mostly of wood. However, the air is so dry that, outside the bubonic plague, which has now disappeared, the region is exceedingly healthy, and as far as I know yellow fever has never been known.

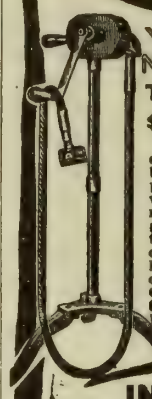
During my stay here today I have tramped through every part of the town, visiting the main streets and slums, and have not had one offensive smell greet my nostrils. There are no bad odors in the desert. In this dry air flesh does not rot, and you could leave a dead chicken for a week in the street, and if the vultures would let it lie there, it would not emit an odor.

The air is such that it sucks the juices out of anything left out of doors. It is as healthful as Egypt. It will keep a corpse or a mummy, and it is the dryness of the air that has preserved the mummies of Peru, like those of Egypt. There are many ruined cities of the Indians scattered over the desert, and from some of them mummies have been dug which look almost as fresh as when they were buried. They are quite as fresh as the mummies in the museum at Cairo. They were usually cured in a sitting posture, wrapped in cloth and tied up with string.

During my last visit to Peru I visited a number of cities from which such mummies have been dug, and near them saw piles of skulls from ten to fifteen feet in height. Nothing seems to decay in the desert, and there are long lines of skeletons of animals scattered here and there over the sand.

Landmarks of Unknown Nations

During a former trip to this desert I visited some of the ruins of cities that were in existence long before the Incas came. In the Jequetepeque (Hek-e-te-pe-ke) valley back of Pacasmayo I found a large mound which was once the site of a palace or possibly a temple devoted to the vestal virgins of the sun. All about me were bits of pottery of an unknown nation of the past. The remains showed that the building was nearly square, and it was 500 feet wide at the



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The way to do it is to get more, longer and better wool that will bring a higher price from the buyer. You can if you use a

Stewart No. 9 Ball Bearing Shearing Machine

It turns so easy that a boy can run it all day without tiring. It is ball bearing throughout, including a ball bearing shearing head, shears quick and evenly all over. The price including four sets of knives is only **$11.50**

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Every style of vehicle and harness for every purpose of pleasure and business. Many new styles and big improvements in 1914 line. 40 years of success selling direct proves quality and big savings.

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base. It was made of adobe and then plastered on the outside with mud and washed with color.

Not far from that place up in the Andes is Caiamarca, where Atahualpa was imprisoned by Pizarro until he filled the room which formed his cell, as high as he could reach, with gold, in exchange for his liberty. After Pizarro had gotten the gold he had the Inca chief killed. A little farther south of here is the town of Trujillo, which was founded by Pizarro and named in memory of his native home in Spain. The town is older than Lima, and it has now about 15,000 or 20,000 people. There are great ruins nearby.

In the same desert is the Chuncana valley, where, a short time ago, T. Hewett Myring unearthed pottery which is supposed to have been made by a people who were old when the pyramids were young. They lived from 7,000 to 10,000 years ago. They had a remarkable civilization and the pottery was equisitely shaped and of remarkable artistic beauty. I have before me some photographs of it which were recently taken for the London News. The objects are now, I believe, in the British museum in London.

Desert Wonderfully Interesting

I find the desert of Peru wonderfully interesting. Parts of it are rocky, like much of the Sahara, and many parts of it have as fine sands as that which surrounds the pyramids on the banks of the Nile. In some places the sand gathers in drifts or great mounds, and these mounds are moved along by the winds. The mounds are in the shape of a crescent. They are made of millions of millions of little grains of sand not as large as a mustard seed, which the winds roll up over the top of the crescent. These sand mounds travel always in the direction of the winds, which are here toward the north. They climb over the hills and make their way through the valleys. They will not stop for roads or railroads, and they are the terror of the civil engineer. Some of the railways that cross the desert have been swallowed up by them again and again, and it is impossible to keep them back by such arrangements as our snowsheds or fences. They have to be shoveled out for the trains to pass, and the track be relaid until they have gone on.

Such sand hills often cover the paths of the desert, and the blowing sand frequently blots out the landmarks.

Business for Panama Canal

I have spoken of Paita as a port that will furnish business for the Panama canal. The town has a railroad to the Piura valley, which is about sixty miles inland; and I am told that this road might be extended a distance of 400 miles over the Andes and connect with the Maranon river, one of the great tributaries of the Amazon. This extension would put Paita in close connection with the upper Amazon valley; it would bring one of the most fertile parts of South America right at her door, and make it a feeder for the Panama canal.

As it is now, the Piura valley promises to furnish a big export of cotton. It is there that grows the famous native cotton of Peru, a cotton which brings 6 or 7 cents a pound more in our markets than that we raise in America, and that is shipped to the United States by the thousands of bales. The native Peruvian cotton is sometimes called vegetable wool. It has a long fiber, and it is very like wool in its texture. We use it to mix with wool for the making of hats, hosiery and underwear. It is said to give the cloth a finer luster and to render it less liable to shrink.

Home of the Cotton Plant

Indeed, this land seems to be the home of the cotton plant. It was growing here when Pizarro came, and he found cotton cloth in the tombs of people who lived long before the Incas. The native cotton grows on a tree which will continue to yield for twenty years after planting. It is usually at its best at three years, and after that it begins to decline. The common method of planting is to put the seeds in the ground with a stick, and let the trees reach a height of six or eight feet. After that they are cut back from year to year in order that the crop may be the more easily gathered. On other plantations a single sowing is allowed to do for several annual crops. The cotton begins to ripen about ten months after it is planted, and the principal yield is obtained when the plants are twenty months old.

The picking is done by the native men, women and children, who also sort the cotton by color before it is ginned. I say by color, for much of this Peruvian cotton is brown or red. The brown cotton and white cotton grow on the same tree; and there may be brown and white lint in the same boll. The colored cotton is largely sold to the Indians, who use it for their ponchos and hammocks.

A Street in Salaverry—at the Back is the Desert

Cotton from American Seed

In addition to this native Peruvian cotton, they are now growing American upland cotton and Sea Island cotton from American seed. The Sea Island cotton has but a small acreage, and its production is confined to several small valleys. The American cotton will yield here for three years without replanting, but the plants are cut back every year. At present the cotton exports of Peru amount to something like 100,000 bales yearly. About 12,000 bales of this product is consumed at home. There are seven cotton factories scattered here and there over the country, five of them being in the city of Lima.

The Peruvian steamer upon which I am sailing has brought here two barge-loads of galvanized iron pipe and of eight-inch castiron casings for the Lobitos oil regions, which are situated about forty-five miles up the coast. The pipe comes from the National Tube works at Pittsburgh, and the shippers are a branch of the Standard Oil company. I do not know how this freight got to our Atlantic seaboard, but it was carried down to the Isthmus of Panama and there transferred to the railroad and thence to this Peruvian steamer. The freight must be heavy, and, considering the handling at Panama, the rate will probably be cut in half when the Panama canal is completed. We have a great deal of heavy machinery on board that has come the same way.

Petroleum and Oil Along Sea Coast

Speaking of the oil fields of Peru, I could see the derricks of the Petroleum port of Tarala as we came down to Paita. The petroleum is found there on the edge of the sea and this is so with other oil fields all along the coast. They are now getting out petroleum in several provinces in Ecuador; there are oil wells at Tumbez, Peru, and there is a refinery at Zorritos, where forty-eight wells are now working. The piping we have on board will go by launch to the oil fields, and the castings will be used for new wells. They are now discovering oil also in southern Peru, and are even boring wells on the shores of Lake Titicaca, at an altitude of two miles above the sea. There the oil is struck at about 800 feet. Ten wells are already working and each is yielding an average of fifty barrels daily.

The petroleum output of this country is now more than 1,000,000 barrels per annum and the business is at its beginning. More than 600 wells are now working, and of these 300 are in the old fields of Zorritos. The oil is of a high grade and it is good for lighting as well as for fuel. The steamer upon which I now am burns fuel oil instead of coal, and we have taken on a fresh supply here. The oil is stored in a great round tank on the bluffs above Patia, and a pipe from the tank runs down to the ocean and to a little oil barge, whence it is conducted into the reservoir of the steamer.

Landing Done in Small Boats

The landing at all these coast ports is done in small boats. The moment our ship came to anchor at Patia white boats with red flags started out from the shore. They were rowed by barefooted Indian sailors clad in blue with white caps on their heads. Behind them came the boats of the natives bringing vegetables and other wares out to the ship, and farther back still were towed the great barges loaded with freight to be taken away on the steamer. At Eten, the port nearest here, the harbor is rough and the landing of passengers is by means of a barrel, the half of which has been cut away and turned into a chair. The passenger takes his seat in the barrel, whereupon he is lifted by the crane worked by the engine and dropped over the side into the boat. In the same way passengers are taken from the boat to the deck of the steamer. I saw three women brought up that way today. One of them wrapped her head in her shawl and evidently prayed all the way up.

I bought a Panama hat her for £2, or $10. It was brought on board by an Indian whose first price was £6. I offered him £1 10s and he came down to £5. At the last moment he again appeared and took £2. The hat is as closely woven as the finest of silk. The straws are as big around as a cambric needle, and so soft that I can bundle it up in my pocket and hardly know it is there. The Panama hats that are now sold so largely in our stores are not made in Panama. They come from Ecuador, Colombia and northern Peru, being shipped from here all over North America and to Germany, France, England and to other parts of South America. Just now the Ecuadorans are exporting some of the straw, and a great deal of it comes down into Peru and is here worked into hats.

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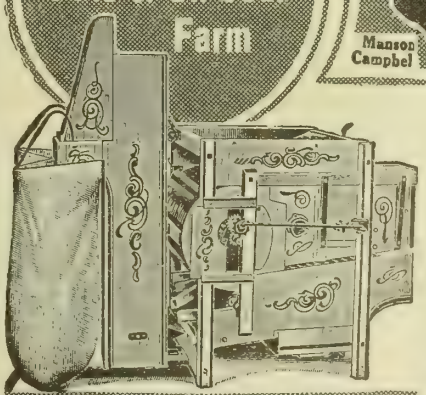
$1.00 Puts It On Your Farm

For $1.00, I Clean and Grade Your Seed Grain



THE CHATHAM Grain Grader and Cleaner

Handles 70 Kinds of Seed Grain and Grass Seed

From Wheat, it takes Wild Oats, Tame Oats, Cockle, Rye and Smut.
Cleans the dirtiest Flax. Has special knocker and skimmer which prevents clogging. (Other machines choke up.)
Takes Dodder, Barn Yard Grass and Foxtail out of Alfalfa and Millet "slick as a whistle."
Takes Buckhorn from Clover.
Sorts Corn for Drop Planter.
Famous BEAN MILL. Handles all varieties, takes out the SPLITS, Clay, Straw, etc.
Handles Peas as well as any Grain or Grass Seed. Removes foul weed seed and all shrunken, cracked and sickly grain. Takes out all dirt, dust and chaff. It is also a bully chaffer. Handles 60 bushels per hour. Gas power or hand power. Easiest running mill.

You can't afford to plant common Seed and take chances on a poor crop, when I am offering to scientifically clean and grade every bushel of your Seed Grain for this spring's planting for one paltry dollar.

Here's my proposition, and if you are a smart man you will write me before sunrise tomorrow:

Send me one dollar and I will ship you, FREIGHT PAID by MYSELF, this improved 1914 Chatham Grain Grader and Cleaner, with all equipment. Clean your Seed Wheat, Oats, Flax, Barley, Peas, Beans, Corn, Grass Seed, etc. Then PLANT those fine seed. AFTER you have harvested a bumper crop, pay me the balance of my low price. Not one penny need you pay, except the $1, until next October. And by October YOUR CHATHAM WILL HAVE MORE THAN PAID ITS ENTIRE COST IN INCREASED CROPS. Then you'll have it to work FREE for you the rest of your life.

Your Dollar Returned

I only want the dollar as evidence of good faith—to protect myself from mischievous boys. If after 30 days' hard test, you don't want my "Chatham," send it back at my expense and I will return the dollar

A "Made-to-Order" Machine

Every "Chatham" is practically a *made-to-order* machine, for I send you the exact and proper Screens, Riddles, Hurdles and Sieves to grade and clean every *Grain and Grass Seed grown in your locality.* That's the secret of my success. I would not be the leading maker of Graders and Cleaners if I had tried to make my equipment fit ten million farms. What would you think of a clothing maker whose suits were all one size? Wouldn't it be a *miracle* if he gave you a fit. Yet all makers of Graders and Cleaners, except me, send the same equipment, whether you live in Maine, Ohio or Oregon. They wouldn't do that, if they had my 41 years' experience. .

Extra Screens Free

I use, all together, 81 Screens and Sieves. It usually requires 15 to 17 for the average farm. These I select from the 81. After 41 years in the business, I am pretty sure to pick the exact equipment needed on your farm. If I shouldn't, just drop me a line and I'll send your additional requirements. There will be no charge for this.

Samples Graded Free

Maybe you have some Seed Grain that you can't clean or grade or separate. Send me a sample. I will purify it and tell you how you can do it cheaply. No charge for this.

Seed Corn Sorted

My big Corn Sorting Attachment, invented 2 years ago, is a great success. Twelve thousand farmers and many leading Agricultural Colleges are using it. It is the only machine I know of which scientifically sorts seed corn for drop planters.

New Book Ready

Send me no money now—just a Postal, for the finest, most complete Book on Seed Selection I've ever written. After the Book comes, write me what size machine you want and I'll ship it, freight prepaid, on receipt of $1.00. Then clean and grade all your Seed Grain. If you write today, you get my Book by return mail. Address nearest office.

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will give it an air of substantial neatness and thrift—a clean, bright, healthful appearance, not possible with a wooden fence. Permits an unobstructed view of the ground; discourages accumulations of refuse in back yard; tends to turn mud holes into flower beds in front yard. Combines chaste simplicity with strength. Cyclone Fence costs less than wood; lasts much longer. Fully guaranteed.

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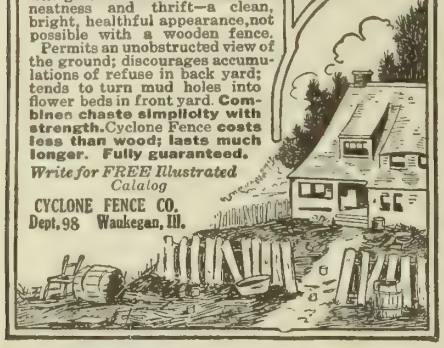

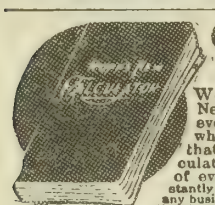

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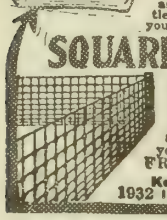

Which tells you why it is better than any other fence and where to get it. If you want a farm fence that will last, and stay trim and tight the year round, write for these FREE books today. 32

Keystone Steel and Wire Co.
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Be your own dealer. Buy direct from the mill. Get our 40 page money-saving fence and gate catalog free. 164 styles to select from. Factories and warehouses at Ottawa, Kansas, Brazil, Ind., Lincoln, Nebr., Denver, Colo., Ft. Worth, Texas and San Francisco. Write today.

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FARM FENCE

11½ cts. a rod for a 26 in. high fence; 17 1-4c. a rod for 47 inch high stock fence; 28 1-2c a rod for a 50-inch heavy poultry fence. Sold direct to the farmer on 30 Days Free Trial. Special barb wire, 80 rod spool, $1.40. Catalog free.

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FARM FENCE FROM FACTORY TO FARM

26-inch Hog Fence,.....14c.
41-inch Farm Fence,....21c.
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80-rod spool Barb Wire, $1.40

Many styles and heights. Our large Free Catalog contains fence information you should have.

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4-H. P. All-Purpose 4-Cycle **Engine**

Does everything any 4-H. P. engine will do and some work no other 4-H. P. can do. An ALL-PURPOSE, all-season engine AND will run any binder. Weighs 190 lbs. Throttle overnor. Guaranteed 10 years. Also 2-cylinder 6 H. P. up to 20 H. P. Get catalog and trial offer.

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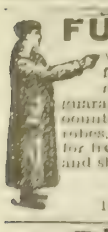

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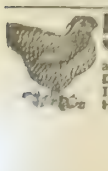
55 BREEDS Pure-Bred Chickens, Ducks, Geese, Turkeys,



also Incubators, Supplies, and Collie Dogs. Send 4c for large Poultry book Incubator Catalog and Price List.

H. H. HINIKER, Box 58 Mankato, Minn.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

THE poultry industry, as it exists today," remarks one of our best known incubator manufacturers, "did not just happen. It has been the result of intelligent, skillful work performed by men of character and ability who saw its possibilities. Sixty years ago the poultry industry of America may be said to have had its beginning. First was the 'Old Dominicker,' forerunner of the Plymouth Rock; next the Shanghai, next Brahma Pootras and Leghorns. Now from these have been created about 140 breeds—shape, color, laying capacity, all bettered.

"With the making of new breeds came the successful poultry breeder—a new trade, profession, or whatever it may be called. There are now thousands who engage in this business as a sole means of making a living. Next came the high prices for poultry. Standard prices now range from $1 a fowl to $100, and there are many bona fide sales that reach as high as $1,500. Some well known poultry specialists are being paid from $1 to $5 each for hatching eggs. These are of course, for exceptional quality. Prices of this kind prevail in England and Canada also. Next has come the baby chick industry. Day old chicks now sell from 10 cents apiece to as high as $5, according to quality. This last phase of the poultry business was handed over the water to us from England, and has gone up by strides and bounds."

* * *

Here are some of the objections against a "fireless brooder," especially if set out of doors: The chicks must have air, therefore there is a division left between lid and muslin inner top, which lets in air. As a rule it lets in too much air on windy days or in cold weather; too often there is a draft; then the chicks incline to huddle anywhere to get warm. If while running out on the fireless brooder floors they chill, the first thing the little sillys do is seek a corner; the rest gather about them, and half an hour of that may do all the damage needed to send them off with bowel trouble. Or, if a few have sense enough to seek the hover, there may not be enough to run in at the same time to produce the right amount of heat for even one. It takes a bunch huddling well together to heat up the hover. Certain poultry people report good luck with fireless brooders set right out in the snow, but the same parties have had extreme loss when trying it in the following years. Fireless brooders are best if used in a heated room, or in midsummer.

* * *

It is useless to argue that the hen method is the most reliable method of raising the chicks, for it is not, especially in early spring or fall. It is true it might do if you are on the small scale or setting a hen just now and then, and bringing off just a couple of dozen early chicks. But on a larger scale, just an ordinary number for the farmer, there is little dependence put on getting any great number with the hen, for you cannot as a rule get enough broody hens together at one time early to make early hatching a decided success. Besides this, you have lost the good of each brooding hen for three weeks in hatching time, then from three to six more in raising them. So many farmers would willingly pay the coal oil bill and buy the brooders, but they are so afraid of fire, and one cannot blame them. But now it is possible to fix little houses out from other buildings, and fix adaptable hovers in these—the hover inside the house, the protected lamp outside. Here, though the most careless handle the lamps, no harm could possibly come to other buildings. A woman now and then attaches one of her husband's hog houses to put a hover of this kind in.

* * *

If you are mating up pens of birds, any number to the pen, though ten is more often than not the right number, be careful to select all birds as free from standard disqualifications as possible. If you are mating for heavy laying strains, you may not be able to hold rigidly to this plan, but get as close to it as practicable. It would pay the farmer to pen for his breeding eggs just as it pays the fancier. Yes, pay him big.

Growing Green Sprouts

Spring is coming, and with it the green stuff on the farms, but not all who read these pages can have the green for poultry so soon; they must depend on house-grown greens. One of the writers in American Poultry Advocate gives some easy ways of growing oats without a cabinet to grow them. Now this writer's way is to use "butter boxes" secured at a grocery. These are 15x15 inches and five inches deep. Four quarter-inch holes are bored in the bottom of each box. On the bottom of the box he places one-half-inch of dry oats, then thoroughly wets this, stirring it through and through; this is the last stirring it gets. Double a burlap bag and place on top, thoroughly wetting it; set the box on sticks, or anything an inch or so from the floor, that it can readily drain. Now here comes the handiness and small space. Next day fix another box same way and set on top the first box, evenly. Each day add a box until you have the number needed. For 100 fowls he keeps twelve boxes and feeds two a day. Twice a day he thoroughly wets the burlap above each box with cold water. As the oats sprout they push up the burlap. This is the way of C. W. King, Eagle, Wis., and he says he uses no sunshine and very little heat, and in six or eight days the first box is ready for feeding and is immediately refilled. These boxes are set in a cellar or basement. As he waters the boxes

Tells why chicks die

J. C. Reefer, the poultry expert of 1619 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

Heating Plant Underneath

Saves Work—Saves Money

X-Ray only incubator that completes hatch on one gallon oil. Automatic Trip regulates flame. Heat always right. Thermometer always visible. X-Ray Brooders also centrally heated. *Send for free book No 58*, in colors. Direct from factory, lowest prices. We pay the freight.

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Chicks Worth Raising

Not cripples or weaklings. They come big, strong and vigorous when hatched in the

Queen 1914 Model Incubator

Simple, honestly built, self-regulating. "*Temperature did not vary more than one degree during entire hatch,*" says W. H. Gray, Canfield, Ohio. See the low-priced 1914 Queen. You cannot buy an incubator, at any price, that will do better hatching for you. Send for free catalog now.

QUEEN INCUBATOR COMPANY
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"Jimmy, Always Give 100 Cents' Worth for Every Dollar You Get"

That's what my father said to me when I was a boy—and that's what I'm doing when I send you my Belle City hatching outfit. 276,000 users will tell you so. *I am giving you more*, when you compare my

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with any other incubator. Belle City has won Eight World's Championships and thousands have made 10% per cent perfect hatches. Send for my New Book, "Hatching Facts." It tells of big money making successes. My low price will surprise you. Write today.

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INCUBATOR and BROODER $4 $5 $6

Cheapest on Earth—Direct from Factory to You—Never Offered Before—Kills High Cost of Living.
"2 in 1" Hatching Wonder, holds 15 eggs—With Brooder FREE
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Write Head Office or nearest Warehouse for Free Catalogue

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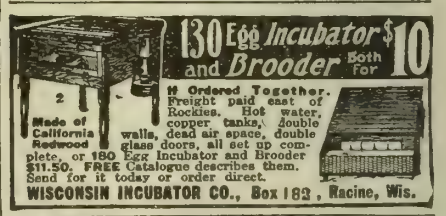
130 Egg Incubator and Brooder $10 Both for



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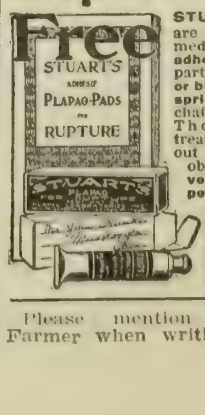
Germozone, Louse Powder, Egg Maker and other Poultry remedies have a successful reputation of twenty years behind them. They have brought success to thousands of poultry raisers and will to you. Lee's big "New Poultry Book", "Reading Symptoms of Disease" and "Poultry Pointers" free from all Lee's dealers, or write direct. The New Mandy Lee Incubator is a real automatic hatcher. Write for catalogue.

GEO. H. LEE CO. 961 HARNEY ST. OMAHA, NEB.

Stop Using A Truss



STUART'S PLAPAO-PADS are different from the truss, being medicine applicators made self-adhesive purposely to hold the parts securely in place. No straps or buckles attached—no obnoxious springs. Cannot slip, so cannot chafe or press against the bone. Thousands have successfully treated themselves at home without hindrance from work—most obstinate cases cured. Soft as velvet—easy to apply—Inexpensive. Awarded Gold Medal.

Process of recovery is natural, so afterwards no further use for trusses. We prove it by sending you Trial of Plapao absolutely free. Write today.

PLAPAO CO., Block 1199 St. Louis, Mo.

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he takes down the top one, puts it on another tier of sticks for draining water from it, then takes down the next and puts on top of it, and so on. One watering sees the top one at the bottom; next watering finds it at the top. He cuts the sprouted stuff into bits with a pair of scissors. It takes but a few minutes each day. He says he has a neighbor who grows sprouted oats for 2,000 fowls and grows them in nail kegs set on her cellar floor, which is provided with a good drain. She fills the kegs about half full of oats, then wets them up with the hose. Every three days she empties them from one keg to another, to give them air, and feeds them when the sprouts are but two or three inches long, as must be done when sprouted at such depths. Where sprouted in shallow boxes they are often allowed to grow to the length of five or six inches. The farmer with a basement or cellar could grow this green stuff as easily and more cheaply than the woman who keeps so large a number of chickens.

Chicken Feeding Time

Incubator Hints

The incubator lamp must always be the first consideration. Many patents have been granted on incubator lamps, and these lamps when tried have not turned out as predicted and must be discarded. The best lamps are as plain as possible to make them, flat of bottom and top and made of copper or galvanized iron. Also, any incubator lamp must be made to hold enough oil to last over the time set to fill them. If that be twenty-four hours, then the lamp must hold enough oil to last at least thirty hours. This is for the times we might forget to fill the lamp at a stated hour, or be unavoidably detained.

* * *

When the cloth on the nursery bottom becomes soiled, discard it and tack on new. White diarrhea can be carried over from droppings on this. The best plan is to keep squares of old quilts, blankets, etc., on it while the chicks are coming into the nursery, and as long as they stay in the nursery, which can be until they are old enough to be safely fed and changed. Chicks can be kept in a nursery that is of four or five inches in depth for nearly a week, if the outside door, or both doors if there be two, be left propped open for a small space all the time. This lets out foul air and lets in more of fresh than the regular ventilators do.

* * *

In cold weather if the lamp wick, turned to its full heighth, just short of smoking, will not keep the heat where it should be kept, then place several layers of cloth or paper in the nursery below to shut off wind coming in that way. This is quite often necessary at night for the early hatches, which are often made in the coldest time of the year. Don't place the incubator near a draughty door or window, and if the room does not contain a stove, then on cold nights set chairs about it and drape old blankets, comforts or quilts on these to keep off cold. Sometimes the ingenious poultry woman sets a lantern, lamp or coal oil stove on the floor that the heat may strike the bottom of the incubator—anything to get chicks hatched early. The writer has even placed hot water jugs at night about the setting hens, as the hen's bodily heat is often not quite sufficient to keep the eggs up to the right heat on an extremely cold night.

Our Young People

(CONTINUED FROM PAGE THIRTEEN)

would go out and take a walk. I went on and on and came to a pitfall. It was dark and I fell in. I lay there all night. In the morning I fell asleep and some men came and took me to their house and put me in a cage and then in a wagon and hauled me to town, and that was the first town I ever saw.

Then they put me on the train and we came to a large town and they put me in a circus in a new cage. The cage was very strong, but one night I found a weak place; then I broke out and ran through the town and ran till I came to the mountain and came to my home. They didn't know me at first, and they said I had to look out for pitfalls after that.

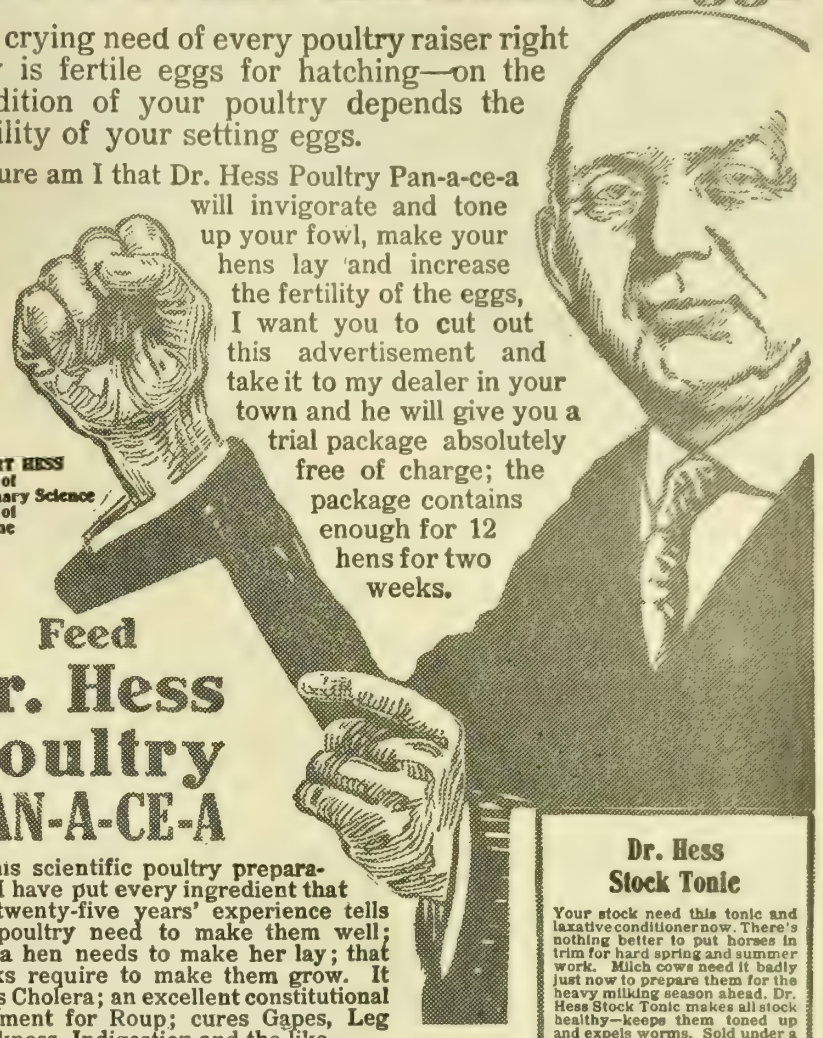
Additional Stories

Dorothy Maupin, Lincoln, Neb.; Carrie Tallon, Ulysses, Neb.; Cecil Overhalser, Ohiowa, Neb.; Lena Brown, Plainview, Neb.; Bessie Russ, Chambers, Neb.; Margaret Wrich, Kennard, Neb.; Blanche O'Mara, Eddyville, Neb.; Millard Getty, Waco, Neb.; Helen Davis, Leeds, Ia.; Clarence Kindig, Kingsley, Ia.; Olga M. Meyer, Marcus, Ia.; Norma Harvey, Goldfield, Ia.; Elva Ready, Mountain Grove, Mo.; Alma Hood, Kiowa, Kan.; Irene Margery Despain, St. Anthony, Idaho; Clara Stoltz, Sterling, Colo.; Leona Decker, Lepscomb, Tex.

Condition Your Poultry to Get Fertile Hatching Eggs

The crying need of every poultry raiser right now is fertile eggs for hatching—on the condition of your poultry depends the fertility of your setting eggs.

So sure am I that Dr. Hess Poultry Pan-a-ce-a will invigorate and tone up your fowl, make your hens lay and increase the fertility of the eggs, I want you to cut out this advertisement and take it to my dealer in your town and he will give you a trial package absolutely free of charge; the package contains enough for 12 hens for two weeks.



GILBERT HESS
Doctor of Veterinary Science
Doctor of Medicine

Feed Dr. Hess Poultry PAN-A-CE-A

In this scientific poultry preparation I have put every ingredient that my twenty-five years' experience tells me poultry need to make them well; that a hen needs to make her lay; that chicks require to make them grow. It cures Cholera; an excellent constitutional treatment for Roup; cures Gapes, Leg Weakness, Indigestion and the like.

I absolutely guarantee that Dr. Hess Poultry Pan-a-ce-a will make your poultry healthy—will tone up the dormant egg organs and compel each hen to lay regularly—help chicks grow—get fertile eggs for hatching and shorten the moulting period.

Money-Back Guarantee I have authorized my dealer in your town to furnish you enough Pan-a-ce-a for all your poultry, and if it does not do all that I claim, return the empty packages and get your money back. Remember this, Dr. Hess Poultry Pan-a-ce-a is never sold by peddlers, but only by reliable dealers whom you know. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West.

Don't forget to get your trial package—it's free—take this advertisement to my dealer in your town. If no dealer in your town, send us 5 cents in stamps to pay postage, give us the name and address of your dealer and we will send the trial package direct.

DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Stock Tonic

Your stock need this tonic and laxative conditioner now. There's nothing better to put horses in trim for hard spring and summer work. Milch cows need it badly just now to prepare them for the heavy milking season ahead. Dr. Hess Stock Tonic makes all stock healthy—keeps them toned up and expels worms. Sold under a money-back guarantee. 25-lb. pail $1.60; 100-lb. sack $5; smaller packages as low as 50c. Except in Canada, the far West and the South. Send 2c for my *new* free Stock Tonic Book.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks, or, if kept in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans, 1 lb. 25c; 3 lbs. 50c. Except in Canada and the far West. I guarantee it.

The Old Reliable Peter Schuttler Farm Wagon

Stands Up in any Climate
The One Best Wagon

Our Latest Improvement is the Peter Schuttler Roller Bearing Wagon that runs one-third lighter by reducing friction on bearings.

Peter Schuttler Co.
Chicago

Est. 1843

The World's Greatest Wagon Factory

SeedCorn

ST. CHARLES RED COB WHITE CORN
BEST FOR CORN; BEST FOR ENSILAGE
Grown in St. Charles County, Mo.; buy it direct and get the genuine article. Write for prices.
LOUIS P. MARTEN, Dept. K, St. Charles, Mo.

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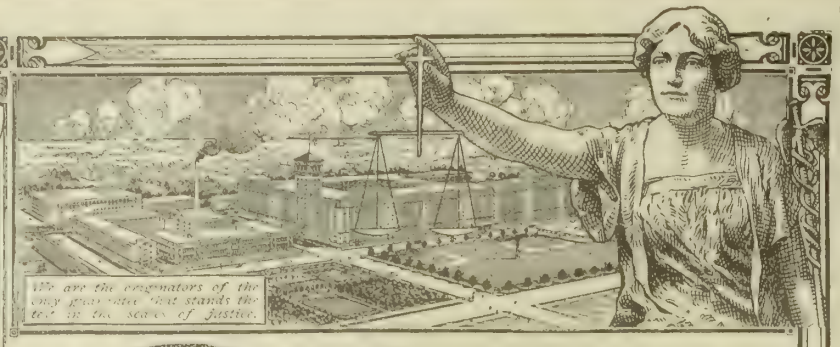


ECONOMY Gasoline Engines

EVERY Economy Gasoline Engine is required to pull more than its rated horse power before it leaves our factory. Every part of the Economy fits perfectly, which means less friction, less wear and greater economy of fuel. Duplicate parts are absolutely interchangeable.

The Economy is the simplest engine on the market. It has fewer parts, is easier to operate and is guaranteed to give as good service for as many years as any other make, regardless of price.

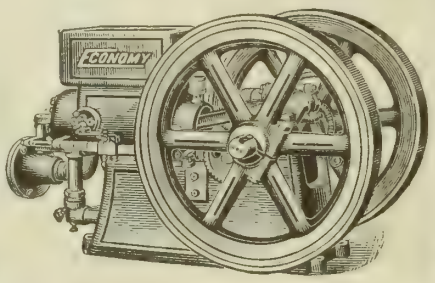
If you need a gasoline engine, you will purchase an Economy if you investigate thoroughly, because you cannot find its equal at anywhere near the price we ask.

Our low prices are the result of modern methods of manufacture, enormous output and direct from factory selling. Our guarantee, "Your money back at any time if you are not perfectly satisfied," and our reputation for fair and square dealing make you sure of the quality of Economy Engines.

The following prices enable you to buy a large and a small Economy engine for less than the price of one *ordinary* engine.

1½-H. P., $29.95; 2-H.P., $39.95; 4-H.P., $72.95; 6-H.P., $102.95; 8-H. P., $149.65; 10-H. P., $219.50.

Turn to the gasoline engine pages of our new big General Catalog, see our complete line of sizes for every purpose. If you haven't our new big General Catalog, just write "Gasoline Engines" on a postal card and also request our free Catalog No. 65T71



Sears, Roebuck and Co., Chicago

Hogs Fattened for LESS THAN 3c a Lb.

is easily done along our line, because green grazing crops can be grown throughout the winter. Sows can farrow during winter months without losing any of the pigs. Pure water keeps them healthy.

Three Crops of Feed a Year

can be raised, and but very little corn is required to finish them for the block. Local markets pay big prices.

Write for illustrated booklets and magazines telling of successes Northern men have made in Kentucky, Tennessee, Georgia, Alabama, West Florida and South Mississippi. YOU can do as well on these cheap lands, and live in an almost perfect climate. (408)

G. A. PARK, Gen'l Imm. and Ind'l Agent, Box C-308, Louisville & Nashville R. R., Louisville, Ky.

400,000 Settlers a Year

Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in Manitoba, Saskatchewan and Alberta.

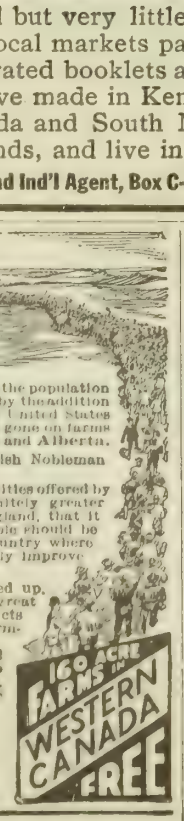
Lord William Percy, an English Nobleman says:

"The possibilities and opportunities offered by the Canadian West are so infinitely greater than those which exist in England, that it seems absurd to think that people should be impeded from coming to the country where they can most easily and certainly improve their position."

New districts are being opened up, which will make accessible a great number of homesteads in districts especially adapted to mixed farming and grain raising.

For illustrated literature and reduced railway rates, apply to Superintendent of Immigration, Ottawa, Canada, or to the Canadian Government Agent.

W. V. Bennett, Room 4, Bee Building, Omaha, Neb.



3 MACHINES IN 1

A perfect seed bed is as important as to sow or plant. The Western Pulverizer, Packer and Mulcher makes a perfect seed bed and leaves a loose mulch on top to retain the moisture in one operation. It will double profits on crops. Made in 8 sizes. 1 and 3 sections. **Sold direct to you on one year's trial. Prices, $22.00 and up.**

We want every farmer and landowner to have our illustrated circular. It describes the machine, its principle and advantages over all others. It gives testimonials from many farmers proving what it will do on wheat, alfalfa and other crops. It contains valuable information on how to prepare the soil for better results. Send for this circular today, whether you want to buy or not.

WESTERN LAND ROLLER CO.
Box 113 Hastings, Nebr.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Pink Buttermilk.

C. W. L., Kansas: We have a splendid looking Holstein cow and she gives a big mess of nice looking milk and it is very rich. She was fresh last June. I sold eleven and thirteen pounds of butter every week for a long time, beside the cream and butter we used for our own family of four. I am still selling six pounds every week. She will be fresh either in March or along the first of April, but her milk is a dirty pink color and I am afraid to use the buttermilk for anything; in fact, its looks are not at all appetizing. Can you tell me what is the cause of this, and if it is dangerous to use the butter and milk. I don't see why her milk looks so nice, and the butter looks and tastes so good, and even the skim milk after it is run through the separator looks nice and white, and the buttermilk looks so ugly. She seems healthy in every way. She always did give a pink-like buttermilk, as well as I can remember, but we always had her milk mixed with other cows' milk until this winter. She has had four calves and all were steer calves.

Answer—It is likely this is caused by bacteria in the utensils. Some bacteria are slow in development, and if they get into the milk from the cow's udder do not develop until they get into the buttermilk. Brush the cow well before milking and see that the utensils are well scalded.

Fall and Winter Calves

A. R. W., Star, Neb.: In the Farmer of February 14 we notice an article, "Spring or Fall Calves," which I noted with interest. We were advised by one of our stockmen and cattle raisers to keep a bull with our herd the entire year if we had the proper shelter and feed. We bought a thorough-bred Angus and followed his advice, and the results are quite satisfactory. We get more calves, and the fall and winter calves, if we care to sell them the following September or October, bring $5 to $8 more per head than the spring calves. If the cows are milkers, we feed the calves separator milk and ground oats and corn, adding a little oil meal.

We have twenty fall and winter calves on our ranch, all in good condition and without any loss. The extra price for cream more than pays for shelter and feed that is required to keep the cows and calves in good condition. If we do not care to breed the yearling heifers, we keep them in a separate pasture until late in the season. Our experience is so satisfactory and remunerative that we can advise any farmer or ranchman that has a bunch of cows and heifers to keep a good bull with them the entire year, but to give them shelter and good care.

Note—This seems to be the general opinion of all who have tried this method. We are glad to receive this letter expressing approval of our editorial and giving the writer's experience.

Sows Stiff in Legs

F. L. S., Colorado: I have two young brood sows that are stiff when they get down and can hardly get up. They are stiff in their fore legs as well as hind. They are due to farrow about April 10. Will you please tell me, through your paper, what is the cause, and if there is any cure?

Answer — Without more definite knowledge of conditions we cannot tell you what the trouble is. It is possible that they are suffering from rheumatism. See that their sleeping quarters are dry and warm and that they are not exposed to drafts. Stiffness sometimes results from lack of exercise. Are you sure these sows are getting exercise every day? It is likely that there is nothing serious the matter and that proper attention to matters of feed, exercise and protection from damp and cold winds will soon put your sows into good condition.

Thanks for Kind Words

We are in receipt of several of the late copies of Twentieth Century Farmer, which as a finished western production ranks squarely shoulder to shoulder with the swell Country Gentleman issued by the Curtis Publishing company of Philadelphia. Hurrah for Nebraska products, one and all!—Curtis Courier.

Note—It is very kind of the editor of the Courier to hand us this compliment. It makes us feel that we are making progress in our efforts to give our western farmers a paper that is equal to the best.

State Fair Free Passes

KENESAW, Neb., Feb. 13.—To the Editor: Mr. Rudge's energetic defense of Secretary Mellor and the board of managers of the State Fair is particularly interesting in that it gives in detail the beneficiaries of the free passes issued. As I view the matter, some of these passes are wholly unjustified. In this class I include 128 passes to members of the legislature, thirty-one to judges, thirteen to the Board of Educational Lands and Funds and the ninety-one appropriated to their own use by members of the board, in addition to twenty-nine given to the wives of board members, twenty-two of which are, in my view, without any justification, each of the seven members having, presumably, only one wife. I can conceive of no reason why these distinguished individuals, amply able as they are to pay their own fare, should be singled out for preference. And if the board is entitled to hand out passes to their friends, why limit the number to 123?

To give judges, legislators and state officers free entrance is unfair and contrary to a sound public policy, while for the board to swipe a handful of admissions to be handed out to their friends is the final waggle to the tail of the old discredited and for the most part abandoned free pass policy. That the board has reduced this bad practice to such a small remnant is to its credit. Now let us complete the job. I. D. EVANS.

Eitdor's Note—The foregoing is reprinted from the Nebraska State Journal. It is interesting for the reason that Mr. Evans has been a member of the legislature several terms and has been one of the recipients of free admissions. His position in this matter is sound and no one can question the force of his argument.

Whitewashing Apple Tree Trunks

J. F. D., Nebraska: Please give us some information on the following—on whitewashing large apple trees and what to use? Is it necessary or advisable to have male birds running with the flock of hens where no eggs for hatching are wanted?

Answer—Whitewashing the trunks

SILO BOOK FREE!

Tells why we quote lowest prices on guaranteed silos—shipped on approval to your station. Made from best grade Washington Fir (one piece staves), by test the best lumber from which a silo can be made. Gives best service. Keeps ensilage perfectly.

The Independent Silo

Gives entire satisfaction. Thousands of satisfied users—our new link lock anchoring system has revolutionized silo construction. Write for free booklet and prices. Delivered at your station.

THE INDEPENDENT SILO CO.,
2337 University Ave., St. Paul Minn.

Good For Man And Beast

Kendall's Spavin Cure has now been *refined* for *human* use. Its penetrating power quickly relieves swellings, sprains, bruises and all forms of lameness. It is just what you need around the house. Write for many letters from users to prove its effectiveness.

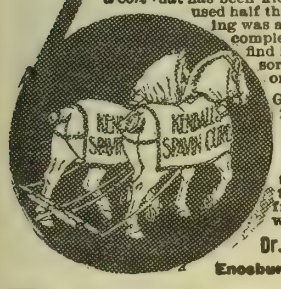
S. Young, Franklin, Vt., writes: "Since getting such good results, I now use your Spavin Cure as an all purpose family liniment, and have found it to do all you claim and more."

Kendall's Spavin Cure

For Horses —And Refined for Man

—has been used by horsemen, veterinarians and farmers for over 35 years. Its worth has been *proved*, for spavin, splint, curb, ringbone and the many other hurts that come to horses. Read this letter from John Freezer, Henryton, Md.

"I recently used Kendall's Spavin Cure on a colt that has been kicked. Before I had used half the bottle the swelling was all gone and he was completely cured. I also find it good for bruises, sores, burns and colds on the chest."



Get Kendall's Spavin Cure at any druggist's. For horses $1 bottle—6 $5. Refined, for man, 50 cts.—6 for $2.50. "Treatise on the Horse"—Free—from druggist, or write to

Dr. B. J. KENDALL CO.
Enosburg Falls, Vt. U.S.A.

"Good to the last drop"
Blatchford's Calf Meal

As good as New Milk at half the Cost.

100 pounds makes 100 gallons of Perfect Milk Substitute.

Send for pamphlet, **"How to Raise Calves Cheaply and Successfully Without Milk."**

At your Dealers or

Nebraska Seed Co., OMAHA NEB.,

SAVE YOUR EGGS

Dip them in J. H. F. Preservative and they will Keep Until Ready for Market. Sample size 10c; large package, which preserves several thousand eggs, $1.00. THE J. H. F. PRESERVATIVE CO., New York Produce Exchange, New York City.

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SUES & CO., Attys., 539 7th Street, Washington, D. C.

of large apple trees was quite common years ago in districts where there was so much dampness in the air as to cause danger of moss on the bark of the trees and of spores of certain fungus diseases. In the climate of eastern Nebraska, where you are located, if the trunks of the trees are sheltered by widely branching limbs so that there is no danger of sun scald, the benefit to be gained by the use of whitewash will probably not be sufficient to justify the expense. In summer the women wear white dresses to guard against the sun's heat. Whitewash on the trunk of a tree reflects some portion of the sun's heat and would be useful in that respect in case the trunk were not properly shaded by its own branches. The addition of skim milk, buttermilk or salt to ordinary whitewash makes it slightly more adhesive and durable.

It is not necessary to have a male bird with the hens unless you want the eggs for hatching. The eggs keep better, in fact, if they are not fertile.

Addresses Must Be Given

There have been several inquiries sent in to this department of late that were unsigned. No letter is given consideration unless name and address are given as an evidence of good faith, though we never publish a name or address in the Readers' Exchange. We have no objection to answering unsigned questions, but it often happens that these answers are crowded out of the paper for a week or two and this may make them too late to be of benefit to the questioner. In this event we always send an immediate reply by mail. Please be sure to give your names and addresses in full when asking questions hereafter.

Suggestions to Tree Planters

(CONTINUED FROM PAGE NINE)

formed and a fresh supply of sap is taken up. Perhaps the tree does not leaf out, or perhaps it comes out with small, delicate leaves, and then the hot, dry winds damage the trees. Under such conditions these trees can be saved by boxing in the trunks with 6x6 fencing. Fill the upright box with moist soil; wet the soil within the box three times a week. This will usually cause the trees to leaf out within ten days and to grow the season through. This method has been thoroughly tested and is of the utmost importance. It is very much cheaper to put in a little extra work and save your trees than to lose a year's time as well as the trees. Leave these boxes around the trees during the winter. In trying climates boxing in trees is of great value in guarding against winter sun scald so destructive to trees in the west and northwest.

Note—Under the heading "Suggestions to Tree Planters" we will print another article next week, which will tell how to trim and head a tree to enable the planter to control the future shape of the tree.

In the United States there are more than 200,000,000 apple trees of bearing age, about 20,000,000 pear trees and more than 16,000,000 cherry trees.

Every Acre Well Plowed—Well Seeded

"Big Four" farmers are always ready for the season's work. They plow when it is time to plow. Every acre is plowed deep and plowed well. When it is seeding time, the Big Four gets a whole crop in. Harvesting and threshing are also old stories to the Big Four. The farmer who gets results from every acre is pretty sure to own a Big Four.

Big Four Tractors are producing results all over the world. There are more Big Fours in successful operation than any other four cylinder tractor made. The first four cylinder tractor ever built was a Big Four. Every Big Four represents the combined force of these "year after year" results. We know the Big Four is the very best tractor built. Ask us to prove it.

A Size For Every Farm

Big Four "20" 4 Cylinders, 3 Speeds

Big Four "30" 4 Cylinders, 3 Speeds

Big Four "45" 6 Cylinders, 3 Speeds

Write today for illustrated catalog.

Emerson-Brantingham Implement Co. (Inc.)
Good Farm Machinery
431 W. Iron Street **Rockford, Illinois**
38017

NOW! THESE PRICES

2 H.P. $39.45; 4 H.P. $75.50;
6 H.P. $99.35; 8 H.P. $149.90;
11 H.P. $218.90;
20 H.P. $389.50.

Other Sizes, up to 40 H.P. Proportionally Low.

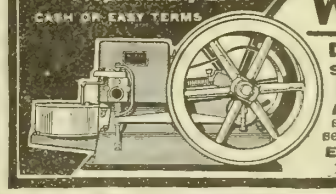
CASH OR EASY TERMS

60 Days Free Trial

Why Pay Double Price, or take a poor, or doubtful engine, for any price, when the WITTE costs so little and saves you all the risk.

For 27 years, almost ever since there have been any gasoline engines, the WITTE has been *quality leader*. Better now than ever. Semi-steel, detachable cylinders, vertical valves; auto ignition, variable speed, and other merits, without which no engine can now be really high-grade

WITTE ENGINES, Kerosene, Gasoline Distillate and Gas



Direct From Factory To User. 5-Year Guaranty.

Sizes: 1½, 2, 4, 6, 8, 11, 12, 15, 20, 25, 30 and 40 Horse Power.
Styles: Stationary, Portable, and Special Sawrig. No cranking needed to start, either winter or summer.
New Book Free. Get my Catalog No. 44 and liberal selling terms. Know how to be safe in your engine selection whether you pick a WITTE or not.

ED. H. WITTE, WITTE IRON WORKS CO.
1551 Oakland Avenue, Kansas City, Mo.

Send for this BOOK HOW TO JUDGE AN ENGINE WITTE

When You Buy "Ball-Band" Rubber Footwear You Buy Dry, Comfortable Feet

The cold, wet ground becomes like a carpet of wool and rubber to the man who wears "Ball-Band" Boots or Arctics. "Ball-Band" Footwear gives long wear and stands up under rough service. It is made for the man who wants the best rubber footwear he can get. Boots in knee, storm king, sporting and hip lengths.

"BALL (Red) BAND"

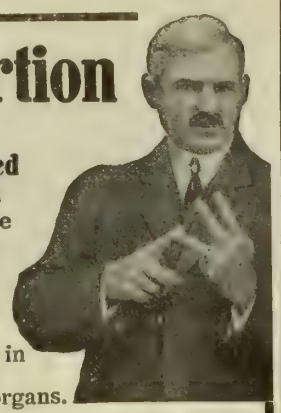
The cost of rubber footwear never worries the man who is careful to get "Ball-Band." That Red Ball on the knee of your boot or the sole of your arctic means that the men who made it were building up to a standard, not down to a price.

Over 45,000 dealers sell "Ball-Band." A Red Ball in the window is the sign of a "Ball-Band" store. Look for it. Buy your rubber footwear where you find it. If your dealer can't supply, write us.

Write for Free Illustrated Booklet

Mishawaka Woolen Mfg. Co., 337 Water Street, Mishawaka, Ind.
"The House That Pays Millions for Quality"

3 Facts About Contagious Abortion



It causes heavy loss of calves and milk
It will spread to the whole herd unless stopped
It can be wiped out and kept out of your herd

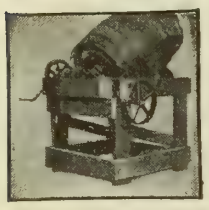
Fully one-fourth of all the cows of the country are affected by this disease. It is highly contagious and spreads rapidly when started. It cannot be overcome by any one medicine, but Dr. David Roberts' Anti-Abortion Treatment stamps out the disease because it meets the germ at every turn.

Anti-Abortion medicine overcomes the germs in the mother's blood—gets at the root of trouble.
Antisepto overcomes the germs in the genital organs.
Disinfectall overcomes the germs in the stables.

Remember, no one medicine can possibly overcome this disease. But Dr. Roberts' Treatment, applied by yourself, makes it impossible for Abortion to exist in your herd.

The Practical Home Veterinarian, Dr. Roberts' great book, gives particulars on all animal diseases. 184 pages. Practical, plain, authoritative. Best book published for posting up on your animals. Distributed free at most drug stores. If not at yours, send 25c and receive a copy direct, postpaid.

DR. DAVID ROBERTS VETERINARY CO., 6146 Wisconsin Ave., Waukesha, Wis.



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Make your own batch concrete mixer, capacity 3 cu. ft., operated by hand or 1 h. p. engine, by inclining a strong barrel as a rotary mixing drum in suitable frame. Turns easily—dumps into wheelbarrow. You may use old machinery odds and ends and make the entire mixer yourself or my illustrated catalogue quotes prices for separate parts and complete sets of castings and attachments. Simply constructed and easy to build. The first week's use more than pays for it. Send 25c today for complete drawings and instructions. Ask for catalogue. **G. C. SHELDON, Box 350, NEHAWKA, NEB.**

The Magic Flight of Thought

AGES ago, Thor, the champion of the Scandinavian gods, invaded Jotunheim, the land of the giants, and was challenged to feats of skill by Loki, the king.

Thor matched Thialfi, the swiftest of mortals, against Hugi in a footrace. Thrice they swept over the course, but each time Thialfi was hopelessly defeated by Loki's runner.

Loki confessed to Thor afterward that he had deceived the god by enchantments, saying, "Hugi was my thought, and what speed can ever equal his?"

But the flight of thought is no longer a magic power of mythical beings, for the Bell Telephone has made it a common daily experience.

Over the telephone, the spoken thought is transmitted instantly, directly where we send it, outdistancing every other means for the carrying of messages.

In the Bell System, the telephone lines reach throughout the country, and the thoughts of the people are carried with lightning speed in all directions, one mile, a hundred, or two thousand miles away.

And because the Bell System so adequately serves the practical needs of the people, the magic of thought's swift flight occurs 25,000,000 times every twenty-four hours.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
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One Policy *One System* *Universal Service*

Who Pays Cost of Cream Stations?

(CONTINUED FROM PAGE THREE)

they will begin to pay less and less. Now, I won't do anything like that, for I am a neighbor of yours and you know I will play fair."

There is a farmer in Nebraska who has recently had just this experience. He had been shipping direct and had been satisfied with the tests he had received. His creamery agent came to him and gave him a little spell like the above. So he let the agent test the cream. Sure enough, he got a better test than the creamery gave him. Of course he did. The agent saw to that. So he went back to the old system, and some of his neighbors paid the difference for a while. We don't say all creamery agents are like that, but the temptation is strong.

Farmer Pays for Two Tests

As we said before, the creamery weighs the cream as a check on the agent. There are five creameries represented in this one town, and probably as many in proportion to size in your town. With each agent receiving between 2 and 2½ cents per pound of butter-fat, equipments costing from $25 to $100 for each of these creameries and the expenses of traveling men, who receive $40 to $50 per week salary and expenses, who pays all these unnecessary expenses? The farmer, of course. The consumer is protected to a great extent by competition, which works in his favor, and not only by home competition, but by that of foreign countries, which may now ship butter in with a duty of 2½ cents per pound instead of 6 cents, as it used to be. Since this reduction the foreign countries are flooding our markets with butter made more cheaply than we are able to produce with our wasteful methods of buying cream.

When cream is shipped direct to the creamery it costs no more to weigh it there than when it comes from the station. A force of men is maintained to receive samples of cream, which are numbered. They do not know whose cream it is, nor do they care. They weigh it. These weights are recorded by number in a book, kept by a bookkeeper, who makes out the checks according to his records. In many creameries two separate sets of men weigh the cream and the records are compared. If these do not check, the cream is retested. No one has any object in making anything but a fair test. The weighers are paid salaries instead of commissions, and anyhow they do not know whose cream they are testing.

It is in the interest of the creamery to give the farmer a fair and impartial test. He can soon find out if this is being done. The state chemist will test samples of cream at any time.

Expressing the Cream

It would not cost the farmer any more express to ship direct than through the stations; in fact, it would probably cost less. The creameries have a good deal of grief with their station agents. Since competition is so strong between them for their share of the farmer's cream, each agent likes to make the others think he is shipping more cans of cream than the others, so he frequently ships two or three half or partly full cans at the same time. Express is paid, not by weight, but by the can. The creamery calls him down, but he always has excuses to offer, and if the call-downs come too often he exchanges stations with one or another of the other agents and the good work goes on. Sometimes he sends only full cans, but fills them up with rinse water, which not only adds nothing to the weight of the cream and costs as much as cream to ship, but injures the quality of the cream with which it is mixed.

Station agents will tell you that you will find it a good deal of a bother to have to take your cream to town whenever the can is full, instead of whenever you happen to be going, and that your cream will not be so good, because it will have to stand so long waiting for you to get a full can. The remedy for this last difficulty would be to keep enough cows so that you would get a can full in a reasonable length of time. And if you could get 5 cents more for your butter-fat by the direct shipping method—which you could—would it not be worth a little extra bother in sending someone into town with it when it was ready to go? As for waiting for your checks until you had a full can to ship, you would have a much bigger check when it came, and no good business man lives in such a hand-to-mouth way that he cannot wait a few days for his money, especially when he can make more by waiting.

Altogether, there seems to be not one single perfectly logical reason for maintaining all these cream receiving stations. Ask the creamery men why these stations exist, and they will say, "Because the farmer is so suspicious. He won't ship direct to us because he is afraid we will cheat him." Perhaps some creameries would cheat, but they would have to be managed by mighty short-sighted business men if they did and would soon be out of business. When you figure it all up, the creamery that buys direct from the farmer has much less cause to give you incorrect tests than the agent in your town, who knows you personally and with whom there might be personal reasons for giving varying tests, as in the case of the farmer we told you about. When you consider the matter carefully, what do you think about this direct shipping method after all?

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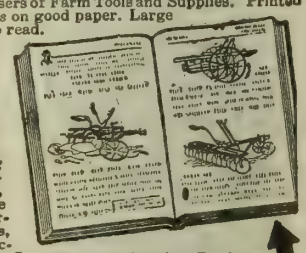
Listen—I've just had printed the best book ever offered to users of Farm Tools and Supplies. Printed in *two colors* on good paper. Large type easy to read.



I'll send it to every man who ought to KNOW about the *Monmouth wholesale price plan* of selling Plows, Cultivators, Discs, Spike Tooth Harrows, Drills, Gates, Fencing, Roofing, Farm Wagons, Gasoline Engines, Mowers, Manure Spreaders, etc. We haven't any Agents or Dealers. We manufacture and sell Farm Supplies exclusively: direct to farmers at money-saving prices.

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If your Monmouth implement doesn't please you in every way—send it back at my expense and the trial doesn't cost you a penny. I want you to read the good things users say about our machines in the letters in my big book. Just say "Mail me the book" on a postal and sign your name and address. Don't wait! Write now.

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Care of Sows at Farrowing Time

Good Care of Mother Saves the Pigs

THE most important season of the year for the hog raiser is now at hand. On success at farrowing time depends the whole season's work. Let us give particular attention to this part of our work, that we may be in position to reap the desired benefits at the end of the season.

First, the farrowing house or pen. The sow must have comfortable quarters if she succeeds in raising a good litter of pigs. The farrowing pen must be roomy, so constructed that no air can come under the floor, and must be reasonably warm. We believe the "A" house one of the best. Make it out of seven-foot boards, both floor and roof. In this house we have a minimum of air space, thereby retaining all the animal heat possible. If it is cold, hang a lantern from the roof, which will give a lot of additional heat.

Put the sow into her farrowing quarters at least twenty-four hours before her farrowing time and give her plenty of bedding. Too many hog raisers don't use bedding enough, on the theory that if there is an abundance of bedding the little pigs will crawl into it and be stepped upon by the old sow. The sow must be comfortable. The important thing for the first couple of days is to have her move about in her quarters as little as possible, giving the pigs a chance to get strong enough to look out for themselves. If the sow has but a limited amount of bedding and the weather is cold she will not lie down and be quiet, for she will be trying to get enough bedding together to make herself and the pigs comfortable. Take this to yourself. If you are cold when in bed you are continually rolling around trying to arrange the covers that you may be warm and comfortable. Just so with the sow. If she is getting up and around the pen she is very liable to step on some of the pigs and kill them. Arrange to make her comfortable.

Now about the feeding. Reduce her ration to some extent a couple of days before farrowing. For twenty-four hours after farrowing don't give her anything to eat and nothing to drink but pure water. Water drawn fresh from the well is about the right temperature. If you can't do this, get a little warm water from the house and don't, under any circumstances, give her water taken from a tank full of ice; if you do, don't kick if the little pigs are scouring and all knocked out in a day or two. The second day after farrowing commence to give her something to eat; light feed, such as oats or a little shorts, is best. Don't give her any corn for three or four days, and then commence with a little and gradually increase the feed until the little pigs get to taking more nourishment. If you feed her too heavily at first you will be almost sure to find the little pigs scouring, and then you have a job on your hands to save them, and if you do the chances are they will be stunted for a long time, and probably always. A little time and attention at this time will be worth many dollars to you when the hogs are driven over the scales.

Every little pig is born with eight teeth, almost as sharp as needles; these should be removed before the pig is 48 hours' old. A very handy tool for this purpose is a jeweler's side-cutting pliers, which may be bought from any jewelers' supply house. By removing these teeth you will save many bad cases of cankered mouth and also probably save many pigs on account of the sow being allowed to lie more quietly while the pigs are nursing.

One Man Worker—Multiplied Results

Why not cut your plowing cost per acre? One man with a Leader Tractor can do the work of 3 or 4 men with 10 to 12 horses. Plow deep—bring up the fertile soil that grows better crops. Others are doing it; let us send you their letters. Learn how easily a Leader Tractor can earn and save money for you, even if your farm is no larger than 120 acres.

Leader Farm Tractor

You Try It Before Buying

One man with 10 horses wrote that he sold 4 and doubled his efficiency. The Leader is a regular giant for power—yet it's light in weight—only 2½ tons. So light that you can drive it where you cannot take a horse. Frank Cheney, Lancaster, Minn., proved this when plowing swamp land.

It's made of heat treated steel—built to give long, efficient service. All gears are case hardened and run in oil. Write today for trial offer on your farm. Ask for "The Book of Farm Power."

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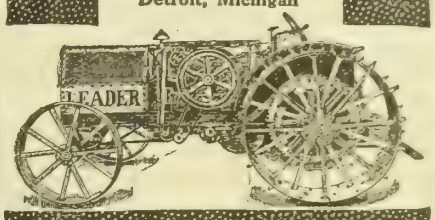

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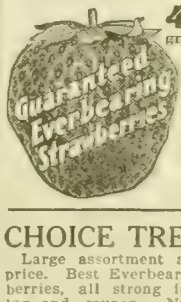

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Catalpa Speciosa Seedlings The kind that are planted for posts. I raise them by the million. Here are my prices: 4 to 8 inch, $1.25 per 1000, 8 to 12 inch, $2.00 per 1000; 12 to 18 inch, $3.50 per 1000; 18 to 24 inch, $4.00 per 1000. I pay freight on $10 Tree Orders. Full line of Fruit and Ornamental Trees, Forest Tree Seedlings, Small Fruits, Grape Vines, Flowering Shrubs and Roses. Here are a few of my prices: Apple 5c; Peach 7c; Plum 15c; Cherry 14c, all grafted; Concord Grapes, $2 per 100. Also all kinds of Vegetable, Flower and Field Seeds, Grasses, Corn, Oats, etc. First quality only. Write me today for my free, large, well illustrated Garden Book.
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SEND TODAY for catalog describing this WONDERFUL Tractor.

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Blue Ribbon Mule Foot Hogs.

Largest herd in U. S.; the most hardy, prolific, healthy and quick growing breed; they bring top prices on market; for breeding buy the best and start at the top; 350 for sale. Jno. Dunlap, Box 406 Williamsport, Ohio.

Please mention the fact that you saw it in Twentieth Century Farmer when writing to advertisers on this page.

JERSEY CATTLE

WINELAND FARM JERSEYS

Bulls of serviceable age for sale, sired by Duke Raleigh by Noble of Oakland. Also a number of choice heifers bred to freshen soon. I can suit you in both quality and price.

H. C. YOUNG, Lincoln, Neb.

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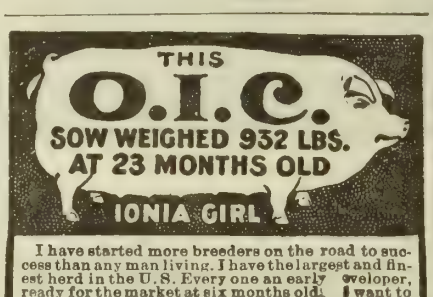

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." G. S. BENJAMIN RFD79 Portland, Mich.

HORSES

Percherons and Belgians

Our New Importation of Percheron and Belgian Stallions and Mares has arrived. They are the best we have ever owned. We also have a splendid lot of American breds They are the big, heavy-boned, drafty kind, with style and action. Come and look them over. We know you will be pleased. **A Certificate of Soundness Given with Each Animal.** We invite correspondence.

WOLF BROS., Albion, Boone County, Neb.

Percherons, Belgians and Shires

Imported and Homebred Stallions and Mares, ranging in age from coming two-year-olds to matured ages. We have a lot of two and three-year-old stallions weighing from 1900 to 2100 pounds; among them a fine lot of pasture-raised stallions—the kind for the western breeder. A fine lot of mares for sale. Always have stock for sale—never sold out. Write for prices, descriptions, etc.

NORTH & ROBINSON CO., - Grand Island, Neb.

Foaled and grown on the farm, offered at farmer's prices. Eight coming 2-year studs, 9 coming 3-year studs, 8 3-year-old and over studs, registered Percheron Society of America. Of the big type with substance and from French ancestry on both sides. Just east of Omaha. FRED CHANDLER, Rt. 7, Chariton, Iowa.

JACKS

The kind all are looking for; large boned black Mammoth Tenn. and Ky. Jacks, 2 to 6 years old, guaranteed and priced to sell. All broken and prompt sellers. Reference: Banks of Lawrence, 40 miles west of Kansas City on U. P. and Santa Fe.

AL. E. SMITH, LAWRENCE, KAN.

50 Mammoth Jacks and Jennets

A lifetime experience in breeding the large, thick, big-boned, good head and eared kind that produce the good Missouri mule. Two extra good Black Percheron 4-year-old Stallions.

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Mr. ... has the largest number of big, heavy boned, ... to 2100 pound stallions to be found in the United States. The Cedar Rapids Jack Farm is the ... of the world. All ... are here. The majority of the ... in the United ... are the results of the ... breeding ... inaugurated and carried on here. Write for catalogue. Come to me when you need stock. I will make it worth your while.

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I have ... Percheron stallions ... All good ... ready ... 2 ... 7 years old, ... and ... ready right to work.

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Quality of production and persistency of milking during long periods are well known characteristics of Holsteins. Dropping her first calf at about two years old the average cow, if well cared for, will produce from 5,000 to 6,000 pounds of milk in ten months, and she will increase the production every year until, at ... years, she will give from 7,000 to 9,000 lbs. limited to their ability to digest and assimilate feed, many Holsteins will exceed this production.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179, Brattleboro, Vt.

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FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Sir Clark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Shorthorns at South Omaha

A sale of Shorthorn cattle that should attract the attention of cattlemen in general will be held at South Omaha, Neb., on March 5. On this date there will be offered for sale a splendid lot of cattle from some of the very best herds in the corn belt. In this offering there will be sixty-five head of bulls of serviceable age, and among them are a number that are good enough to head any pure-bred herd. There will also be a lot of big, strong husky, rugged bulls for range purposes. C. A. Saunders & Sons of Manilla, Ia., are consigning a number of especially good ones, among them being two sons of the undefeated Cumberland's Best. Carl Deitsch of Orleans, Neb., is consigning a number of big, strong fellows that will go out and make good anywhere. C. M. French of Arlington, Neb., will put in several choice fellows sired by a son of Cumberland's Last. J. Doyle of Neola, Ia., and Dan Powers of Ulysses, Neb., will also offer some good ones. These are only a few of the consignors. There are others just as good and the offering as a whole will be one that is worthy of the attention of anyone wanting anything in this line. Listed among the bulls are several Polled Durhams, one of these being an extra good one, consigned by Saunders & Sons. Do not forget that this sale will be held at South Omaha, Neb., on March 5. If there is anything more you want to know about what is to be offered, write to C. A. Saunders, manager, Manilla, Ia. Kindly mention The Twentieth Century Farmer when writing.

Percheron Stallions for Sale

I have ready for immediate sale several high-class Percheron stallions weighing from 1,700 to 2,100 pounds, all good, desirable colors, ages from 2 to 7 years, inspected and marked absolutely sound. Several have done service and are ready to go out and do a satisfactory season's breeding right from the beginning. They are broke and handled by myself, and I am in position to know each and every horse like a book. I raise these horses right here on Pleasant View Farm the way nature intended they should be raised. They are fed good sound grain and hay, and are not pampered and stuffed to deceive an innocent buyer. I have owned and handled a great many stallions, but have yet to sell the first one that failed to give satisfaction. They are raised from pure-bred mares which we use to do all our work on the farm, are broke to fences, have large corrals and pastures to exercise in, are developed right, and sold guaranteed. You do not have to acclimate these horses. That is where the foreign bred horse falls down. I have had plenty of experience with the imported horses to know whereof I speak. It takes from one to three years to acclimate a horse brought across the water, and for the first season or two you will not have satisfactory results. If you want results get one already acclimated.

Come to Pleasant View Farm and I will show you horses that will make you a paying investment, and one that will get for you the desired results. I am pricing them to sell, and I want to hear from you. George W. Schwab, Clay Center, Neb.

Kindly mention The Twentieth Century Farmer when writing.

Draft Horses, March 19 and 20

On March 19 and 20 at Grand Island, Neb., the well known importing and breeding firm of North & Robinson of that place will hold their annual sale of draft stallions and mares at the sale barns of Bradstreet & Clemmons. This is considered one of the most important horse sales held in Nebraska each year and has come to be looked forward to by a great many as one of the best places to buy strictly first class breeding stock. In this sale, they are going to offer sixty head. Thirty stallions and thirty mares. These are largely Percherons and Belgians, with a few Shires, and one-half of them are imported, while the balance are American bred. They have one of the largest horse breeding establishments in the west and the home bred horses they are offering for sale are largely of their own production. They are pasture raised, thoroughly acclimated and will certainly go out and do good for those who buy them. If you are looking for the big, heavy boned, drafty kind that will fill every requirement, we would advise you to get in touch with Messrs. North & Robinson at once, mentioning The Twentieth Century Farmer.

Do You Want a Jack?

If you do, we would advise you to get in touch with Al E. Smith, breeder of jacks and jennets, at Lawrence, Kan. Mr. Smith is one of the best known breeders in the country and handles a class of animals that has made him an enviable reputation in this line. If you are looking for the big, heavy boned kind, you will find them here. He has plenty of big black mammoth jacks fifteen to sixteen hands high, standard measure, and guaranteed in every way. His many years in the business is a mighty good guarantee to prospective purchasers as to just what they can expect in this line. If you want something that will go out and do you good, get in touch with Mr. Smith at once, mentioning The Twentieth Century Farmer.

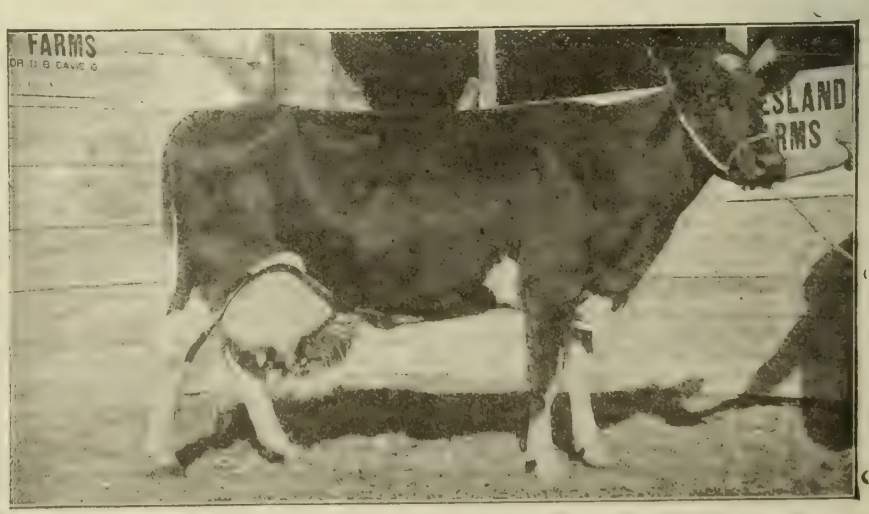
Imported Stallions and Mares

W. L. DeClow, the stallion and jack man of Cedar Rapids, Ia., is splendidly equipped at this time to supply his old, and the new customers as well, with anything they want in the line of a Percheron or Belgian stallion or mare, or big, heavy boned jack. Mr. DeClow has one of the largest breeding establishments in the country and is splendidly equipped to carry on his great volume of business. He has eighty head of imported Percheron and Belgian stallions and mares for sale at this time, and they are the kind that people are looking for—the big, better-than-a-ton kind that actually weigh it over the scales. Get in touch with Mr. DeClow for anything in his line. He surely can please you and we know he will treat you right. Kindly mention The Twentieth Century Farmer when writing.

Kuzel's Duroc Sale

This is the last call for the sale of Duroc-Jersey bred sows to be held at Clarkson, Neb., on March 2 by L. J. Kuzel of that place. This offering is one that should attract the attention of every good breeder of Durocs. They are the right kind, bred and raised in the right way, and will certainly go out and make good for the man who buys them. They are sired by King Echo Top, he by Echo Top King; Proud Wonder Jr., by Belle's Crimson Wonder; Model Wonder 3d by Crimson Wonder 3d; Crimson Boy, Wal-

Lakeside Dekol Queen



Lakeside Dekol Queen, a pure-bred Holstein cow, owned by Dr. B. B. Davis of Douglas county, was awarded the $50 prize offered by the Beatrice Creamery company for the highest record of butter-fat by any cow in the state. Queen made a record of 706 pounds, the prize being awarded by J. H. Frandsen of the department of animal industry at the state farm. Nannette Butterboy, a Holstein, owned by A. Gierens, Walton, took second prize with 629.3 pounds, and Zulu Queenie, a pure-bred Jersey, owned by W. L. Hunter & Son, Raymond, took third prize.

lace's Wonder, Red Wonder, Gold Dust Chief and a number of other boars of prominence. These sows are bred to King Echo Top, Proud Wonder Jr. and Lucy's Select, a strongly bred Chief Select boar. You will find these sows possessing plenty of scale, in good fair flesh, in fact in a condition to go right out and make good for you. The sale will be held at Mr. Kuzel's farm, midway between Howells and Schuyler. Parties from a distance will find free accommodations to the farm from either Clarkson, Howells or Schuyler. Get in touch with Mr. Kuzel at once, as his catalogues are now ready and may be had for the asking. If you can not attend, send your bids to G. E. Hall of this paper and they will receive careful attention. Kindly mention The Twentieth Century Farmer when writing.

Mammoth Jacks and Jennets

We wish to call attention in this issue to the advertisement of G. M. Scott of Rea, Mo., who is offering mammoth jacks and jennets for sale. We had the pleasure of calling on Mr. Scott some time ago and we certainly were impressed by the establishment he has and the magnitude of the business he is conducting, as well as the high class character of the breeding animals he is producing. If you are looking for a big jack, the kind that has made the state of Missouri famous as a mule state, it will not be necessary for you to go further than right here at Mr. Scott's breeding farm. He has them just about as big as you want them and they certainly will meet you demands in every other respect. Along this line, you can put absolute dependence on whatever Mr. Scott tells you about any animal he is offering for sale. Write Mr. Scott for particulars as to just what he has to sell, mentioning The Twentieth Century Farmer.

Grand Island Hereford Sale

The combination Hereford sale managed by Robert Mousel at Grand Island, Neb., on February 19 and 20 resulted in an average of $192.13 on the 115 head sold. It was an excellent offering of cattle, consigned by Nebraska's best breeders, and although the prices were conservative considering the prices Herefords have been bringing, yet the breeders were well pleased with the good service given them by Mr. Mousel. They will sell again next year with Mr. Mousel as manager. There were none of the so-called "tail-enders" in this offering and the breeders can feel proud of the fact that they were able to put up such a clean offering. Colonels Kraschel and Snell performed on the block and did very effective work. A list of the sales of $125 and over follows:

Lot		Price.
1	C. C. Hampton, Gering, Neb.	$235
2	W. C. Edney, Ord, Neb.	175
3	Will Henn, Denver, Colo.	170
5	C. C. Hampton	135
6	Will Henn	185
7	M. D. Meisenburg, David City, Neb.	235
8	Ben Broughten, Lakeview, Ia.	250
9	Charles Hoffman, Scribner, Neb.	125
11	G. E. Stryker, David City, Neb.	175
12	J. W. Coder, Elwood, Neb.	150
13	G. E. Stryker	150
15	Davis & Thomas, Laramie, Wyo.	240
16	M. J. Killian, Wolbach, Neb.	155
17	R. Graham, Fullerton, Neb.	150
18	F. M. Steiner, Bellwood, Neb.	135
19	A. C. Denman, Alta, Neb.	200
20	Clayton Bros., Central City, Neb.	145
21	S. Waddington, Anselmo, Neb.	240
22	J. O. Rawlings, Archer, Neb.	180
23	J. E. Deming, Broken Bow, Neb.	145
24	S. J. Sillasen, Keystone, Neb.	190
25	Wm. Kuhlman, Grand Island, Neb.	135
26	E. L. Booth	260
27	J. W. Coder	200
28	I. W. Marshall, Fleming, Colo.	180
29	W. G. Pashby, Overton, Neb.	165
30	J. P. Peterson, Stromsburg, Neb.	150
31	A. C. Jensen, Wolbach, Neb.	165
32	S. J. Sillasen	175
33	Davis & Thompson	250
34	M. D. Meisenburg	510
35	Davis & Thomas	240
36	Davis & Thomas	200
37	Heber Hord, Central City, Neb.	155
38	Davis & Thomas	265
39	Davis & Thomas	300
40	Davis & Thomas	245
41	Davis & Thomas	230
42	Davis & Thomas	215
43	Chas. Hoffman, Scribner, Neb.	170
44	M. D. Meisenburg	165
45	J. W. Coder	190
46	Fred Lind, Clarks, Neb.	180
47	C. Gerloff, Aurora, Neb.	160
48	M. D. Meisenburg	130
49	J. W. Coder	200
50	E. D. Murphy, Brady, Neb.	125
51	Will Reiff, Grand Island, Neb.	140
52	Fred Lind..	180
53	Heber Hord	115
54	John Irwin, St. Paul, Neb.	150
55	Will Henn	195
56	F. H. Weisenreder, Broken Bow, Neb.	150
57	E. C. Smith, Hampton, Neb.	160
58	E. D. Murphy	175
59	F. Ortegren, Central City, Neb.	125
61	M. W. McCullough, Maxwell, Neb.	275
62	Fred Lind	170
63	Fred George, Brady, Neb.	225
64	C. A. Peterson	170
65	M. R. Lewis, Bladen, Neb.	185
66	Will Henn	135
67	C. H. Kempen, Carroll, Neb.	145
68	Henry Spath, Scribner, Neb.	275
69	C. L. Nord, Raymond, Neb.	130
70	William H. Reuwe, Hooper, Neb.	350
71	August Hager, Avoca, Neb.	230
72	O. J. McCullough, Clarks, Neb.	185
73	L. P. Stone, Lexington, Neb.	170
74	M. D. Meisenburg	300
75	John Griffith, Maxwell, Neb.	190
76	J. E. Deming	175
77	M. D. Meisenburg	450
78	Mousel Bros., Cambridge, Neb.	255
79	Frank Carr, Bladen, Neb.	165
80	E. A. Stacy, Ord, Neb.	145
81	T. D. Bates & Son, Clarks, Neb.	310
82	Fred George, Brady, Neb.	220
83	Will Henn	200
84	O. J. McCullough	125
85	L. B. Stuhr, Grand Island, Neb.	185
86	A. J. O'Connor, St. Michael, Neb.	155
87	C. A. Peterson	150
88	Charley Verzal, Ord, Neb.	150
89	Heber Hord	140
90	J. R. Yoakum	190
91	I. G. Mack, Central City, Neb.	165
92	Karl Deitman, Grand Island, Neb.	180
93	Charles Hughes, Baxter, Neb.	165
97	Heber Hord	145
98	William Reim, Grand Island, Neb.	145
99	Will Henn	255
100	Fred George	135
100½	Fred Lind	160
101	C. G. Clement, Ord, Neb.	135
102	Geo. W. Tomlinson, Ogden, Utah.	140
103	Heber Hord	125
104	J. E. Deming	175
105	Fred Lind	220
106	G. E. Stryker, David City, Neb.	175
107	G. E. Stryker	175
108	Fred Mues	180
109	Fred Lind	220
110	Kerr Bros., Muscatine, Ia.	180
111	C. Cook, Shelton, Neb.	16
112	Kerr Bros.	370
113	Nick Kulp, Eddyville, Neb.	180
114	A. E. Hall, Kearney, Neb.	210
115	T. B. Hord	165
116	W. J. Johnson, Loup City, Neb.	485

SUMMARY.

	Brought.	Average.
79 bulls	$15,215	$192.59
36 cows	6,880	191.11
115 head	$22,095	$192.13

Eavey's Poland-China Sale

The Poland-China sale of W. J. Eavey of Geneva, Neb., on Tuesday, February 10, made an average of $33.62 on forty-two head of bred sows. It was an extra good offering and several bargains were picked up. There were no long prices paid, as there were not many breeders present, and most of the stuff went to Mr. Eavey's neighbors. Colonel J. R. Tupper and Colonel J. F. McGraw conducted the sale in a very satisfactory manner. Sales of $25 and over follow:

Lot No.		Price.
1	John Hoff, Geneva, Neb.	$51
2	C. F. DeLance, Woodbine, Ia.	49
3	William Wythers, Geneva.	44
4	Joe Gergen, Geneva.	60
5	L. W. Myers, Geneva.	41
7	F. Hranac, Geneva.	36
8	John Kucera, Milligan.	36
9	J. A. Massoth, Geneva.	31
10	Harry Sloan, Geneva.	40
11	John Kucera	34
12	William Yager, Geneva.	26
13	Albert Morgan, Geneva.	36
14	Harry Sloan	38
15	John Hoff	37
16	John Hoff	35
17	John Hoff	27
19	Lee Peterson, Geneva.	27
20	J. M. Miller, Carleton.	32
21	J. F. McGraw, Geneva.	26
22	Albert Morgan	25
23	John Schmidt, Grafton.	26
27	M. Levander, Grafton.	40
28	George Theobold, Ohiowa.	38
29	J. A. Smith, Geneva.	26
30	Ernest Melthan, Ohiowa.	40
31	John McGraw	30
32	N. Levander	27
34	John Hoff	27
35	John Hoff	27
36	William Yeager	32
38	William Bult, Western.	27
39	Walter Eavey, Brady Island.	34
40	F. J. White, Florence, Colo.	34
42	John Hoff	25
47	Westley Miller, Geneva.	52
48	Albert Morgan	41

Mr. Eavey kept fifteen brood sows last spring and has sold over $2,300 worth of their pigs this year.

Flying Swede Machinery

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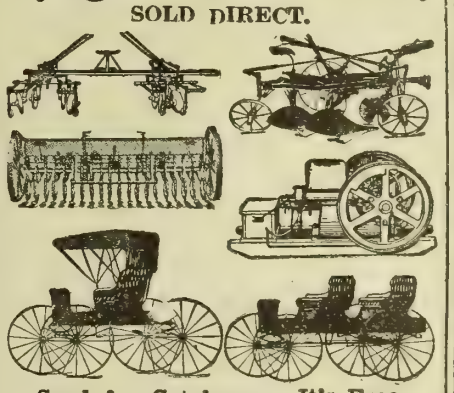

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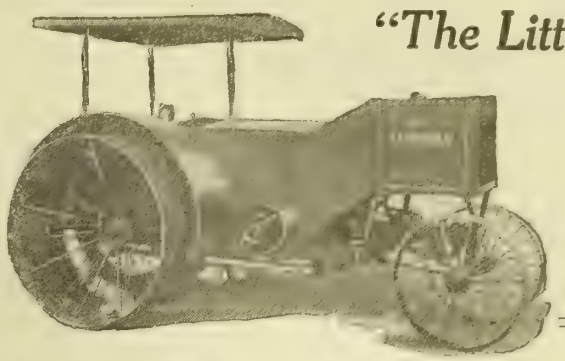

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KUZEL'S DUROC SALE

40 Head of Brood Sows to Be Sold at the Farm Near

Clarkson, Neb., March 2, 1914

This is a select draft of bred sows and gilts from my herd and I am putting in nothing but what I would consider good enough to keep in my herd. These sows have been grown right, and I know they will go out and make good for you. One third of them are sired by KING ECHO TOP, one third by PROUD WONDER JR. and the balance by MODEL WONDER 3d, CRIMSON BOY, WALLACE'S WONDER, RED WONDER, GOLD DUST CHIEF and others. They are bred to KING ECHO TOP, PROUD WONDER JR., and LUCY'S SELECT by Chief Select.

Write for catalogue at once. I will promise to show you the "goods" on sale day. Sale may be reached either from Schuyler, Howells or Clarkson.

L. J. KUZEL, Clarkson, Neb.

Auctioneer—Col. Ray Page. Fieldman—G. E. Hall.

Breeders' Sale of Shorthorns

75 Head of High-Class Shorthorns to Be Sold at South Omaha, Neb., March 5.

65 BULLS **10 FEMALES**

These bulls are a strong, rugged lot, and among them are a number of strictly high-class, herd heading character. Also a splendid lot of bulls for the range.

Some of the consignors to this sale are **C. A. Saunders & Sons**, Manilla, Ia.; **L. & S. Woods**, Wiota, Ia.; **Carl Dietsch**, Orleans, Neb.; **C. M. French**, Arlington, Neb.; **J. Doyle**, Neola, Ia.; **Dan Powers**, Ulysses, Neb., and others.

This sale will afford an exceptional opportunity for parties wanting either a first-class herd bull or a number of bulls for range service. For particulars, address

C. A. SAUNDERS, Mgr., Manilla, Ia.

Review of Live Stock Market

By A. C. Davenport

CATTLE receipts have been quite large during the last week or ten days, the big market points as a whole showing increases over recent weeks as well as over the corresponding period a year ago. In spite of the apparent haste of the country to unload its fat stock the market has been in reasonably good shape, prices alternately declining and advancing. The improvement in the consuming demand has been the natural outcome of severely cold weather prevailing over the entire eastern country.

While the market has recently shown sufficient strength to withstand liberal receipts without breaking very badly, there is a feeling that with the near approach of Lent it would be advisable for the country to reduce shipments. Past years' experience has taught the trade to anticipate a greater or less shrinkage in the demand for meat products during the Lenten season, and there is no special reason for anticipating any different outcome this year.

A feature of the market is the increasing spread between choice, well finished beeves and the common to medium grades. Choice cattle have been so scarce that prices have been well sustained, while the common to medium grades have been coming forward in increasing numbers.

No one is anticipating any great change in prevailing prices in the near future unless the country should be so unwise as to flood the market during Lent. The bulls have not given up hope of a higher market later in the season, but even they are willing to admit that a good deal will depend upon weather conditions. Everyone is beginning to realize that the open winter has caused cattle to put on flesh much more rapidly than they would otherwise, thus increasing the pounds of beef per head, while the same mild weather has decreased the consuming demand.

Cattle Shortage Exists

Much less is being said regarding the shortage of cattle in the country than was the case six months or more ago. The reason for this is that there is no longer any question for discussion—the shortage is here and everyone is aware of it, and that is all there is to it. In spite of the fact that the country is shipping its cattle to market without waiting to finish them thoroughly, receipts at the big market points for the first month and a half of the year show a falling off of 100,000 head, and the majority of stockmen believe that this decrease will become larger as the season advances. Thus the question is no longer "Is there a shortage?" but rather, "What are we going to do about the shortage?" Some people thought they could relieve the shortage by admitting cattle duty free from Canada and Mexico. While perhaps that has helped in a small degree, it has largely failed for the simple reason that there were not enough cattle in Canada and Mexico to make very much impression on the shortage. After absorbing all the cattle available from these two countries shortage still exists.

Stockmen have about settled down to a belief that the only way that the supply of cattle can be increased is for Americans themselves to grow the cattle. At the big market centers there is a feeling of confidence that the effort to interest the farmers of the country in breeding cattle more extensively is certain to bring about a change for the better in the course of the next few years. It is really surprising what a vast amount of missionary work is being done in the way of encouraging cattle breeding. Newspapers, bankers and business men generally, have united with the experiment stations of the various states and with the Agricultural department to awaken interest in the production of cattle. These efforts are not being confined to the west, where cattle growing has always been an important industry, but they are being pushed into territory never thought of as cattle producing sections, such as the old eastern and southern states. Southern live stock markets are sending speakers down into the old cotton states to tell the farmers just what profits can be made from growing cattle. The newspapers are publishing these talks, thus aiding to arouse public interest in the subject. As an example, Louisiana papers recently contained a column report of a speech at a farmers' gathering by a Chicago stock yards man explaining the cattle situation of the country and how the south could take advantage of it. It would hardly seem possible that all the efforts that are being put forward to increase the breeding of cattle can fail to bring about a marked change in the next few years. Still a great many well informed stockmen believe that the acute shortage has not yet been reached, but will be even more marked before the end of the present year.

Falling Off in Hog Receipts

Hogs have been coming forward quite freely at some points, with others showing very light runs, with the result that the six big markets are considerably behind last year's record. For the year to date there is a shortage of about 250,000 head as compared with the same time last year. As compared with two years ago eleven markets show a falling off for the year to date of 1,000,000 head. Prices have continued very firm, showing fluctuations from day to day, but no very great change in either direction.

Hog men are divided in opinion as to the near future of the market, some of them looking for still further advances, while others profess to believe that the market is now about as high as it can be expected to go for the next month or two. These latter are basing their opinion on the fact that hogs at present writing are the highest that they ever were the latter part of February, with the single exception of the high year, 1910, when on the basis of Omaha, hogs were selling on an average during the last week in February around $9.25. That year hogs continued to advance, reaching the $10 mark at Omaha by the tenth of March, easing off again during the latter half of April. The bears in the hog trade are pinning their faith to the belief that receipts during the next few weeks will prove to be larger than expected. On the contrary, the bulls are unable to see where the unexpected large receipts are to come from.

Nothing in the way of news of special interest has occurred during the last week or ten days in the sheep or lamb trade. There has, aside from the usual fluctuations, been very little change in price values and as a rule operators on the market do not expect very much change for some little time in the future.

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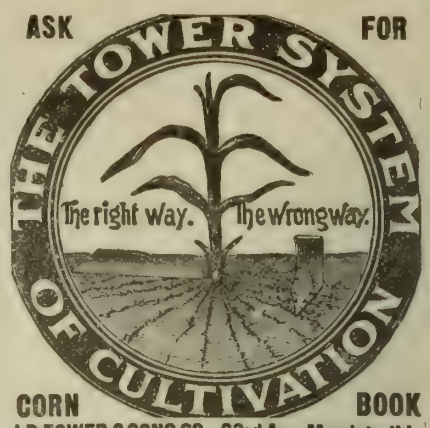

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POULTRY—Cochins

FOR SALE—PARTRIDGE COCHINS, pure blood. Mrs. C. E. Wonderly, Benedict, Neb.

Leghorns

25 SINGLE-COMB BROWN LEGHORN cockerels, scoring from 90 to 93½, $2 each; 100 unscored cockerels, $1 each. Hawkeye View Farm, Selma, Ia., Vanburen Co.

WILL SPARE A FEW MORE SINGLE-COMB White Leghorn pullets, April, 1913, hatched, Yesterlaid arm strain, $1.50 each now. Am also taking orders for hatching eggs to be delivered later from my pure Pekin ducks, $1 for 11. Mrs. Merton J. Casson, Neola, Ia. R. 1.

ROSE-COMB BROWN LEGHORNS—For years my Leghorns won the blue ribbons at the leading western shows. Both matings. Choice stock and eggs. Satisfaction guaranteed. Mrs. John Holzhey, Bendena, Kan.

RIDGEDALE WHITE LEGHORN Farm, established 1905; cockerels, eggs, cheap. Lee Schureman, Route 4, Lincoln, Neb

Langshans

FULL-BLOOD BLACK LANGSHAN cockerels for sale. C. C. Cunningham, Kennard, Neb.

BIG-SCORED BLACK LANGSHAN cockerels, $2.50 each, guaranteed. H. Osterfoss Farm, Hedrick, Iowa.

BLACK LANGSHAN EGGS—CIRCULAR. Jake Hetrick, Wahoo, Neb.

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SINGLE-COMB BUFF ORPINGTONS, Cadwell strain—size, vigor, type and color, with ability to lay; 85 per cent fertility. Baby chicks, 25c each; guaranteed eggs, $2.50 and $1.50 setting; lots, $6 per 100. Instructions for home-made oxygen vitalizer with every $2 order. Catalogue free. Gene Huse, Norfolk, Neb.

PRIZE-WINNING BUFF ORPINGTON eggs. Mrs. Cook, Eddyville, Neb.

BIG, VIGOROUS CRYSTAL WHITE Orpington cockerels, $2 and $5 each. David Garvis, Lyons, Neb.

FOR SALE—WHITE ORPINGTONS—12 hens, one cock. State show and Omaha winners. Good size and type. What eggs I have to spare from above, $5, 15. W. L. Curtis, Fairbury, Neb.

EGGS FOR HATCHING — SINGLE-comb Buff Orpingtons, Toulouse geese, Indian Runner ducks. Mating list free. Peter Brehm, Harvard, Neb.

ORPINGTONS, WHITE OR BUFF; eggs, cockerels. List free. Frank Lewis, Clifton, Neb.

SINGLE-COMB WHITE ORPINGTON winter layers—eggs, $1.50 per 15, $3 per 15. N. J. Steffes, Hemphrey, Neb.

Plymouth Rocks

WHITE ROCKS, BRED FOR EGGS and size. Eggs, 15, $1; 100, $4. George Clauson, Mead, Neb.

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EGGS — BARRED ROCK, WHITE Rocks, Buff Orpingtons, White Leghorns, Brown Leghorns, Black Langshans, Toulouse geese. Mrs. Frank Davis, Holbrook, Neb.

POULTRY—Plymouth Rocks

BARRED ROCKS—"RINGLETS" DIRECT from Thompson. Eggs, $1.50 per 15. Mrs. B. Taft, Norfolk, Neb.

WHITE ROCK EGGS—$1.50 PER 15, $5 per 100. Mrs. Harry Butler, Bellwood, Neb.

BUFF ROCK EGGS—LEADING WINNERS at the big state shows. Write for circular. Mrs. James Christopher, Carleton, Neb.

BIG BUFF ROCKS, GOOD ENOUGH to win four firsts at big Nebraska shows; grand layers. Eggs for sale from $2.50 to $5. Mrs. Isaac Williams, Wymore, Neb.

BARRED ROCK COCKERELS—LATE hatch, big bone, well marked, 6 and 7 pounds, $2; three for $5. Mrs. J. D. Stevenson, Benkelman, Neb.

SUPERIOR QUALITY BARRED PLYmouth Rock eggs. Davis Bros., Lincoln, Neb.

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Rhode Island Reds

SINGLE-COMB REDS, WINNERS AT Omaha and Blair. Eggs at $1 and $2 per setting. Otto Timm, Bennington, Neb.

SINGLE-COMB REDS—LARGE, dark, even color; heavy layers. Egg circular free. Scott Covalt, Box O, Council Bluffs, Ia.

GOOD YEARLING SINGLE-COMB Red hens, $1 each. Mrs. Ed M. Kern, Stanton, Neb.

EGGS FOR SALE—SINGLE-COMB Rhode Island Red, $1 per setting or $5 per 100. John L. Hoffman,, Linwood, Neb.

FOUR ROSE-COMB RED COCKERels and fifteen young hens, eight single-comb pullets. A bargain for quick sale. W. J. Cocklin & Son, Rising City, Neb.

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WHITE WYANDOTTE EGGS FOR hatching. Best blood in America. Won highest honors Nebraska State Poultry show 1914. Send for mating list. Oscar L. Bock, Council Bluffs, Iowa.

FINE EGG-LAYING WHITE WYANdottes, $10 per pen. Fred Van Gorden, Gresham, Neb.

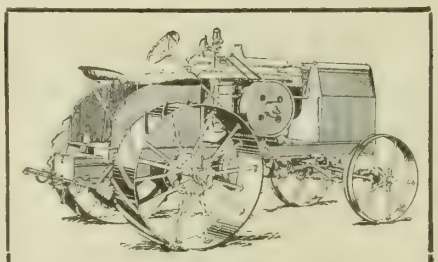
PEERLESS WHITE WYANDOTTES—Winners at Nebraska State Poultry show 1914 and at Fairbury. Eggs for hatching. Write for mating list. Cockerels, $2 to $4. M. L. Burbridge, Fairbury, Neb.

VIGOROUS WHITE WYANDOTTE cockerels from prize-winning stock for sale cheap. R. Petty, Martland, Neb.

SILVER-LACED WYANDOTTE cockerels, $1.50 each. Anuel Frazer, North Loup, Neb.

$25 COCK FROM J. W. ANDREWS, Dighton, Mass., heads my pen prize-winning White Wyandotte pullets. Eggs, $2 for 15, $3.50 for 30. Order now; will ship when wanted. L. Brown, Fairmont, Neb.

BEST STRAIN GOLDEN AND WHITE Wyandottes. Eggs in season. Write for prices. Wm. Schreiner, Exeter, Neb



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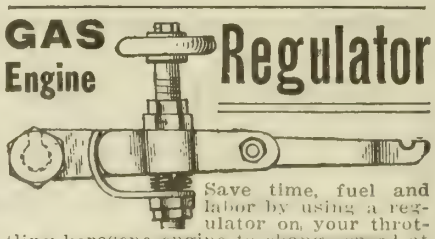

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DON'T RAISE "JUST CHICKENS." Any farmer can afford a breeding pen of Columbian Wyandottes at $10. Start right and you will always be proud of your stock. Eggs, 15, $2. W. J. Casey, Knoxville, Ia.

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WHITE WYANDOTTES AND WHITE Orpingtons—cocks, cockerels and mated pens. G. W. Hardin, Ulysses, Neb.

WHITE WYANDOTTE COCKERELS, $1.50. H. A. Goodrich, Enon, Mo.

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Washington

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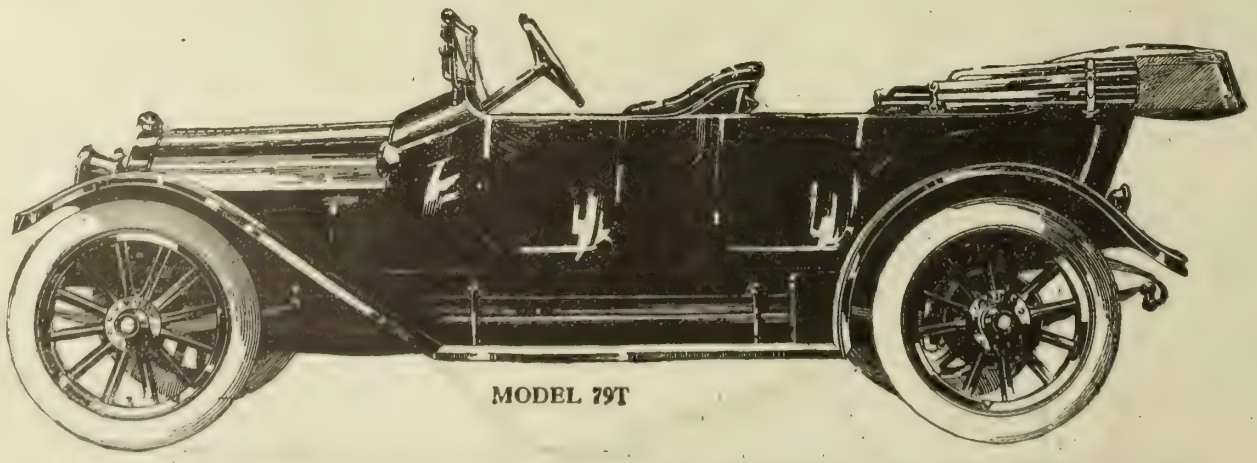

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TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, March 7, 1914 | Number 691

Bright and Breezy

Had It Located

"Which tooth are you going to have pulled, Sam?"

"Upper six, sah," answered the Pullman porter.

Domestic Science Needed

Gabe — Bagley says he would rather fight than eat.

Steve—I don't blame him. I had dinner at his house one night.

Much Changed

Mistress (finding visitor in the kitchen)—Who is this, Mary?

Mary (confused) — My brother, m'm.

Mistress (suspiciously) — You're not much alike.

Mary (stammering apologetically) —We were, m'm, but he's just had his beard shaved off, and that makes him look different.

A Veteran Colt

Evidently the fountain of eternal youth bubbles near Mrs. Finn's cottage. That worthy woman, engaged to wash for Mrs. Gibbs, who was spending the summer at the lake, brought back the washing in a boat.

"Less'n a year ago," said Mrs. Flinn, "I wouldn't had to 'a' used the boat. I'd have brung it by the colt. But one day he jes' got colic or somethin' and rolled over on the grass and died. My, how we miss that colt! We'd had him for almost thirty years."—Youth's Companion.

Secret of Success

"How is it, Colonel," asked the hopeful bunko steerer, addressing the hoary-headed master of the craft, "that you have always been successful in picking out juicy suckers and never have to waste your time on unprofitable subjects?"

"I simply wait till I hear a man say that he is a pretty good judge of human nature," replied the veteran, "and then I know he is just what I am looking for."

So It Was

An English minister, who guarded his morning study hour very carefully, told the new maid that under no circumstances were callers to be admitted—except, of course, he added—in case of life and death.

Half an hour later the maid knocked at his door. "A gentleman to see you, sir."

"Why, I thought I told you—"

"Yes, I told him," she replied, "but he says it is a question of life and death."

So he went downstairs and found a life insurance agent.

Cobb's Advice

A tramp called at Mr. Cobb's house one morning.

"I've walked many miles to see you, sir," he said, "because people told me you were very kind to poor, unfortunate fellows like me."

"Indeed!" said the old gentleman. "And are you going back the same way?"

"Yes, sir," was the answer.

"Well," said Mr. Cobb, "just contradict that rumor as you go, will [illegible]

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Special Dairy Number Comes Next

EVEN if you have only the one old family cow on the place, you are interested in dairying. In the past, commercial dairying has not always been found profitable in the corn-belt states on account of the drying up of pasture in the hot summer sunshine that is necessary for the ripening of the corn. With the introduction of alfalfa for hay and the silo for the preservation of green fodder, the question of carrying the cows over the feedless periods has been solved, and dairying is on the increase.

During the last year the Twentieth Century Farmer has been carrying on a campaign for the purpose of securing to the farmer cheaper and better silos and better facilities for marketing cream. We have uncovered and shown up to the light of day more than one shady little deal whereby the cream producer was relieved of a part of his profit. Dairying is a profitable pursuit, but it will be more profitable when the farmer can get all there is coming to him for the cream he produces on his farm. In order to do this he must eliminate from the field all so-called "co-operative" creameries that are not really co-operative, but are organized for the sole purpose of selling creamery machinery for many times its value, and the wasteful methods of some of the centralized creameries. These are some of the problems that confront the corn-belt dairymen at the present time.

In the coming issue we will take up many matters of interest to the owners of cows, from caring for the cows to farm [illegible]

Prattle of the Yougsters

Heart vs. Stomach

Mamma—Eddie, what would you do if you had no mother?

Eddie (promptly)—Eat up all the pie.—Puck.

And Why Not?

A little girl who was just beginning to read her primer was asked to spell cow.

"C-o-w," she replied promptly.

"How do you spell cows?"

"C-o-w, c-o-w, c-o-w."—Youth's Companion.

Perfectly Truthful

"I saw your mother going to one of the neighbors just as I crossed the street," said the lady caller to her friend's little son. "Do you know when she will be back?"

"Yes'm," answered the truthful Jimmy; "she said she'd be back just as soon as you left."

Too Popular

A little boy was taught the Lord's prayer and found it much to his taste. For a few days he kept repeating it with great faithfulness, and then announced to his mother, in great disgust:

"I heard another fellow say that prayer today, mother. First thing we know it's going to get all around town."

Domestic Science

The first-grade children were having a drill on one-half of six, and little Elsie was asked the question:

"If Mary had six eggs and put three of them in a cake, what part of her eggs did she use?"

Elsie, after a thoughtful silence, made answer:

"I guess she used the yellow part and saved the whites for frosting."

Granting His Wish

A little girl stood before a window, watching a fly that buzzed on the pane.

"Fly," she said, "does 'oo love heaven?"

And, impersonating the insect, she answered the question with a whispered "Ess."

"Fly, would 'oo like to go to heaven?"

A pause, and another whispered "Ess."

Then—bang! The poor fly was crushed on the pane, and the little girl said triumphantly:

"Now 'oo's there."

Couldn't Wait

Little Jasper Senter learned from the minister's sermon one Sunday that man was made of clay, so after returning from church he resolved to make him a man after his own fashion. The work proceeded in the clay bank back of the garden until his mother called Jasper to luncheon. He had completed all of the man save one leg.

That afternoon Jasper and his mother, while walking along the street, met a man with one leg, [illegible] with crutches. Jasper accosted him and grabbed his coat.

"See here!" he said. "I thought I told you to stay there in the yard [illegible] put that other leg on you."—Judge.

THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Now is the Time to Plan Your Road Work

Highway Improvements Should Be Arranged So Taypayers Will Get Most for Money Spent

By John N. Edy

THIS is the time to formulate plans for spring road work. I might say, perhaps, that the plans should have been worked out before this, so that final arrangements might now be in course of completion. It is undoubtedly poor business to neglect the feature of highway work that pertains to the planning of the improvement. There are entirely too many things to be considered to go at any piece of construction work without first knowing what is to be done and how it is to be accomplished. There are today many miles of good road that cost too much because the work was not properly laid out. There are many miles of road that cost enough to be good, but that are not giving satisfactory service because the exact nature of the improvement was not determined beforehand.

The lack of preparation is not only illustrated by excessive cost or poor service. We frequently see examples of large expenditures made in the wrong place; that is, on the wrong road, or the wrong end of the road. This last seems to be quite a favorite method of separating the community from its money—and that under the guise of "good road" building.

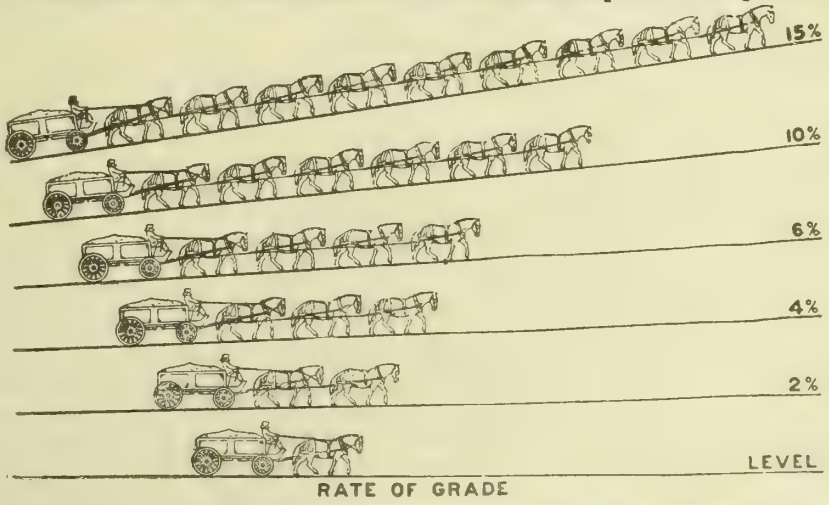
Well Thought-Out Plans Necessary

The importance of working out plans for highway betterment is more generally recognized when the improvement is of some magnitude. Financing the project is then a matter for careful consideration and requires reliable estimates of cost. Well thought-out plans are therefore a necessity. But there is no good reason why the same thorough investigation and detailed arrangement should not attend road improvements of less cost and magnitude. The mere fact that there is less money to spend should emphasize the need for rigid economy. This means that no money must be wasted on account of uncertain methods, or a lack of sufficient fore-knowledge of the difficulties likely to be encountered. In other words, the more you know about the improvement before undertaking actual construction the less that construction will cost you. It is therefore quite evident that any expenditure for plans and estimates is not an additional and useless cost. On the contrary, such expenditure represents a very wise economy.

Ordinary road building—the kind in which the average man is interested—is not an immense project. In fact, there are many counties wherein each year the work consists chiefly in building up and grading earth roads, together with the construction of a few miles of the less expensive road surfaces. Where such conditions exist there is every reason why each years' work should be planned in advance, because when only a small mileage may be permanently improved at one time it is essential that the work be done according to some prearranged scheme, so that the improvement may be properly located, which, as I have said, determines its value.

Careful planning is necessary also in order that there may be co-operation between the several foremen or supervisors. The only way we may ever expect decent, passable, earth roads is as the result of such co-operation. Too much money has already been wasted because of the aimless, haphazard efforts of a number of supervisors, each working according to his own ideas. What one has done another has undone, until road building is more often road destroying.

What Grades Cost Teamowners in Extra Horsepower Required



WHY WE WANT TO REDUCE GRADES ON OUR ROADS.
—From August "Better Roads."

What has been suggested can hardly be carried out efficiently unless the roads of the county are classified. This means simply that we must recognize the superior importance of certain routes as main thoroughfares or trunk lines. This idea has been followed in adopting systems of state highways, and it is equally applicable to the individual county. There is never sufficient money for improving all the roads; therefore, unless certain ones are designated for betterment and the preliminary plans followed as nearly as possible, there will result a very unsatisfactory condition. The systematic improvement of the principal highways as trunk lines is of more value than a greater mileage of good roads scattered promiscuously over the county; there is no doubt about that.

Obviously, the preparation of plans for the highway system and for the improvement of the several units of the system must devolve upon one skilled in such matters. In those states having highway commissions advantage should be taken of their offer to serve the counties. Sometimes I think that the taxpayers fail to appreciate the value of their highway department. There is, as you well know, every reason for its existence, the principal one being its ability to save you money, and this money is saved in the very beginning by the preparation of plans and designs, by the testing of materials, and occasionally by means of the skilled supervision afforded.

Uncle Sam Will Help

It is well to remember, too, that the United States office of public roads offers its expert services to highway officials throughout the country. Not the least important feature of this service is the elaborate series of tests on road materials, made without charge. In this connection I wish to call attention to the fact that when planning for road improvements one is too frequently inclined to underrate the value of local materials. I have in mind a community where the opinion prevails that the local deposits of stone are useless for highway work, and I know that this opinion is the result of an unsuccessful attempt to build a road according to wrong methods. The material has been proved useful for road purposes through the cooperation of the office of public roads, thereby illustrating the necessity for expert advice on such questions.

Office of Road Superintendent

However, in addition to the assistance noted each individual county should have the services of a road superintendent. This man may be the county surveyor, and he may not; his ability is of more importance than his present title. The road superintendent will be charged with the preparation of plans for the construction and maintenance of roads and bridges. He will work out a scheme of betterment, indicating which highways are to be improved first, specifying the nature of the improvement and the materials to be used therein. It will be his duty to effect an organization of the foremen and supervisors that will make for a business-like expenditure of the funds and eliminate waste. In short, your road superintendent will be the administrative head of your road building organization, planning not only for the large expenditures, but making every dollar count for something in the highway system; and in every case the superintendent will report to the county commissioners for final authority.

The idea is simply this: The spending of the public funds merits the same careful, judicious management as would be demanded in your private transactions. In fact, the biggest business in the county may be the road business.

What It Costs to Own and Operate a Farm

More Money is Invested in Average Farm and Equipment Than in Country Bank or Store

These Silos Cost $1,000 Each, and the Stock Another Thousand or Two

By J. O. Shroyer

SOME city people, and now and then persons in the country, get the idea that farming is a cheap affair. They think that all you need is a pair of old skates, a $10 walking plow and a few second-hand tools and you can begin growing corn and fattening steers by the carload. But take a trip around over southeast Nebraska, where they grow the top-notcher steers that you see down in the stock yards, and follow one of those lusty farmers as he goes about his morning chores or gives his live stock the evening meal and you will soon be convinced that it is an expensive business.

With corn at 75 cents a bushel, hay hard to find, stalks out of the question, pastures eaten and burned out all summer, and the cholera hanging around in the atmosphere until he shoots dollar doses of medicine in his pigs and has to fight the veterinary trust to even get that privilege without paying its members a few bones, one can see that we have some expenses.

Out-of-Date Implements Discarded

And farm equipment is no small part of the farm expenses nowadays. I recently looked over one of the best equipped farms in southeast Nebraska and I saw many discarded implements. They were not worn out, but had been supplanted by others that were more up to date and efficient. Hundreds of thousands of dollars of money is sunk in implements in our section, and there is no cessation. Future expenses will be as heavy or heavier along that line.

With agricultural intensity increasing, insect pests and plant diseases are forging ahead at a still more rapid pace. Anyone could plant and raise apples thirty years ago, but disease and insects have multiplied until we must spray, prune, cultivate, stimulate and pet our trees to keep them in good shape.

Three things are now necessary on the farm —muscle, scientific intelligence and money. There are many farms down here that have more money invested in equipment and live stock than it takes to run the average village bank. The horses on some farms would buy the stock of a country store. Talk about your business man! The average farmer has more variety, more real activity, needs to do more financiering, more technical engineering along a dozen lines to make more scientific investigation and application than any other one line of business men in this country.

Up Against Trusts

We have all sorts of high-priced and protected interests to meet. When we buy lumber to build we are up against a combine that is supported tooth and nail by tariff; when bread and meat got a little high they knocked off the tariff on the farmer's products, and we are expected to suffer it like little lambs; when we go down to buy nails we run up against protected infants of many years' growth—big, lusty infants.

We are told to grow our stuff more cheaply, but the manufacturer still sends his daughters to Europe to buy costly dukes and barons, and his wife to Paris to buy several millions of dollars worth of diamonds and "creations" each year. When some of those factory men, like Ford, attempt to pay the profits of the business back to the men who helped earn them, and thus make them able to buy our meat and bread at living prices, the rest of the world scowls at him and attempts to crush him.

Farmer Demands Fair Profit

The photographs on this page show that capital, brains and high-priced labor are required on the western farm. These things cost money, and the people that furnish them are entitled to as much profit as any other tradesmen get. We are no longer willing to work for board and clothes. The world of business has taught us to build homes with modern conveniences, ride in automobiles and travel with the push, and now the world will have to pay us enough for our products so that we can afford those things.

If the world wants perfect apples, without worms or specks, it must pay us for spraying and pruning. If the world wants good butter, it must pay for separators, daily hauling to market and the other little expenses that go with all that is good and best. If the world wants plenty of beef, it must pay the price that modern conditions demand. We no longer herd our cattle on free ranges, but they wander over $150-per-acre land and eat $14-per-ton alfalfa.

Works as Hard as City Man

I spent some days in a city and saw the big lawyer get around to his office at 9 a. m. The farmer had done just a quarter of a day's work when that big judge found his place on the bench. Now, the farmer has work just as difficult as the lawyer or the judge, and he

Something Like $2,000 Worth of Horses, to Say Nothing of Implements, Are Often Required in One Day on a Nebraska Farm

This Land is Worth $150 Per Acre, and the Buildings Were Built with High-Priced, Trust-Protected Lumber

ought to get as much pay. The big corporation president does not work harder, has fewer complications and requires a less varied knowledge of affairs, but he dresses his wife in "creations" and diamonds and sports a son-in-law duke. The farmer and his wife do not want those things, but they do want reasonable compensation for high-class work.

The man who helps the farmer run his farm, and perhaps understands farming just as well, needs an income equal to the manager of a department store. His duties are as complicated and as arduous. We have reached the time when farming is an art, a science, a business, and requires high-grade workmen and workmanship.

The Man Who Thought Farming Was Easy

Being a Fable Founded on Fact and Containing a Good Deal of Truth

By Joseph W. Fox

ONCE upon a time there was a man who had made a lot of money in the hotel business, but he was afflicted with that curious mental disorder so prevalent among men—and to a smaller extent among women — which consists of believing that the grass in another's pasture is taller, sweeter and more easily obtained than in your own.

This man remembered the transients who had stung him, the kickers, the waiters, with their grievances; the chambermaids, with their sundry complaints; he thought of the cook, always on the defense; the bell boy, always with a tailor-made excuse; the night clerk and elevator boy, always desiring a raise, and his wife, always wanting change, or theater tickets, or new furs, or a new gown, etc.

He Envies the Farmer's Easy Money

He thought of the farmer's merrily cackling hen, which laid 200 eggs a year that were sold to hotel keepers for 45 cents per dozen, making an income of over $7,000 per year from a paltry thousand hens. The best that he had ever been able to do in the hotel line shrank into insignificance alongside of what could be done with a small herd of ten 6,000-pound-per-year cows that gave an income of over $5,000 yearly when the milk was bottled and sold to restaurants at 10 cents per quart.

So this man, whose family consisted of his wife and a sport (son), gathered his family about him and showed them by figures how much could be cleared from ten acres of potatoes yielding 500 or 600 bushels to the acre when sacked and sold at 75 cents per bushel; how large an income could be had from ten acres of corn, hogged down, with dressed pork at 11 cents; how, with apple trees planted twenty feet on the square, bearing ten bushels yearly and apples selling at $1.25 a box, a thousand dollars per acre could be cleared up with no trouble at all.

"It's the Farm Life for Me"

He Convinces His Family

His wife was enthused over the plan, because it would take so much worry off her mind. They would buy a forty-acre farm, close in, and she could run into town in the auto to the matinee, and they could have bridge parties, etc., at the house, and riding in the pure, country air would do much to reduce obesity, and they could have their own strawberries and cream, and they could have their own turkey for Thanksgiving and Christmas.

"It's the farm life for me," said the son. "It will be a dandy place to raise some pointers, and I can have a good saddle horse or so and a motorcycle so I can come in to see the ball game in the afternoons, and I can bring Roy and Guy out on the farm to go quail and duck shooting, and I can raise some Belgian hares and game chickens, etc."

"I've had enough of business cares and worries," said the hotel man, "and I am going to live the simple life after this, where I have nothing to do but plant the things and then reap, where with about half as much headwork as I had to use in the hotel business I can keep the money rolling in so fast that it will keep one clerk busy taking it to the bank."

He Buys Himself a Farm

So they leased the hotel and after many days bought an unimproved piece of land, containing about forty-five acres, within twelve miles of the city, and proceeded to lay out a model farm along a scientific line.

The well driver came and after driving over 200 feet got a scanty supply of water, tasting strongly of iron, and at first with a decided flavor of oil, which caused the aforesaid man some feverish excitement, until he learned that new wells are always oily from the greasy pipes.

He built a cement chicken house, with a flushing appliance to wash out the floor every

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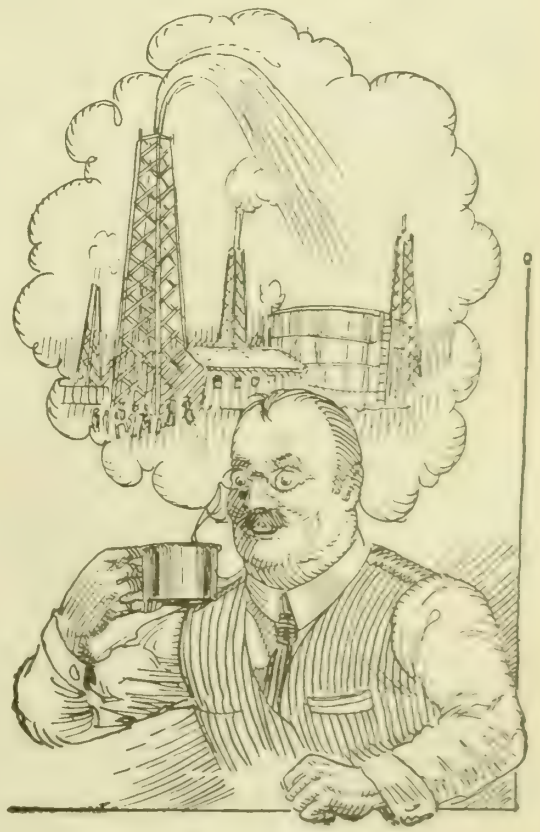

With a Decided Flavor of Oil

TWENTIETH CENTURY FARMER

Publish Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

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Subscription Rates

To all points in the United States and Mexico, per annum, in advance....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75

REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.

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Advertising Rates

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COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

You like your meals to be regular. So does your stock.

Measure all grain accurately as fed, both for the sake of economy and the good digestion of the stock.

Many farmers are saving themselves the labor of hauling out the manure by feeding the stock out on some wind-swept point, but they seem to forget that the exposure of the animals will cause them to eat considerably more high-priced feed to keep up bodily heat.

A small town journal mentions with pride the fact that a "co-operative" creamery has been started in the community in which it circulates. "Half the stock," the item reads, "has been subscribed by farmers and half by the business men of our town." This brings up again the old question, "When is a co-operative creamery not co-operative?"

Western ranchmen are strong buyers of young bulls of good quality. They are not much inclined to take grades. Pure-breds seem to be the requirement, and even then they are exacting as to quality and growth. The big, thrifty, smooth, young bull is in demand. The price is a secondary matter when the quality is found satisfactory. The improvement in the range herds will be a matter of surprise for the next decade. The good cows and heifer stock are being retained, and these, with the quality of sires now in use, will cause rapid strides in range cattle improvement.

Victory for Winter Wheat Growers

The decision of the supreme court in the so-called bleached flour case means a saving of millions of dollars to the wheat raisers of Nebraska and Kansas, the two leading winter wheat states. The highest court has decided that the electrical process for the bleaching of flour used by millers in the winter wheat states is not a violation of the pure food law.

The decision was made in a case brought by the government against the Lexington Mill and Elevator company to test whether or not the Nebraska millers were violating the pure food law by bleaching flour. The suit was started four years ago in the federal court at Kansas City. The company was found guilty and the case appealed. Had not the verdict of this court been set aside by the supreme court, it would have meant that Nebraska and Kansas wheat would have brought several cents a bushel less than it will, and the farmers of these states would have been the losers.

Some of the best chemists in the country who analyzed samples of bleached flour reported that no greater per cent of impurities was found in such samples than in the unbleached samples examined. Even the government chemists only complained that to 1,000,000 parts flour 1.8 parts of a poisonous character were added by bleaching.

Before the invention of the process that started the litigation flour was bleached by the long and tedious method of storing. The difference between this and the electrical method is that one is instantaneous and the other requires a long period of time for the same elements in the air to do their work.

The millers of the milling association of Nebraska furnished the money to fight this suit and pay the attorneys' fees. The farmers of Nebraska and Kansas should appreciate what the millers have done for their interests. Of course, it is not philanthropic, as their interests are mutual. The millers and the wheat growers are to be congratulated on winning this victory.

The northern milling interests had a double purpose in pushing the prosecution of this case. The decision would not only have eliminated the winter wheat state millers from competition in the world's markets, but the northern millers could have bought winter wheat at several cents less a bushel. While the soft spring wheats of the north produce a flour that is white, yet they lack the consistency necessary, so northern millers use about one part of winter wheat to four of spring wheat. This produces a white flour, with sufficient consistency. Used in this proportion, it is not necessary to bleach the winter wheat.

Care for the Farm Teams

One of the most important duties now on the farm is the care of the horses to be used in the work teams for next spring and summer. It never pays to let the farm teams get thin during the winter months from neglect and lack of feed. They need to strengthen up, rest up, get plenty of outdoor exercise, liberty to run out on a pasture field and keep hardened to exertion.

The horse that is stinted in feed because he is not in the harness every day is injured just to that extent when the time comes to put him into the plow or heavy spring work. Why is it that so many horses get sore shoulders when they are taken up in the spring? Why is it that their last year's collars do not fit them, and they must be wrapped and all sorts of temporary, ill-fitting devices arranged for the teams when they are being prepared for the spring work? Because the horse is thin, and no place shows it more than the neck and shoulders.

Commence now and get the teams fleshed up if they have fallen away by neglect. A strong team is the only satisfactory team to handle. It does not take long to put the horse in good fix if he is healthy and feeling good, and, above all other things, supply collars that fit perfectly, remembering that the whole labor practically is done by the shoulder. A poor shoulder disqualifies the horse, and the most of such disqualifications are due to carelessness in properly fitting the collar. Get a neat-fitting collar; watch the horse's shoulder to see that he is not pinched and that the pressure is even over the shoulder. The shoulder should be washed with water and carefully sponged off at least once a day, whether the collar fits or not, and preferably noon and night. This will often keep down the trouble of galled or sore, pinched shoulders.

To Call Your Attention

"Why, of course, I knew that all the time," said a hog raiser recently to a Twentieth Century Farmer man who was looking over his hogs with him. "I knew that hogs needed exercise, but I have been so busy I didn't notice that they weren't getting it." He had asked his visitor what he supposed was the matter with the animals, which were not doing very well, yet seemed to have nothing in particular the matter with them, and the visitor had asked if they were getting any exercise, as they could not be expected to be in good health without it.

The farmer and stock raiser sometimes criticise the farm papers for telling them things that any farmer or stockman know. One man says: "We all know how to test corn, even the children know how, yet every spring we have long articles telling us that we ought to test our seed corn and how to do it." Probably the farmer does know these things. He certainly ought to know them, but so often he gets so busy that he does not stop to think out the things he knows. Here is where the efficient farm paper comes in. If the farm paper published only the things that were new and strange to its readers, it would be a pretty slim publication. What the farm paper aims to do is to remind the farmer of things that should be done and to refresh his mind as to the details of the various seasonable operations. Timely articles on every-day topics are merely reminders. They are not meant as insinuations that the farmer is ignorant of the facts contained, but as gentle taps to call the attention to things already learned in the school of experience.

County Demonstrators

There has been and is much misunderstanding as to the aims and claims of the county demonstrator. Many farmers see in him a young man, fresh from a college and filled with theories, to the exclusion of practical knowledge. They think he is trying to force his advice and assistance upon them and trying to get them to test out his theories. Perhaps this misconception of the demonstrators' work is partly due to the attitude of certain demonstrators. In a report recently received at this office of the work of V. S. Culver, farm demonstrator in Merrick county, Nebraska, he sets forth his plans and ideals in a way that cannot be misunderstood. He says:

Your demonstrator wishes to impress upon you that he is here to be used. He cannot be successful unless you desire to use him. He is not an expert, but he is in a position to get for you expert advice along any agricultural line that you may wish. He is not a boss, nor does he force any of his ideas or conclusions upon anyone who does not wish them. He is an investigator who travels from farm to farm trying to find out the best agricultural practices of this county and of the community. He learns new things and gets new ideas from nearly every farm which he visits and carries those ideas and inspirations to other farms and farmers. In every community there are men who are especially successful in certain lines, many men whose closest neighbors even do not know what methods this man employs to bring about his success. Your farm demonstrator is desirous of learning of these successes and finding out what produces them and of getting the neighbors to try those same methods and see if they will not be equally successful along these lines. On this plan is farm demonstration work founded.

Never water an animal immediately after it has been fed, as its coolness will surely check the digestion. This is especially detrimental to pregnant stock, as the water at this season often is ice cold. Neither should one allow a horse to get at the water trough or tank while he is in a heated condition, nor give any grain till he has reached a normal condition again. Blanket him and let him stand in some sheltered place, where there is no draft, till he cools off before feeding.

The Farmer's Opportunity

There are periods of opportunity in the life of all men, and especially does this seem to manifest itself with the farmer and stockman who are in a position to buy and sell or sell and buy, as the case may be. There are periods of urgency in the markets of live stock when the farmer can sell some of his least desirable animals and buy some of higher and better breeding, and at comparatively small advance over his refuse stuff.

There is a good opportunity now to get pure-bred stock at practically what the grades are bringing in the market. In the case of fresh cows, there are cows of no special breed offered and sold at $100 to $125 per head, while some pure-bred cows are being offered at the same prices. There is an active trade for all the cattle offered, and the cheaper quality of pure-breds sell at about the same price as the good grades.

The farmer who is short of good, well-bred cows should arrange to buy up such as he needs before spring opens up. There are a lot of very good milch cows about the cities and towns that, with the high cost of feed, are proving rather expensive, and can be bought, if selected by a good cow judge, at prices that will justify their purchase for breeding herd material.

It is astonishing the number of pure-bred cows scattered around among the family milk supply cattle of the towns that are producing only veal calves.

Handling Sheep Pays

"It pays to handle sheep," is the announcement of a Missouri farmer following his experience with a carload of sheep bought with a view to testing out their money-making capacity. This bunch of sheep, all ewes, cost him $520 in February, 1913. His first revenue was the fleece, which netted him $150. The lamb crop came next and was sold in the fall for $715.95. Recently the ewes were sold for $525.57, making a total of $1,391.52. The original cost of the ewes deducted, leaves $871.52 for care and feed. This is presented as a very profitable investment.

The sheep business is capable of great opportunities for profit when properly handled, with good feed resources. The little farm flock usually shows better returns for the money invested than the large flock, since the growth of the sheep on the farm may be largely obtained from pasturing the waste of grain fields, the weeds and the general growth of vegetation that is not used by other grazing animals. The keeping of a few sheep on the farm is a good proposition to think about, but before putting it into practice be sure to have a sheep-tight pasture where the sheep may be confined when crops are growing and when they are not given the free range of the farm.

A Kansas farmer reports that a year ago he purchased a cow and calf for $41. After ten months the calf sold for $61, and had consumed only part of the milk of its mother. This illustrates what good management and a little properly applied feed may do to an otherwise very common prospect. Feed and good pasture will make money for any operator if judiciously handled.

Hay Feeding on the Range

One of the greatest lessons taught at the 1914 Denver Stock Show was the importance of hay-feeding the range cattle, and the holding of the grass fat or flesh growth that is acquired through the summer and autumn grazing seasons. The practice of starving a couple of hundred pounds of flesh off a steer to get his carcass through the winter cheaply does not appeal to people of good judgment when beef cattle and stockers are worth such extravagant prices per pound as have prevailed for several years.

The quick-growth steer on the range is desirable and should be appreciated just as keenly as on the farm, because the entire proposition is one of money making from beginning to finish. Then why pay such extravagant prices for wintering these animals as 200 pounds of beef or thereabouts? The cattle business is worth too much to be thus sacrificed. The cost of wintering should not be gauged upon a basis of pounds of flesh, but upon a cost of forage, which is much cheaper, and places the steer in a healthy, vigorous condition to start right off and take on flesh rapidly when put on pasture in the spring.

There is no better demonstration of what can be done with winter hay feeding than was to be seen at the Denver Live Stock Show. These annual exhibitions are rapidly influencing the quality of the range cattle, and they will continue to exert great influence for a bettering of winter care in the matter of more feed, more system and precaution in open range risks.

How is Your Seed Corn?

The most important work connected with the growing of corn is the testing of the germinating quality of the seed to be used in planting. Independent of all other influences, seed quality determines the success or failure of the crop. It matters not how well the soil is treated in plowing, fertilization, cultivation, etc., if the seed is not of good germinating quality good crop results cannot be expected.

The casual observation—"it looks good, is dry, well cured and sound to all appearances; guess it is all right"—is not enough. It is not safe to test a few ears and then judge the balance on this basis. It will require only a short time, and not much labor, to test fully every ear to be used. This is the only safe method, as there will be enough misses where the kernels are all of good quality. A full and as nearly a complete stand as possible should be the aim of every corn grower.

It costs just as much to produce a half crop as a full crop; consequently the testing of the seed is imperative, if farming and crop raising mean anything. It will not pay to put off the testing until near the planting season. Test now, while there is plenty of time to look after the work. There are so many successful devices for testing germination that no special one need be recommended.

Winter Wheat Condition

The latest reports from the winter wheat states are optimistic on prospects of a big crop for 1914. There has been no dry, freezing, windy weather to damage the plant, as quite frequently occurs in some sections of the winter wheat districts most every year. It is scarcely time, however, to rejoice over winter's freedom from freezing influences, as the March winds, with their variable temperatures, are yet to be reckoned with.

That prospects have never been more encouraging at the close of February for a good, healthy growth of the wheat plant is the report coming from all sections of the country. In some districts there were apprehensions of approaching danger at various times through the fall and winter, but the saving influence intervened and the bright outlook has prevailed. Moisture in abundance, not too much, yet enough and to spare, is the present situation. Injurious insects may develop in some localities as springtime approaches, but they can be reckoned with when their presence is actually known.

The precautionary measures for holding in check the Hessian fly and chinch bug must become a work for the wheat-growing districts under state supervision, planned and worked out through the direction of the state entomologist.

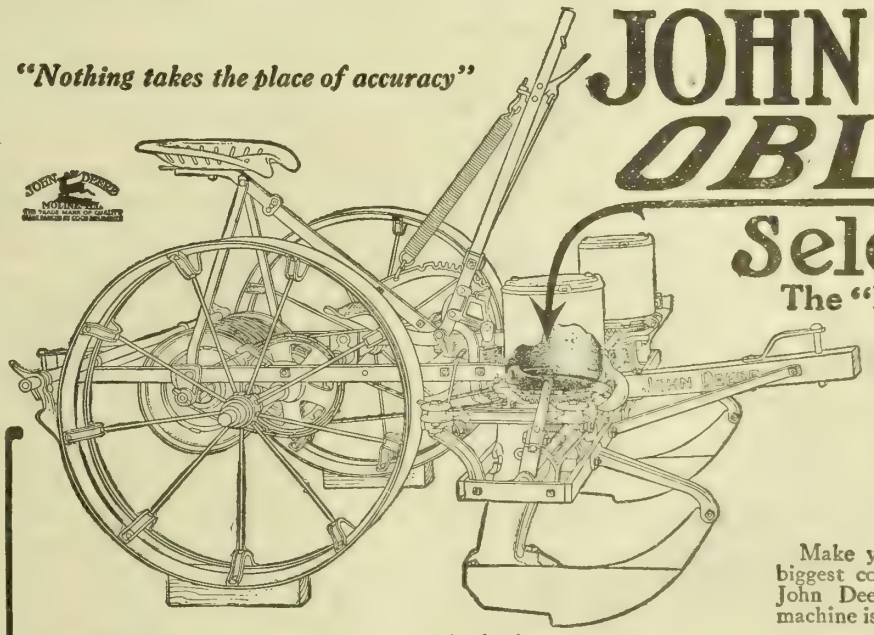
Warning has been issued to the horse and mule breeders of West Virginia that the dealers of the middle west are slipping down there and selling to local breeding organizations stallions and jacks at prices that are far above the real value of the animals. The author of this warning commends the practice of forming community breeding organizations, but deplores the fact that they pay such high prices for their animals. If, as is said, these southern farmers pay $3,000 for stallions worth not more than $1,800, they should certainly have guardians appointed.

The biological survey and the forest service have been co-operating in the extermination of ground squirrels on national forests in California. The annual loss of range feed and grain crops from ground squirrels is enormous.

"Nothing takes the place of accuracy"

JOHN DEERE OBLIQUE Selection

The "Natural" drop



This machine maintains high accuracy even with ordinary seed. With well selected seed its dropping accuracy is practically perfect.

Make your spring planting the start of your biggest corn crop by accurate dropping. The John Deere "Oblique Selection" will do it. The machine is a splendid investment.

MAKE your corn ground pay you with the largest possible yield, by making sure that the required number of kernels is in each hill.

The seed must be there. Every "miss" means just that much thinner stand. No amount of cultivation can make up for inaccurate planting. The loss of one ear from every hundred hills costs you the price of one bushel per acre.

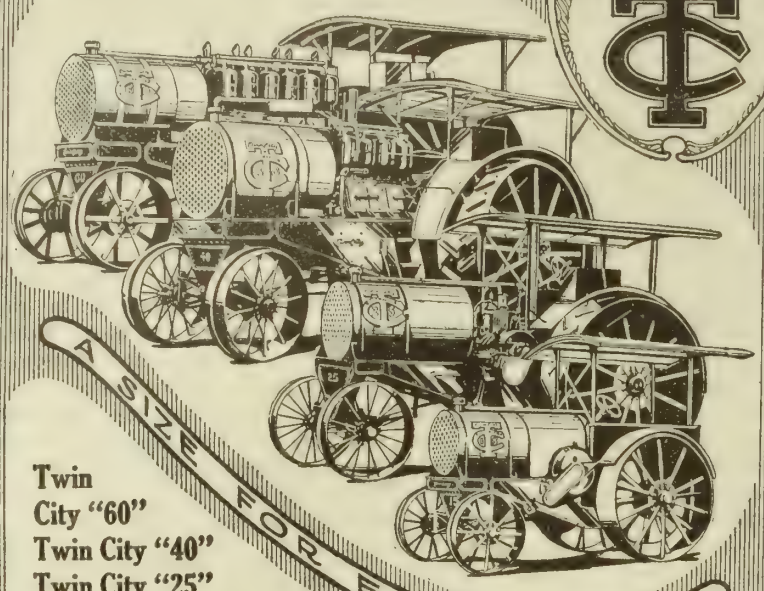
For years the John Deere Company has concentrated on accuracy in planting devices. The "Oblique Selection" solves the problem.

The results of its use are so profitable that many corn growers have discarded the best of previous machines. It is as far ahead of the old Edge Drop as it was ahead of the round hole plate.

Free Book Gives Valuable Corn Facts

Write us today for free booklet "More and Better Corn". It tells you why the average yield for the United States is only 25 bushels an acre, whereas better methods have produced 125, 175 and even 255 bushels per acre in places. It also describes and illustrates the John Deere "Oblique Selection" Corn Planter. The book to ask for is No. D 15.

John Deere, Moline, Illinois



A SIZE FOR EVERY FARM

Twin City "60"
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Every machine is built to use kerosene, gasoline or distillate.

The Twin City Oil Tractor

THE ONE TRACTOR THAT STANDS ON A PAR WITH THE HIGHEST GRADE AUTOMOBILE

LOW cost of upkeep—low repair bills—durability—economy of operation—ease of access to every part—adaptability for all work—surplus power—are features that mean most to you in a tractor investment.

Examine the Twin City steel plate frame—that superb heavy duty four-cylinder motor—that force feed oiling system—that compact enclosed cooling system—that automobile type of axle which makes for easy steering—just see these tractors. It won't take you long to find the reason for superiority.

Attend Our Twin City Tractor School

The last 30 day term opens March 16th. Learn to operate this tractor and then judge of its merits. Send in your application now.

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Horses, Mules & Cows Should be CLIPPED

They are healthier and give better service. When the heavy coat that holds the wet sweat and dirt is removed, they are more easily kept clean, look better, get more good from their feed and are better in every way. Horses and mules take on new life and energy when clipped and naturally work better. Clipping the flanks and udders of cows prevents the dropping of filth into the milk. The best and most generally used clipper is the Stewart Ball-Bearing Clipping Machine, the only machine that can be used on horses, mules and cows without change. It turns easier, clips faster and closer and stays sharp longer than any other. Gears are all file hard and cut from solid steel bar. They are enclosed, protected and run in oil; little friction, little wear. Has six feet of new style easy running flexible shaft and the celebrated Stewart single tension clipping head, highest grade.

Price $7.50 Get one from your dealer or send us $2.00 and we will ship C. O. D. for balance. Your money and transportation charges returned if you are not satisfied.

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Get More Money for your wool. You not only scar and disfigure your sheep but lose a dollar on every six you shear the old way. Figure how much more money you'll get if you use a Stewart Shearing Machine. It's the most perfect hand operated shearing machine ever devised. Has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of latest improved Stewart pattern. Price complete, including 4 combs and 4 cutters of the celebrated Stewart quality is $11.50 Get one from your dealer, or send $2.00 and we will ship C.O.D. for balance. Money back if not satisfied.

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—the only all steel, triple power stump puller made. More power than a locomotive. 60% lighter, 400% stronger than cast iron puller. 30 days' free trial. 3 year guarantee to replace, free, castings that break from any cause. Double safety ratchets. Free book shows photos and letters from owners. Special price will interest you. Write Now. Address

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Free Book

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Man Who Thought Farming Was Easy

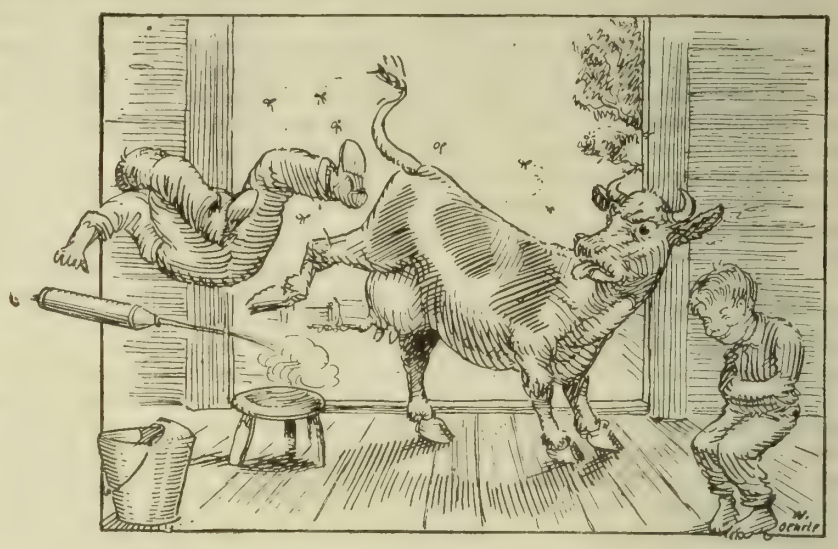
(CONTINUED FROM PAGE FIVE)

afternoon. It worked until winter, and then what chickens did not freeze to the floor had their combs and wattles frozen.

They planted shade trees promiscuously about their five-room, modern house, seemingly only with the idea of shutting off the view.

He Tests Some Theories

The gasoline engine which pumped water for the water system for the first two months was out of commission half of the time; the man was



Which Afforded the Small Boy Much Secret Joy

out of commission for a long time, owing to his efforts to crank it backward, and then again from cranking with an early spark; also the engine expert charged him more to show him a broken wire of an empty gasoline tank than it would have cost to haul the water from the city.

The small boy whom he employed to milk his five registered Jersey cows was very irregular, and on nights of foot ball games, base ball games, etc., the cows were milked at about 9 o'clock, and on Saturday mornings, when the boy did not have to go to school, at about 10 o'clock. On figuring up the cost of the scientific ration on which the cows were fed, and the milk receipts, the balance was always red.

As they had bought their farm rather late in the spring, all that they had been able to plant on the new, cloddy ground had been five acres of corn and a half acre of potatoes. The ground would not work down and at every cultivation rolled the clods over on some more corn, and the potatoes were the knottiest ever dreamed of in that locality.

He is Kicked by a Cow

In August the flies and mosquitoes began to multiply and became fierce, so that in order to breathe comfortably the air had to be strained through a veil, and the man, in showing the small boy who milked his cows how to spray the left hind leg of such animal with some flyshy, was greatly surprised, not to say shocked, to receive the foot pertaining to the aforesaid leg with great force slightly above the dome of his diaphram, on the pericardium — which afforded the small boy much secret joy.

At this time his wife had become dissatisfied (the son had been dissatisfied two weeks after the date of buying the property and had gone to the city, getting a job as usher in a theater), and the wife now procured a hired girl and proceeded to spend most of her time visiting friends in the city.

He Sticks to the Farm

The man being a very obstinate character and very persevering, to say nothing of a dogged determination not to be laughing stock for certain bald-headed, fat-necked friends, kept pegging away, putting up a silo, which his corn crop about half filled; doing fall plowing, a half acre per day at first being his limit, with a sulky plow and a bald-faced, balky, sorrel horse.

He Decides to Specialize

The ensuing winter he wisely decided to sell out his farm and his hotel and go to raising big, red apples, an orchard of which in full bearing being much better than a concentrating mill. Before he sold out, however, he made a vacation trip, finding a neglected twenty-acre orchard, about fifteen or eighteen miles south of Salt Lake City.

He sent for his wife and son, sold everything at his old home, bought twenty-five acres of sandy alfalfa ground adjoining his orchard, built a frame shack to live in until he could put up a brick house, and hired an agricultural college student on his Christmas holiday to show them how to prune the orchard, during which operation he demonstrated several times, to the huge satisfaction of onlookers, that man's proper sphere of action is on the ground and that the law of gravitation is absolutely inexorable.

After pruning the trees resembled hatracks to a surprising extent, but the student said that was the correct conformation, and it was afterward proved that he was right.

He Sprays His Orchard

The man then bought a standard gasoline spraying outfit and proceeded to put on a winter spray of lime sulphur, which ruined his complexion, gave him granulated eyelids, and every time a hose flew off the rod and stuck in his pocket or overall bib it was the cause of acute suffering for days and of unprintable language at the moment. He also

tried to stand on the top of a slippery tank, with a high-pressure spray, and spray downward into the calyx cups of the blossoms and drive the team attached to the spraying outfit at the same time, but he found that he was too old to learn anything resembling tight-rope walking, and, like Napoleon, he made his generals out of mud, by hiring two striplings, whom he followed and guided at every turn, listening to their advice occasionally and paying them $30 per month for eight hours a day.

Under his supervision, the first spraying was accomplished, not quite to his satisfaction, but fairly well; bushel as fast as they were picked, and, figuring 40 cents expense per bushel, he had made $6,000 from twenty acres, or within $2,000 of what his orchard had cost him. The twenty-five acres of alfalfa paid all expenses of the farm and fed his two teams, cows and hogs through the winter.

His son became highly interested in orcharding when he saw what his father had done, and especially when he thought of the money his father had made, and expressed a desire to go to an agricultural college. His father agreed to pay the expenses, and he went, and in due course of

His Son Became Interested in Orcharding

the second and third spraying was nothing compared to the first; the thinning was a tedious job, in which his own son became slightly interested; banding and dividing the worms in the bands was a job watched with interest by everybody, including the neighbors.

The apple crop was a record-breaker; the worm crop was rather light, owing to a small crop of apples the previous season; the apples were well colored, owing to the pruning, and large from thinning, pruning and cultivation combined; and, the main thing, the price he received for his apples was in proportion.

He Feeds Some Hogs

The wormy apples and those pulled off in thinning were eaten by a drove of hogs bought about thinning time. He fed them a little ground grain and lots of alfalfa, green and cured; they ate every wormy apple that fell to the ground, killing the worm and turning the apple, otherwise a waste, to some account; they ate up or dug up every weed, Russian thistle included, except cockleburrs and sunflowers; they also rooted out all the mice that were in the habit of girdling some of the trees in the winter and ate them, and, above all, they solved the fertility problem in his orchard —and he has had a drove of hogs in his orchard ever since his first year's experiment, when his forty head of hogs cleared him at killing $230 net profit.

He Succeeds with His Orchard

The apple crop was 12,000 bushels, which he sold for 90 cents per time graduated and became, not a tiller of the soil, but a teacher of agriculture in a country high school, which is the case with 90 per cent of agricultural college students.

The man we spoke of in the beginning and about whom this story is written did not live happily ever afterward, but had his troubles like the rest of us, and ran his farm successfully and made money at it, which is slightly different from some of us.

Codling-Moth

What can we do at this season of the year to control the codling-moth, that insect whose damage to the apple and pear crop we must figure by the hundred thousand dollars?

All fruit growers that have watched this insect at all know that in the fall the full grown worm, or larvae, comes from the wormy apple, seeks a protected place under the rough bark or in the crotches of the trees, spins a cocoon about itself in which it remains inactive during the entire winter. With the coming of the warm days of spring a change begins to take place and shortly after the blossoms have fallen and the little apples begin to form, the adult moth emerges from the cocoon to begin laying its eggs about the little fruit.

Each female lays on the average from forty to fifty eggs, so if only a few of these chrysalis or hybernating larvae are destroyed the number of eggs to be deposited will be greatly reduced. A large per cent of the wintering larvae can be destroyed by scraping all rough bark from the trees especially in and about the crotches of the trees. If the scraping is done during the winter, the larvae not killed in the process will be destroyed by the exposure and the birds.

The sooner fruit growers come to realize that this mothod of fighting this pest is almost as important as thorough spraying, the sooner will they begin to grow a larger per cent of worm-free fruit.

GEORGE M. LIST,
Colorado Agricultural College.

"Beats Coffee"

Many a man and woman with coffee troubles has found that **Postum** is a sure and pleasant way back to health.

One coffee drinker writes:

"I want to tell my experience with Postum. I was a great coffee drinker, and when I was so bad with stomach and nerve trouble I was advised to stop coffee and try Postum. I did, and grew to like it so well that it was no effort to pass coffee by.

"I often make myself a cup of Postum before going to bed and it seems to work like magic."

(Name given upon request.)

POSTUM

is a pure food drink made of wheat and a small proportion of molasses—roasted and skilfully blended. It is absolutely free from the coffee drugs, caffeine and tannin—common causes of heart, stomach, liver, kidney and nerve disturbance.

Some people marvel at the benefits from leaving off coffee and using Postum, but there is nothing marvelous about it—only common sense.

Postum now comes in two forms:

Regular Postum—must be boiled. 15c and 25c pkgs.

Instant Postum—a soluble powder, requires no boiling. A spoonful stirred in a cup of hot water makes a delicious beverage instantly. 30c and 50c tins.

The cost per cup of both kinds is about the same.

"There's a Reason" for POSTUM

—sold by Grocers everywhere.

Postum Cereal Co., Ltd., Battle Creek, Mich.

How the Lawter Tractor Saves Your Land

Field Plowed with a Lawter
Note the Land Saved in Fence Corners.

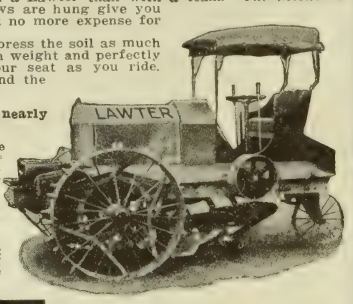
Field Plowed with any other Tractor
You lose one eighth of an acre in every corner

You can plow into the very corner of your fields with the new Lawter "One Man" tractor. You can plow a garden as economically as a large field. The new double transmission of the "Lawter" gives it this great advantage over any other tractor or a team.

It is the only tractor with this great economy.

You can plow deeper with a Lawter than with a team. The scientific way in which the Lawter plows are hung give you this deeper, better plowing—at no more expense for fuel.

Even your horses will compress the soil as much as the Lawter, it is moderate in weight and perfectly balanced. You steer from your seat as you ride. One wheel takes the furrow and the bed mechanically levels itself.



It plows 80 yards per minute, nearly 3 miles per hour.

This record holds good whether the field is level or rolling and there is no vibration. The Lawter is so well made that you can use it in the roughest kind of work year in and year out.

In only 200 working days your saving over horse power will pay for a Lawter.

This is exclusive of the big saving the Lawter makes in Belt work of every description. In belt work the Lawter has no rival.

Mail This Coupon Right NOW!

The Lawter Tractor Co.,
3714 Twentieth St., St. Mary's O.
Send me full particulars of the Lawter Tractor.

Name.....
Address.....
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Our Unlimited Guarantee

You can't spend a penny for the Lawter tractor unless it is exactly what you need in your work. Its advantages are so many that you can't fairly estimate them from this small ad. Send at once for complete details of our proposition.

Will show you the biggest money saving proposition you ever received. The coupon brings everything. Mail it to us today.

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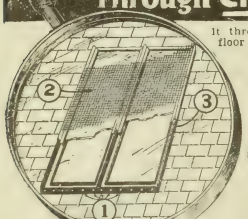
Let the Sunlight Into Your Hog House Through "CHIEF" Sunshine Windows



It throws sunlight on the floor, where it is needed. Keeps floor dry summer and winter.

The "Chief" window is the common sense way of building a hog house. Glass specially protected from hail.

MEANS HEALTHY HOGS AND FAT POCKET BOOKS

Keeps your hogs warm, comfortable and healthy. YOU CAN'T RAISE WINTER PIGS WITHOUT SUNSHINE.

Galvanized iron frame. Two 10x28 sashes with metal flashing. Copper sims hold glass. No putty. Trough in bottom with holes permits water to run out. We guarantee these windows against leaking.

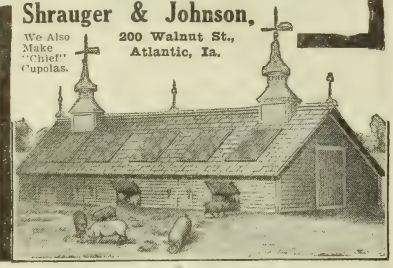
Glass seldom gets broken out but if one does, it can be replaced in a moment's time.

Write for Literature

Get our illustrated circular, which tells all about this modern, scientific system of hog house lighting.

Shrauger & Johnson,
200 Walnut St.,
Atlantic, Ia.

We Also Make "Chief" Cupolas.



1 Perforated trough to permit water to run off. Makes a leak-proof window.

2 Heavy galvanized screen over glass. Protects from hail or from livestock if side windows are used.

3 No putty needed. Copper clips hold glass rigidly. Glass easily replaced in case of breakage.

STOP THE LOSS

Coe's Humane Forcep

If you have not one of my Forceps, ask your dealer for them. If they haven't them in stock, send $1 to me and I will send you one by return mail. You try it, and if not satisfied return it to me and I will gladly refund your money. It's the only self adjusting Forcep on the market it neither injures the sow nor the pig. CHAS A. COE, 51 Chestnut Street, Atlantic, Iowa.

AMERICAN DARK CHASER

400 candle power in a hand lantern is something never heard of before. Costs less than ½ cent per hour. Will illuminate the barn yard as bright as day. Perfectly safe to take into the barn or haymow. Unbreakable chimney. Will not blow out. Fully guaranteed. Write for circulars and prices. Agents wanted.

AMERICAN GAS MACHINE CO.,
410 Clark St., Albert Lea, Minn.

95 cents

5 YEAR GUARANTEE

Railroad Watch

To advertise our business, make new friends and introduce our catalogue of Watch bargains we will send this elegant Railroad watch by mail post paid for ONLY 95 CENTS. Gentlemen's size, full nickel silver plated case, locomotive on dial, lever escapement, stem wind and stem set, a perfect timekeeper and fully guaranteed for 5 years. Send this advertisement to us with 95 CENTS and watch will be sent by return mail post paid. Satisfaction guaranteed or money refunded. Send 95c today. Address

R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO.

Now is the Time to Get Busy

Corn-Belt Farmer Writes Again

DO YOU want to increase your income, Mr. Farmer? Avail yourself of every opportunity, then, for the next sixty days. Now is the time of year for getting the summer wood all cut and ricked, testing the seed corn, cleaning and grading the seed oats, taking a careful inventory of the work harness necessary for spring use, and last of all, but not the least, overhauling the machinery that will be put into use during the first spring days. If a new plow, harrow, seeder or pulverizer is needed, now is the time to decide upon it. Don't wait until the day the machine is needed and then lose that day going to town to get it.

The farm work should be so arranged that there will be smoothness in all operations, rather than a week of "hustle and bustle," followed by a week or ten days of waiting around until the seed arrives or the disk harrow is repaired or possibly until help can be obtained for sawing the wood. Every farmer should be as systematic in his work as is the city business man. Farming is no less a business than is the work done by our city friends and should be treated as such if the best results are to be obtained.

The merchants of our cities plan at the beginning of the season for all the work to be done that season, but we have many farmers today who do their work in a slip-shod, don't-care sort of way and then wonder why their oats yielded twenty bushels per acre, while Neighbor Smith's made forty-three bushels; why they reared twenty pigs out of six litters producing forty-eight, while Jones reared sixty-one out of eight litters producing sixty-three. The solution will be found in the fact that the neighbors didn't wait until the last minute to do everything.

Make plans now for caring for your March and April pigs. Make plans now for your spring crops. Take a piece of paper and make a diagram of your fields and then mark each plot just the amount of each crop to be grown. Have the necessary amount of seed ready; have it cleaned and graded; if it be oats, have it treated for smut. By following such a plan more than one farmer has bettered his farming operations by transfering the planting of certain crops to another part of his farm to facilitate their harvesting and at the same time working out a better crop rotation and thus materially increasing the yield. All successful business men, whether they live in the country or city, must exert every possible means to bring their business up to the highest point of efficiency. Be systematic in your work and watch the profits grow. CORN BELT FARMER.

County Agents at Work

Alexander D. Cobb, Wayne county, Indiana, reports that farmers and laborers are making use of the farm labor bureau. He keeps a card file of all applications, references, experience, and where the applicants find work.

***

Excellent results are being realized in Montgomery county, Kansas, in the efforts of E. J. Macy to interest his farmers in sweet clover. The farm bureau is securing seed direct from the growers in Wyoming, and is saving $1.20 per bushel.

***

Otto H. Liebers of Gage county, Nebraska, recently took a party of 350 farmers to the state experiment farm at Lincoln. One farmer, who took two of his tenants along, said the trip was worth $100 to him.

***

In Leavenworth county, Kansas, P. H. Ross is interesting farmers in farm bookkeeping and is devoting some time to farm surveys. Notwithstanding the very severe drouth of last year, he is finding some farmers with good labor incomes. This is particularly true where the diversity was large and where good methods have induced good yields even in a very bad year.

McCulloch's Pure Seeds

FROM MY FARM TO YOURS.

CORN—Prize winning strains Reid's Yellow Dent, selected and tested, shipped in the ear.
OATS—Regenerated Swedish Select, a large plump kernel of white variety weighing 40 lbs. to the bushel, a big yielder and a hardy grower that will stand where others go down.
Danberry, an early oat of great promise and one of the best oats for seeding clover.
WHEAT—Early Java Spring Wheat, the leading spring wheat for the corn belt growers.
BARLEY—No. 21; this is a variety that originated in Canada and is one of the greatest malting and feed barleys grown, a heavy yielder.
TIMOTHY and CLOVER—Seed of prize winning strains, carefully cleaned and tested.
These seeds are all grown on my farm, are cleaned, graded and tested under my personal supervision. I stand back of every seed sale. If you are not satisfied with it, send it back at my expense.

FRED McCULLOCH, Hartwick, Iowa.

GREATER GAS ENGINE POWER

If you want the greatest power, endurance and reliability you can't afford not to investigate the ROYAL. Our slogan is quality. We put no baits in our advertising and make no "free" offers. You won't have after troubles with the ROYAL Gasoline Engine. It's built for year in and out steady service by one of the largest and oldest manufacturing plants in the West. If you are after reliability write for our FREE ROYAL ENGINE CATALOGUE. 1 to 16 H.P. Address enquiries to

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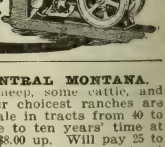

IN SOUTH-CENTRAL MONTANA.

250,000 head of sheep, some cattle, and 200,000 acres of our choicest ranches are now offered for sale in tracts from 40 to 40,000 acres on five to ten years' time at 6% interest, price $8.00 up. Will pay 25 to 50% yearly on investment. We must cut down our stock operations. Homesteaders took 50% of our out-side ranges in the past four years. Ours is choice land, chosen when Montana was a baby. You can buy this land as you desire, fully equipped, with stock or without. Will subdivide some of it and sell parts best for hay and grain, irrigated or unirrigated. Can locate you near Helena, Bozeman, Lewiston, Great Falls, Livingston, Billings or Dillon, on the N. P., G. N., U. P. or Milwaukee railroads. Good schools, churches and markets. Agents wanted. For particulars write Department 6.

MONTANA RANCHES COMPANY,
Helena, Montana.

TANGO!

Complete instructions of the new dances, including Tango, Innovation, Walk, One-step and others, put up in neat booklet form, one dollar by mail postpaid!

TANGO PUB. CO.,
P. O. Box 858. Omaha, Neb.

Suggestions to Tree Planters

II---How to Trim and Head a Tree

APPARENTLY, the well meaning planter dislikes to trim his trees when he receives them. He seems to feel that he is mutilating a thing of life, but over and over again we have found in our experience that a judicious shortening of the top, to strike a balance between the top growth and root system, was immensely helpful—first, in its lessening the loss of sap by evaporation for the tree replanted; second, by enabling it to stand the shock of transplanting; third, more quickly to establish proper conditions of growth, and finally, in the course of the season to make a far stronger growth than the trees not shortened.

It is quite important that each kind of trees be trimmed in accord with its peculiar qualities. With apple trees it is best to shorten back something like three-quarters of the growth of the side branches, leaving a dominant center, so that the next set of branches will be twelve to eighteen inches above the lower set of branches. Shortening back should rarely be construed to mean to remove any of the branches; rather, shorten the branches and leave all that were on the tree when received from the nurseryman. As a rule the nurseryman has left on the tree only a suitable number of branches to form a symmetrical head.

Cherry trees have fewer buds on the branches than the apple tree, hence the side branches of the cherry should be trimmed with reference to the number of strong, vigorous buds to each branch remaining. Sometimes buds are injured in transportation or by packing into cases. Three or four buds should be left on each branch of the cherry tree, which will leave the branch from one-half to a little more than one-half its original length. Count the buds to determine to what point to shorten the branch.

The peach tree belongs to still a different type of trees and should be handled in a different manner. Most growers now prefer to head their trees low. The peach tree almost invariably reaches the planter in the condition of one year from the bud, or in the case of a June bud only a few months from the bud. Usually there are a goodly number of buds up and down the trunk of the peach trees, and trees that are five-six feet or four-five feet in height may usually be cut back to perhaps thirty inches, and then the buds at the base of each branch usually start and make a vigorous growth in the course of the season.

Plum trees are trimmed very much in accord with the suggestions given for apple trees.

Small fruits, like currants and gooseberries, should be severely shortened in and depend for the season's growth on the lower buds. This is peculiarly true in handling ornamentals, roses and shrubs. They should be cut back in proportion to the plant and root system. Roses, in the condition ordinarily received, should be cut back to within six inches of the ground and then depend on starting shoots from near the surface of the ground. Frequently in trying to supply all the branches to the tip with sap the root system, which has been weakened by the shock of digging, is unable to supply a sufficient amount of sap to any of the branches. Under such conditions the plant is stunted and handicapped from the outset. In contrast with this, trees properly trimmed at planting time frequently make a growth of twenty-four to forty inches the same season set. Over and over again in our orchard contracts we have had trees put on a growth of thirty to fifty inches the first season, this, of course, when the trees were properly planted and thoroughly cultivated, giving them every opportunity to do their best. These suggestions are supremely important also in the planting of shade trees.

To lessen the evaporation from the trunk of the tree and damage from the heat of the sun and also the effect of the aridity of the wind, we have for some years adopted the method of protecting the trunks of trees with wooden veneers, cornstalks, cloth, heavy paper (never black paper) or anything that would lessen the effect of the sun on the trunk. It should be remembered that trees are grown closely in the nursery row, that in the nursery they are protected by each other. When transplanted into the open ground the bark oftimes suffers severely, the same as your arm would sunburn if you should roll up your sleeves in mid-summer.

The planter should observe that not all buds of a branch are on the outside, nor are they all on the inside, near the center, but are distributed around the whole circumference of the twig. This is of importance to the planter. Why? Because it enables him at will to control the future shape of the tree. If the tree is so formed as to carry an open head, the sunlight is admitted to the center of the tree, the fruit colors better and it is more attractive; therefore in shortening the branches it is wise to trim trees that normally have an erect habit in such manner that the last bud is an outside bud. Usually the flow of sap forces the most vigorous growth to the last bud left on the branch. Now, if the last bud is an outer bud, the effect is to give the head of the tree a spreading form. In case the form of the tree is such that the branches are unevenly distributed about the trunk, should the last bud be a sude bud, then the tendency of the growth is to close the opening and give more symmetrical form. In trimming trees that have a very sprawling, spreading form, then the reverse would be the proper method, leaving an inner bud, which would assist in correcting a sprawling form of growth. It is wise in pruning a tree to train it to a growth that shall protect the trunk from sun scald, that is, that the trunk of the tree may be properly protected from south and southeasterly winds.

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NOW READY! The **New Spring Bulletin** is just out. It contains the newest merchandise and the latest Spring styles. No one can afford to be without this "book of bargains." Send today coupon (below) or postal card and it will be mailed you—**FREE**

4ND197 $1.97

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Stylish $1.00 Wash Dress, Only

ND1—A rare money-saving opportunity, for this charming wash dress is priced at half regular cost. Made of extra good quality, serviceable LINENE in cadet blue, tan or lavender. Bodice cut with becoming fullness, and attractively trimmed with white pique; collar and revers embroidered with matched floss. Buttons in front. Ladies' sizes 34 to 44 bust. (Misses' sizes following.) Postpaid in the U. S. **$1.00**

ND1M—Same as ND1, in Misses' sizes 14 to 18 years. Postpaid $1.00

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4ND197—One of the best dress bargains of the season. An extremely smart, new style effectively made of good quality washable WHIPCORD in two-tone gray, dark blue, tan or wine. White ratine is daintily employed in the vest, collar and cuffs, and matched silk embroidery provides very tasteful trimming. Closes in front. Ladies' sizes 34 to 44 bust. (Misses' sizes following.) This $3 dress, postpaid in the U. S. **$1.97**

4ND197M—Same as 4ND197 in Misses' sizes 14 to 18 years, postpaid, $1.97.

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Our Young People on the Farm

A Department Devoted to the Boys and Girls

"How do you do? We are Rose and Harry, and we hope you are going to like us."

What Rose and Harry Found

Rose and Harry lived on a big farm, where there were hundreds of apple and cherry trees, rows and rows of vines on which the purple grapes ripened in the summer sun, and long stretches of corn and alfalfa, over which the birds and bees fluttered and hummed all the long summer days. There were horses and hogs and cattle, and the children had two big collie dogs and a cat that lived at the house, besides a lot of other cats that lived in the barns and caught the mice that liked to eat the corn and the rats that were always after the baby chicks.

But, best of all, the children had an Uncle Jack. Uncle Jack did not live on their farm. He lived on grandpa's farm, several miles away, and in the winter he stayed in town and went to the agricultural college, where he learned a number of interesting things that he liked to tell the children about when he came to visit them on holidays.

Rose and Harry asked so many questions that most people said to them: "Gracious, children! How do I know? Don't ask so many questions." But Uncle Jack never said that. Father said Uncle Jack liked to be asked questions because it gave him a chance to show off his newly acquired knoweldge, and that if he did not know the answer he made it up. But the children knew that when Uncle Jack did not know the answer to their questions he would tell them so and then find out the answer and tell them about it the next time he came to see them.

One day when Uncle Jack was there Harry came running into the house with something in his hand, Rose and the two dogs following close behind. "What is this, Uncle Jack?" he asked breathlessly. "I found it down in the orchard and it looks just like a great, big grasshopper."

"Only it is as light as tissue paper," added Rose.

"Why, it looks to me like a cicada shell," said Uncle Jack, examining it.

"I know," said Harry; "a cicada is one of those locust things that makes such a noise in the summer time."

"Tell us all about them," said Rose, settling herself on the floor, with the dogs on either side of her, to listen.

"I can't," said Uncle Jack. "There are so many things about them that I don't know; but I'll look them up and tell you all about them next time I come, if you won't forget to ask me."

"I'll remember," said Rose, "because I want to know where he went without his skin. I wish I could give it back to him."

"You don't need to worry," said father, who was listening; "he has another one. I know that much about him.
him."

Note—In two weeks Uncle Jack came back and told them all the wonderful things he had found out about the cicada. On March 21 you may know just what he told the children. HOME EDITOR.

(Prize Story)

Rescue of a Rabbit

By John Weibe, Aged 13, Bingham Lake, Minn.

A few years ago, when the tornado had not yet come, there were so many trees around our house that it was a good place for rabbits to play. We were small boys, but we had some neighbors where there were two larger boys that would come and trap the rabbits with wooden, hand-made traps. When we went to school we would sometimes see the poor rabbits shivering with fear. One Saturday, when we didn't need to go to school, I went into the woods and came to one of the wooden boxes, in which a dear little rabbit was shivering with fear. I stood there feeling bad about the creature. I looked around to see if anybody could see me, but found I was alone, so I opened the box, and you don't know how happy he was. He scampered off into the woods as fast as he could.

But after some days the neighbors knew what I had done. They were angry, but I think it is not fair to be angry at such a little thing. You see the woods were ours and so I thought the rabbit was mine.

(Honorable Mention)

My First Long Trip

By Gertrude Taylor, Aged 11, Cascade, Mont.

One fine September morning father and I saddled up our ponies and started to go to a place four miles from our place to look for a cow which belonged to father. We trotted until we came to Mount Cecelia, then we walked, leading our horses. We went through thick growths of pine and fir. Many smaller bushes grew there, too. Soon we crossed a divide, coming to a large basin. From every side projected moss-grown rocks. One cliff had broken in two so that the rocks had slid down and it looked like a

high, perpendicular wall. On the sides of the ravine grew little forests of pine and fir, intermingled with berry bushes.

We rode on until we came to a neat little log cabin. Turning to the left, there we rode up the largest ravine. There we saw two blue grouse, and on our trip we saw many other kinds of birds. We could not find the cow, so we rode back by another way. We saw so many beautiful things I couldn't mention them all if I tried. This was my first long ride and I was very tired for a number of days afterward.

A Queer Cat

By Marion Noyes, Valley, Neb.

Once I had an old cat and four little kittens. I called the old cat Nigger. She had her kittens in the haymow. One night something got after her and frightened her so she brought her kittens one by one down to the cob house, which has some pigeon houses in it, and she took her kittens up into one of the pigeon houses.

In the morning when I got up Pat (our hired man) said he had found something. I went out to see what it was. He took me out to the cob house and there was Nigger with all of her babies but one in the pigeon house. We never knew what happened to that one. Two or three days afterward I went away visiting and when I came home Helen told me that the prettiest kitten of all had fallen out and broken its neck.

Additional Stories

Marie Stoulp, West Po' t, Neb.; Emma Diris, Schuyler, Neb.; Marie Flory, Carleton, Neb.; Florence Hanson, Weeping Water, Neb.; Oscar A. Legler, Schuyler, Neb.; Edith Henkins, Scott's Bluff, Neb.; Beatrice Sartorius, Wynot, Neb.; Edna Oschander, Homer, Neb.; Willis Kingston, Doniphan, Neb.; Ella Formanek, Chelsea, Ia.; Rosa Kalina, Chelsea, Ia.; Agnete Carlson, Harlan, Ia.; Ethel Smith, Underwood, Ia.; Mary Ewing, Greenfield, Ia.; Mamie Peterson, Neola, Ia.; Alice Wingert, Bronson, Ia.; Grace Downey, Lacey, Ia.; Clarinda Faith Brower, Augusta, Kan.; Clara M. Thompson, Elgin, Kan.; Annie Payne, Harriett, Tex.; Robert Warford, Pattonsburg, Mo.; Viola Oshmicher, Cleveland, Wis.; Flora Trimble, Tishomingo, Okl.; Nellie Oas, Woonsocket, S. D.

Awards in Picture Contest No. 10

Our Twentieth Century Farmer family is certainly poetical. There were over 200 answers sent in this time and they were especially good ones, too. The prizes go to very little children, as there were some excellent verses sent in by our youngest members. There are ever so many of you who say, "Please print my verse even if it does not get a prize," and we would like to print them all, but there is not room for them—over 200. They would more than fill our page, so we can only let you read a few of the best ones. I hope you will like the picture of the children with their sleds that comes next and write about them. By the time that contest is over the snow will be about gone, even in the very northern corners of the country, and your thoughts will be turning toward spring affairs.

(First Prize)

By Alice Davis, Aged 8, Dalton, Neb.

This little boy is full of joy
To think he has two goats.
What would he say if some fine day
They'd be made into coats?

(Second Prize)

By Foster Saunders, Aged 7, Comanche, Oklahoma.

This little kiddie drove the kids,
With strings quite thin and small;
He drove them to the turnip patch
And fed them tops and all.

By Jewell Read, Aged 6, Higginsville, Mo.

This little boy must feed these goats
Quite well with hay and corn and oats.
The reason that I give for that
Is that the goats both look so fat.

By Alvin McGinnis, Aged 10, Coin, Ia.

Billy and his goats so gay
Play and frolic day by day;
In summertime they help make hay;
For winter sports they have a sleigh.

By Mabel Coker, Aged 12, Afton, Ia.

A team of goats named Jack and Jill,
A little boy whose name is Phil.
That's all I know; I'll have to quit.
P. S.—I'll get the prize book—nit!

By James Ferguson, Aged 14, San Point, Idaho.

This Johnny was a little lad,
Who lived near Omaha;
"I'm going to hitch them up," he said,
"And teach them gee and haw."

By Clive Rickabaugh, Aged 7, Sheridan, Missouri.

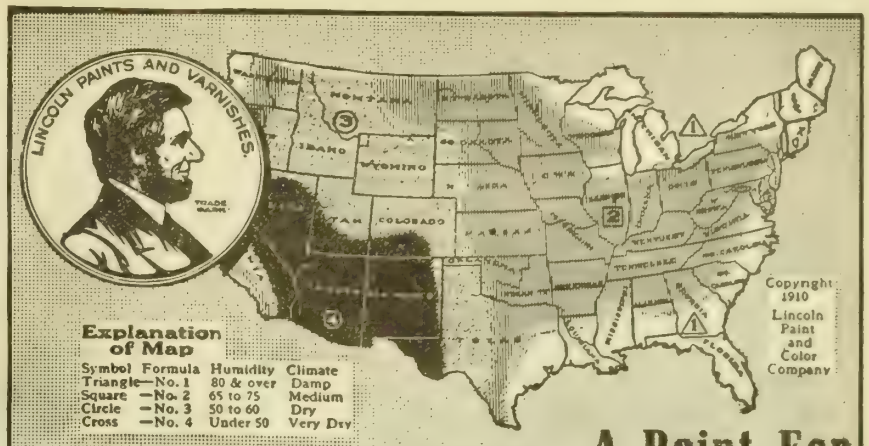
I went and caught my billy-goats
To hitch them up today,
And every time we left the fence
They tried to run away.

By Madge Roberts, Aged 12, Rose Hill, Ia.

Bob and Bill took me a ride;
Now they are standing side by side.
They'll not run away, I hope,
While I hold them by the rope.

By Ada Bruning, Aged 11, Bruning, Neb.

This is Harry and his goats;
They are waiting for their oats.
He has told them they must wait
While he goes to close the gate.



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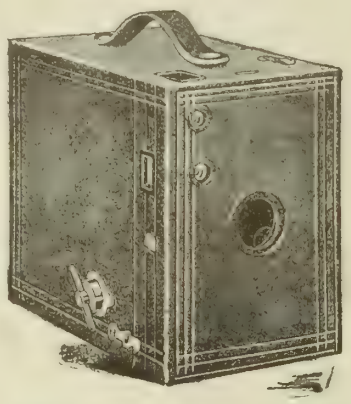

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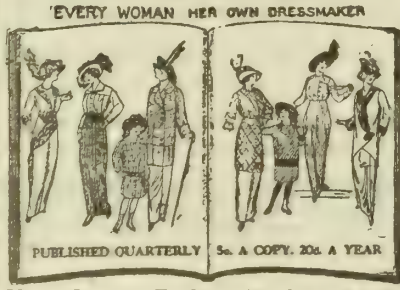

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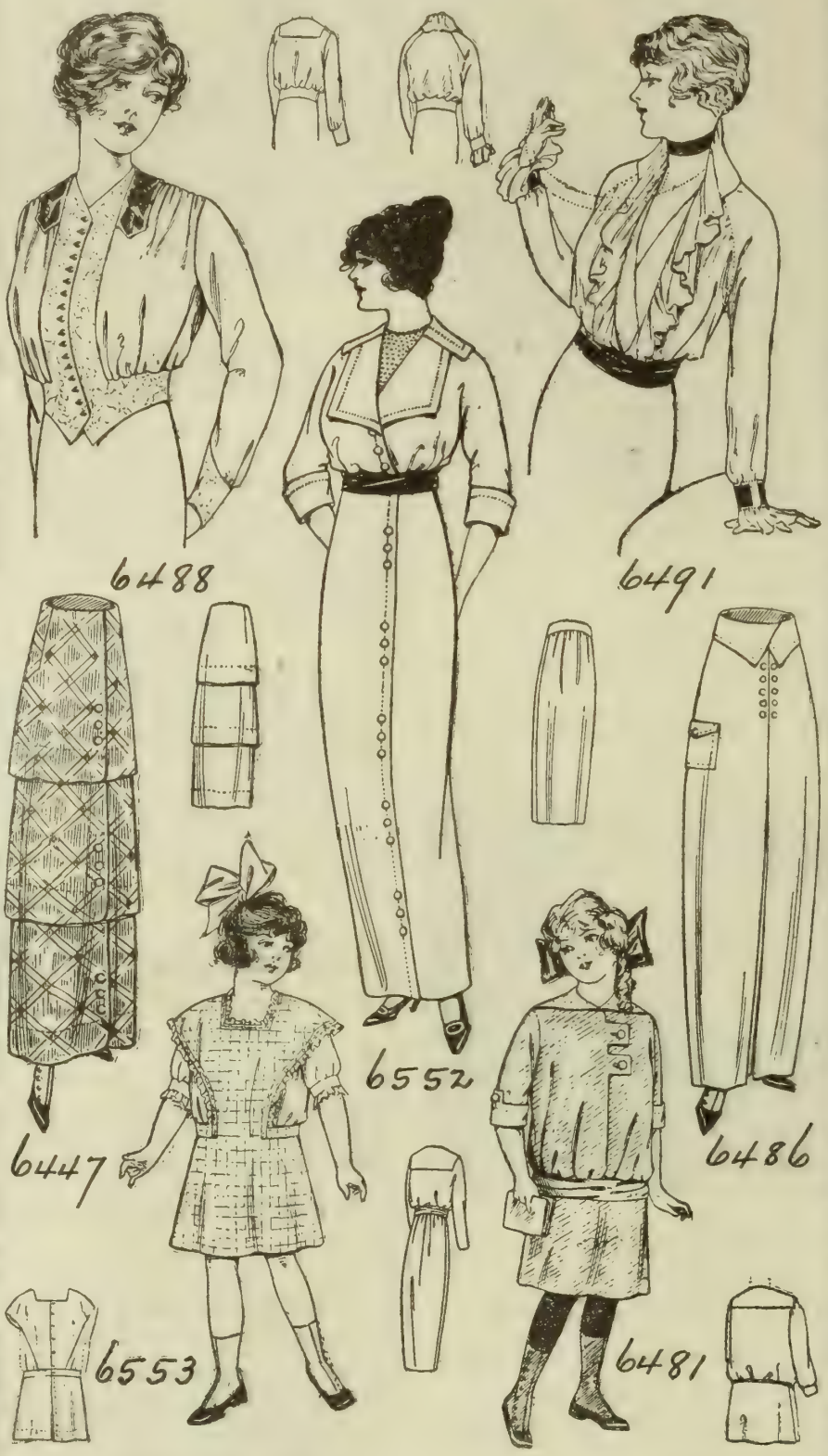
Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each



Description of Patterns

6488—Ladies' Waist—One or two materials can be used to make this waist. The waist closes at the front and is made with long sleeves. The vest and front belt are in one piece. The pattern 6488 is cut in sizes 34 to 44 inches bust measure. Medium size requires 1½ yards of 36-inch plain goods and ⅞ yard of 27-inch figured material.

6552—Ladies' Dress—Simple house dress made with the kimono shoulder and an open neck, trimmed with a wide collar and ornamented revers and with an inner shield or chemisette. The sleeves may be long or short. The pattern No. 6552 is cut in sizes 34 to 44 inches bust measure. Medium size requires 4⅝ yards of 44-inch material, ⅝ yard of 18-inch lace for the chemisette and ¾ yard of 24-inch satin for a girdle.

6491—Ladies' Waist—The very latest vogue in blouses is as represented in the illustration. Instead of being made of linen or woolen material this up-to-the-minute style should be made of crepe de chine, chiffon or voile, in white, heliotrope or peach color. The vanity neckband and wristlets are made of black velvet. The pattern No. 6491 is cut in sizes 34, 36, 38, 40 and 42 inches bust measure. Medium size requires 2½ yards of 36-inch material.

6447—Ladies' Skirt—The tier skirt is the very newest of all models. It takes the form of three flounces, each one of which is attached to the one above it at the hem. All open in front and either the raised or normal waistline can be used. These skirts are much worn in plaids and stripes and in such materials as cheviot, serge, broadcloth, faille and other silks. The pattern No. 6447 is cut in sizes 22 to 30 inches waist measure. Medium size requires 3 yards of 54-inch material.

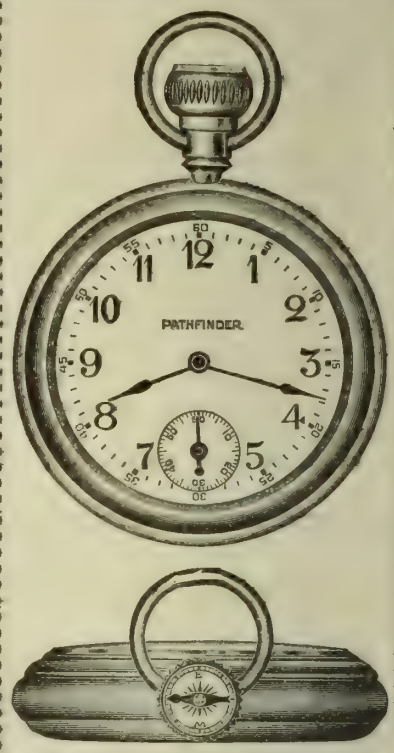
6486—Ladies' Skirt—This new skirt shows the Turkish trousers effect which is so very smart. It has three gores and closes in the center of the front. The back is slightly gathered and the sides and front are plain at the top, finished with an ornamental belt. Broadcloth, serge, cheviot, ratine, eponge and any other soft materials can be used for such a skirt. The pattern is cut in sizes 22 to 32 inches waist measure. Medium size requires 2¾ yards of 44-inch material.

6553—Girls' Apron—This simple one-piece apron can be worn over any dress, or it may be made of warm material and worn with a waist only instead of a dress. The closing is in the back and the skirt sec-

(CONTINUED ON PAGE NINETEEN.)

BOY SCOUTS

Look Here!



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The unique location of the compass in a recess formed in the top of the watch crown obviates all necessity for increasing the thickness of the case or distorting the appearance of the watch to accommodate the compass, and at the same time the compass is far enough removed from the steel parts of the movement to prevent its being deflected thereby.

Every Boy Scout should have one.

Make up your mind to get it today.

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OMAHA, NEB.

Of Interest to Our Women Readers

The Country Girl

p in the early morning,
Just at the peep o' day,
raining the milk in the dairy,
Turning the cows away,
weeping the floor in the kitchen,
Making the beds upstairs,
'ashing the breakfast dishes,
Dusting the parlor chairs.

eeding the geese and the turkeys,
Hunting for eggs in the barn,
eaning the turnips for dinner,
Spinning the stocking yarn,
istening to the old hen cackling,
Down in the bush below,
ansacking every meadow
Where the red strawberries grow.

rushing the crumbs from the pantry,
Churning the snowy cream,
insing the pails and strainers
Down by the running stream,
athering up wood for the fire,
Making the pumpkin pies,
gging the little one's cradle,
Driving away the flies.

race in every motion,
Music in every tone,
eauty and form and feature
Thousands may covet to own,
reeks like the rival spring roses,
Teeth the whitest of pearls;
ie of those country maids are worth
A score of your city girls.

Our Home Chat

The other day in a city restaurant
e writer overheard two men talk-
g. The subject of the talk was the
ense ignorance of the farmer. One
the men was a minister and the
her was a business man. The min-
ter had recently had occasion to
ke a trip through a rural district
d had been deeply insulted because
farmer he met had not considered
m qualified to give advice as to the
ising of poultry and because some
her farmer had not been willing to
ust him to harness and drive a spir-
ed team. The minister had spent
s boyhood on a farm and seemed to
ink that qualified him to give
oints on any branch of farm work.
Vhy, the farmer is the narrowest
an in the world," I heard him say.
His whole life runs in a rut about
wide"—he indicated about twelve
ches—"and he doesn't know a
ing outside of that."

I couldn't help wondering what the
inister would have said if one of
ese farmers had come to town for
visit and tried to tell him how to
rite his sermon or deal with some
his Sunday school difficulties.
ust because the farmer has sense
nough not to "butt in" on matters
at do not concern him and because
e is willing to allow professional
en to manage their own affairs is
o reason why he should be consid-
red narrow. He might do their
ork as well as they if he had the
aining and the time for it that he
as used in learning to manage his
wn affairs.

This is not written with the idea of
isparaging ministers. It would be
s unfair to judge the whole profes-
on by this one specimen as to judge
rmers by his opinion of them. The
ing that kept coming to my mind
s he talked was what those farmers
ust have thought when he was try-
g to tell them how much he knew
bout farm topics. By pretending a
nowledge he did not have in that
ne he lost their respect so com-
letely, no doubt, that nothing he
ould say on other subjects would im-
ress them. If there is anything that
akes us lose our respect for people
uicker than anything else it is to
ave them come and tell us how to
anage our affairs, when they obvi-ously have no knowledge of conditions.

HOME EDITOR.

Home Co-operation

In one lovely and simple farm home is southern Missouri I have found how the mother grasped the first great principle of home-building—the principle of the co-operative spirit. This successful home-maker is the mother of five strapping children, all healthy, happy souls, devoted to each other and their parents and home. The mother's face bears no trace of worry and no one hears her complain she is overworked, though her income is limited and it is necessary for her to do all her own work.

The woman on the adjoining farm said to her one morning, when she came over to borrow a pattern: "I do not see how you do it; here I am tired out all the time, nervous, irritable and careworn at 30; and I keep a girl to assist with the work and hire a sewing woman at least four weeks of every year. How you manage to do all your work, all your sewing, and still keep your youthful appearance and the courage to smile is a puzzle to me. How do you manage? You keep no help," the neighbor continued, "and yet your house is always in order; the running gears of your household machinery do not squeak as mine do; you and your children are well dressed, you are well fed, your house and yard are clean, your flowers and friends are never neglected; I cannot understand how you accomplish all this and live on a farm."

Our successful homemaker laughed merrily at her interrogative neighbor and, helping a vine she had planted by her porch to find and cling to its support, she looked not a day over 20, though she was 35.

"It seems to me," she said, as she seated herself in a comfortable chair on their cozy porch and motioned her companion to be seated in the porch swing, "an easy thing to find time for everything if you can only get started right. My children help me so much that I am never rushed nor worn threadbare. Helen is cleaning the pantry shelves now. It has been so long since I had this to do that I hardly know where to commence; she is 15 now and does her work as well as I can do it," and the cheerful mother smiled at her mental picture of Helen—the black eyes, the black braid of hair hanging down her back and her blue gingham apron, and her skillful hands washing off the oilcloth and replacing the articles on the shelves with the greatest care.

"Do you mean to tell me your children help you? My children are so helpless; they are incapable of doing any task well; two of them go to school, and it almost drives me wild getting them ready each morning; they never know where they put their books or wraps, and it is hunt for these things from the time we get up until they are gone.'

The other mother looked her disapproval and then said. "I am sure it all depends upon the way you begin with the child. Helpfulness is a habit and must be cultivated as other habits. Habits are easily formed when the child is very young. I began with Helen just as soon as she could walk and talk; I gave her little tasks to do and I had her do them every day. While these little things were trifling, yet they saved me much stooping and many steps, but my real motive was in helping Helen to be helpful; to train her to feel that she was a part of the home and must do her part in keeping the home together. She commenced immediately picking up and putting away her toys; she kept the newspapers and magazines in their proper places; just as soon as her papa or one of the men would throw a newspaper on the floor Helen would pick it up, make an effort to fold it and place it in the basket. She always picked up the scraps after a day's sewing, and I taught her very early to dress herself and button her shoes. I did not drive her to do these things, but I led her on, originating little plays of the work; the toys must all go to sleep-eye-town, and the scraps were little chickens that had escaped from their lot and must be caught and taken back; and the buttons on her shoes were little birds hopping through holes; she would say as she succeeded in getting a buttonhole over the button, 'Another little bird hopped out, mamma.' These little play devices seem foolish to many, and mothers prefer doing these things themselves, but they do start and nurture the habit of helpfulness.

"The months grew into years rapidly and Helen did these little household tasks because she had never learned not to do them; with her, helpfulness is a natural evolution; it seems to me that each day her helpfulness increases; I never allowed our work to interfere with her school work, her music or her play time. For a long time she has done those things which give the home touches to the house; that is, she always has flowers on the dining table and waters the house plants; she assists in training the younger children as she was trained; if one of us is sick Helen can prepare the most daintily-appointed meal; she can make lovely desserts, splendid

(CONTINUED ON PAGE TWENTY-THREE)

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JOHN DEERE, MOLINE, ILL.

Unknown Peru---An Empire of Undeveloped Resources

LIMA, Peru—I want to give you a bird's-eye view of this wonderful land of Peru that is to be made our next-door neighbor by the opening of the Panama canal. It is one of the chief countries of South America, but parts of it are as unknown as the wilds of Tibet. It is right at the front doorstep of eastern North America, so close that if Uncle Sam took a walk, using his thousand-league boots, he would stub his toe upon it before he got three steps away from our gulf port of New Orleans. I am writing at Lima, the capital. An express steamer can cover the distance between here and the canal in less than three days, and when the fast Atlantic liners from New York enter the Pacific they will be able to come to Callao, the port of Peru, quite as quickly as they now cross over to Hamburg or Bremen. The actual distance from the Balboa docks to those of Callao is 1,346 miles, and the regular vessels which call at the coast ports make the trip in five or six days. Even now one can go from New York to Lima, crossing the isthmus by rail, in less than two weeks, and when the canal is completed the whole trip can be easily made by ship in that time.

This Village Market is Two and One-Half Miles Above Sea Level

I have spoken of Peru as unknown. The most of the country has never been prospected. It lies here in the heart of western South America, taking up about one-fourth of the whole range of the Andes and extending for 1,000 miles along the dry, thirsty coast and an equal distance through the rainiest region on earth, on the opposite side of the mountains.

Peru is more than 1,000 miles long, and in places it is more than 700 miles wide. If you laid it down in the Mississippi valley, with the Chilean boundary at New Orleans, the Ecuador line would be somewhere near Minneapolis, and it would almost fill the whole valley from the Mississippi river to Pittsburgh.

Contains 680,000 Square Miles

The country contains about 680,000 square miles. It is equal to more than one-fifth of the area of the United States proper, is six times as large as Great Britain and Ireland, and is larger than Germany, France and the Spanish peninsula combined. There is enough of it to make fourteen states as big as New York, fifteen as big as Pennsylvania, or seventeen the size of Ohio. The country has one province, the name of which many of you have never heard, which is larger than Texas. This is Loreto, at the headwaters of the Amazon. The province of Cuzco is in southern Peru, and most of it high up in the Andes. It is bigger than California, and there are other provinces that would make sizable American states.

The whole of Peru is divided up into three zones. It all lies in the tropics, but the climatic influences are such that most of it forms a fit home for white men. The first zone is that of the desert, the second that of the high Andean valleys and plateaus, which are upheld by the three parallel ranges of these mighty mountains, and the third is country that slopes down from the mountains and forms a part of the Amazon valley. The desert zone would be as hot as the Sahara, but is tempered by the Antarctic current which flows up this coast from near the south pole. This makes it cool and healthful all the year round.

The second zone is the plateaus of the Andes. These highlands form a region 300 miles wide. They have from 4,000 to 14,000 feet elevation, and are looked down upon by some peaks almost four miles in height. They are so high that it is cool and healthy throughout the year. They have summers that will ripen the hardiest grains, and in the lower valleys will grow all kinds of semi-tropical fruits. It is rather cold there in the winter and the snow often falls, but the summers are not unlike those of the Rockies.

Famous Live Stock Region

This region is famous for live stock. It provides the meat and wool for the whole of Peru, and it has large tracts of grazing lands where sheep and cattle grow well. An extensive wool and meat industry might be developed, and that with a view of supplying American markets.

Upon the highest plateaus are found the llama, alpaca and vicuna. The llamas are used as beasts of burden, but they produce a great deal of wool, and also are eaten. The alpacas are smaller than the llamas. They are herded, and they furnish excellent wool. The vicuma wool is even better. It is as fine as silk and is worth four times as much as the alpaca. Within the past few years some of the wool growers have been trying to cross the vicuma and alpaca, and have developed a new breed of animals which they call "pacovicuna."

The third zone of Peru is that which lies east of the Andes. It begins about a mile or a mile and a half above the sea on the slopes of the mountains and runs down to the tropical forests of the Amazonian headwaters. This region is densely wooded, and its vast forests contain rubber and other valuable trees. It has also some open country, and there are lands which will produce coffee, cacao and sugar as well as every sort of tropical fruit.

It is East Andean Peru that is almost unknown. Many parts of it have never been prospected, and it is still uninhabited except by wild Indians, with here and there a few rubber hunters. There are no large towns, and Iquitos on the Amazon, is the chief port of the northern

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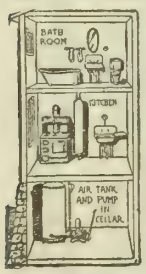

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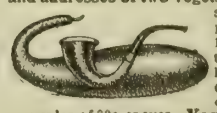

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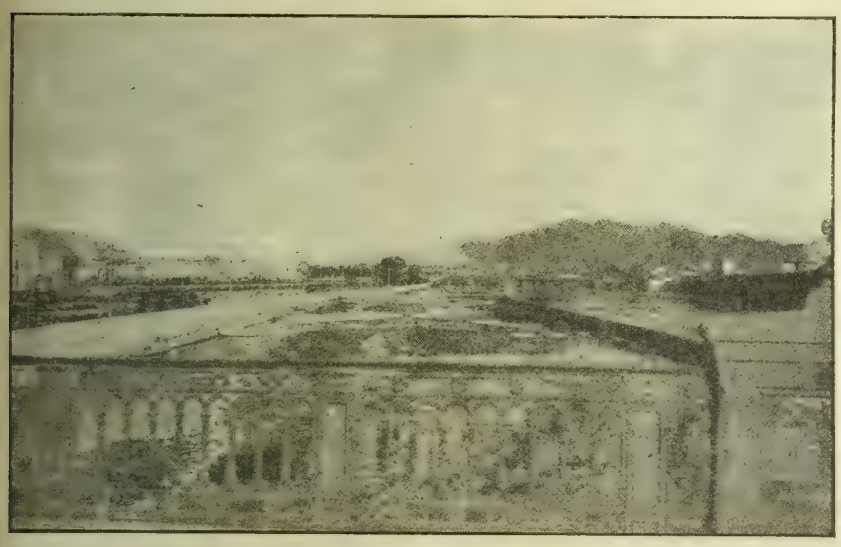
section. It is 2,000 miles or more from the sea.

Will Be Reached from the Pacific

There is no doubt that East Andean Peru will eventually be reached from the Pacific. It is only about 400 miles from that ocean and there are now railroads going to the tops of the mountains that might be extended to tap parts of it. The Oroya road just back of Lima is one, that has already been surveyed to the headwaters of the Amazon. This road begins at Callav, passes through Lima and crosses the Andes at an altitude of more than three miles, after which it goes down about 3,000 feet to Oroya. It is estimated that the road could be extended to the navigable Amazon system for something like $15,000,000 or $20,000,000. Its altitude, however, is too high for it to be made of practical value for carrying heavy goods over the Andes.

There are several other passes, however, that are much lower and there is one where the altitude is below that of Mexico City. This pass can be reached by an extension of the roads from one



The Rimac River at Lima, the Andes in the Background

of the valleys of northern Peru, and the road built thence to the Amazon at a cost not to exceed $20,000,000. The distance from the Pacific all told would be only 400 miles.

I have already spoken of the possible extension of the railroads in Ecuador to the Amazon valley, so that it will be seen that the vast region of the eastern Andes may some time be accessible to us through the Panama canal. Almost all of trans-Andean Peru lies within 500 miles of the Pacific ocean, and when the railroads are built it can be reached from New York within fifteen days after leaving. As it is now it takes three weeks or more to get to the nearest port, that of Iquitos, which is more than 2,000 miles from the mouth of the Amazon, and this means connection with only the northern part of the Peruvian Amazon.

The potential value of such a connection can hardly be estimated. Trans-Andean or Amazonian Peru, as it might be called, comprises an area equal to fifty states the size of Massachusetts, or ten as big as Ohio or Kentucky, and the region has proportionately more good land than either state mentioned.

Amazon Region Enormously Rich

The value of the Amazon region is not confined to its agricultural possibilities. It has great resources in rubber, and it is known to be enormously rich in the precious metals. It was from the headwaters of the Amazon tributaries that the Incas got much of their gold, and in the last number of the Peruvian Magazine, in an article entitled "Peru of Today," which has just come to hand, I see that Raymond McCune, the civil engineer, who has surveyed the railway route from Cerro da Pasco to the headwaters of the Amazon, is about to open up placer deposits along the upper stretches of the Maranon river. In this article he says "that the new mine is the largest and richest placer deposit in the world today." It is credited with having produced in the past most of the $125,000,000 in gold that the Spaniards took from the natives, and the total value of the gold still to be mined is said to be twice as great as that taken out by the Incas. The gold is in dust and small nuggets, and there is more than 100,000,000 cubic yards of gravel above the bed rock, which, it is estimated, will average over 80 per cent per cubic yard. These placers are almost two miles above sea level, but the rainy season makes it impossible to carry on the hydraulic workings for more than ten months of the year.

The desert region of Peru has a large amount of desert land that is susceptible of irrigation. This has been brought forth by recent surveys, and it will probably be developed when the canal is completed. I have written of this region in a former letter. It consists of a strip of arid land 1,000 miles long and from sixty to ninety miles wide, running from the Pacific ocean back to the mountains. It is nearly everywhere as dry as a bone, but there are fifty-five little rivers fed by the snows of the Andes which give as many valleys, where they can raise sugar, rice and cotton and which are now producing millions of dollars' worth of these staples today. The amount of sugar already grown is worth in the neighborhood of $10,000,000 per annum, the rice is worth more than $2,000,000 and the cotton sells for $67,000,000. There are over 200,000 acres in cane, and the sugar costs to raise it 1½ cents a pound. There are about 30,000 men employed in the cotton plantations, and in some of the valleys they are raising from 500 to 1,000 pounds to the acre.

Studying Conservation of Water

The government is studying the conservation of the water with a view to increasing the irrigated area of the desert, and it is estimated that more than 1,250,000 acres of crops can be grown by the building of additional reservoirs and dams in the mountains. Mr. Sutton, the American civil engineer, who is the chief of the Peruvian government irrigation survey, estimates that the annual flow of water through this costal region is 24,000,000 acre feet, and that 10 per cent of it would give these additional farms. The government is now making hydrological studies all along the coast from Ecuador to Chile, and most of the valleys are being considered with a view to the extension of their farms.

As it is now all of these valleys are producing. We took on cargo at every port on our way down the coast, and at each barge loads of rice, sugar or cotton were brought out to the steamer. At one place we loaded a large drove of cattle, at another about fifty hogs and at a third they transferred some tons of rice to the hold of the steamer.

This desert region contains the bulk of the white population of Peru. The country has altogether very close to 5,000,000 inhabitants. The average density is about seven to the square mile. The great bulk of the people are Indians, of whom more than 2,000,000 live on the high plateaus of the Andes. The Amazonian region is populated almost entirely by

(CONTINUED ON PAGE TWENTY-THREE)

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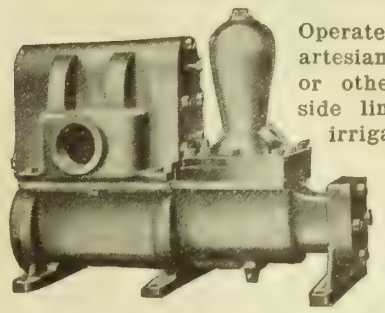

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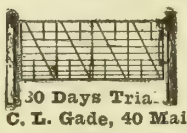
Unexcelled for Culverts, Tanks, Cisterns, Roofing, Siding, and all forms of sheet metal work. APOLLO Roofing Products give lasting service, and are sold by weight. Send for "Better Buildings" booklet.

AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh

Stronger Than Three Woven Wire Gates



Solid steel bars instead of woven wire. Double automatic latch locks gate. The whole gate raises over snow banks. Also manufacture steel Farm Fence Posts.

30 Days Trial.

C. L. Gade, 40 Main St., Iowa Falls, Ia.

BROWN FENCE

WE PAY FREIGHT

13 Cents Per Rod Up

Strongest, heaviest wire, Double galvanized. Outlasts others nearly 2 to 1. Low prices direct from factory. Over 150 styles for every purpose—hog, sheep, poultry, rabbit, horse, cattle. Also lawn fence and gates of all styles. Mail postal for catalog and sample to test and compare with others. Address

THE BROWN FENCE & WIRE CO.

Department 69 Cleveland, Ohio

This Coupon Is Good for Prof. Beery's Introductory Course in Horsemanship FREE!

CUT OUT AND MAIL TODAY

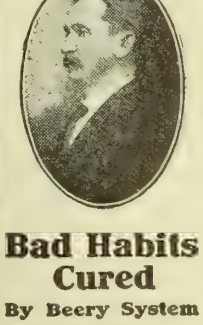
PROF. JESSE BEERY, Box 76 Pleasant Hill, Ohio

Please send, free of cost, to the address below, Prof. Beery's Introductory Course in Horsemanship

Name.....

Postoffice.....State.....

R. F. D.....



Bad Habits Cured

By Beery System

Refusing to lead.
Running away when halter or bridle is removed.
Getting fast in the stall.
Pawing in the stable.
Pawing while hitched.
Crowding in the stall.
Fighting halter or bridle.
Tender bitted.
Pulling on one rein.
Lugging on the bit.
Lunging and plunging.
Refusing to stand.
Refusing to back.
Shying. Balking
Afraid of automobiles.
Afraid of robes
Afraid of clothes on line
Afraid of cars.
Afraid of sound of a gun.
Afraid of band playing.
Afraid of steam engine.
Afraid of the touch of shafts or harness.
Running away.
Kicking
Biting. Striking.
Hard to shoe.
Bad to groom.
Breaking straps
Refusing to hold back while going down hill.
Scaring at hogs or dogs along the road.
Tail switchers
Lolling the tongue.
Jumping fences
Bad to hitch to buggy or wagon.

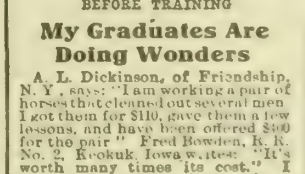
To all men *owning horses*, who answer this advertisement, I will positively send my introductory course in Horse Training and Colt Breaking ABSOLUTELY FREE.

World's Greatest System of Horsemanship

Twenty-five thousand FARMERS and horse-owners have taken my regular course and found that *it does the work*. Even if you have only *one horse*, it will pay you to master my wonderful system. The Beery Course is the result of a lifetime's work as a tamer and trainer of horses. As one of my students has said, "The horse has never been foaled that Prof. Beery cannot handle." My record proves it.

Master Any Horse

The Beery Course gives you the priceless secrets of a lifetime—enables you to master any horse—to tell the disposition of any horse at sight—to add many dollars to the value of every horse you handle—and my students are all good traders.



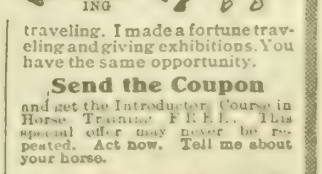
BEFORE TRAINING

Break a Colt in Double-Quick Time!

You can do it by my simple, practical, humane system. There is a lot of money in colt training.

Make $1,200 to $3,000 a Year

Many of my graduates are making big money as professional horse trainers at home or traveling. I made a fortune traveling and giving exhibitions. You have the same opportunity.



AFTER TRAINING

My Graduates Are Doing Wonders

A. L. Dickinson, of Friendship, N. Y., says: "I am working a pair of horses that cleaned out several men I got them for $110, gave them a few lessons, and have been offered $300 for the pair." Fred Bowden, R. R. No. 2, Keokuk, Iowa, writes: "It's worth many times its cost." I have many similar letters from graduates all over the world.

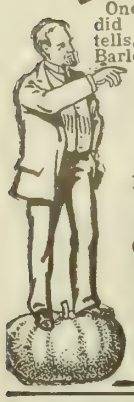
Send the Coupon

and get the Introductory Course in Horse Training FREE. This special offer may never be repeated. Act now. Tell me about your horse.

PROF. JESSE BEERY

Box 76, Pleasant Hill, Ohio

Get My Big 1914 Book
Tells all about
SALZER'S Oats
Free



Here we outrank. Our seed Oats outyield any and every variety known to the trade. One of our specialties. A dozen splendid full-blooded varieties. Catalog tells, so also about Wisconsin's famous Barleys, Corns, Wheat and Potatoes.

10 Big Sample Packages 10c

For 10c we gladly mail one package each new $1,000 Marquis Wheat, 20th Century Alfalfa, Rejuvenated Bonanza Oats, Silver King Barley and other farm seed packages. **America's headquarters** for Alfalfa, Clovers, Grasses, Oats, Rye, Barley, Wheat, Potatoes, Seed Corn, Onions, Tomatoes, Peas, Beans, etc.

Salzer
127 S. Eighth St., La Crosse, Wis.

GUARANTEED SEED CORN and APPLES.

A rather queer combination—however, when you think of **either**—remember we specialize in growing **both**. We have studied **Seed Corn** for 25 years, breeding and improving varieties on our farms that have repeatedly yielded **125 bus.** per acre. We have varieties exactly suited to your locality and can put you in the prize winning class.

Hardy Apple and other Fruit Trees, Shade Trees, Berry Bushes, etc. we grow in our nursery and you will save half by buying direct.

Send at once for our new **Seed & Nursery Annual**—also free premium list.

FARMER SEED & NURSERY CO.,
516 Third Ave., Faribault, Minn.

We Will Send Grains of GOLD AND SILVER FREE TO FARMERS

Send name and address—we will mail free samples of the best yellow and white seed corn for the corn belt.

IOWA GOLD MINE
IOWA SILVER MINE

Grown, selected, cured, graded and tested by us. Planted in all parts of the world where corn is grown.

Seven lb pkg either variety, enough for 1 acre prepaid to any address, for $1.00. Will increase your yield 50 per cent. Large illustrated catalog and special seed corn circular free. IOWA SEED CO., Dept. 51 Des Moines, Ia.

12 EVERBEARING STRAWBERRY PLANTS FREE

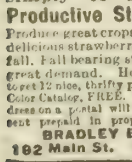
Yes ABSOLUTELY FREE! This is simply to introduce our wonderful **Productive Strawberry Plants**

Produce great crops of fine extra large, delicious strawberries all summer and fall. Fall bearing strawberries are in great demand. Here's your chance to get 12 nice, thrifty plants, also our Three Color Catalog, FREE. Your name and address on a postal will bring them. Plants sent prepaid in proper planting season.

BRADLEY BROTHERS
182 Main St. Makanda, Illinois

BRADLEY BROTHERS MAKANDA, ILL.

Pure Bred Seed Corn



Picked in September, sure growing, big yielding, Reid's Yellow Dent, Johnson County White, Leaming, Improved Silvermine, and Bloody Butcher, grown by us on Sunnyside Seed Farm which we own and operate ourselves. Send today for the free corn book giving full particulars, prices, etc.

McGREER BROS., COBURG, IOWA.

OATS Kherson and Swedish Select. Yield 65 bushels per acre.
FRANK J. RIST,
Box 4, Humboldt, Neb.

FINE SEED CORN

World's best producers. Yellow Rose and White Salamander. Catalog and samples free. Address
Armstrong & Son, Box 700, Shenandoah, Iowa.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

IF YOU set the incubator very early and did not get the number of fertile eggs you felt that by right was due, don't blame the incubator. The incubator has nothing to do with eggs that on test show as clear as if laid yesterday. The fault lies in the flock. If the flock has been laying heavily through the winter, or under some conditions even after moderate laying, you are going to have a large per cent of infertile eggs for the early hatches, and if the pullets have contributed their share of the eggs, then the infertility will be pronounced. If there could any way be found to know a fertile egg before setting hens and incubators, what a saving of eggs there would be to put on the market. The writer has learned to be a little careful about setting these early eggs. While not every spring are the early eggs as provokingly infertile as they are other springs, yet it is a good idea to not waste too many eggs in the incubator or under a dozen hens until you have tested some first. A few brooded under the hens will, if broken after three or four days, give you an idea about how high the fertility is running. Some flocks show low fertility every spring until the chickens get far out on the range, then the fertility shows strong. The eggs on a cold spring, especially the February and early March eggs will hatch better from pens in which you have turned one good male with even as high as fifteen hens than if you put a dozen males with from seven to eight hens apiece, and allow all to mix in the houses and yards.

How Long to Keep

An egg has been known to hatch after being kept for six weeks. Indeed, longer time than this is told of. I cannot speak for the truth of a longer time; neither can I of a good hatch, or even a medium hatch, if kept six weeks. Usually, if the chicks come out of eggs set at this age, they come weak and small. The reason for this is because of the tendency of cell life to die after a certain time, and in the egg this is hurried by the evaporation of moisture in which the germ swims. Three weeks in winter or early spring is usually too long to keep eggs, although they will keep in hatchable state better then than later. I do not like to keep eggs over fourteen days, as over this time they are slow in starting, and thus slow in coming out. A slow hatch is seldom a satisfactory hatch.

Eggs that are old will do better under hens than in an incubator. I want all the eggs I set in an incubator not to be over ten or eleven days old. Eggs hatch best for me that are not over from one to four days old. This is the rule, although from a healthy, strong flock, and in warm weather, I have had at times good hatches from the two-week-old eggs. The reason that eggs from a large flock hatch better than from a small flock, all other things being equal, is because the eggs are fresher when set. The fresh egg hatches from six hours to twenty-four earlier than the several-day-old egg.

Musk Ducks

At some of the late poultry and pet shows the Muscovy duck has been shown rather extensively. The right name of this duck is Musk duck, from its peculiar musky smell. The smell diseappears on cooking. The Musk duck is a wild duck in Guinea, and, while wild, tends to dark feathering that turns lighter on domestication. In fact, a white variety of these has been made standard. This duck is the largest of our ducks and can fly up into a tree like a bird. The drake has a crest that it can lower and depress at will. To let them cross with other ducks brings a cross that is mainly sterile. Five weeks or nearly so are required to hatch the young.

Spring Cold Storage

When the grass comes, then comes the largest number of eggs. Eggs are wanted at this time for hatching purposes, as well as for the market, and they are wanted in plenty for the market, for April and May are the logical months to put eggs in cold storage. This is not a questionable undertaking at all; it is just as honest as putting up fruit or meat or anything else for future use. About 15 per cent of the eggs put on the spring market go into cold storage. The cost of storing is not heavy. If in good condition and properly handled, these eggs will stay good for several months. It is not the cold storage itself that is in question; it is the combinations of storage men that, taking advantage, make the price soar when they come out.

Styles for Home Dressmaker

(CONTINUED FROM PAGE FOURTEEN.)

tion is in one, with the bib, which covers the front and extends as a wide collar at the shoulders, again covering the back. Gingham, calico and chambray are suitable. The apron pattern No. 6553 is cut in sizes 6, 8, 10, 12 and 14 years. Medium size requires 1⅞ yards of 27-inch material.

6481—Girls' Dress—Quite in line with the present demands of style is this smart frock, with plain blouse, trimmed with a wide collar, plain, full length or shorter sleeves and a two-piece skirt made without fullness. The handsome plaid cheviots, the brighter colors in serge, velveteen, eponge and wash fabrics are suitable for this dress. The pattern is cut in sizes 6, 8, 10, 12 and 14 years. Medium size requires 2 yards of 44-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Tells why chicks die

J. C. Reefer, the poultry expert of 1619 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

KHERSON OATS The heaviest yielding early variety—great smut and drouth resister—fine to seed with. My seed is very bright, absolutely free from smut, carefully recleaned. Prices low. Get Booklet No. 10, describing this great oat and my higher yielding seed corn. C. RAY MOORE, Box 105, KELLERTON, IOWA.
"THE MAN WHO DOES THINGS WITH CORN"

All Three FREE
First and Only Patent Hatching Chart FREE
$1.50 Hygrometer FREE
Money-Making Book FREE

To every person who asks for our free Money-Making Book, we will send, *absolutely free*, a sample of the Rayo Patent Hatching Chart. If you buy a Rayo Incubator we will give you complete hatching chart and a $1.50 Hygrometer. The hygrometer and hatching chart are as essential to success as fertile eggs and would cost you $2.50 if you had to buy them. Remember, we include these with each incubator without extra charge. No other firm does this.

Get a Rayo Chart and Hygrometer and win a prize in hatching contests now going on. A

RAYO Incubator

usually turns out 15 to 20 or more chicks every hatch over old-style, lamp-on-the-side machines. Requires only 1 filling to hatch. Runs on 1 gal of oil; others use 5 gals. Needs little attention; others need constant looking after.

Hundreds of experienced poultrymen will have no other machine. Beginners sure of success. Low, direct freight prepaid rice.

Money-Making Book Sent FREE

Get it. Sample Patent Hatching Chart FREE. Write for Book No. 18, which paves the way to success. Get special low combination price offers.

RAYO INCUBATOR CO.
1063 S. 13th Street Omaha, Nebr.

"If I were buying a dozen incubators they would all be Queens."
C. E. GRAGG, BUTLER, Mo.

Mr. Gragg wrote after he had taken off two 95% hatches. The grand record of the

Queen Incubator

is built on service. You can depend on good hatches every time you fill it with fertile eggs. I build honestly, so your machine will last many years. See my 1914 Model with its 28 Special Features. Paying a higher price for other incubators will not get you a better hatcher. Send for finely illustrated 1914 catalog.

P. M. WICKSTRUM, Incubator Man
Box 9, Lincoln, Neb.

RADIO ROUND THE EQUAL HEAT INCUBATOR

Round like hen's nest--no corners to get cold—heat rises through center with equal radiation. Only hatcher combining round box, center heat, complete circuit radiation, visible egg chamber, safety burner attachment which prevents overheating and explosion. Turn eggs without removing. One filling, less than gallon oil, to a hatch. Write today for free Radio Round Book

RADIO ROUND INCUBATOR CO.
BOX D-506 COUNCIL BLUFFS IOWA

Radio Bantam Hatcher & Brooder set up freight paid, $6.75

KEEPS FENCE POSTS FROM ROTTING

Yellow locust and red cedar posts are now too scarce for fencing. Pine, chestnut, willow—any kind of wood will last twice as long if treated with REGISTERED
AVENARIUS CARBOLINEUM
Guaranteed to preserve all wood in or above ground. One gallon covers 300 sq. ft. Freight prepaid.
Carbolineum Wood Preserving Co., Dept. 125 Milwaukee, Wis.

MONEY IN POULTRY and SQUABS Start small. Grow BIG. Get winter eggs. Keep healthy fowls. Save your chicks. Foy's big book tells how. Describes largest poultry and pigeon farm. Mailed FREE.
F. FOY, Box 38, Des Moines, Ia.

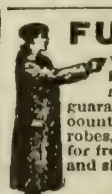
Latest Book "Profitable Poultry," 128 pages practical facts, lowest prices on fowls, eggs, incubators, etc. 180 beautiful pictures. Latest improved methods to raise poultry. All about **Runner ducks**, 52 other varieties pure-bred poultry only 5 cents.
Berry's Poultry Farm, Box 80, Clarinda, Ia

Can White Diarrhoea and other bowel troubles be prevented? Write **CHICKLIFE REMEDY CO.**, Clay Center, Kansas.

CLOVER AND TIMOTHY $5.00 Per Bu.

INVESTIGATE—Best and Cheapest Seeding Known. Alsike Clover and Timothy mixed. Fully 1-3 alsike, a big bargain. Greatest hay and pasture combination grown. Write for **Free Sample** and 76-page catalog and circulars describing this wonderful grass mixture. Beats anything you can sow and ridiculously cheap. We handle only best tested recleaned seed guaranteed. Write before advance.
A. A. BERRY SEED CO., Box 507, Clarinda, Iowa

FUR COAT, $12.50



We tan the hide and make your coat for only $12.50. Complete coat (we furnish hide), $18.00. A square deal, all work guaranteed. We are pioneer tanners of this country of cattle and horse hides for coats, robes, rugs, harness, lace, leather, etc. Write for free booklet of information on handling and shipping hides; also price list.

BAYER TANNING CO.
114 S. W. 9th St., Des Moines, Iowa.

This paper will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises.

Tee Up! Smoke Up!

ALEX ROSS

Alex Ross, Professional, Brae Burn Country Club, Auburndale, Mass., Open Champion of Massachusetts six times; National Open Champion 1907, says:

"Tuxedo, cool and mild, is essentially the smoke that satisfies. Many of my fellow golfers agree with me in giving preference to Tuxedo."

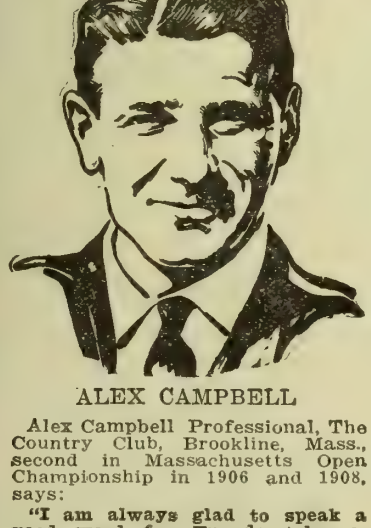
Alexander Ross

JACK HOBENS

Jack Hobens, Professional at the Englewood Country Club, N. J., Metropolita... Open Champion 1908 and second in 1911, says:

"'...oke Tuxedo tobacco because it ...'s me, and I have no desire to change. The best is always good enough for me. Tuxedo is the golfer's smoke."

John Hobens



ALEX CAMPBELL

Alex Campbell Professional, The Country Club, Brookline, Mass., second in Massachusetts Open Championship in 1906 and 1908, says:

"I am always glad to speak a good word for Tuxedo tobacco. Constant use of it only serves to make it better liked. Its fragrant, soothing flavor makes it the choice of many golfers."

Alex Campbell

As satisfying as the sounding smack of the perfect drive, is the open-air relish of the perfect smoke — Tuxedo. Both go together, too. When you grab your bag and start for the links, grab up your tin of Tuxedo and take it along.

"Follow through" the snappy afternoon with Tuxedo. Put Tuxedo in your pipe and you will *"put"* the best. And at "the nineteenth hole" rest up and relax with a good solid smoke of Tuxedo. That's the advice of good golfers everywhere.

Tuxedo

The Perfect Pipe Tobacco

It's worth *your* while to *try* Tuxedo. Especially if a sensitive tongue prevents pipe smoking.

Tuxedo positively *cannot bite*—not even if you smoke pipeful after pipeful, as many as you can crowd into a day or a week.

Tuxedo is made of only the finest, choicest, selected leaves of perfectly aged Burley tobacco. It is made by the original "Tuxedo Process" which removes *every trace* of *bite* and *sting* and develops *all* the wonderful mildness, fragrance and flavor of the Burley Leaf in a way that no other brand of tobacco has successfully imitated.

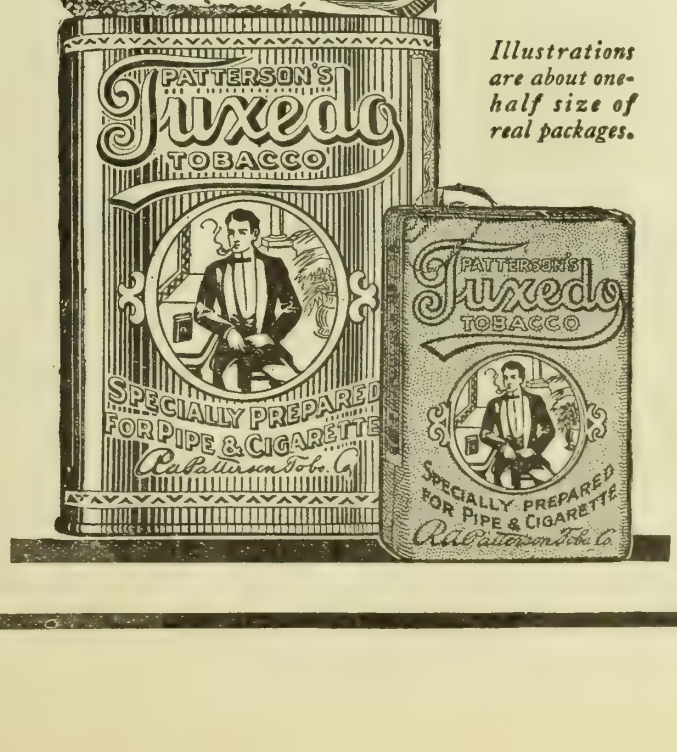
YOU CAN BUY TUXEDO EVERYWHERE

Famous green tin with gold lettering, curved to fit the pocket 10c

Convenient pouch, *inner-lined* with moisture-proof paper . . . 5c

In Glass Humidors, 50c and 90c

THE AMERICAN TOBACCO COMPANY



Illustrations are about one-half size of real packages.

TOM VARDON

Tom Vardon, Professional, Onwentsia Club, second in British Open Championship 1903, second in French Open Championship 1906, says:

"Tuxedo tobacco can be used in pipe or cigarette. In either case it is an agreeable companion to the golfer. We are old friends."

J. Vardon

WILLIAM H. POTTS

William H. Potts, Professional, Apawamis Club, Rye, N. Y., well-known instructor and player, says:

"The absolute purity and mild fragrance of Tuxedo make a great hit among golfers. I'm for Tuxedo."

Wm. H. Potts

J. J. McDERMOTT

J. J. McDermott, Professional, Country Club of Atlantic City, N. J., National Open Champion 1911 to 1913, second in 1910, known as the famous "Home-bred Champion," says:

"Pipe smoking gives added pleasure to a golfer when the pipe is filled with Tuxedo. Tuxedo provides more keen enjoyment than any other tobacco I know."

J. J. McDermott

JANESVILLE Corn Planters

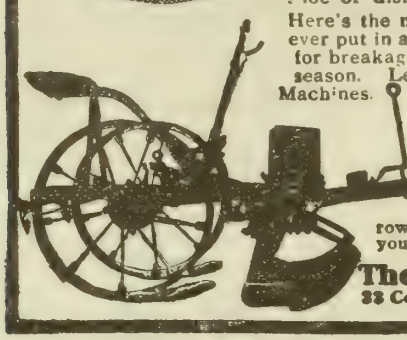
Let You Fit the Crop To Your Soils

You know your land—you know where you can plant thick and you know where you must plant thin. Here's the planter that you can adjust to plant 2, 3 or 4 kernels as the land varies. Drill close for silage crops. Make all changes quickly—not even necessary to leave your seat or stop the team. The Janesville is

The Only Planter With Shaft Drive—Sight Feed—See Every Hill As It Drops

The valves will not mix the hills. There are no sprockets—no chains—no clutch. This means time and labor saved. The shaft runs in oil tight bearings greased at factory and good for a season's use. Kerosene bath is *not* needed at every round. You can change runners—use shoe or disk on same machine.

Here's the most simple and practical construction ever put in a corn planter It has the least chance for breakages—prevents costly delays during busy season. Let us tell you more about Janesville Machines.



Write for Janesville Catalog—Mailed FREE

Also get our proposition on Janesville Riding and Walking Plows, Cultivators, Disk-Cultivators and Harrows. Ask for name of Janesville dealer near you. Address

The Janesville Machine Co.
33 Center Street Janesville, Wis.

"POLK SYSTEM"

WHAT IS IT?

It is the perfect method or reinforced, monolithic, concrete silo construction: The silo unique among all other types—Not one "Polk System" silo has ever been blown down, burned down, caved in, knocked down by lightning, fallen down, cracked open, eaten by acid, absorbed the moisture of the ensilage, nor have any of the other things alleged against it occured.

If you will listen to reason, instead of interested critics, you will know that we really have a perfect, permanent silo and at a cost so little, over the cheapest silo, as to make it insignificant.

It has been proven, beyond successful dispute, that excepting in a very few favored locations, any silo that needs an anchor cannot be held in place, even one as high as 30 feet, and above 36 feet it is folly to attempt to go.

Now, when you figure that we go up to 70 feet occasionally and frequently as high as 50 or 56 feet, you will realize the advantage of a silo which is an anchor in itself. Let us figure the comparative cost: A wooden silo 16x30 costs about $225.00 and this looks small, when put up against a "Polk System" silo of the same dimension ($392.00) but when you add to the wood silo figures, $25.00 for a proper foundation, $25.00 for painting and $35.00 for erecting, you have $310.00 on this silo, if you don't count time tightening hoops, painting at least every two years and other little details, with which you absolutely are not bothered after constructing a "Polk System" silo.

However, here is where we come in with our "Polk System" Construction:

A 16x30 Silo holds a little over 100 tons
A 16x45 Silo holds a little over 200 tons
A 16x56 Silo holds a little over 300 tons

Figure this out—The gravel you furnish—Our 16x45 silo costs $575.75. Our 16x56 costs $710.50. Write us for information.

PLATT & FREES, RED CLOUD, NEBRASKA

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

OLD SEED CORN 4 leading varieties. Tested and guaranteed.
FRANK J. RIST, Box 4, Humboldt, Neb.

SWEET CLOVER Seed direct from grower. Price and circular how to grow it. Free. John A. Sheehan, R. 4, Falmouth, Ky

GOVERNMENT Positions are easy to get. My free booklet X 78 tells how. Write today—NOW. EARL HOPKINS, Washington, D. C.

COW PEAS Write for SAMPLES and Prices. Address, JAS. S. EVANS & SONS, Vandalia, Ill.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Calf with White Scours

A Subscriber, Loomis, Neb.: I have a calf about 3 weeks old that I feed three-fourths of a gallon of milk from its own mother. It has scours and it seems as if it must be white scours, as its stools are very white and loose. Any information you can give me, through your paper, in regard to treatment will be greatly appreciated.

Answer—It is probable that this calf is getting too much milk at one time, and it will be well to reduce the amount. It may also be well to look to the bucket in which it is fed to see if it is properly scalded. It is sometimes beneficial to change the feed of the cow, giving in place of grain a mixture of ground oats and bran.

Live Stock Certificates

G. D. R., Missouri: I have been thinking of shipping some live stock from this state to my farm in Nebraska. Would they have to be inspected, or does this rule only apply to the stock offered for sale? What is the mallein test? My stock are all in good health.

Answer—Live stock shipped from one state to another must have certificates from the state from which it is shipped before it can be admitted into Nebraska. This is true of all stock, whether for breeding, sale or other purposes. The mallein test is the one used to discover whether or not glanders is present in horses. It is much like the tuberculin test for cattle.

Calf Not Fed Enough

B. H., Texas: I am a subscriber of your paper and in reading it I find that the readers may ask questions in regard to stock, and I should like to ask one. I recently bought a cow and calf. The calf is 6 months old. It eats well, but when I feed it after a while it quits eating and goes to sucking its tail. I have asked several stockmen about this habit, but they have not been able to recommend anything that will stop it. It is a well-bred calf and I want to cure it some way. Would like to hear from you as to the cause and remedy.

Answer—This bad habit is caused by the calf not getting feed enough. Feed in a stanchion so that the calf cannot reach its tail, and feed plenty. Let it have plenty of milk and then leave it in the stanchion for some time, with a little alfalfa hay to nibble on. After a time, with sufficient feed and lack of opportunity to continue this practice, the calf will forget the habit. This method has proved successful in breaking the habit of calves sucking each others' ears.

Ringworm and Warts

G. Van A., Iowa: Could you please tell me what to do for ringworm on calves? Some of my pure-bred calves are badly affected with this trouble. Also for warts?

Answer—Ringworm is a trouble caused by a parasite. To cure the disease the little parasite causing it must be killed. There are several ways of doing this. In the first place, the sore should be thoroughly washed in warm water to remove the scabs. In this warm water an ounce of carbonate of potassium to each quart is beneficial. After washing apply a salve made of two teaspoonfuls of iodine to four tablespoonfuls of vaseline. Rub in well, being sure to wear a glove while applying. Do this once every three days until cured. Or a mixture of one ounce of carbolic acid to two ounces of alcohol may be made and applied with a feather; one or two applications of this is generally sufficient.

Warts are little skin tumors. Frequently they occur around the mouth and nose of young animals, but disappear of their own accord in a short time. If they persist longer than a few days pure acetic acid may be dropped carefully on the wart until it softens and disappears, after which treat the place with an ointment made of half ozide of zinc and half lard, applied daily. It is sometimes necessary to cut them out. This should be done carefully, being sure that perfect cleanliness is observed.

Cheese Making

E. E. L., Deming, N. M: I am a very thorough reader of your paper and take great pleasure in it. Now, I would like to ask some questions, to be answered through "Our Readers' Exchange" column: First—How do you make cheese from fresh whole milk? Second—Where can I buy rennet? Third—How shall I apply the rennet, also what proportion of rennet and milk should be used? Fourth—How shall I care for cheeses to keep out skippers? Fifth—How long will I have to continue greasing? Sixth—Can I use any of the substitutes for lard now manufactured?

Answer—First: On account of the time required and the experience which is necessary for the manufacture of good cheddar cheese, the process cannot be applied to farm cheese making in the average farm dairy. A good grade of cheese can be made by a shorter and more simple process, as follows:

Take fresh morning milk and cool to 86 degrees Fahrenheit. Add enough rennet to curdle the milk in eighteen to twenty minutes. This will require one-fourth to one-half ounce of rennet extract or one and one-half small rennet tablets to 100 pounds of milk. Dilute the rennet extract in about forty times its volume of water. Determine when the curd is ready to cut by inserting the forefinger in the curd at an angle of about 45 degrees, then gently raise the finger. If the curd parts with a clean break, leaving no flakes of curd on your finger, the curd is ready to cut. Cut lengthwise of the vat with a horizontal knife and then lengthwise and crosswise with a perpendicular knife. Be sure to cut the curd in such a way that the particles will be of a uniform size. Stir the curd gently for about five minutes, then slowly heat to 98 degrees Fahrenheit. Keep the curd in motion by gently stirring while it is heating. Keep the curd at this temperature for about fifteen or twenty minutes.

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To tell when the curd is sufficiently cooked, take a handful and press it gently, then open the hand; if the curd falls apart it is firm enough. The whey should then be drawn off and the curd gently stirred with the hands for a few minutes and then transferred to the cheese mold and subjected to light pressure for about two hours. The cheese should then be removed from the mold and put in warm water for a minute, then take a piece of cheese cloth about six inches wide and long enough to go around the cheese and lap about an inch. Wrap the cloth smoothly around the cheese and put a circular cloth on each side, fold the ends of the cheese cloth neatly over and then return the cheese to the mold. Return cheese and mold to the press and subject to moderate pressure for twenty to twenty-four hours. The cheese should then be removed from the mold and salted. Salting may be done either by rubbing dry salt over the outside of the cheese twice a day for three days, or by making a solution of salt and water as strong as possible; soak the cheese in this brine for two days. Turn every twelve hours and at the end of two days remove from the brine and transfer to a moist place where a uniform temperature of about 60 degrees may be maintained. After the cheeses have been placed in the curing room they should be turned and rubbed with the palm of the hand every day the first week or two. After that twice a week will be sufficient. They should be washed occasionally with a cloth dampened in warm water. If the cheeses become moldy they should be washed with a brine solution and a stiff brush. The cheese will be ready for use in from two to five months. If the cheeses tend to dry out, a coat of hot paraffine will check the evaporation.

Second: Rennet may be obtained from any good dairy supply house.

Third: Either liquid or tablet rennet may be used. Two or three ounces of liquid extract diluted with about a pint of cold water is sufficient for 1,000 pounds of milk. If the tablets are used one small tablet in about one-fourth pint of cold water will be sufficient for 100 pounds of milk. The amount of rennet should be varied to suit conditions. For a quick-curing cheese, enough rennet should be added so that the curd will form in eighteen to twenty minutes.

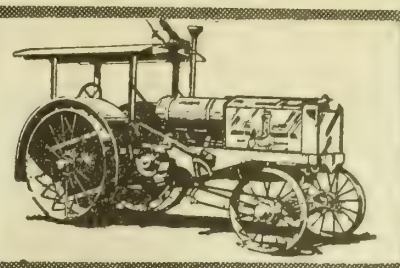
Fourth: Keep the cheese in a cool place and protect it from flies.

Fifth: Grease the cheese as soon as the rind is dried off so that the grease will stick. Continue greasing until the rind is well formed.

Sixth: Yes, but cheese is an article of food, so be sure that all materials used are clean and pure.

For Better Rural Schools

F. H., Nebraska: On reading through your paper on a stormy morning I found in your Readers' Exchange a few letters that I think are all right, and I notice the editor would like to hear our opinions on rural schools and their relation to the labor question. My opinion is this: If children could have the same schooling in rural schools that they can get in small towns, it would keep them at home helping to do the chores instead of getting into all kinds



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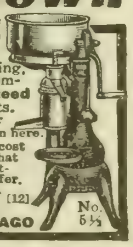

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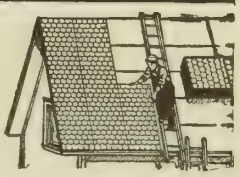

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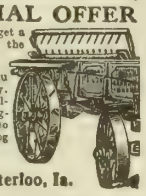

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of mischief. I know plenty of farmers that have quit the farm, rented it and moved to town to give their children an education. The rented farm grows poor; after the children graduate they feel too big to do farm work and want to get some easy city job; the parents have spent their money on the children, and now the rents are growing less as the farm grows poorer, so they get disgusted, sell the farm and live the rest of their lives in town. In that way there are constantly more town people and less farmers to raise the food, which makes foodstuffs constantly higher.

I must close, but will say first that in some manner we ought to do away with these small schools of five or six children and a school ma'm that is a kid herself. She can get a certificate, but when it comes to teaching the children she does not know how to do it.

Editor's Note—Why shouldn't the rural schools be as good as those in town? What is lacking? Let us have the opinion of some of the parents. Nobody is barred out. The teachers can have their say if they want to write.

Kind of Help Farmers Need

H. C. M., Nebraska: I have read different articles concerning more profitable and up-to-date farming. It is a hard proposition for the farmer today to keep up with the times on account of hired help. Good hired help, either male or female, is too scarce to do farming as it should be done. A lot of help is not what it ought to be. One reason is that wages are so high that when they work a month and have $30 to $45 they go to the city and loaf a month or two. I don't say hired help is all that way; there is some good help, but it is scarce, and when the good hired man has worked three to five years he has saved up enough to go to farming for himself.

I can remember twenty-five years ago, when my father used to pay his men $150 to $200 per year, or $15 to $18 per month. It was that way all over the country, and they were better men than they are now on an average, and most all of them have made good, because this taught them to be saving, and they were satisfied if they had a place to stay and work.

There are too many college boys nowadays. I have had several to work for me on the farm. They claimed to know all about farm work. They had never seen a farm, but had gone through high school and two or three terms of agricultural school, and they did not know the first thing about farming, not as much as a boy of 6 years knows that is raised on a farm—and that kind of men will write in a farm paper and tell the farmer all about farming and all about seed corn. The average boy 10 or 12 years old on the farm knows what corn will grow and what will not grow. If farmers had to depend on what these college boys preach they would be worse off than they are now. I claim you can't learn farming out of books and agricultural colleges alone. You have to have the actual experience right on the farm, and then a few terms at the school of agriculture are all right.

On the average the Nebraska farmer is one man short on 160 acres because he can't get help. When you do get a man you have to pay around $35 per month, and then he won't milk the cows or he won't do some other job, and every Sunday afternoon he wants to go to town or somewhere else and won't be back until Monday morning, and on Monday morning he doesn't feel very good and if he has to work much he will quit and go somewhere else, and there is always someone wanting a man. So you have to take that kind of help or do without, and it is about six of one to half a dozen of the other. If the farmer could get hired help that he could depend on for the season or a year, then he could arrange his work so it would pay better profits and he could pay his help better wages and help reduce the high cost of living all around.

I am fairly well acquainted with farm conditions here in eastern Nebraska, and what we are in need of here is help, and when we get that there will be better farming and more stock raised.

Editor's Note—In defense of the farm paper for which the kind of college boys referred to are supposed to write, why does the farmer take such a farm paper if he does not like the college boy articles? There are a number of agricultural journals that are made up entirely of college bulletins, which could easily be obtained direct, and the writings of these college boys. There are others that contain articles written by men of experience in the lines on which they write. The average farmer takes the cheapest one, or the one which happens to be represented by the most persuasive solicitor, or even the one sent him by

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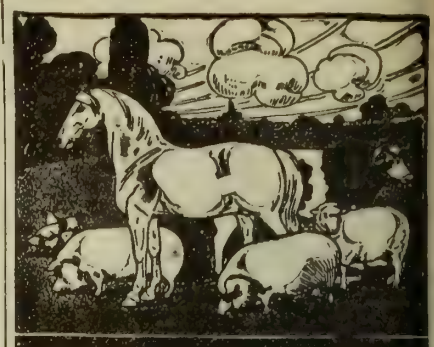

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is local bank. If the farmer would ive his support to the farm paper hat contains real information, writ- en by practical instead of theoreti- al farmers—and there are a num- er of this kind of papers—the time ould come much sooner when, by o-operation of farmer and editor, uch burning problems as that of arm help could be solved. The real arm papers have men who are com- aring what farmers under all sorts f conditions are doing. Their knowledge and observation is not onfined to one farm, one kind of oil and climatic conditions. The nore a common-sense person gets round where he can see what others re doing the better able he is to udge by comparison what is the est thing to do under certain con- itions. The farm papers with this kind of men on their staffs are worth while.

Home-Co-operation

(CONTINUED FROM PAGE FOURTEEN)

oups, and can cook meat and veg- etables equally as well as I, though t is not often that she does this. She can mend the stockings and sew very neatly.

"I do not allow one child to be the servant of another—all have work; Ruth keeps the top of side- board and dressers dusted and in order; Ralph makes little repairs needed with his carpenter tools; on days when we have extra work we join forces in picnic spirit and go after it for all it is worth. Early training can be relied upon as a val- uable aid in building up helpful habits. I do not command my chil- dren; if Ralph is playing outdoors and we need him in the house, I never say, 'Ralph, come in this min- ute,' but I think it fair to the child to give him a little leeway, and I al- ways say, 'Ralph, would you come in in about ten minutes?' or, 'When you finish the game would you come and fill the woodbox?' Children do not feel so resentful as they do when they are commanded to do something this very minute.

"I believe every child from the time it can walk and talk should be made a working member of the Home Building association. It is not just a matter of saving the mother, but it is the child's own good we seek; for the sake of his future he should not become a ten- derly-cared-for onament, placed in a home setting, and later on sent out into the world a weakling; but if given his simple daily tasks he feels that he is a living, active, necessary part of the life of the home, and he is strengthened for the work and re- sponsibility that increases with the years. There," said the sensible mother, "I have talked about my children and myself until I know you are very much bored.'

"I never listened to a more help- ful lecture; I am going to try to make over my children; when I started here Roy was trying to force Mary to button his shoes, which he could do himself. Do you think I can do anything for him, he is so selfish and indolent?"

"Every hope in the world; study it over and plan what each can do. Eternal vigilance wins the day," called out the wise mother as her neighbor went through the gate.

JESSIE WHITSITT.

Unknown Peru

(CONTINUED FROM PAGE SEVENTEEN)

Indians. About one-fourth of the in- habitants are Cholos, or half-breeds, a cross between the Indians and the whites, and there are altogether per- haps less than 1,000,000 who are of pure Caucasian descent.

A great part of the coast population lives in the cities and towns. Lima and Callao have together perhaps 200,000. Arequipa, the chief city of the south, has about 50,000, and there are several cities of 15,000 and upward in the small river valleys. On my way here I stopped at Palta. Its population is put down at 6,000, but it seemed to me that one-half that number would be a generous esti- mate. The next port was Eten, said to contain 13,000, and still further south was Pacasmayo and Salaverry, each con- taining 3,000 or more. Salaverry is the port for Trujillo, the old town founded to Pizarro in honor of his native town. It contains about 20,000. I was not able to visit it, owing to our short stay, al- though it lies only ten miles inland. It is said to be a beautiful place and to be surrounded by a very rich country. Pacasmayo looks like a little city of Arabia.

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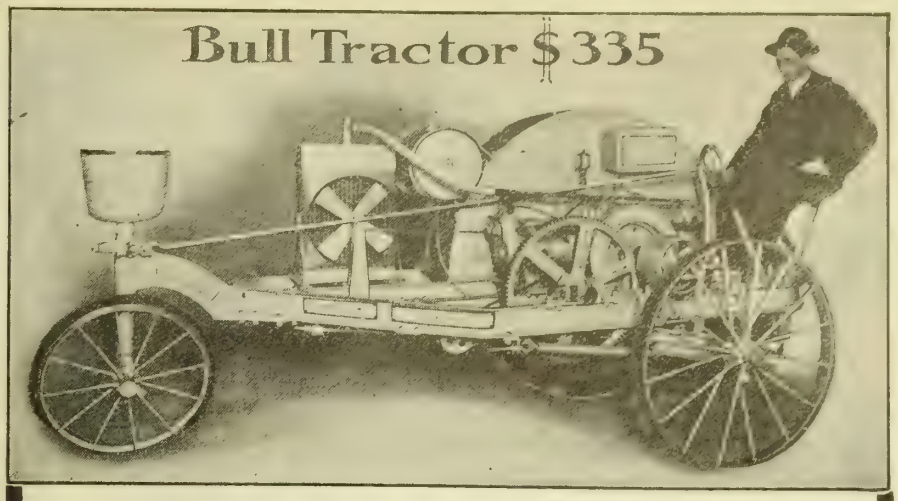

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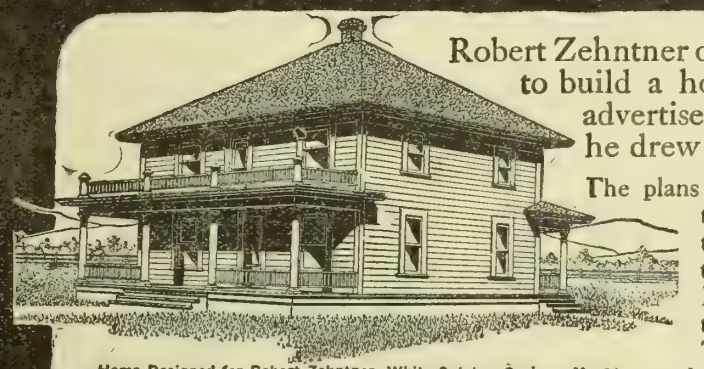
Turns Square Corners. Has Belt Pulley for Other Work.
Write for catalog and complete information to

Bullock Machine & Supply Co.
NEBRASKA DISTRIBUTORS,
2520 Farnam Street, Omaha, Neb.

Manufactured by BULL TRACTOR CO., Minneapolis, Minn.

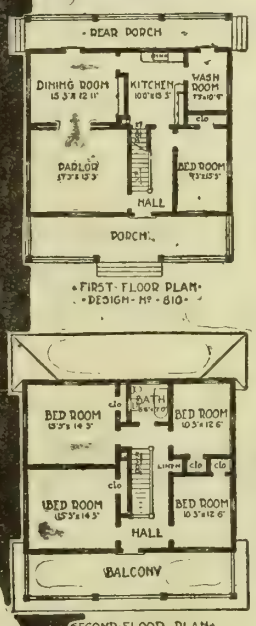
We planned this House and Saved Robert Zehntner $375.00



Home Designed for Robert Zehntner, White Sulphur Springs, Mont.

Robert Zehntner of White Sulphur Springs, Mont., wanted to build a home and answered a Hewitt-Lea-Funck advertisement. On the back of our question blank he drew a rough sketch of what he had in mind.

The plans you see at the left, and afterward, the house pictured, was the result. When it came to ordering the lumber, the local yard man asked for the chance to bid and got it, but he didn't get the business. Mr. Zehntner's letter to us tells why. "I unloaded the car," he says, "and found the material fine. The carpenters are well pleased, the finish being much better than I could have gotten here. The best local bid on the material was $375 higher than yours and lacked quite a bit of being complete."



Complete plans $2

If you like this house, *you* can get the complete plans, specifications, guaranteed estimate of prices on lumber, millwork, hardware, paint and heating plant delivered at your station—all for $2.

Our guaranteed price means *no extras*. We guarantee absolutely to provide sufficient materials to build the house, and guarantee grades equal or better, than required by standard rulings. Getting the plans does not obligate buying materials of us, if you do, you get your $2 back. If this plan doesn't suit,

Send coupon for Prize Plan Book —100 homes—all sizes—all prices

It's the *most practical* book of it's kind ever published. Every plan is a good one—a lot of them will please you—one of them will doubtless *just suit you*. Our architects worked over a year on this book. It cost us $30,000 to get it out. Books not nearly so good are sold at 50c to $2.00. Yet, ten cents, merely to cover postage, will bring *you* this valuable book, if you use the coupon.

Special plans at small cost

If none of the plans in this book quite suit you, and you have your own ideas of what you want, you'll find it easy to show us what your ideas are, just as Robert Zehntner did. We have a Plan Sheet for this purpose, that makes it simple. Give us a rough sketch of what you have in mind—and we will complete the plan for you.

Save as high as 60% on lumber—buy direct from the producer

Too many middlemen come between the mill and the lumber dealer—that's why his prices are so high. We cut out every single middleman and sell you direct at the *mill price*—a price that's way-down low, because the raw materials come from forests under our control. Our lumber is straight-grained, free from sap and large knots, doesn't warp or shrink. Makes a beautiful job.

Send for estimate—no obligation

Send us your carpenter's bill of materials for our prices, if you can. Do it even if you aren't ready to build. No charge or obligation. If we can be of any help to you in planning your building be sure to let us know. Our special plan sheet makes it easy to give us your ideas—ask for it. At any rate, mail the coupon today for catalog and general price list.

Silos at up to 60% Saving

Here's the biggest silo value you can get. *Buy direct*, at the mill price, a Seattle Silo of one-piece staves from durable Puget Sound fir. **Seattle Silos** have patented swinging doors. Door bars form strong ladder from which hoops are easily tightened.

Send the coupon for folder on Seattle Silos. Get our special one-farmer-in-a-town-offer. Write today.

HEWITT-LEA-FUNCK COMPANY
460 Union Avenue - - - Seattle, Wash.

Hewitt-Lea-Funck Plan Book

Hewitt-Lea-Funck Company
460 Union Avenue, Seattle, Wash.
(Be sure to write plainly and if possible send bill of materials for estimate)

Please send me the following:
[ ] Book of Plans (for which 10c in stamps or coin is enclosed)
[ ] Catalog and General Price List of Lumber and Millwork. Free.
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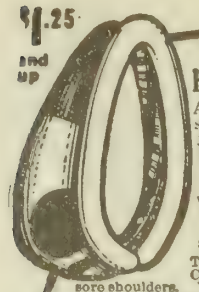


Save your horse's strength

A poor fitting collar saps the strength out of your horse—won't let him do his best. Give him a Lankford Humane Collar and he will have

No galls or sore shoulders

The Lankford Humane Horse Collar prevents galls and sore shoulders. When used on horses thus afflicted, it cures them immediately. Fits any shaped neck. Built of best duck, trimmed in leather and stuffed with soft, medicated cotton, which has remarkable healing qualities. Easy to put on and take off. Neat and serviceable. Collar and pad combined. Lasts three seasons or more. Unequalled for colts and horses just starting work. Will not sweeny the horse.

The Lankford HUMANE HORSE COLLAR

is guaranteed, if properly fitted, to cure galls and sore shoulders. Over 1,000,000 sold annually.

Free memorandum book

To those writing for particulars regarding Lankford collars, we will send a little book for keeping a daily record of sales, business transactions, engagements, etc. If your dealer hasn't Lankford Collars, write us. $1.25 and up.

The Powers Mfg. Co.
Dept. R-0 Waterloo, Iowa

Lumber, Millwork, Shingles, Sash *and* Doors *and* Mouldings

Delivered to you at wholesale prices. Let us save you 50% on your next house or barn bill. Prompt shipments guaranteed. Send us your lists of material wanted. Will furnish reference if desired. **LOCAL LUMBER COMPANY, 11th & Q Sts., Tacoma, Wash.**

CHOICE TREES AND PLANTS

Large assortment at less than half of agents' price. Best Everbearing and other sorts of Strawberries, all strong irrigated plants. Free catalog and coupon. NORTH BEND NURSERIES, Box 503, North Bend, Neb.

Kind of Care for Little Pigs

Must Be on the Job to Save the Crop

VERY often following such a winter as we have had we have a spring that is cold and wet, with little sunshine; consequently one that is hard on the little pigs, and often the mortality among them is great. It is always important to save this crop as best we can, but it is especially true this spring, for everything points to a good pork market the coming year.

How often do we look at the litter when about a week or 10 days old and think that we have one of the finest litters we ever saw, so fat and sleek and growing fine. Then in about two or three days we look at the same litter and some of them are dead and probably all the balance looking like they soon would be—thumps! We, in our rush of work, probably forgot that the weather was cold and cloudy and that the little ones were lying in their all the time and getting no exercise. At the same time we were gradually increasing the feed on the sow, causing an increased flow of milk.

What is to be done? Not very much can be done when the pig once gets the thumps, but there are many things to do before he gets them. If the weather is such that the little pigs are not exercising quite a little, you must get after them and run them around the lot until they are quite tired out; do this at least twice a day, and then it is well to not feed the sow too heavily, but exercise is the all-important thing. Watch the litter carefully and when you see these little fellows begin to look overly fat and sleek, especially if there is developing a roll around the heart or neck, lookout, and don't lose any time in getting busy with your exercise.

Scours in pigs is another thing that has to be watched, and it can take a litter, or stunt them to such an extent that they might as well be taken, before you realize the danger. Over-feeding of the sow and improper bedding are the main causes of scours. Both the sow and the litter should be carefully watched, the feed of the sow to be regulated by the way the litter is looking. A good feeder will never feed a sow with a young litter until he looks at the pigs to see that they are all right. A litter might show the first symptoms of scours and the damage be remedied at once by the right feed to the sow at that particular feeding time, or the litter ruined by giving her a heavy feed. If you find some of the litter showing scours, shut off the sow's feed at once; give her possibly a little oats, no slop, a few drops of carbolic acid in the water; watch the litter and you can readily tell when you may safely increase the feed.

Clean bedding is almost as important as feed. Under no circumstances allow the pigs to lie on damp bedding. When you do you are courting disaster. If necessary clean out the nest every day and put in clean, dry bedding; use wheat or rye straw, prairie hay, millet hay or shredded fodder. Under no circumstances use oats or barley straw. Prepare yourself for this part of the saving of the pig crop and be sure that you prepare yourself well.

Greenish Slime in Cream Separator

There has come to our attention a case in which a thick, greenish slime was observed to collect in the cream bowl of the separator. It was thought by the reporter that this accumulation was due possibly to a diseased condition of the cows from which the milk came. Examination of the green slime showed the presence of numerous microscopic green algae. These algae are simple plants living in the surface layers of soil and under favorable conditions reproducing very rapidly. Obviously in the case mentioned the udders of the cows had become covered with mud and dirt, containing these algae, and some of this had found its way into the milk. W. W. ROBBINS.

Colorado Agricultural College.

Sale Dates

Hereford Cattle

April 14 and 15—Breeders' Combination sale at South Omaha, W. N. Rogers, McCook, Neb., manager.

March 25—W. N. Rogers, McCook, Neb., dispersion sale, South Omaha.

Aberdeen-Angus Cattle

April 1 and 2, 1914—Charles Escher, Botna, Ia. Sale at South Omaha, Neb.

Hampshire Hogs

March 14, 1914—Roy Fisher, Winside, Neb. Sale at Wayne, Neb.

Shorthorns

March 11—E. H. Cosgrove, Farnam, Neb.

March 20—William Ferguson, Scribner, Neb.

March 24—A. C. Shallenberger, Alma, Neb.

March 20—Will Ferguson, Scribner, Neb.

Horses

March 19 and 20—North & Robinson, Grand Island, Neb.

The past dry season and open winter has caused pocket gophers to attack alfalfa fields voraciously, increasing the sale of Gopher Death for November and December 600 per cent above normal for ten years past. See adv., page 16, this issue.—Advertisement.

SOUTH OMAHA

Great Live Stock Market of the West

SOUTH OMAHA is the most convenient and centrally located large market for the Nebraska shipper, where his stock can be sold in unlimited quantities with the *least shrinkage and risk; lowest freight* and *best transportation* and be assured of net returns *unequalled elsewhere.*

Nebraska's Home Market

THE SHIPPERS of Live Stock desire *service* when their stock has arrived at the market. The management of the *South Omaha Market* has anticipated this fact and has expended during the past four years *over one million dollars* for permanent and up-to-date improvements to provide the live stock shipping public with

Market Facilities Unexcelled by Any Other Market in the World

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Draft Horses at Auction

With this issue of Twentieth Century Farmer we are starting an advertisement of North & Robinson of Grand Island, Neb., who will hold their annual sale of draft horses at that place on March 19 and 20. This sale is looked forward to each year by a great many horsemen as a place where they can get what they want. They have come to know that when North & Robinson drive a horse into the sale ring it is going to be sold. This fact, together with the high character of the horses they handle, has enabled them to build up a business second to none in the west. In this sale they will sell sixty head of Percheron, Belgian and Shire stallions and mares, about thirty head of them being imported and the balance home-bred. Their imported horses have been in this country long enough to become thoroughly acclimated and most of the home-breds are bred and raised on their large breeding ranch at Bridgeport, Neb. Their colts are pasture raised and are the big, heavy-boned, rugged kind that cannot help but go out and make good. This will be, without question, the largest, smoothest, heavy-boned lot of horses that have ever been offered for sale. If you are looking for a first-class stallion or a few mares, we do not know of a better place to go than to this sale. Write for catalogue and look it over, and remember the date, March 19 and 20. When writing kindly mention Twentieth Century Farmer.

Shorthorns at Scribner, Neb.

On March 20, at Scribner, Neb., Will Ferguson of that place will offer for sale one of the choicest lots of Shorthorn cattle that has been sold for some time. These cattle are a strictly clean lot of well bred, highly useful cattle that cannot help but go out and make good for the purchaser. They have not been pampered and are a strong, rugged lot. With two or three exceptions, they are under 5 years old. There was never a better time to get hold of some good cattle. If past experiences and present conditions are to be considered as a barometer, the future in the cattle business certainly looks bright, and in our opinion the man who is far-sighted enough to possess himself of some good cattle at this time will certainly make no mistake. Just such cattle as are to be offered in this sale are the kind to buy. They are working cattle; they are the kind that will begin to bring in a revenue right from the beginning. About one-half of the offering is of good Scotch breeding and the balance are highly Scotch topped. A number of the cows are by Bonny Champion 336075 by Champion of Cedar Lawn 20375. Quite a few of the younger females are by Bar None 3d, a splendid son of Bar None 2d. There will also by a number of particularly choice young bulls sired by Bar None 3d. Practically all the females of breeding age are either safe in calf or will have calf at foot on sale day. Write for catalogue and arrange to attend this sale. Kindly mention Twentieth Century Farmer when writing.

Bred Duroc Gilts

W. G. Unitt of Seward, Neb., is offering for sale a select bunch of Duroc-Jersey bred gilts. These gilts are large and growthy, not fat, as they have been fed a ration of 60 per cent ground alfalfa hay and 40 per cent corn and have had plenty of exercise. They are all good colors, with good length and bone, and are due to farrow the last of March and April. They are all out of aged sows and an aged boar and bred to an A-No.-1 spring boar, with plenty of length and bone. He will sell these gilts single or in lots to suit purchaser, and every one guaranteed to be safe in pig. He will be glad to furnish further information as to their breeding, etc., if you will drop him a card. Kindly mention Twentieth Century Farmer when writing.

The Animal for Slaughter

An animal should never be losing in flesh at the time of slaughter. If failing, the muscle fibers are shrinking in form and contain small amounts of water. As a consequence the meat is tough and dry. When the animal is gaining in flesh the opposite condition obtains and better meat product will be obtained from an animal in only medium flesh but gaining rapidly than from an animal that is very fat but not gaining in flesh.

GRAIN BELT BRAND
Vegetable Hog Potash

The Perfect Worm Expeller, Appetizer, Conditioner and Bone Builder.

Send $2.50 today for trial 125 pound bag. Your money back if not entirely satisfactory.

Grain Belt Supply Co.
South Omaha, Neb.

Shorthorns at Auction

55 Head of High Classed Shorthorns, About One-half of Which Are Scotch and the Balance Highly Scotch Topped to Be Sold at

Scribner, Neb., March 20, 1914

This will be a strictly first-class offering of highly useful breeding cattle. There will be a number of cows with calves at foot and practically all of breeding age are safe in calf. With few exceptions, these females are under five years old and are just in the right condition to go out and do good for the purchaser. They are bred mostly to SCOTTISH LAD 304896, a splendid son of Acanthus Lad 293299. There are a number of extra choice young bulls by Bar None 3d by Bar None 2d. Catalogues are now ready.

WILL FERGUSON,
G. E. HALL, Fieldman. SCRIBNER, NEB.

DUROC-JERSEY HOGS

Duroc-Jersey BRED GILTS FOR SALE—With length, bone and quality.
W. G. UNITT, Seward, Neb., Route No. 2.

HORSES

GREAT DRAFT HORSE SALE

60 HEAD -- 30 Stallions 30 Mares -- 60 HEAD

At Grand Island, Neb., March 19 and 20, 1914

This will be one of the best offerings we have ever put through a sale ring. We will show you more TON STALLIONS than will be sold in any sale this season.

We will sell 30 HEAD OF IMPORTED stallions and mares and 30 HEAD OF AMERICAN BREDS, mostly of our own breeding. They are pasture raised and will make good.

You can find what you want in either a PERCHERON, BELGIAN or SHIRE. They are BIG, with plenty of bone, style and quality. Along with this, they are thoroughly acclimated and are sold under an iron-clad guarantee. Catalogues are ready and will be mailed on request.

NORTH & ROBINSON CO., Grand Island, Neb.
Auct., Z. S. Branson. G. E. Hall Will Represent This Paper.

The Breeding Season Is Drawing Near

You, Mr. Farmer and Breeder, will be out looking around for **draft stallions**, and we want to impress upon you to come and see our offerings. You will find at our barns **two-year-old** Percheron and Belgian stallions weighing **2000 lbs.** and over—horses of **quality, scale** and **substance**—at the lowest possible prices. European and American prize winners—stallions that will go out and do you and your community good. We also have some extra good Imported and American Percheron and Belgian mares in matched teams. A certificate of soundness goes with every stallion. Correspondence solicited and inspection invited.
WOLF BROS., ALBION, BOONE COUNTY, NEBRASKA.

Foaled and grown on the farm, offered at farmer's prices. Eight coming 2-year studs, 9 coming 3-year studs, 8 3-year-old and over studs, registered Percheron Society of America. Of the big type with substance and from French ancestry on both sides. Just east of Omaha. **FRED CHANDLER, Rt. 7, Chariton, Iowa.**

JACKS

The kind all are looking for; large boned black Mammoth Tenn. and Ky. Jacks, 2 to 6 years old; guaranteed and priced to sell. All broken and prompt servers. Reference: Banks of Lawrence, 40 miles west of Kansas City on U. P. and Santa Fe.
AL. E. SMITH, LAWRENCE, KAN.

50 Mammoth Jacks and Jennets

A lifetime experience in breeding the large, thick, big-boned, good head and eared kind that produce the good Missouri mule. Two extra good Black Percheron 4-year-old Stallions.
G. M. SCOTT, Rea, Mo.

80 Imported Percheron and Belgian Stallions and Mares on Sale

My exhibit comprises the largest number of big, heavy-boned, 2000 to 2400-pound stallions to be found in the United States. The Cedar Rapids Jack Farm is the jack metropolis of the world. All nations buy jacks here. The majority of the best mules in the United States are the results of the past twenty years' improvement inaugurated and carried on here. Write for catalogs. Come to me when you need stock. I will make it worth your while.
W. L. De CLOW, Cedar Rapids Stallion and Jack Farm, Cedar Rapids, Iowa.

PERCHERON STALLIONS

I have several high class Percheron stallions for sale. All good, desirable colors, weighing 1,700 to 2,100 pounds and from 2 to 7 years old. These stallions are of my own raising and are absolutely right in every way.
GEO. W. SCHWAB, Clay Center, Neb.

RED POLLED CATTLE

RED POLLS

Bulls and heifers for sale. Prices reasonable. Quality the best. Satisfaction guaranteed. Write your wants or call.
W. F. SCHWAB, Clay Center, Neb.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

The Wisconsin Farmer notes that fewer and fewer of the Wisconsin farmers are content to milk and care for cows that are able to produce only about 150 pounds of butter. During two weeks last spring 175 Wisconsin dairymen purchased registered purebred Holstein sires in order to improve their herds.

Everywhere the more progressive dairymen are alive to the necessity of using bred-for-production sires in order to bring up the butter-fat yield of their cows to a profitable figure.

Send for FREE Illustrated Descriptive Booklets.
Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro, Vt.

When writing to advertisers on this page please mention this paper.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.
DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

MULE-FOOT HOGS

Blue Ribbon Mule Foot Hogs.
Largest herd in U. S.; the most hardy, prolific, healthy and quick growing breed; they bring top prices on market; for breeding buy the best and start at the top; 350 for sale. Jno. Dunlap, Box 406, Williamsport, Ohio.

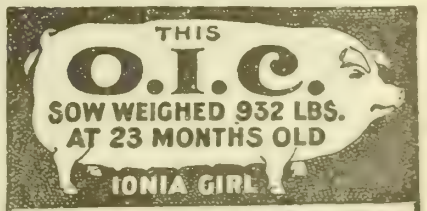
Please mention the fact that you saw it in Twentieth Century Farmer when writing to advertisers on this page.

JERSEY CATTLE

WINELAND FARM JERSEYS

Bulls of serviceable age for sale, sired by Duke Raleigh by Noble of Oakland. Also a number of choice heifers bred to freshen soon. I can suit you in both quality and price.
H. C. YOUNG. Lincoln. Neb.

O. I. C. HOGS



I have started more breeders on the road to success than any man living. I have the largest and best herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **G. S. BENJAMIN** RFD 79 **Portland, Mich.**

Review of Live Stock Market

By A. C. Davenport

NO NEW features of any great importance or special interest have developed in the cattle markets of the country during the last week. Prices have fluctuated to some extent, being alternately higher and lower, but without making any material change in either direction. The tendency toward a wider spread between the best cornfed cattle and the common to medium grades of short fed cattle still continues. This is no more than was to be expected considering the relative scarcity of strictly well finished beeves and the liberal supply of less desirable kinds.

Genuine winter weather in the east caused a better demand for dressed beef, and that of itself was sufficient to give the markets of the country a little better tone. On the other hand, Lent may be expected to somewhat curtail the call for beef. In view of this fact, operators on the market are generally advising their friends in the country to be a little conservative and not ship too freely during the next thirty days.

With nominal receipts no great change is anticipated in the market for some little time to come, the feeling being that there are enough cattle on feed to take care of the wants of consumers for the next few weeks without advancing values. Prices on good to choice beeves are already high and judging from the shrinkage in consumption whenever they show material advances, they are about as high as consumers will pay. On the other hand the medium grades of cattle are not up to what sellers would like to see and are not high enough to make feeders any money excepting where the cattle were bought at comparatively low figures. This brings to mind the fact that there is a general complaint regarding the high cost of stock and feeding cattle. While everyone seems to realize that such cattle are selling too high as compared with beef cattle it has seemed impossible to get prices down and keep them there, as farmers have been so anxious to stock u that they bid prices up on themselves

Good Demand for Hogs

Hogs have fluctuated within narrow limits all the week past, up one day and down the next, without any very marked results either way. Packers seemed to feel that prices are high and they act consistently on the bear side of the deal, pounding the market good and hard as often as receipts become at all liberal. On the other hand there is a splendid shipping demand which helps to maintain values. It is a noticeable fact, however, that even the packers seem to regard hogs as worth the money and as often as they succeed in breaking prices down a few cents they cannot resist the temptation to buy so freely that values spring back almost immediately. In spite of the fact that the opposition of the packers to further advances renders the trade slow and draggy on many days, the market as a whole is in a good healthy condition and in the main satisfactory to the selling interests.

Prevailing prices are now around 20c per 100 higher than a year ago, and over $2 per 100 higher than two years ago. In fact the market is the highest that it ever has been at this season of the year, with the single exception of 1910, when prices were close to $1 per 100 higher than they are now. Considering that the market is the best that it ever was at this time of year with one exception, it must be admitted that the trade is in a very satisfactory condition, and that previous bull predictions have been fully borne out.

As to the future of the market there is some difference of opinion. Receipts have recently been quite liberal and there are people who predict that they are going to prove larger than anyone anticipated. Those who hold to this opinion feel that the market is already as high as it ought to go under existing conditions for the next thirty or sixty days. On the other hand the bulls are still firm in their belief that receipts will prove far from large and that prices in consequence will show still further advances before the coming of summer. It will be observed that the bulls do not set any special date for the advance, admitting, as many of them do, that prices cannot be expected to advance materially so long as receipts continue as liberal as they have been during recent weeks. It might be observed in this connection, that the so-called liberal receipts already show a decrease of 270,000 head at the six big market points since January 1, as compared with a year ago.

Liberal Supply of Sheep

Sheep and lambs during the last week have shown very little change, prices being alternately higher and lower. The buying demand has been good, but receipts have also been liberal, so that there has been no opportunity for any permanent advance in prices. For the year, to date the receipts at the six markets show an increase of 183,000 head over the same period last year, sheep being the only kind of stock to show increased marketings.

It is an open secret that feeders of sheep and lambs are none too well pleased with the market. While prices have run very evenly, the average, especially on lambs, has not been high enough to give them much of a margin of profit, considering the high cost of the feeders last fall. The feeders of sheep are in about the same position as cattle feeders—that is, the stock cost them too much to begin with, and after feeding up a lot of high-priced hay and corn the difference between the selling and buying prices are not great enough to make satisfactory profits.

The future of the market does not give promise of any very immediate change. All reports agree that there are plenty of sheep and lambs on feed, and receipts will be large until the coming of grassers.

HACKNEY AUTO-PLOW

The "One-Man" Outfit

Gasoline-Kerosene Burning Motor

HEAVY DUTY TRANSMISSION

Leads the World as a Combination Tractor and Farm Power Machine for Plowing, Seeding, Discing, Harrowing, Harvesting, Road Grading, Orchard work, Hauling, Grinding Feed, Sawing Wood, Threshing, etc. Send for our literature.

HACKNEY MFG. CO., 574 PRIOR AVE., ST. PAUL, MINN.

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Count every word, initial, sign and numeral, including the address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred five thousand farmers are regular paid-in-advance subscribers to TWENTIETH CENTURY FARMER. If you have any wants, or if you have anything to sell, insert an ad. in this department.

POULTRY—Ducks

RUNNER DUCK BARGAINS—AGNES Young, Loveland, Ia.

Leghorns

RIDGEDALE WHITE LEGHORN Farm, established 1905; cockerels, eggs, cheap. Lee Schureman, Route 4, Lincoln, Neb

SINGLE-COMB BROWN LEGHORN eggs, $4 per 100, $1 per 15, $2.25 per 50. From 200 large, 2-year-old hens mated with cockerels scoring to 93¾. Heavy laying strain; guarantee good hatch. Edward Dooley, Selma, Ia.

ROSE-COMB BROWN LEGHORN eggs—15, $1; 100, $4.50. Olga Hayek, Linwood, Neb.

SINGLE-COMB WHITE LEGHORN hens and cockerels. Will Rockwell, Hubbard, Neb.

Langshans

FULL-BLOOD BLACK LANGSHAN cockerels for sale. C. C. Cunningham, Kennard, Neb.

CHOICE BLACK LANGSHAN EGGS—Mae Curtis, Lyons, Neb.

BLACK LANGSHAN EGGS—CIRCular. Jake Hetrick, Wahoo, Neb.

BIG-SCORED BLACK LANGSHAN cockerels, $2.50 each, guaranteed. H. Osterfoss Farm, Hedrick, Ia.

Minorcas

HIGH-CLASS BLACK MINORCA AND and Buff Orpington eggs. Frank A. Agnew, South Omaha, Neb.

Orpingtons

SINGLE-COMB BUFF ORPINGTONS, Cadwell strain—size, vigor, type and color, with ability to lay; 85 per cent fertility. Baby chicks, 25c each; guaranteed eggs, $2.50 and $1.50 setting; lots, $6 per 100. Instructions for home-made oxygen vitalizer with every $2 order. Catalogue free. Gene Huse, Norfolk, Neb.

EGGS FOR HATCHING FROM THOROughbred White Orpingtons, $1.50 per 15. Wm. Langbehn, Avoca, Ia.

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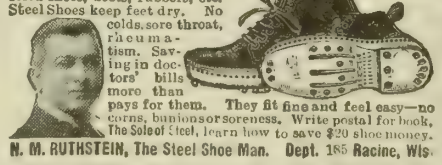

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For Collar Boils and Sore Shoulders

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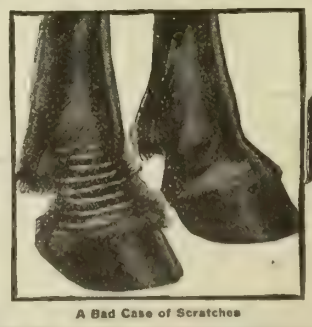

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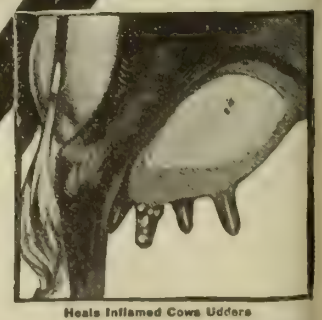

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TWENTIETH CENTURY FARMER

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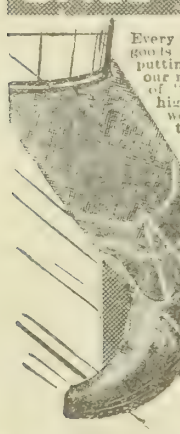

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Care of New-Born Calves

FROM now on for several weeks there will be many calves born into the world. Calves are valuable property in these days of high prices for breeding stock, dairy stock, beef and veal. They are worth a little extra care and attention. There have been many inquiries sent to us recently regarding the care of the new-born calf and the prevention of the dreaded calf disease—white scours. We believe a good article, from a practical man who has had experience covering many years in raising calves of both beef and dairy breeds, will be appreciated by all our readers at this time. In our next issue this very practical article will be published. You may rely upon the advice given, as the writer has had occasion, both on the range and in the dairy barn, to practice what he preaches, and speak from an experience covering many years.

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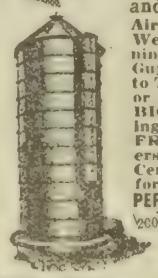

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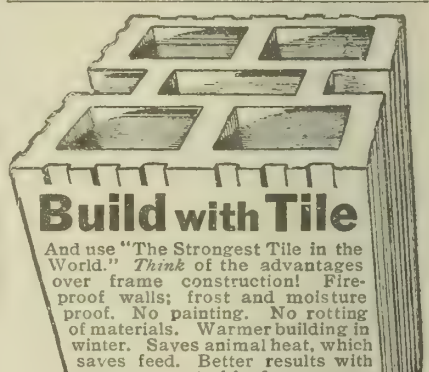

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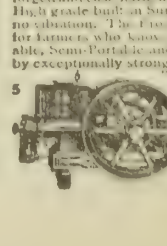

THE JOHN LAUSON MFG. CO.
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THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Making and Marketing Good Farm Butter

There is Always Demand for A1 Country Butter Put Up in Neat Packages

IN THESE days of creameries scattered over the country butter-making on the farm is less common than it was a few years ago. On many farms no butter is being made at all; on others there is a good deal of butter made and a good market is found for it in some neighboring town. Country butter is conceded to be far better than the best of creamery butter, if it is good country butter. Frequently the country butter on sale in the city markets is far poorer in quality than the cheapest renovated butter. There are two reasons for this. The first is that care and cleanliness are not observed in the making, and the second is that after good butter reaches the market in the city it is often placed in a refrigerator with inferior butter and absorbs odors and tastes from it. This second reason is out of the power of the farm butter-maker to remedy except in so far as he may place his product in sealed packages which will keep out foreign odors.

Where the farm is near the town or city it is often possible to get regular customers who will buy direct and thus save the middleman's profit. If good, sweet butter is furnished these patrons regularly they will not only continue to buy it, but will recommend it to their friends, so that the demand for this class of butter, especially in the smaller towns, usually far exceeds the supply. From the standpoint of the customer it is almost impossible to find good country butter. There is plenty of country butter on these small markets, but as a rule it is not good.

Causes of Defects

The commonest defects of farm butter are due to bad flavors, lack of uniformity in color and salt and poor packages. The causes of these defects are lack of cleanliness and attention to details. Since more than one billion pounds of butter are produced annually in the United States, every butter-maker should try to avoid these faults.

Good butter cannot be made from anything except clean, pure cream. To get good, clean cream the milk must be clean. To avoid dirt in milk, keep the cows on pasture if possible; do not feed dry, dusty feed before milking, and clean the cows' udders with a damp cloth; keep the milk vessels, the separator and the cream cans sweet and clean by cleaning with warm water, scalding and airing well every time they are used. Never mix warm and cold cream.

Keeping Cream Cool

Cream keeps well in running water from springs or wells. When kept in caves, cellars and other poorly ventilated places it develops bad odors and butter of a poor quality results. A good place in which to keep the milk and cream is a tank through which the water for the live stock of the farm passes. If the milk house is built near the well, preferably just south of the pump, and a pipe to carry the water directly to the bottom of a cooling tank with an overflow pipe from near the top emptying into the stock tank is installed the dairy products can be be kept from 10 to 20 degrees cooler than in the cellar. Cream kept in this way is always in good condition, and butter made from it never has a strong, bitter taste. Cream absorbs bad odors readily, so coal oil and spoiled or strong-smelling meats and vegetables should be kept away from the milk house.

A Tribute to the Cow

MOST potent of all single influences in the building of this, the mightiest nation in history, is the cow. Her sons drew the plows which first cultivated the land of the new world, hauled to market the products of the field, and with slow energy moved the chattels and household goods beyond the mountains to new homes in the farther west.

They supplied the beef, which is the food of the Anglo-Saxon, a race that was never conquered since history began. They furnished the shoes of the pioneers who trod the unknown wilds and made of them the farmsteads and cities of our present enlightenment. They gave the clothes and robes to protect the pioneer against the destroying blasts of winter and made commerce possible before the railroad was. They covered the chair upon which he sat, filled the mattress upon which he slept and glued the furniture which he used.

The old cow is mother of the whole bovine race and foster mother of half the human race. From the roadside weed she manufactures the most nourishing of human foods. She is the ready aid of the farmer, the pet of the rich man and the ever-present help of the poor. She is the economist of the people and the conservator of their resources. She partakes of the grass of the field and leaves the farm the richer for her presence.

As she helped to develop the farm from the wilderness, and as she ate of its first fruits, so she will renew the life of the soil and make a still greater agriculture possible.

In all our history the cow has been man's closest friend and benefactor. Upon her products are built the great business interests which center in the stock yards, the creameries, the shoe factories, the harness shops and the mills.

Take away the cow and our banks would close, our graveyards yawn and the wheels of commerce would cease to turn. Foster and care for her and business flourishes, the fertility of the soil is conserved and she becomes the custodian of the nation's prosperity.

Normally enough bacteria are present in cream to ripen it, but sometimes starters are added. Starters tend to give the butter a uniform flavor, hasten the ripening of the cream and improve the quality of the butter. Starters are of two kinds—natural and artificial. Artificial starters are manufactured in bacteriological laboratories, and can be bought on the market. Natural starters include the following: Skim milk, buttermilk, whole milk and ripened cream. Any of these materials give the desired results provided they are absolutely clean and have present in them considerable numbers of the acid-producing bacteria.

Flavor and appearance indicate in cream the proper degree of ripeness for producing the best butter. An acid test is used in creameries. Apparatus and directions for this test can be bought from any good dairy supply house. During the ripening, cream needs frequent, thorough stirrings so that the butter-fat and the bacteria will be equally distributed through all parts of the cream.

How and When to Churn

The per cent of butter-fat in the cream, the fullness and speed of the churn, the breed of the cows, their feed and the acidity of the cream all influence the process of churning. Cream from certain cows churns more easily than that from others. The proper churning temperature is between 50 and 60 degrees Fahrenheit, depending on conditions. Cream kept several days before churning should be kept at a temperature of about 50 degrees. Several hours before churning the cream should be heated to a temperature of about 70 and kept at that temperature a few hours and then cooled gradually to about 60, or lower. After two or three hours at this temperature the cream is in condition to churn without becoming frothy.

In churning, the object is to make the small particles of butter-fat scattered throughout the milk serum unite in granules of a certain size. Granules about the size of corn kernels or peas allow the complete removal of the buttermilk and an even distribution of the salt. Also, the butter is of better texture when the granules are of the proper size. The proper size can be secured by stopping the churn frequently after the butter breaks.

In a full churn the agitation and concussion are limited. If the amount of cream is too small for the churn considerable cream sticks to the sides of the churn and fails to receive the same agitation as the rest. With a barrel churn one-third to one-half full the best results are obtained. When such a churn is revolved too rapidly the cream stays in one end of the churn; if it is revolved too slowly the cream flows from one end to the other and the butter granules fail to form. The speed should be regulated so as to give the cream the greatest amount of movement possible.

To remove the buttermilk after granules of

(CONTINUED ON PAGE TWENTY-ONE)

Fodder in the Shock

— Gordon Wilson. —

Whitcomb Riley had a birthday just a little while ago;
When they said that he was sixty, right away I answered "No."
For I've read all Riley's verses, everything he ever sold,
An' I couldn't think of Riley—Whitcomb Riley—gettin' old.
I had always thought of Riley as a sunburned Hoosier kid,
Guess I thought he still went swimmin' like the other youngsters did,
So this talk of sixty birthdays almost sounded like a knock—
Until I recalled his poem about fodder in the shock.

Yes, I guess J. Whitcomb Riley must be sixty, anyway,
For the farmers don't leave fodder lyin' out in shocks today.
They don't leave their biggest asset out, exposed to sun and rains,
And then try to fatten cattle on the fiber that remains,
Of course, they might have done it back when Hector was a pup,
But since that time another breed of farmers has come up—
Men who realize it's up to them to really feed their stock,
And a frost is on the farmer who puts fodder in the shock.

Oh, the Indian summer wakens just as glad a thrill in me
As it did in any farmer in the fall of '63.
All the Plymouth Rocks and Berkshires, too, are glad that they're alive.
And the cattle, fed on silage—well, you ought to see 'em thrive!
All the feed I'll need this winter in my silo has been placed
Where none of its good qualities can ever go to waste;
There it stands, my concrete silo, built as solid as a rock,
So the frost can come, and welcome.; I've no fodder in the the shock.

What Silos Are Doing for Southwest Texas

THE "silo town" is going to be an interesting result of the advent in southwest Texas of these wonderful means for conserving green food for cattle. Silo towns are already developing. They are going to be queer looking places, to be sure, but business will be good in the silo towns, and civic beauty will have to take care of itself.

The principal advocates of the silo in southwest Texas are the cattlemen, and they don't raise the raw material for silage. Consequently they make contracts with the farmers to pay them $3 a ton for certain quantities of green stuff. Then the cattlemen build their own silos. Some have as many as fifty, and when the movement is more generally developed than at present there is no doubt that some of the larger ranches will need several hundred large silos to feed their cattle. They tend to congregate the silos in towns because of the fact that cattle are shipped in and out by rail to be fed and then moved on to market. It will readily be seen that a town with a hundred or more large silos will be an important trading point for the farmers—a place where many cattlemen will come during the year, and an important shipping station. Such is the situation in this section of the state that silos alone might prove the foundation for the existence of a town.

The Texas cattleman and farmer have not wasted love on one another in the past. That spirit of unfriendliness has shown itself in many ways to the detriment of all concerned and the country in general, but the silo has proven the bond of unity between the farmer and stockman, and this section looks forward to a new era of development in consequence. In the old days the stockman frequently had to move his cattle to north Texas or Oklahoma when pastures were dry. In recent years it has been difficult for him to fatten cattle on his place because the price of cottonseed products has been rising so rapidly and the situation was becoming difficult in the extreme. Now at one stroke he finds himself freed of the nightmare of sun-scorched pastures, railroad freight for starving cattle, glutted markets and all that sort of thing. With silage he can fatten his cattle with much less cottonseed meal, and, altogether, he is beginning to think his farmer friend is a most worthy citizen. On the other hand, the farmers of this territory are blessed with rich soil and irrigation facilities at reasonable cost, but find themselves so far from the markets that their perishable produce grown at great cost under intensive methods does not always bring profitable returns. They have yet to struggle with the marketing problem and to win a secure place in the larger markets for their stuff at certain seasons. In the meantime, they want something to depend upon as certain money. The cattleman with his silo offers them a profitable price for the crop that they can raise the most of for the least money and with the least attention. Ordinary land under irrigation will produce eighteen tons of green Kaffir to the acre and give two cuttings a year. Three times thirty-six is 108, which is the number of dollars gross return per acre the farmer gets for this crop in a season. This is nearly all profit.

While the truck growers have dotted southwest Texas with green patches, the territory is so large that it is still essentially a cattle country, and must remain so for many years. It will take a long time for the man with the hoe to win all this fertile land. Moreover, there is much of it that never will be good for anything but range. Thus there is prospect that this arrangement between farmers and cattlemen will go on indefinitely. The only obstacle in the way now is that the farmers cannot raise all the green stuff the cattlemen would like to buy. As the business gets better established and the number of silos in the most favored towns increases there are going to be some strange looking municipalities in Texas. But business will be good there.

CHESTER T. CROWELL.

Dairying Methods for City Milk Supply

How An Iowa Man Has Built Up a Good Business in this Line

THE dairy industry might very properly be termed a diversified industry. It has more special phases of operation than any other line of work associated with agriculture. With the cow as its basis of operation, it builds to suit the fancies and inclinations of the operator. We see the creamery gathering cream here and there from the farmer-dairyman for the manufacture of butter for the city trade, the big commercial butter trade of the world. We see the more centralized effort of the farm dairy, where a larger number of cows are kept and where the business efforts of the farm are being devoted mainly to the production of cream to be sold and shipped direct to the large city creamery. We see the farm dairy spirit taking hold in every community in almost every state, in a small and modest way at first, where there are but a few cows kept on the farm and where the cream separator has been installed and a few gallons of cream gathered each day for contribution to the great flow of butter-fat that is constantly going out from the farm, and in its stead is being replaced by millions of dollars, the produce of the factory, the labor of the city.

Family Cow the Foundation

We see the dairy industry represented by the city milk supply, where thousands of cows are used within easy reach of the retail distributing centers of each of our large cities and where the most energetic effort is being put forth to compel purity, sanitation and general good condition of the milk supply. And we see the old family cow that is in use everywhere in her individual effort contributing to the comfort and well-being of mankind, where milk is the recognized basis of human nutrition, the essential in food supply.

This old family cow, the noblest work in animal creation, the most dependable support of man, as she has been from the beginning of time, is still found standing upon her individual record in her neighborhood, which she has acquired by common contest and without competition—"the queen of the realm" within the estimation of the family who has learned to appreciate her value beyond any expression that words could convey.

Milk, cream, butter and cheese form an important factor in the food supply of the people of the world, and there is not the slightest evidence but that this will not only continue, but will grow and develop into a more widespread and urgent demand as the years go by. The dairy business offers great opportunities alike to both rich and poor. There is no investment of a few hundred or a few thousand dollars in land and live stock that will yield a larger or surer profit than the well managed dairy enterprise, be it large or small.

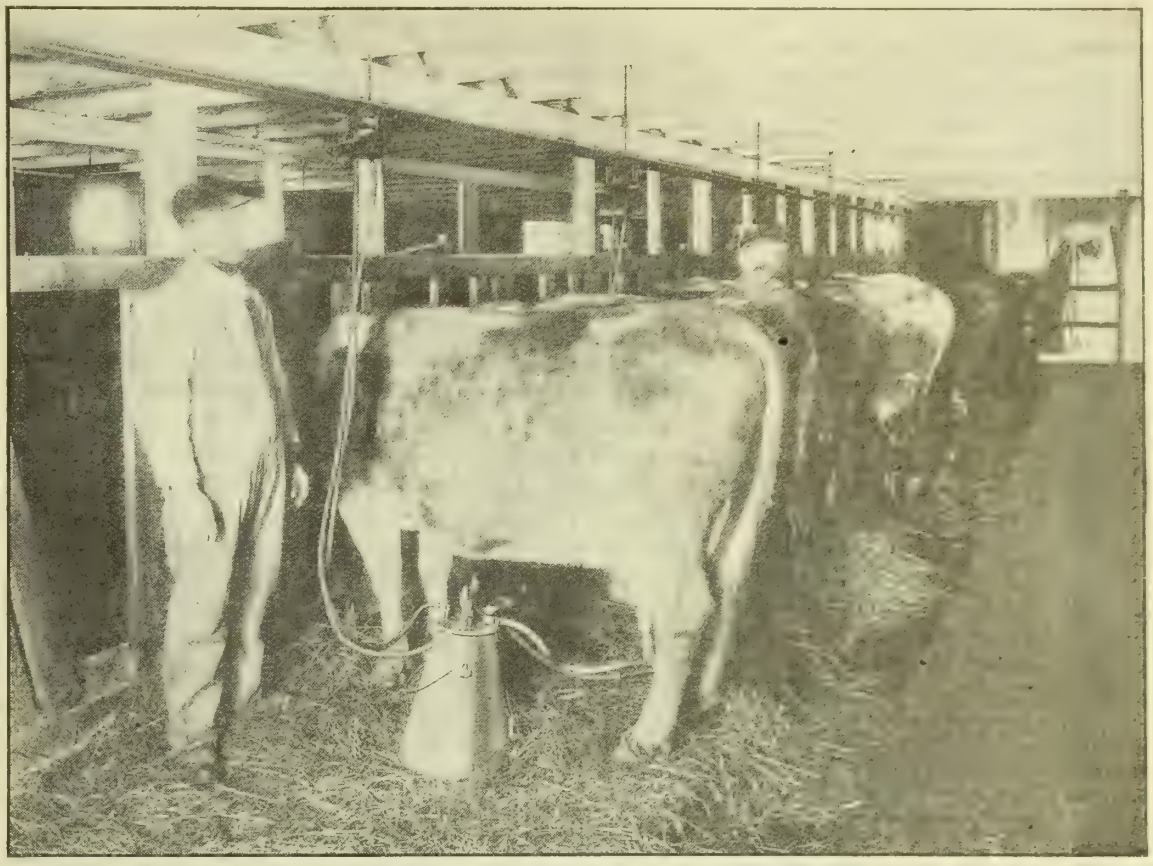
City Dairyman Regulated

The city milk supply is the most exacting feature of the dairy enterprise. It encounters more stringent regulations in the matter of inspection of the health of cows, cleanliness and sanitation of the barns and premises, the handling of the milk, etc., than any other feature of the dairy proposition. It is usually based more upon a cash investment of plant and all its equippage than the other forms of dairy operation, and therefore demands a more rigid and energetic system of management in order to make it yield a profit. The shifting of the milking stock, in order to keep up a paying yield from each of the cows employed, is a feature that has forced an element of beef-producing industry into the dairy work in order to dispose more profitably of the declining milkers.

The city dairyman who furnishes milk for the daily supply of family trade of the town or city must become a feeder of beef as well as a producer of milk, and this feature of the dairy industry has become a more complex proposition in its successful management than any other phase of this very important work—milk supply for the family.

Direct to Consumer

In the investigation of this feature of the dairy business our attention was recently directed to an Iowa milk dairy, in Pottawattamie county, which has developed within recent years into one of the points of supply for the family trade of Council Bluffs. This dairy enterprise, while established as a farm dairy and operated on a farm outside of city influences and regulations, markets its entire product in the city by means of grocery trade and wagon delivery to the family. It is owned and operated by Otto Skodsholm, the founder of the plant, who had ideas of his own as to a family supply of clean, wholesome milk.



Milking Time in the Skodsholm Dairy Barn

In order to accomplish the purpose and ambition of producing a strictly clean and healthful quality of milk, Mr. Skodsholm commenced planning sanitary accommodations for the feeding and stabling of his cows and the handling of his milk, in order to bring his product to the highest possible degree of sanitation. In this he commenced with a concrete base for his barn, making his floors, gutters, mangers and entire base so that he could apply hot or cold water to every square foot of space it contained, and through this system of flushing and sewerage for carrying this water off he is enabled to cleanse it thoroughly. He also has a spraying system, which is operated from the working head by the same gasoline power that he uses in spraying the entire inside of the barn, cows and all, with a disinfectant as often as is deemed advisable.

The cows receive their drinking water in the cement trough in the manger. All surplus water is drained off by means of pulling a plug, which readily carries the water to the main sewer and thence to the cesspool, several hundred yards from the barn, where it is pumped out at intervals, to be used as fertilizer for growing crops on the farm. The sanitary observance in this barn is strictly up to date, and the appliances for economy and saving of labor have been a feature carefully planned in the building and the adding of conveniences to carry on the dairy work.

Cows Milked Mechanically

The greatest labor saver, however, and the crowning feature in sanitation, is the system of milking that Mr. Skodsholm has recently installed. This is nothing more nor less than a mechanical milker. This machine has now been perfected until its action seems to be in perfect harmony with the comfort of the cow, and instead of annoying her or causing any uneasiness she rather enjoys the milking operation by this mechanical device. There were forty big, healthy, robust cows in this barn when we visited it that had been regularly milked by this mechanical milker for months, and the manager asserted that these cows invariably milked better and manifested more satisfaction since the milker had been used on them than previously.

As an illustration he cited periods of a few days, when something would occur with the power, that the hand milking had to be resorted to, and a very pronounced discomfort was exhibited by many of the cows, some even resisting by kicking. Invariably there was a perceptible falling off in the quantity of milk, due to the change to a less congenial and sympathetic milking process, which seemed a pretty strong endorsement, coming from an operator of the machine. The secret of success in this whole mechanical milking proposition is the imitation of the hand milker, which the first milking machines failed to produce, while this one seems even to have exceeded it.

Principles of Milking

The automatic suction and upward squeeze, corresponding with each pulsation or drawing of the milk from the teat, is the requirement to accommodate the natural milk flow, such as is had by the sucking of the calf and the soothing influence of the gentle hand milker, who has not infrequently been referred to as exerting a sort of mesmeric influence over the cow. The principle to be understood in this machine is

CONTINUED ON PAGE TWENTY-TWO

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Nearly all of the trouble in this world is started by people who imagine they are doing good.

The things to look for in buying a tractor are efficiency, practicability, simplicity and a moderate price.

Are you watching the little pigs carefully to see that there are no cracked tails or sore mouths? How about the bedding? Are you careful to see that it is not damp?

The effort to change the parcel post law was defeated in the senate by one vote. It was charged that the effort to lessen the administrative powers of Postmaster General Burleson was in the interests of the express companies. The less red tape we have in working out the parcel post the sooner it can be put on a paying basis. It took a fight of forty years to secure a parcel post law. We would suggest that farmers look up the record of their United States senators and see how they voted.

Since the publication of the article, "Who Pays Cream Receiving Station Costs?" in our issue of February 28, not a day goes by but we receive letters from station agents protesting against what was said. Some of these letters are signed; more are not. One and all, they proceed to show the foolishness of the agents' methods as cited in that article. The peculiar thing about it is that the incidents we related are true, every one of them, and most of them have occurred hundreds of times. Yet these station agents say that it would be poor business to employ these methods.

Comparing Prices Paid for Butter Fat

An exceedingly difficult thing to do is fairly and satisfactorily to make comparisons of prices paid for butter-fat by different creameries in various states. The producer pays, either in labor or in a reduced price for his butter-fat, for its delivery at the creamery, where it is manufactured into butter, whether the creamery be in sight of his house or hundreds of miles distant.

The highest prices paid for butter-fat are by creameries operated on the whole-milk plan. The butter-fat which such creameries receive is of finest quality, always fresh and sweet, and from such can be made the finest quality of butter, commanding the highest price.

The farmer who patronizes a whole-milk creamery, however, hauls eight times the weight in the delivery of his butter-fat as does the one who delivers in the form of heavy cream. During the most of the year he makes at least six trips a week. The separated milk which he hauls back has less feeding value than milk separated at home. The milk must be delivered within certain hours in the day, and for this service the farmer makes a special trip to the creamery. Just what this labor of one person and a conveyance is worth per pound of butter-fat is difficult to determine, and the determination needs to be made for each individual, as it depends on the distance from the creamery and the amount of butter-fat delivered and the loss in feeding value of the separated milk. The farmer who delivers butter-fat to a local creamery is at much less expense (in time and labor) than is one who delivers whole milk.

It is usually cheaper in time and labor to deliver at the railroad station as a direct shipper or to a cream receiving station than direct to a creamery, as the creamery is not located in the business portion of the business center, and the farmer usually makes a special trip to the creamery in order to deliver the butter-fat, and this trip must be made within certain hours. The farmer who delivers his butter-fat at a railroad station as a direct shipper or to a cream receiving station is as a rule at the least possible expense (in time and labor), as both the railroad station and cream receiving station are open during business hours and are located conveniently in the business center of the town. Such butter-fat is not usually delivered oftener than twice a week (possibly in extremely hot weather three times), and the delivery can be made in connection with other business to be transacted, a special trip seldom being made just to deliver the butter-fat. But the farmer who sells his butter-fat either as a direct shipper or to a cream receiving station pays in a reduced price the transportation charges by rail to the creamery, and in the case of the cream receiving station his share of the expense of operating the station also.

When published statements appear in the public press in regard to prices paid by creameries for butter-fat, oftentimes the prices quoted varying several cents per pound, the reader who understands the situation at once questions on what plan these creameries are operated, for on that basis only is to be determined the farmer's net returns, or real price received for his butter-fat.

The United States Department of Agriculture was recently asked to gather statistics in regard to prices paid for butter-fat in dairy states, the same as it now gathers statistics as to prices paid for other farm products and for butter. The reply was that an attempt had been made and abandoned, and it was intimated that the varying conditions, some of which have been mentioned in this article, made such statistics of little practical value.

Inspection of Mexican Cattle

The department of animal husbandry, Washington, D. C., is instituting a more rigid inspection of all cattle coming over the Mexican border with reference to contagious animal disease. The discovery recently of a case of scabies having come from a Mexican importation has caused a temporary check in imports and stirred up some activity among the government inspectors that no further laxity in inspection methods will be permitted.

It is urged that all cattle dealers and handlers are interested in a close inspection of all imports, and that there will be a united effort to keep down all forms of cattle disease that may creep in through the Mexican cattle importations. The work of cleaning up cattle disease south of the quarantine line has been progressing slowly for many years, but promises eventually to establish the southern part of the United States as a safe and successful breeding and developing grounds, free from disease.

Reports from England, covering the markets of the entire world, indicate that it is becoming more difficult each year to find outlets for second-grade butter. For first-grade butter the demand is good and prices correspond.

Raises His Own Feeders

It is not unusual lately for some farmer shipper to bring into the stock yards a load or two of steers of his own raising and own feeding, whereby he has cut out the middleman and got everything in sight that business and trade could contribute until he struck the railroad, the stock yards company and the commission man. This sounds pretty good in the matter of beef supply. If a few hundred thousand more farmers would decide on this plan of money making in the beef cattle industry there would be some hope of solving the meat question upon a strictly consistent basis, and the farmer would be getting more of the real, legitimate value of the feeding and beef cattle-producing industries than he is now enjoying, generally speaking.

There are a lot of helpers in almost every producing industry that are just about as important as air and water to man's existence. You can't do without them, because you cannot connect up. They are a necessity. The transportation companies, the commission men, every needed man all along the route until the cattle reach the consumer, is a necessity in business, and deserves a living out of these beef cattle for his labors. The busy world deserves to be fed and clothed and made to enjoy some of the comforts and privileges of life for the part they are contributing in helping to distribute the produce of the soil to the hungry consumer. But we can eliminate some unnecessary ones.

We rejoice in the farmer feeder spirit that is being cultivated, the farmer calf-producing spirit that is working into actual practice among thousands of corn-belt farmers all over the great grain-producing states of the central west. This is one of the strongest factors in working out the solution of the meat supply. Our rich acres are not producing enough in the matter of mixed husbandry. There is no better place in the world to raise cattle than on the rich lands of these corn states. We cannot afford to depend entirely upon other districts to supply our feed yards with feeder cattle. Raise a few cattle on the farm and have these few of the very best quality and keep them on the farm until they are finished for the top of the beef cattle market. It will pay, and the farm has earned it all in the interest of better farming and better farm management.

The manure produced on American farms in a single year is worth more than two billion dollars. This is one-third more than the annual corn crop is worth. The plant food of every ton of manure on your farm is worth $2.50. Add to this $2 or $3, its worth in improving the physical condition of the soil in promoting bacterial action and in increasing the capacity of the soil for moisture, and you get approximately the total value of a ton of barnyard manure. Do you get as much for your barnyard manure as you do for your corn?

Nebraska's Sanitary Board on Trial

The last Nebraska legislature passed a law creating the State Live Stock Board, giving it powers to pass rules and regulations affecting the shipment of live stock in the state and all matters pertaining to the diseases of live stock. On January 15, 1914, this board passed a rule requiring all manufacturers of serum and virus for the treatment of hogs for cholera to procure a government license or to get permission from the board to sell the product.

At the same meeting of the board a rule was passed requiring these manufacturers to file with the board the name of any purchaser of this product, his residence and the amount sold. The board also agreed to employ not to exceed six competent veterinarians to work in connection with the veterinary department in assisting farmers in the treatment of all animal diseases.

It is now two months since these rules were passed. No government license has been issued to any manufacturer of these products in the state, nor has any permission been granted to the different manufacturers to sell serum or virus. Names of purchasers have not been filed as required.

The legislature created this board that the live stock interests might be looked after by a board with no other duties to perform. Nebraska's live stock interests are of the greatest importance. This paper believes that the Live Stock Sanitary Board can be of inestimable value to the farmers and live stock men of the state if its members will use the powers given to them by the legislature, and not only make rules, but see to it that these rules are enforced. The Live Stock Sanitary Board is being tried out, and now is the time for it to let the people of the state know that it is a board in fact and not a board that will pass rules and regulations to be ignored, as too many of our laws now are.

Early Seed Supply

The pure seed proposition is worth while looking into if you have any land to seed or plant this spring. It is reported that there are a great many districts in the Missouri valley country, as well as in other parts of states west, south and east, that are not well supplied with a good germinating quality of seed. The alarm is sounded to look out for good seed early. This is most excellent advice under all circumstances. It matters not what crop you are planning to produce, one of the first things to be attended to is the seed supply.

If you are not critical nor hard to please in anything else, get right down to business in the requirements of quality in all the seed you use. Poor quality or weak germinating seed had better be saved for feed rather than lost by putting into the ground. The best quality of seed is none too good when you are expecting every grain to produce a plant and each plant grow and develop into a producing stalk. It is to produce crops that you plow the land and sow the seed. Then why not try to secure the greatest yield possible?

In all grains, in all forage and feed crops, in vegetable and root crops, and in fruits, plant and sow the best you can get. It pays all the time to be critical and exacting in anything that is to produce its kind. The time to secure seeds of all kinds, if not already provided, is now. The month of March is not too early. The spring of 1914 will, in all probability, be in a hurry. There is plenty of plowing and spring preparation to do. Attend to the seed supply now.

The production of eggs in Iowa in 1913 was worth more than the annual output of the gold mines of Alaska or California or any other state in the union, according to a statement issued by the Iowa department of agriculture. The year 's crop amounted to 97,549,731 dozen.

American Horses Abroad

The demand for American horses from European countries is constantly coming to the attention of our horse breeders and dealers, but heavy cart horses and lighter horses are indicated in these inquiries. It is believed by horse dealers and interested horse authorities that this year will develop considerable trade for horses suitable for army service. It is understood that the German government will make extensive purchases during the coming summer and autumn of horses for army use. It is estimated that there will be possibly 40,000 head demanded before the close of the year to supply the need of this one country.

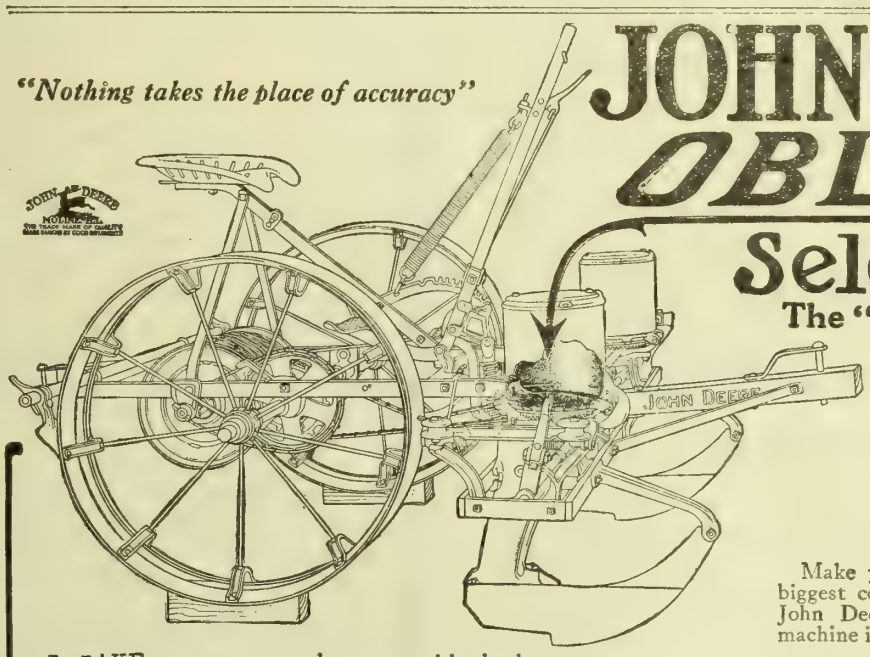
The United States has become a successful horse-growing country, and its horses are well known over the world for their activity, energy and endurance. These qualities are more pronounced among the horses produced in the western half of the United States, where the horses lead an open, out-of-door life from colthood to mature development for service.

The horse-growing industry of this country only needs care and caution in the quality and soundness of its sires and dams. There is no question about the climatic and feed conditions for the successful developing of the best race of equines in the world. Our western horse raisers have a good start in these respects. Stringent sanitation laws should be enacted in every state and rigidly enforced in the matter of contagious equine diseases. Build a horse market for the producer of the farm, the ranch and the range horse, the equal of which is not in the world. This is within easy reach now. The western horse is its basis.

With the country short 19,000,000 head of meat animals, the price of such foodstuff is not likely to go down. Even the importation of Argentine and Australian cattle has had but little effect upon the markets. Quite a scare went out when it was learned that a coterie of large packers had organized and started running a meat line from Buenos Ayres to New York, but these same fellows are interested in the United States and are protecting their business here from unnecessary slumps.

According to figures compiled by the office of public roads of the Department of Agriculture, expenditures in the United States for improvement of roads have more than doubled since 1904. In 1904 expenditures for this purpose amounted to $79,771,417, while in 1912 the total was $164 332,265.

"Nothing takes the place of accuracy"



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Write us today for free booklet "More and Better Corn". It tells you why the average yield for the United States is only 25 bushels an acre, whereas better methods have produced 125, 175 and even 255 bushels per acre in places. It also describes and illustrates the John Deere "Oblique Selection" Corn Planter. The book to ask for is No. D 15.

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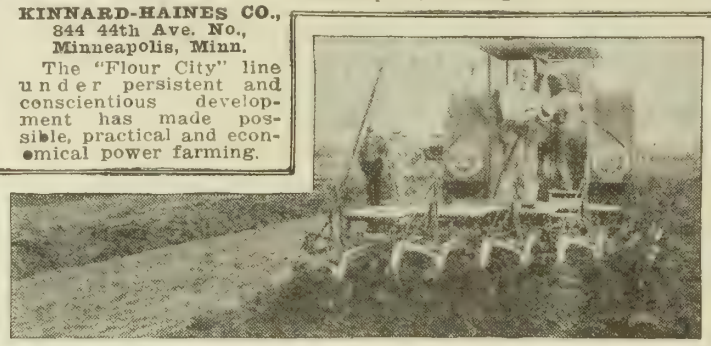

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He knows a good thing when he sees it, in separators as well as automobiles, having studied farming intensely as well as mechanics.

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What Constitutes a Dairy State?

By S. C. Bassett

IT IS too much the case that in our efforts to "boost" agriculture in our state we gather the sum total in millions of bushels, or pounds, or dollars, as the case may be, and hurl it at the public, but seldom do we go back to the root of the matter and see on just what foundation rests our sometimes bewildering "boost."

We boast of Nebraska as one of the great dairy states. Let us go to the farms and see what we find to substantiate such a claim. To engage in the dairy industry on the farm is to produce dairy products for commercial uses, to sell to others. The man on a farm who keeps a few cows to supply his family needs with milk, cream and butter is no more engaged in the dairy industry than is one who raises a family garden engaged in commercial gardening.

The census returns disclose that in the twenty years from 1890 to 1900 the number of our farms increased 14 per cent, the average number of acres in our farms increased 56 per cent, the total number of acres in farms 61 per cent, while the number of milch cows increased 21 per cent. In the year 1890 we had an average of 4.4 milch cows on an average 190-acre farm. In 1900 we had an average of 4.1 milch cows on an average 246-acre farm, and in 1910 we had an average of 5.1 milch cows on an average 297-acre farm. It is quite evident that the increase in the number of milch cows has been largely because of the increase in both the number and size of our farms and not because our farmers have engaged more extensively in commercial dairying.

Wisconsin is recognized as one of our great dairy states. In the twenty years from 1890 to 1910 the number of farms has increased 18 per cent, the number of acres in a farm from 115 to 119 acres, while the number of milch cows has increased 81 per cent. In the year 1890 Wisconsin had an average of 4.4 milch cows to a farm of 115 acres; in 1900 an average of 5.8 cows to a farm of 117 acres, and in 1910 an average of 8.1 milch cows on a 119-acre farm.

Census returns of gallons of milk, pounds of butter, and I might add dozens of eggs, produced on farms have always been recognized as largely guess work, because very few farmers keep any record of such products. Statistics in regard to production of butter in creameries is approximately accurate, and we find that the increase in creamery butter manuactured in the state from 1890 to 1910 was quite 300 per cent, and the increase for the three years --1910, 1911 and 1912—was 30 per cent. This remarkable increase in the amount of creamery butter manufactured is easily accounted for from the fact that much less butter is being made on the farm.

The centralizer plan of creameries had its inception about the year 1890. With this plan has come the establishment of cream gathering stations in every town and hamlet and also the payment of cash on delivery for cream, and instead of making into butter the surplus cream on the farm the almost universal custom nowadays is to sell the surplus cream from the farm, even though it be but a few pounds at a time.

It requires from two to three average milch cows to supply a family on a farm with milk, cream and butter, and as we increase our number of farms and also increase their size we necessarily add to the number of milch cows in the state, but we do not thereby increase our importance or relative standing as a dairy state.

To make the best growth, pigs should be given feed to eat as soon as they are old enough to eat. Most of them will begin to eat at about three weeks. Have a pen in which they can go and not be disturbed by the older ones in which corn and oats may be had all the time. Make a creep for them and don't make it so they will have to bow their backs to get into the pen.

LIFE'S ROAD
Smoothed by Change of Food

Worry is a big load to carry and an unnecessary one. When accompanied by indigestion it certainly is cause for the blues.

But the whole trouble may be easily thrown off and life's road be made easy and comfortable by proper eating and the cultivation of good cheer. Read what a Troy woman says:

"Two years ago I made the acquaintance of Grape-Nuts and have used the food once a day and sometimes twice ever since.

"At the time I began to use it life was a burden. I was for years afflicted with bilious sick headache, caused by indigestion, and nothing seemed to relieve me.

"The trouble became so severe I had to leave my work for days at a time.

"My nerves were in such a state I could not sleep and the doctor said I was on the verge of nervous prostration. I saw an adv. concerning Grape-Nuts and bought a package for trial.

"What Grape-Nuts has done for me is certainly marvelous. I can now sleep like a child, am entirely free from the old trouble, and have not had a headache in over a year. I feel like a new person. I have recommended it to others. One man I knew ate principally Grape-Nuts, while working on the ice all winter, and said he never felt better in his life."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true and full of human interest.

Vital Seeds Are Not All Good

By H. L. Cobb

WHEN we ask the merchant if he has good garden seeds he understands we mean, "Will they grow?" Now all seeds that will grow are not good seeds. What the merchant should be able to do is to tell us whether his seeds are good in the quality of the crop they will produce as well as whether they will grow.

I have bought seeds that grew that were not worth planting, or, rather, the crop they produced was not worth harvesting. To my mind the pedigree of the seeds is of more importance than their vitality. If they fail to grow I can get others without much loss of time. If they grow and I put in a season's labor on them and they produce a worthless crop, I have lost the value of the seed, the labor and use of the land, not counting the other considerations where the product was so much needed on the table.

Good seeds can be purchased of the retail merchant if he is a merchant that makes sure he buys only of a reliable seedsman. If he will buy of seed jobbers he should not have your patronage, for he cannot tell what he has to offer. There are seed jobbers who purchase their seeds on the open market from any source that offers. They cannot know the quality of nearly all the seeds they buy. You do not want such seeds. The large seed houses that have a reputation to uphold have seed farms in all parts of the country where the seeds mature the best, or else have seeds grown for them under contract and subject to their inspection. You will always get good seeds of them, whether you buy them through the local merchant or send direct to them for them.

Seeds from a good house will be good for from three to five years, though I seldom use them after the third year. Some seeds, like celery and lettuce seeds, I do not use after the second year without testing, and it is too much trouble to test celery, so I always get a fresh supply each year. If you want to plant any seeds after the third year give them a test. A simple method is to put a certain number of seeds between a blotter and keep the blotter warm and moist. The seeds will sprout if they are vital.

If you are going to grow your own seeds, be very careful in planting varieties together. The early sweet corns, if planted early, will seldom mix with any other corn, as the tassels are dead before the field corn begins to tassel, consequently the silk of the sweet corn is past being affected by the pollen from the field corn. I have planted the Queen's Golden popcorn and the Premo sweet corn side by side and neither was affected. If rice popcorn and sweet corn of the early varieties are planted close they will both be ruined. Pumpkins, squashes, cucumbers and melons should never be planted where they can pollenize each other.

When growing peas, beans and, in fact, any kind of plants for seeds, select the strong plants, and then take the first to mature. It is never policy to gather the first for use on the table and keep the culls for seed. It will not be long until you would have nothing but culls. The best you have should produce the seeds you intend to use in the future, for you then will be making your stock better instead of running it out.

Cure all your seeds carefully and put them away in a dry place, for much of the vitality depends on this. Seeds that are imperfectly cured or dried and are put away in a damp, musty place will hardly test up to standard in fertility.

Lodgepole Pine Seed

Lodgepole pine seed sown broadcast on the snow in southern Idaho last spring germinated when the snow melted, and as many as sixty little trees were counted to the square foot. The summer was so dry, however, that most of the plants died, except where sheltered by brush or logs.

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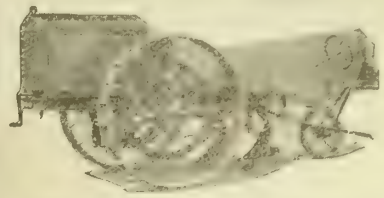

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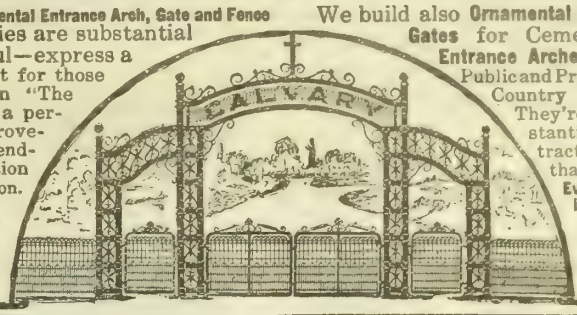

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In Reo the Fifth

We take this year what seems to be the last step in quality, beauty, equipment and price.

The chassis embodies the best Mr. Olds knows after 25 years of car building. A better-built car cannot be conceived.

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The price this year is $220 less than last year's model, similarly equipped. That saving is mainly due to this: All the costly machinery for building this chassis has been charged against previous output. That cost is all wiped out. From this time on, so long as we build this chassis, this big item is omitted from our cost.

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Reo the Fifth is built in a most unusual way. The steel is made to formula, and each lot is analyzed twice. All driving parts are given 50 per cent over-capacity. Gears are tested for 75,000 pounds per tooth. Engines are given five long, radical tests.

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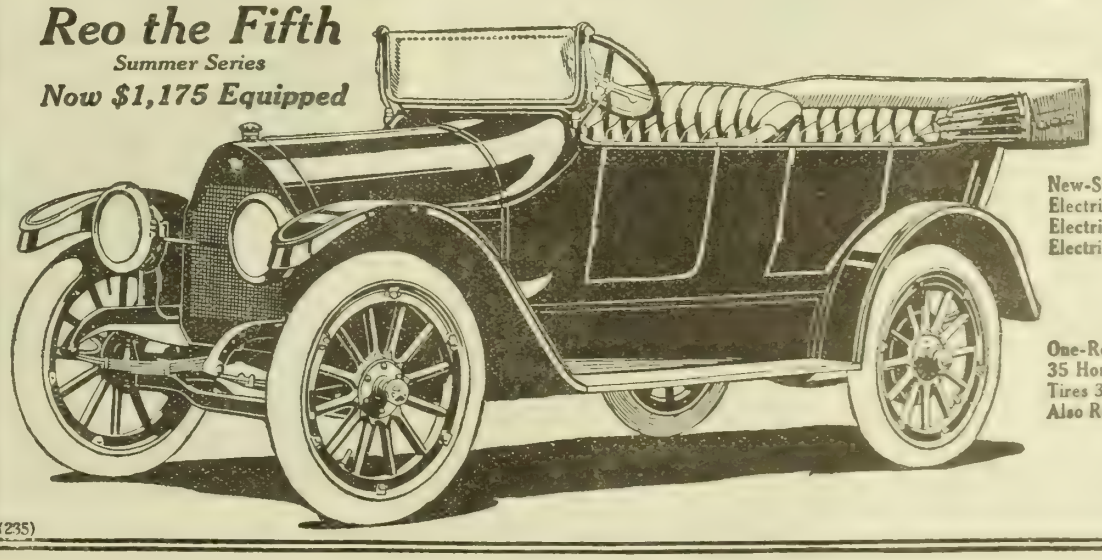

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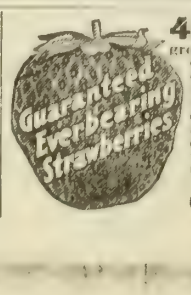

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Profitable Cows for the Dairy

How to Know the Kind Worth Owning

University Dazie—Annual Average for Three Years: Milk, 8,817 Pounds; Butter-fat, 467.9

ONLY clean-limbed, strong animals should be selected for the dairy herd. Big-boned animals are undesirable. The head of the dairy cow should be feminine in appearance, long, and have large, dilated nostrils to insure a good supply of air to the lungs. The neck should be long and slim. The ribs need to be long, far apart and well arched to provide room for a large heart, large lungs and a capacious digestive apparatus. The chest should be deep. Thin hocks, pointing directly back and giving ample udder room between them, are essential. The cow's tail is useful in fly season and therefore should be long and have a heavy brush of hair, which should clear the ground by two or three inches.

A dairy cow should show a more or less distinct triple-wedge form. From the side she should appear deeper behind than in front; viewed from the front, she should widen gradually to the hindquarters, and, looking from above, the animal should show a distinct wedge widening from the withers to the hips.

The cows whose photographs are shown are owned by the University of Missouri. Although they are half sisters, the pictures show the contrast between a cow of true dairy type and one of poor milking ability. University Dazie's annual average for three years is 8,817 pounds of milk, containing 467.9 pounds of butter-fat. Her photograph shows the ideal dairy head, the wedge shape, the even coat of fine hair, the long tail, the deep body, the large and well proportioned udder and the enormous milk veins clearly. The productiveness of Pedro's Elf, under the same conditions as the other cow's record was made, was less than one-fourth as great. This cow's rough general appearance, her small, poorly shaped udder, and the conformation of her body, indicate an individual of inferior quality. She is neither a good dairy nor a good beef animal. These cows consume about the same amount of feed, yet the gross income from the poorer cow, with butter-fat selling at 30 cents, would be $32.82 a year, while University Dazie would bring her owner $140.37 and raise a calf worth considerable money. The other cow's calf would be practically worthless.

The ideal dairy cow is lean in flesh because she uses her food in the making of milk. The barrel of her body is a manufacturing plant and must be large to produce large

Pedro's Elf—Annual Average for Three Years; Milk, 2,227 Pounds; Butter-fat, 109.4. Half Sister of University Dazie

quantities of milk. Yellow or orange-colored inner ears indicate that the milk will be rich in butter-fat. The skin should have an oily feeling, showing that the skin secretions are normal, and suggesting therefore that the milk-secreting organs are in a healthy condition.

The milk veins are good indicators of a cow's milk-producing ability. In mature cows these veins should be long and tortuous and the holes where they enter the body should be large. The holes or milk wells show the probable size of the milk veins, thus indicating the individual's milk-yielding ability even when the cow is dry. The milk veins are much less prominent in young cows.

The most distinctive organ of the dairy cow is the udder. It should be attached high behind and far forward in front, should be fairly thick and have four good-sized teats far enough apart to be conveniently grasped by the hands of the milker. After milking the udder should be soft and pliable and show folds of skin between the thighs behind. These folds allow a great increase in the size of the udder as milking time approaches. The skin on the udder should be mellow and soft and the hair very fine.

The temperament of the dairy cow is a significant characteristic. The dairy cow should be an animal full of nerves, sensitive and active. Vitality and productive powers depend largely on these traits. This nervous (notice that the word used is not "excitable") temperament is indicated by the bones making up the backbone (vertebrae), being large and placed well apart so that there is plenty of room for branch nerves to enter and leave the spinal cord. Large, clear eyes are good evidences of a gentle disposition, which is extremely desirable in a dairy cow.

While the appearance of a dairy cow indicates to a great extent her milking qualities, no amount of estimating and judging will completely test a milch cow's value without the use of the Babcock tester and the milk scales and the keeping of a record of the amount and cost of the feed consumed. Where these three tests are carefully made, "star boarders" in the dairy herd are soon eliminated. D. C. CLARKE.

Dairy Train in the Ozarks

"YOU are giving us something we can go home and use tonight." That was the almost universal comment made by the farmers who attended the lectures on the "dairy instruction car" recently operated by the Frisco railroad in Missouri. The car was equipped to give practical instruction in feeding and breeding dairy cattle. It was conducted by the dairy department of the Missouri Agricultural College, co-operating with the department of development of the Frisco railroad.

The car was operated six weeks. The feeding and breeding of cattle and the keeping of records were the points emphasized. Feed conditions at the various points were ascertained in advance and at each place multigraphed sheets were passed out showing the cheapest balanced rations for cows of average size giving two and three gallons of milk a day. Always in compiling these rations home-grown feeds were used as much as possible. The feeding problem for the Ozark dairy farmer has been a serious one this winter because of the severe drouth last summer. In the above manner advice was given to meet the conditions as they were found.

The department of development of the Frisco furnishes free to any farmer who will keep systematic records of his cows a set of record sheets for the entire year and offers to add up the monthly records if sent in to the office. The dairy department of the university makes the same offer to the entire state. These record sheets were distributed on this trip. This is done because it is felt by those closest to the situation that the greatest need of Missouri dairy farmers at present is not more cattle, but better cattle. The most practical way for the Ozark farmers to get better cattle is to weed out their unprofitable cows after first feeding them properly in order that they be given an opportunity to show their worth. Then raise the heifer calves from the best cows when mated to a good, pure-bred bull of dairy breed.

A number of co-operative bull associations are being established as a result of this work. In many cases bankers belonging to the Ozark Bankers' Development Committee are financing the purchase of these bulls.

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Bigger profits—greater benefits—endless satisfaction —follow the use of Hart-Parr power outfits.

If you farm with horses or mules now, sell most of them, invest in a Hart-Parr power outfit and let it do all your heavy work; plowing, discing, seeding, etc. With a Hart-Parr outfit you can easily get your spring plowing done RIGHT and on time. You can make it a bigger profit paying operation than ever before. The worry and hard drudgery it saves—and the increased crops—go a long way towards paying for the outfit the first year.

The Hart-Parr One-Man Outfit doing a nice job of stubble plowing

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The One-Man Outfit, illustrated above, replaces 10 to 12 sturdy horses. One man handles entire outfit from engine platform. No plowman's board or wages to pay. No back-breaking work lifting stubborn hand levers. A slight jerk on the clutch rope lifts and lowers the plows automatically.

This outfit will plow 10 acres daily—shallow or deep—just as you desire. Work it 24 hours and easily plow 20 acres daily, at a cost of only 50 to 80 cents per acre. Uses cheapest kerosene for fuel. It's a big profit maker on as little as 160 acres.

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We have a power outfit to fit your farm, at a price to fit your pocket book. Consult us on your power requirements. Let us tell you just why a Hart-Parr outfit will make your farm pay biggest profits, with the least amount of time and labor. Write today for descriptive catalogs, special bulletins and literature on power farming costs.

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Hit the Spot!

Toothsome, crisp bits, that have the natural sweetness of white Indian Corn.

Thoroughly cooked—rolled thin as paper—then toasted to a delicate brown.

Easily the most delicious flavor of any flake food known.

Toasties are convenient—ready to serve direct from package—an easy solution of the "what to eat" problem.

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knocking about his place finds a mighty big lot of pleasure in a chew of "PIPER". There's something about the open air, the stimulating life of the country, that calls for a rich, satisfying chew. And he uses

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Made of "RESISTO VEAL"

The uppers of Mayer Honorbilt Work Shoes are made of the wonderful wear-resisting leather "Resisto Veal"—the new leather that resists even ammonia of the barnyard, and the alkali in the soil, and remains soft and pliable. This is the best wearing leather ever put into work shoes.

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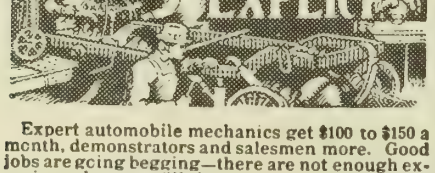

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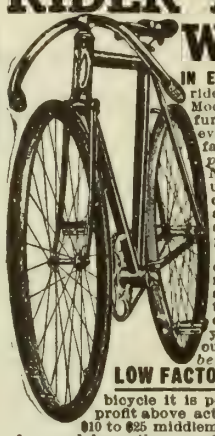

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Our Young People on the Farm

A Department Devoted to the Boys and Girls

A Happy Family

I know a happy family of cunning boys and girls,
Who have such round and rosy cheeks and pretty, golden curls.
In all that they may have to do they pleasantly agree,
And every one of them is kind and good as good can be.

They never call each other names, nor pull each other's hair,
Nor find the slightest bit of fault with what they have to wear.
They never cry at night because they have to go to bed,
Nor ever frown at anyone, no matter what is said.
Not one of them was ever known to try to tease the cat,
Or even have a wish to do a naughty deed like that.
When they are asked to do things they never say, "I shan't."
Because they're dolls, these boys and girls, and so, you see, they can't.

(Copyrighted) —Nixon Waterman.

Editor's Corner

What are you going to be when you grow up, boys? Yes, of course, you are going to be farmers, most of you. But what kind of farmers are you going to be? Is your farm going to be just a plain, common farm, or do you have an ambition to be known throughout the state as the breeder of some kind of fine stock? If you want to be a grower of fine stock when you are a man, why not try to get a start now? It is not too early. One boy told us, in a story that, unfortunately, was crowded out of the story department, how he managed to found quite a nice herd of hogs on one little pig that he rescued from the corner of a pen where the old sow had stepped on it. His father gave him the pig because he saved it, and allowed its feed in payment for feeding all the hogs. Then he helped him sell the pig when it was old enough and invest the proceeds. It ought not to be hard for most of you to become owner of a pig, lamb, calf, colt or even a chicken and then earn the feed for it. If you start young, even in such a small way, you will have a good start toward stocking up your farm when you are old enough to have one. There is no reason why girls could not do the same thing.

HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write with ink, on one side of paper only.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department. Twentieth Century Farmer, Omaha, Neb.

(Prize Story)

The Prize Story

By Bernice Bollen, Aged 13, Orchard, Neb.

Richard and Harold sat down to write a story for a magazine. Richard sat for a long time trying to think of something to write. Then, getting discouraged, he picked up a book and copied a story from it. Harold was just starting to write his story when he looked up and saw Richard putting on his coat.

Are you through with your story?" exclaimed Harold in surprise.

"Yes," replied Richard.

"Let me see it?" asked Harold.

Richard handed the story to Harold, thinking that Harold had never read the story before. Reading the story, Harold exclaimed: "Why, Richard! You copied your story."

"Yes, I did," was the reply, "and you had better keep still about it if you know what's best for you."

"I won't tell," replied Harold. He knew if he told that Richard would punish him somehow.

Harold wrote a story about a little dog which he owned. He was not looking for a prize. He thought Richard would get it. That evening they both sent their stories. Within a few days Harold received a package through the mail. Upon opening it he found it was a pretty knife, which he had won by his story.

Richard received a letter saying: "My Young Friend—We would like to receive more stories from you, but please don't copy any more out of books."

This shows that the easiest way is not always the best.

A Pet Worth Having

(Honorable Mention)

Ozark Caves

By Clyde Camerer, Aged 11, Granby, Missouri.

I live in the Ozarks and there are many caves in this section. There is one cave near my home, and my brothers and I often go to it. The entrance to the cave is very small, and in order to get in we are forced to crawl on our hands and knees, carrying lighted torches. There are four rooms. Each room is about twenty feet long, ten feet wide and from forty to seventy feet high. From the walls hang rocks which look like icicles.

In order to get into the last room we are forced to crawl through a small opening. In this room is a rock shaped like a coffin and set upon two large pillars of rock. The coffin is about three feet wide and seven feet long. There are no end of bats and they are hanging around everywhere.

There is another large cave about a mile from my home. It has a stream of water running through it. The rooms are very large, and no one knows how long it is. Several boys went into the cave one morning and got lost and did not get out until about 4 o'clock in the even-

ing. We have never ventured into this cave, fearing we might get lost. The caves start in the bluffs along Shoal creek. I live just a quarter of a mile from the creek.

My Little Prairie Dog

By Curtis Brown, Aged 11, Attica, Kansas.

One day, when I was a little boy about 5 years old, I went out to the field with papa and we found a little prairie dog. It ran under a clod of dirt and we caught it and carried it to the house in papa's glove, and we named it Trixy. When I got to the house I put it in a box. It soon grew tame and would eat anything we ate. In about two weeks we turned it out and let it run about the house.

One day it got on my little sister's back and would dodge up and down and she couldn't get it off. She could play with it like a kitten. A strange cat came to the house one day and Trixy slipped up behind it and bit its tail.

We made a hole along under the ground for a home for Trixy, and one day a calf stepped in it and broke through. Then Trixy stood up on his hind legs and barked and barked.

One evening some of the neighbors came over and brought their hounds. We were all sitting in the shade of the house, when we heard the chickens making a noise on the other side. I went around there and found that the hounds had killed Trixy. We were very sorry, and dug a grave in the front yard and buried him.

Fun Picking Apples

By Mildred Nelson, Aged 11, Dibel, Neb.

"O, mamma!" said Ruth Smith one day as she came running into the house where her mother was sewing, "papa says that the apples are ripe down in the orchard. May Bennie and I go and get some?"

"Yes," said Mrs. Smith, "but be careful and don't hurt yourselves, and get the ripest apples you can find."

"All right," said Ruth, and away she ran.

She met her brother at the door and told him what her mother had said. "O, good!" said Bennie, and away he ran into the kitchen to get the basket. The cook put some sandwiches in, as she thought they might get hungry. "I will make some apple tarts for you when you get back," she said. But Bennie was going so fast he did not hear her. He took hold of Ruth's hand and away they ran.

When they reached the orchard they sat down and ate their lunch, and then they went to the spring to get a drink and hastened back to the orchard. They chose a tree that was full of red, juicy apples. Bennie got up in the tree and hung his basket on a small branch. Just as he had the basket full the twig broke and down came the apples. Ben was not mad, but only laughed and said:

"Here comes old Bossy, and she will eat up the apples."

"No, she won't, either," said Ruth as she picked up an apple and sat on the fence and fed it to Bossy, while Bennie picked up the apples.

By this time the sun had gone down, so they ran away home. The old cook was waiting for them to bring the apples so she could make apple tarts for supper, and it would be hard to tell which they enjoyed most—picking the apples or eating the tarts.

Picture Contest No. 11

Write a verse of four lines about this picture. Each of the two children writing the best verse about this picture will receive a book as a prize. Make your verse bright and original. Tell us what you would say and do if you were in their places. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than March 28.

Additional Stories

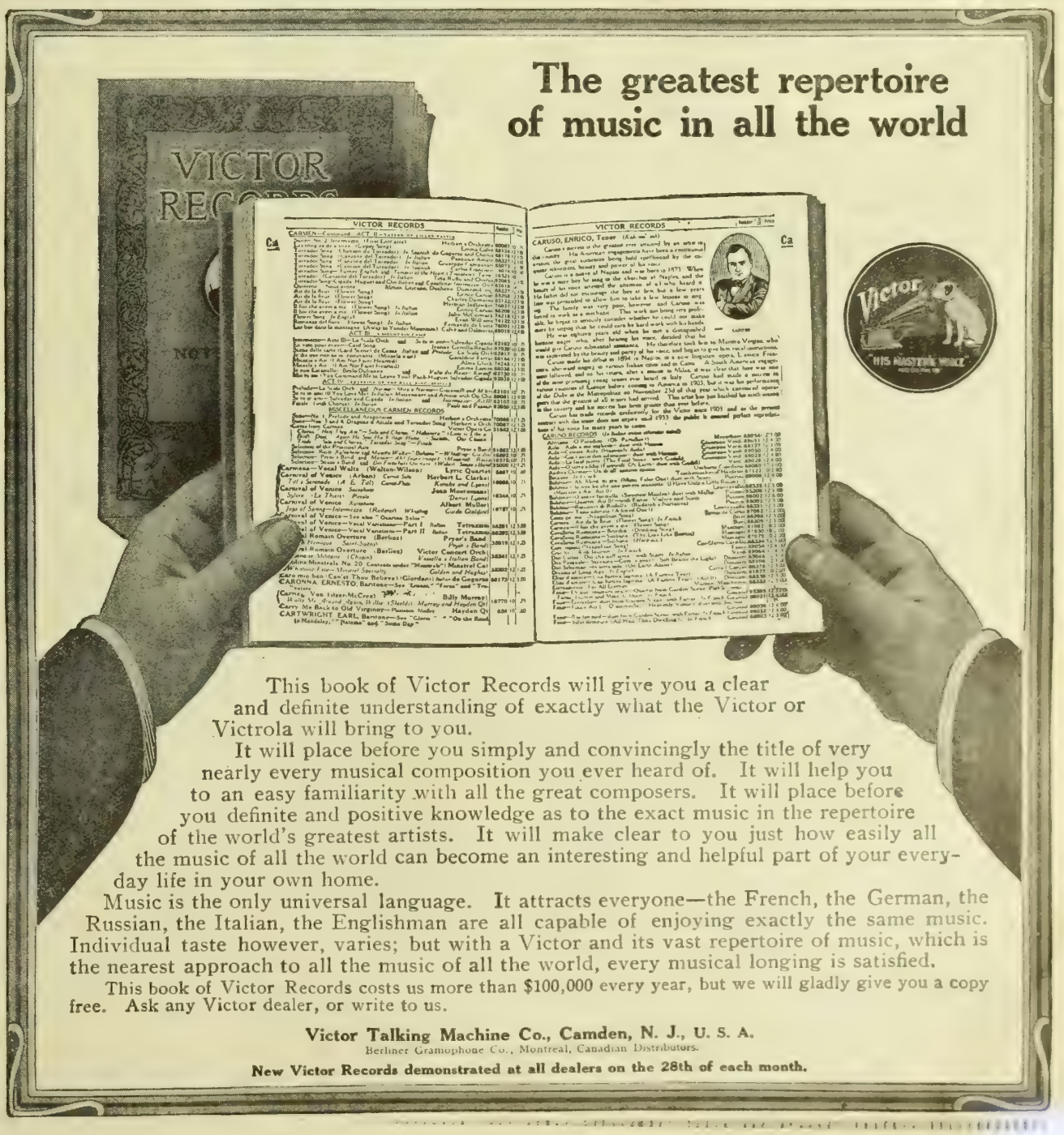
Walter Joyce, Harvard, Neb.; Joe Gorey, North Bend, Neb.; Bessie Russ, Chambers, Neb.; Alice Belle Brown, Loretto, Neb.; Ledra Stoltz, Milford, Neb.; Alvin Kemp, Milford, Neb.; Martha Glanz, Harvard, Neb.; Luella Stewart, Wisner, Neb.; Gertrude Watkins, Neligh, Neb.; Arthur H. Lange, Ord, Neb.; Bernice Bird, Dunlap, Ia.; Abraham Schram, Anton, Ia.; Rosa Kalina, Chelsea, Ia.; Mabel Stewart, Quenemo, Kan.; Gladys Schransberg, Spring Grove, Minn.; Helena Kleinjan, Bruce, S. D.; Mary Eunice Straum, Fordland, Mo.; Ella Irene Burks, Fordland, Mo.; Irene Reed, Fordland, Mo.; Melba Gilliland, Riverton, Wyo.; Stanley Sherman, Kingman, Ariz.

San Blas Islands

The San Blas islands are situated about 100 miles from Colon, Panama. On the islands are a few cats, dogs, hens, chickens and one pig, but no horses, cows, goats or sheep; only the few inhabitants who have been to Colon have ever seen a horse or other large domestic animal. Many of the young men are, therefore, greatly interested in pictures of these animals. Just now they are looking forward eagerly to the proposed importation of a cow.—Dumb Animals.

Usefulness of the Dog

Just to give pleasure is not the only mission the dog has. Flocks on hill and plain have been guarded and herded; the approach of the stealthy thief by night has been made known; property, and even lives, have been saved by the direct means of a dog.—Southern Kennel.



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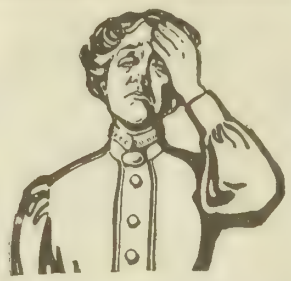

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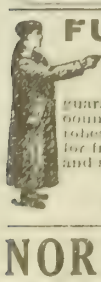

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Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6512—Ladies' Shirt Waist—This shows a simple style for the tailored effects worn so much with separate skirts. The tucks are in front only and the closing is made with the usual box pleat. The collar can be detachable or form part of the waist. The sleeve is plain, with tucks near the cuff. French flannel, cashmere, satin and similar fabrics are used for waists in this style. The pattern No. 6512 is cut in sizes 34 to 44 inches bust measure. Medium size requires 3¾ yards of 27-inch material.

6472—Ladies' Waist—A plain shirt waist without the usual severity of outline. The neck may be high or low, with a novel pointed collar as finish. The closing is double-breasted and the sleeves plain at the shoulder, but gathered into a cuff at the wrist. French flannel, batiste, voile, faille and satin are used for these waists, or they may form part of a costume. The pattern No. 6472 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2½ yards of 36-inch material.

6492—Ladies' Skirt—The four-gore skirt is one of the plainer models suited to the tailored costume. It is also good for the separate skirt. It has a side-front closing, where there is an ornamental tab extension part of the way down. Plaid, striped and plain cheviot, corduroy, serge and novelty woolens will make up well in this style. The pattern No. 6492 is cut in sizes 22 to 32 inches waist measure. Medium size requires 2⅞ yards of material 44 or 54 inches wide.

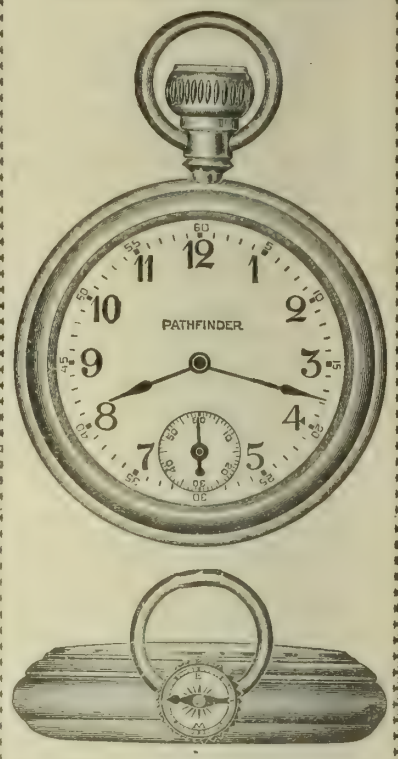
6453—Ladies' Dress—In this very stylish design the new vest idea is carried out in the bodice. This is plain and has a front closing with two points at the waist, hanging over the girdle. At the neck there is a small chemisette and a low, ornamental collar. The sleeves are plain at the top and slightly gathered at the wrist. The skirt has three gores and is gracefully draped. The closing is in the front. The dress pattern No. 6453 is cut in sizes 34 to 42 inches bust measure. Medium size requires 4⅛ yards of 44-inch material, with 1¼ yards of 24-inch plain fabric and 1⅞ yards of edging.

6518—Ladies' Skirt—This stylish three-gore skirt can be made with the high or regulation waistline. The two trimming bands give the tier effect now so much sought and may be of contrasting material or of the skirt fabric. The closing of the skirt is in front. Plaid and plain materials, novelty goods, serge and thick satin are suitable for this skirt. The skirt pattern No. 6518 is cut in sizes 22

(CONTINUED ON PAGE EIGHTEEN.)

BOY SCOUTS

Look Here!



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Get your father, mother, or big brother or some neighbor to subscribe for the Twentieth Century Farmer, or renew their subscription for one year at the regular price of $1.00, and we will send you this watch free. It's new and just out and will please you. It is guaranteed to run and keep accurate time.

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Every Boy Scout should have one.

Make up your mind to get it today.

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OMAHA, NEB.

Of Interest to Our Women Readers

When You Shake Hands with the Morning

I.

The world is waitin' for you—at your dwellin' Joy will stay
When you shake hands with the Morning in a happy sort o' way,
When you glimpse the hills with gladness as you rise from dreams of night,
And recognize your kinship with the blossoms and the Light.

II.

Oh, the world is waiting for you, to follow on and on,
When you meet it—when you greet it with the Spirit of the Dawn!
Trouble to the shadows, ever fading far,
The Light to break in blessing, and Joy the Morning Star.

—Frank L. Stanton, in Atlanta Constitution.

Mother's Spring Suit

The family was gathered around the big lamp, deep in the study of a mail-order catalogue and a pile of samples. Mother's spring suit was the subject of discussion. The girls had already planned theirs and, as usual, mother's came last.

"You would look awfully pretty in that suit," said Caroline, smoothing a sample of soft, gray wool, light in weight and silky in texture—just the thing to bring out the silvery sheen of her hair and the faint pink in her cheeks.

"Well, there is no use considering it," said mother, all the more firmly because she longed for that suit with a longing out of all proportion to the importance of spring suits. It wasn't the thing itself so much that she wanted as what it symbolized—the relief from the everlasting dull blacks and browns she had worn so long that they seemed to her the badge of age and service. "No matter how plainly I had it made, it would cost more than we can afford."

They had a given sum that had been laid aside for spring clothes. The girls were provided with what they needed and then mother took what was left. This had always been the custom. Mother had started it herself when the children were little, toddling babies, and, though the sum grew yearly as the family prospered, mother's share remained about the same. It somehow seemed so much more important to all concerned that the girls should look neat and trim and well dressed than that the middle-aged mother should be attractive.

This is not a story. It is a happening. If it were a story, the girls would be seized with a spasm of unselfishness and order cheaper clothes for themselves that mother might have the suit she could not help showing that she wanted. Girls always do that—in stories. In how many families this year will this little scene or something very like it be enacted? And when those same girls that seem so selfish to you when you look at it from this standpoint grow up and have daughters of their own they will be doing what their mother is doing now—denying themselves what they want and have a right to have that the daughters may have more than they need.

HOME EDITOR.

More About Rural Schools

We are glad to notice the question of the rural school being agitated a bit. The time may come when people will be interested more in their children's welfare than in anything else; then will life be worth while. Of course, the rural schools do not meet the demands. School boards do not often take the pains to consult the county superintendent in regard to finding a thoroughly competent teacher, telling him the exact condition and needs in that particular neighborhood. In some districts a teacher can scarcely find a boarding place, and many are the reasons why a well equipped teacher cannot be had. A poor teacher is undoubtedly expensive at any price.

Home-Made Sausage for Dinner

Since such a small per cent of children are sent away to school, it really does seem necessary to have more than the eight grades taught in the country schools. It would also raise the standard of our teaching force were we to add two or more grades to the work. A really competent teacher is most willing and ready to help those who have finished the required work and who wish for further advancement. Should the school be crowded for work, those advanced pupils may not come forward for much or any recitation work, but receive help from the teacher when necessary and convenient. Some folks might be willing to give private pay for such extra help.

I do not think that by turning the school into a veritable workshop, trying to teach agriculture, sewing, cooking and what not, with only one teacher to do it all, we can expect to arrive at satisfactory results. One can do only about so much correctly, and even were the teaching force adequate to the occasion, what pupil is able to grasp it all? Above all, let us look to the social life of our child and not try to eliminate the cultural elements. There has always been more or less complaint when consolidating two or more schools, mostly from selfish reasons; therefore, from most standpoints, a fruitless undertaking. Were the districts made up entirely of people of the best quality, no doubt consolidation would be easy, but there comes the "if" again. The county superintendent of schools is supposed to know more about the teachers and their work than anyone else, as a rule. It pays to hire a good teacher, give salary accordingly, providing a suitable boarding place or home for him or her, acting as though the teacher were a real benefit rather than a bother to your neighborhood. Were school boards always to do in this way, we would soon eliminate the poorer teachers, who often acknowledge that they dislike their work, but seem to think it a more respectable way to make a living than to do something else. The association of our child with such a person brings little real benefit in the long run, so to speak, and often creates a dislike for school, which in some cases is impossible to overcome. When people are anxious for a cheap teacher we take it for granted that they belong to the same class.

HARRIETTE H. NATION.

Nebraska.

Responsibility

The blame for the boy who goes wrong does not rest with the boy himself, nor yet with his remote ancestors. It rests squarely with the parents, who, through ignorance or neglect, have failed to mold him aright in the plastic days of childhood. What is needed, especially in this complex civilization of ours, with its myriad incitements and temptations, is a livelier appreciation of the responsibilities as well as the privileges of parenthood. Most of all, perhaps, from the point of view of coping with the problem of vice and crime, do parents need to appreciate that it is in the very first years of their children's lives that the work of character building should be begun.—H. Addington Bruce, in Century.

Eggless Recipes

Breakfast Gems—Three cups of white flour, measured before sifting; three teaspoonsful of baking powder, one rounding teaspoonful of salt, one heaping teaspoonful of shortening (lard). Melt the lard in the gem pan so as to have the pan hot. Sift flour, baking powder and salt together in a bowl. Stir to a stiff batter with sweet milk or cold water. Fold in the melted lard, pour into hot, greased pans and bake about fifteen minutes in hot oven.

Sugar Cookies—One cup of white sugar, two teaspoonsful of baking powder, half cup of shortening, half cup of milk or water, any flavoring, flour enough to roll soft and thin. If lard shortening is used, add salt.

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Has a large well built tub of cypress. All mechanical parts accurately made and fitted. All gears enclosed so injury to operator is impossible with this machine.

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To operate, open lid which throws machine out of gear. Fill tub two-thirds full of water. Put in clothes, clamp down lid, thereby throwing machine into gear and your washing is under way. Only one lever on entire machine. This operates wringer.

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Wright's Ham Pickle, a scientific combination of meat curing materials all recommended by Dept of Agriculture. A $1.00 box cures a barrel of meat.

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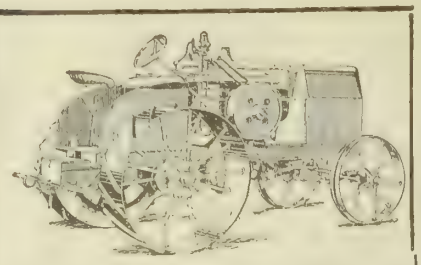

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We guarantee this gate to be the strongest made today anywhere. Built of heaviest High Carbon Steel Tubing Galvanized. Easily withstands shock of wildest steers, or stallions—breachy cows—meanest bulls. Guaranteed for three years. If, by chance, your dealer is not supplied, write us at once for full details, low prices and terms.

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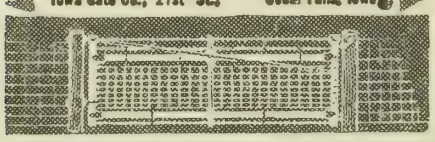

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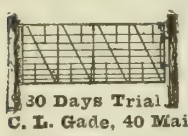

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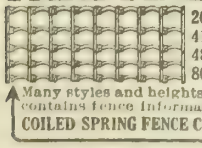

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Chat with the President of Peru

By Frank G. Carpenter

LIMA, Peru.—I have just returned from the National palace, where I have had a long chat with Senor Guillermo Billinghurst, the president of the Peruvian Republic. The National palace stands on the Plaza Mayor, at right angles to the great cathedral that was founded by Pizarro in 1535. The palace itself was built about the same time, and it has all the features of the Spanish architecture of the days of Columbus. It covers a whole city block, and its ground floor area must be six or eight acres. It has two stories, and it consists of large rooms with wide marble stairways leading to the second floor. The building runs around patios, and in these are royal palms and tropical flowers. On my way in I was shown a fig tree that was planted by Pizarro. It is more than 300 years old and is still bearing fruit.

My audience with the president was arranged by the American minister to Peru, Mr. Benton McMillin, and we went to the palace together. Passing the soldiers at the entrance, we walked through the hall in which Pizarro was killed, and ascended a marble stairway to the second floor. Here we met Mr. Cisneros, the secretary of the president, and a moment later were shaking the hands of the man whom I might call the Theodore Roosevent of Peru.

The President Will Make the Harbor of Callao the Finest Port of the Pacific

An Aggressive Ruler

President Billinghurst is an aggressive and progressive ruler. He is a fighter, a man of the people and he believes in the masses. Like Mr. Roosevelt, he has had a military career, and has won his spurs on the battlefield. He is not afraid. He told me that the danger of revolutions as far as Peru is concerned is over* and that even should there be trouble, he had something like 250,000 hard-fisted men who would come to the support of the administration. The president told me that he was elected without applying for the office. He did not want to be president and was about to retire from active business. His support was so strong, however, that he was induced to head the presidential ticket, and he is now putting in fourteen hours of hard labor each day in serving his country. He is a progressive president, and has under way reforms which include the building up of the national credit and the development of Peru along modern lines.

President Billinghurst is, I judge, about 50 years old. He is of medium height and weighs perhaps 160 pounds. His head is large and his face full, with a high forehead and twinkling black eyes. He speaks English fluently, and our conversation was carried on in that tongue. The first subject was the present condition of Peru. The president said:

"One of the great troubles of Peru is that it is coveted by the countries about it. We have an enormous territory. Our country is one-sixth the size of all Europe, and parts of it are exceedingly rich. We have about us smaller countries, the most of which look with longing eyes upon our possessions. We are, in fact, in the same position as the rich man versus the poor man. The rich man has many law suits. His neighbors covet his possessions and dispute his titles to them. That is the condition of Peru. We have had trouble with Ecuador, Colombia, Brazil, Bolivia and Chile as to our boundaries, and in many of these cases the exact territory of each country is still unsettled. Nearly every country is trying to claim something that we think is our own, and we been kept so busy in trying to hold to our rights that we have not had the opportunity to develop our resources."

Willing to Arbitrate

"We are willing to arbitrate matters with Ecuador, but the Ecuadorans seem afraid to risk such a decision. Our records indicate that our boundaries extend almost to Quito and they fear the result. The Colombians hold much the same views as to arbitration, and we are having disputes as to Bolivia and have had some with Brazil. If we could only agree upon some middle ground as our permanent boundaries and allow the balance of the territory to be subject to arbitration, we might be free from some of our complications and in the end be better off. What we need is peace and surety of possession. We only want a square deal and we are willing to submit the questions to fair judges. Some of the countries have proposed that it be left to the pope. I would not agree to that, for, just now, you know, Peru has thrown off the dictation of the church and has declared religious liberty throughout the whole country. I will not say that that was a wise thing to do at the present time. We had religious liberty before in reality, although not nominally so. At any rate it does not seem to be the psychological moment to ask the pope to pass upon questions of such vital relation to us."

"But have you really much good territory, Mr. President?" I asked.

Empire to Itself

"We have an empire. The greater part of the republic is susceptible of development. This is so of the coastal zone and of the high plateau in the mountains, and also of the slopes to the east which go down to the Amazon valley. Right here on the coast we might have three times as much cultivated land as we now have, and we expect to secure this by irrigation. We have more than fifty streams that now flow down from the Andes and cross the desert on their way to the sea. There are tracts of cultivated territory along each of these streams and wherever water can be go to the soil

*Only a day or two after this interview was had the president was imprisoned by revolutionists

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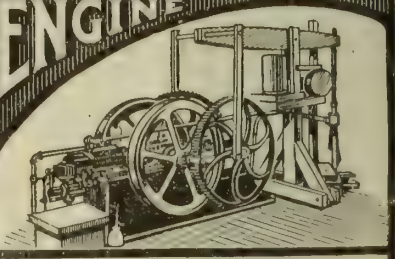

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it produces like the Nile valley. We have had surveys made and we believe that we can treble the irrigated area. The matter is already well under way and congress has authorized me to issue $10,000,000 worth of bonds, the proceeds from which are to be used for that purpose. This money will soon be available and we shall begin work at once."

"Does this mean that you will turn the water out over the desert plains or the pampas?"

"No. Some of my people believe that advisable, but I am in favor of using the valleys until we have made every acre of them into plantations. We know the soil there, and when that has been reclaimed there will be time enough to consider the pampas."

"Tell me about your plans for the high valleys between the ranges of the Andes, Mr. President."

"There is another enormous field for development. We have uplands there that are much like the high valleys of Switzerland. We have plateaus upheld by the mountains, and those plateaus are already covered with sod. We have vast herds of cattle and millions of sheep in the Andes. They feed upon the plateaus and we believe that these pastures can be greatly improved. We are trying to breed new grasses, and if we can do as we hope there is really no limit to our possibilities in the production of beef and mutton. We are introducing new breeds of cattle and sheep, and the day will some time come when Peru will be one of the great wool and meat exporting countries. Indeed, I see no reason why we should not eventually send meat to your markets through the canal.

"Another feature of our highland development," continued Mr. Billinghurst, "is in the raising of grain. We find that barley will grow well at 12,000 feet and more above the sea, and we are inducing the people to plant it. Here is a bottle containing some barley from the highlands. It is not at all bad. We have millions of acres that are adapted to that grain. We can also raise wheat in northern Peru, and we shall eventually produce our own flour. Just now I am planning to import wheat and grind the flour here. We shall protect the industry by tariff. We are raising good tea near Cuzco. All the tea I drink at my table comes from there.

Rich Mineral Deposits

"And then as to our mineral lands," continued the president, "I hardly know how to express their extraordinary richness. The whole of the mountains from Ecuador to Bolivia are highly mineralized, and we must have vast unknown deposits of silver and copper. The old mines of the Spaniards are now being reopened, and we are finding new mines and new minerals almost every month. We have, you know, the greatest deposits of vannadium in the world, and we have vast quantities of tungsten near Chimbote. The copper mines of Cerro de Pasco are about the largest in all South America, and there are other treasure vaults of the Andes yet to be opened. The gold placer deposits on the eastern side of the mountains are said to be enormously rich."

"And the Montana, your excellency, what can you do with the slopes of the mountains on the eastern side of the country?"

Work in Its Infancy

"That region is a world in itself," replied the president of Peru. "We have a heavy rainfall on the eastern slopes of the Andes, and the climate varies from the temperate to the tropical zones. We can grow coffee and cacao pretty well up in the mountains, and further down we have all sorts of tropical fruits. On the lowlands we have rubber and vast tracts that will produce sugar cane, tobacco and cotton. That part of Peru comprises more than half our territories, and it is all virgin soil. Take the province of Madre de Dios, which we have recently opened down near Bolivia. It is estimated that over 5,000,000 pounds of rubber have been taken from that region, and that there are large quantities left. The lands there will produce sugar cane, rice, cotton and coffee, and on the slopes of the mountains they are grazing cattle and sheep. The country is also rich minerally, and this is so of much of the Montana. A great deal of the gold of the Incas came from that region.

Transportation is Handicap

"The chief difficulty as to the development of the Montana," continued President Billinghurst, "is transportation. The only way to get the crops out is on the backs of men or on mules, and this makes it impossible to do any farming upon a large scale. We expect, however, to extend our railroads that now cross the Andes down into the Amazon valley. This can be easily done, and we will then have an outlet to both the Atlantic and the Pacific oceans. We have plans for several railroads to go through that country to the great tributaries of the Amazon. Just at the present we have not the money to make the extensions, and this is one reason why I have not approved of the McCune concession, which provided for the building of a railroad to the Ucayali river. I believe, however, that we shall soon have railroads reaching to the Amazon valley, and that the Montana will eventually be one of the most thickly populated parts of Peru."

"Will not the Panama canal hurry up this development?"

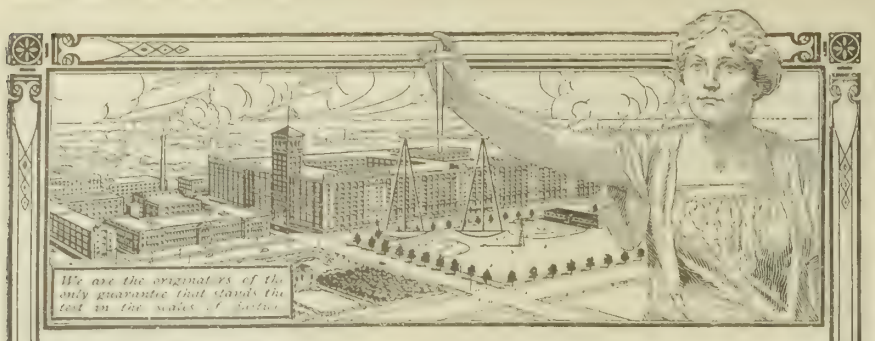
"It should do so, and we hope it will. With railroads to the Amazon, the higher priced products of the eastern slope of the mountains may be brought down to the Pacific and go northward through the canal. Others of the products will go down the Amazon and out to the Atlantic. We do not expect to receive a great benefit from the canal right at the start, but we believe that it will steadily increase our trade, bringing us much closer to your country and Europe. It is our hope that it will lead many of your American capitalists to come down and look over the ground with a view to investing. As it is now some of our most valuable mines are owned in the United States and some of the best development works of Peru are being done by Americans. This is so with Cerro de Pasco, with Morococha and with other large copper properties."

Work in Its Infancy

"What are you doing to prepare for the canal?"

"Our work so far is at its beginning," replied the president. "I have here a scheme for the improvement of the harbor of Callao that will give us the finest anchorage for shipping on the west coast of South America, if not one of the finest of the whole world. We have, as you know, just opposite Calloa, lying parallel with the coast and less than three miles away, the high island of San Lorenzo. At the southern end the strip of water between this island and the coast is very shallow, and we have found that by the building of a breakwater we can unite the two and make an expanse of deep water perfectly shut off from the sea, large enough to hold all the fleets of the world."

(Copyrighed, 1914, by Frank G. Carpenter.)



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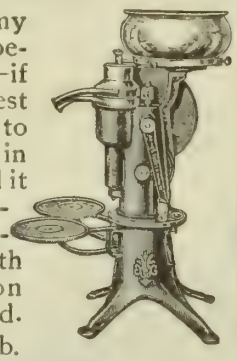

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

SOME of the farmers living near one of our country consolidated schools objected strenuously against time being taken from book study to experiment in crops and other smaller matters about the farm. They didn't want the kids coming home to teach them how to farm; they wanted no juvenile advice handed out from a professor that learned his farming any place but on a farm. However, as chickens are not much, anyway, it did not sound so bad to hear the kids spout at home about the best kind of feed to stuff into a chicken if you want eggs in winter. They listened with considerable indulgence to balanced carbohydrates, protein, etc., and let the children have the wherewithal in the required food. If they must have something to work with, why, what so cheap as a chicken? It was not long before results began to show, and the farmers were constrained to acknowledge that never did they get so many eggs as this winter. After all, there must be something in the ration. So, when the professor said the boys might next take up the study of proper rations for growing calves, the farmers hadn't a word to say against it, not a word.

Roosts

Some poultry keepers think the roosts the smallest item to be considered in poultry raising, when really they are of utmost importance. First to be considered is the placing, for just so certain as the roosts are nailed tight and touch the wall just so sure, work as you may, you will never be free from mites. Once they get in any common board wall and they will hide safe in places you can never touch with vermin destroyers; also the smoother the roosts the freer from mites, as these despise a smooth surface. Sassafras poles were old-time favorites; they peel off smooth, and the odor banishes vermin to some extent. If you have wooden roosts they should be dropped into cleats cut in the frame they rest on. This frame is best made also in such a shape that it can be taken out and scalded, burned over or disinfected with the roost. The "carpenter trestle" roost frame is handiest for this purpose, the trestles having cleats cut in for ends of the roosts to drop in. Greasing the under side of these roosts helps keep down mites. Mites seldom stay on top of a roost unless it has cracks in it, but they will stay on the under side if allowed to.

Where the roosts are graded up the old-fashioned way, which is now seldom seen, the space is never all used, as the fowls fight for and crowd on the top roosts, shunning the lower, and flying from these to a hard floor, bruise the feet and joints more often than one might guess. In building a new house, or fixing up the old ones with roosts, many parties nowadays prefer to buy the iron roosts made just to fit the feet in proper manner and under which coal oil can be run in grooves. Some of these swing from the ceiling, but the latest rest in a frame of iron that sits on iron legs about two feet from the floor. At one corner of this frame is fixed a can for coal oil, and this can feeds the coal oil under all the roosts, killing the mites as they come in contact with it. These roosts come in different-sized frames. Some contain just three roosts from six to ten feet in length, holding from thirty-six to forty fowls. Other frames contain a larger number of roosts. While, of course, these roosts mean the outlay of a certain price over that of an old wooden roost, once bought they will surely last for all time, and the number of chickens saved and larger number of eggs secured, to say nothing of that miserable fight some must ever wage against mites, surely would soon easily save the outlay, for there is no doubt but that many chickens die from the ravages of mites alone, and we know without a doubt that they lower the egg producing power of a hen.

Dirty Food

So many poultry keepers, especially on the farms, seem to think that a fowl, even a wee chick, prefers its food fed to it from off the filthy ground. Notice how corn is thrown broadcast on muddy ground and table scraps pitched out just anywhere. Notice the feed coop for the small chickens; dry feed or wet is pitched into it on the bare ground. It makes one shudder who never feeds anywhere but on clean grass or well scrubbed boards. No wonder the chicks pick up gape worms and the older fowls all manner of filthy stuff and disease germs the whole year around.

Tells why chicks die

J. C. Reefer, the poultry expert of 1619 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

Styles for Home Dressmaker

(CONTINUED FROM PAGE FOURTEEN.)

to 32 inches waist measure. Medium size requires 2⅜ yards of 44-inch material, with bands of same.

6505—Children's Dress—Serge, cheviot or linen can be used for this dress. The dress closes at the front and can be made with either the long or short sleeves. The plaited skirt is joined to an underwaist. The pattern No. 6505 is cut in sizes 4, 6 and 8 years. Age 6 years requires 2½ yards of 44-inch material and 2⅝ yards of edging. The underwaist requires ⅝ yards of 36-inch lining.

6529—Boys' Russian Suit—This suit carries out the idea of the Russian peasant costume. It has a very long blouse, free at the lower edge or gathered into a flat band. The neck is round, with a turnover collar, and the sleeves are plain except for a few gathers at the wrist. The trousers are made in the regulation manner, with front closing. Serge, cheviot and wash fabrics are used for these suits. The suit pattern No. 6529 is cut in sizes 2, 4 and 6 years. Medium size requires for blouse 1½ yards of 36-inch material and for trousers ⅞ yard of 36-inch material, or 2¼ yards of 36-inch goods if made of one material only.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Farmer and Banker

W. C. S., Nebraska: There seems to be an awakening among the farmers and they are beginning to talk back a little, which shows plainly that they feel that the professors, bankers and business men are trying to "rub it in" considerably. Mr. Blair and C. L. D. hit the tack pretty squarely in the issue of February 21, but the school teacher in the rural school is not the only place where improvement might be made. As to mathematics for the banker and color contests for the merchant, these questions have already been solved. The banker has figured that the best thing for him is to induce congress to let him control the money, the medium of exchange, so that he regulates the supply. This gives him control, so that we need not expect cheaper money. The town merchant, like the farmer, cannot figure in a contest because the article—let it be calico or canned goods—is controlled by a combination that governs the output, and they are never rushed for help, and in fact do not care how little is in sight.

I am a farmer in one of the richest farming counties in Nebraska. I own and operate 240 acres of land. It matters not to me whether I produce thirty, forty, sixty or 100-fold, for, like the banker, I know that the more I raise the lower the price gets. Why should I, just because someone else breaks his fool neck to get the applause of trust bankers, get wrought up, wear out my soil and myself, donate labor on roads to make them so good that old Prince may be pressed into the collar and deliver the goods, while the banker and merchant ride over that road in their fine touring cars and put the price on what I produce and what I purchase—namely, money and merchandise?

Agriculture as taught in our schools cannot hurt farming; it only reaches the eighth grade. But when the boy or girl leaves the farm to finish that education it is then that we are forced to ask for help. Under these conditions, forced upon us by educators and legislators, the farmer finds that every leech has fastened itself upon him. To overcome this condition the farmers must join in protecting their interests. He must send men to congress and the legislatures and repeal many laws now on the statutes and make a determined stand for the right to set the price on his products instead of the banker. Then, instead of working early and late to increase the crops, he can take time to make farming a pleasure.

Editor's Note—This letter is full of ideas—the kind we are glad to print, even though we cannot agree with everything the writer says. If it is wrong for the banker and merchant to arbitrarily fix prices, it is wrong for the farmer to do it. Farmers should join in protecting their interests, but to secure equity and establish justice they must not forget to apply the golden rule. It is to the farmer's interest to see to it that gambling in farm products by boards of trade and other speculators is eliminated and that the unnecessary and useless middleman is done away with, so that farm products can reach the consumer by the shortest and most direct route.

Feed for Mare in Foal

D. B., Utah: I have a mare in foal, being about six weeks of her time. Occasionally she passes colored urine. Some recommend feeding the mare in foal wheat and some say not to. Will appreciate any suggestions. Mare is in good condition and appears all right otherwise.

Answer—There is nothing in the condition described that is out of the way. We would suggest that there be no change in the feed that has been given. Wheat is not a very good horse feed.

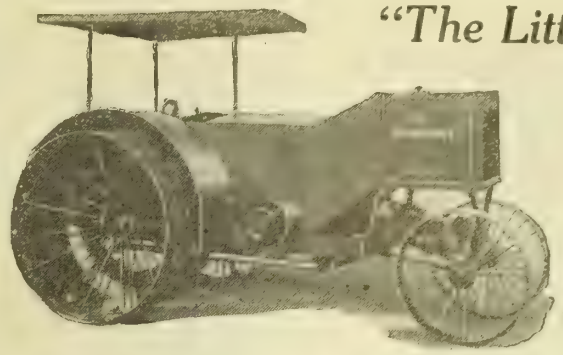
Tuberculous Dairy Cattle

A. A. M., Nebraska: In looking over your paper we noticed on the editorial page an article on shipments of tuberculous cattle. We wish to congratulate you on the stand you have taken in the matter and also for your fearlessness in mentioning names. It seems to us that the same thing might be done regarding some breeders in this state. We had an experience last spring with a tubercular cow. This animal was tested and reacted in December, 1911. In August, 1912, she was exhibited in Iowa and won a premium and in September she was shown in Nebraska, also winning a premium. The reactor tag had been removed. The eradication of tubercular dairy animals is a thing that everyone, from breeder to the consumer of the milk, ought to help along. In the past the state veterinary department has been very lenient in regard to this and it ought to tighten up the lines considerably, and will when people get up and demand it. We hope you will keep up hammering on the tuberculosis question until the laws already on the statute books are enforced.

Editor's Note—This paper will continue to hammer away for the enforcement of laws that are intended to protect the live stock raiser. If all men were honest, this would not be needed. It is unfortunate that it is necessary to enact such stringent regulations, for they necessarily place hardships and burdens on honest men. But there seems to be no other way to protect the honest man, for the unscrupulous, dishonest person must be curbed in his greed for the almighty dollar.

Home Training the Remedy

Mrs. M. A. S., Iowa: I was much gratified by the article on page 18 of your paper of February 21. C. L. D. thinks the rural schools might help us. Perhaps they might in a small degree, but it is the duty of the parent first to teach the child to remain on the farm, because it is the only way to get a really independent living. The farmers are not moving from this part of the country in such large numbers as formerly to the hotbeds of vice to educate their children. They have seen that there are different kinds of education. Children ought to have some kind of



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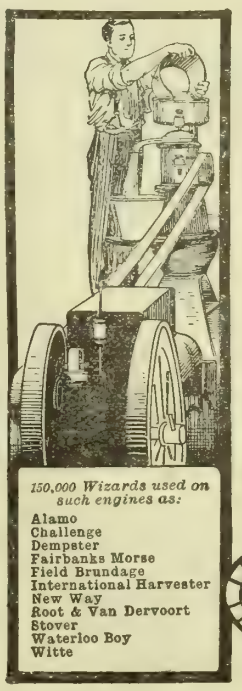

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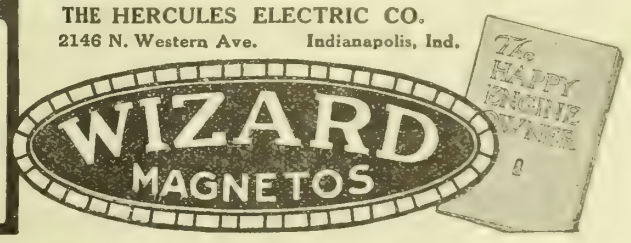

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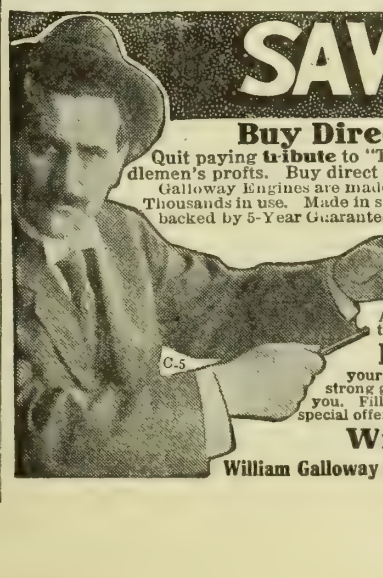

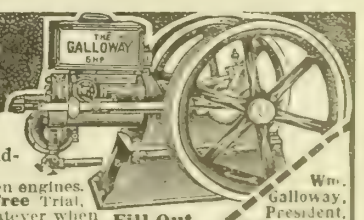

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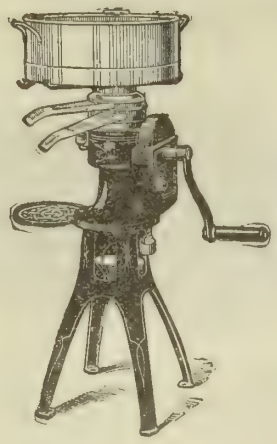

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Motor Trucks
Threshers
Grain Drills
Feed Grinders
Knife Grinders
Binder Twine

A DAIRY farmer who does not use a cream separator is losing up to $15 per cow per year. Complete your dairy equipment by the purchase of an International Harvester cream separator—Lily, Bluebell or Dairymaid. These separators skim closely—leaving barely a drop of cream in a gallon of milk—and they will do it for years.

These machines are furnished with pulleys for the use of power. Belted to a small I H C engine, you have the best outfit it is possible for you to buy. Note the low supply can on I H C separators, the height of the milk spout which allows a 10-gallon can to be used for the skim milk, the strong frame with open base which can be kept perfectly clean, and the dozen other features which make these I H C machines the best.

Your local dealer should have one of these machines on sale. If he has not, write us before you buy and we will tell you where you can see one; also send you an interesting book on separators.

International Harvester Company of America
(Incorporated)
CHICAGO USA
Champion Deering McCormick Milwaukee Osborne Plano

The Old Reliable PeterSchuttler
is the Easiest Running Wagon

It is built in the honest old-time way, by expert wagon builders—in the World's Greatest Wagon Factory. That's why it stands the wear without repair, and gives greater service and satisfaction than any other. Your horses can do more work with a Peter Schuttler Wagon—because it runs so much lighter.

Peter Schuttler Roller Bearing Wagons
run 1/3 easier by reducing friction on the bearings. A Big Improvement.
Peter Schuttler Company, Chicago

200 Bushels of Corn to the Acre

has become an old story in the **Golden Central Southland.** The season is long, and there is plenty of rain. Replanting is unheard of. There is never a total loss, and because more cotton is raised than corn, the price is always around a dollar a bushel.

NORTHERN FARMERS ARE SUCCESSFUL

and many of them have written me and sent pictures of their crops, which look fine. Write for illustrated booklets and magazines telling of successes Northern men have made in Kentucky, Tennessee, Georgia, Alabama, West Florida and South Mississippi. YOU can do as well on these cheap lands, and live in an almost perfect climate.

G. A. PARK, Gen'l Imm. and Ind'l Agent, Box D-408, Louisville & Nashville R. R., Louisville, Ky.

light work to do almost as soon as they can walk. The city children are idle in the summers. There is no success in life without effort and the sooner children learn that fact the better it is for them. There is too much reading done of an unprofitable kind. A child should early learn that it is not how many books he can read, but what he reads, that will make or unmake him as a man. No daily paper ought to be in the house with children, because they relate murders and suicides and robberies, and children ought not to have their minds filled with such things. They will learn of them too soon from experience anyhow.

Editor's Note—Come again. The home is the bulwark of our American civilization. Too many parents are shifting over onto the public school the education and training of their children. When there is cooperation between the parents and teacher then the child has the best opportunity for the right kind of development.

Jack Pines

H. B. A., Minnesota: It has been stated (see "Geography of Nebraska," Condra) that eighty years were required by jack pine to make log timber. I protested by letter to Prof. Condra that the statement was not correct and would discourage planting. The proof of the error is now at hand in a letter from H. F. Bruner of Kola, Neb., on whose place a trial plantation was made in 1891 in competition with about ninety other promising species of trees. These trees are log timber now and have grown in twenty-four instead of eighty years. Below is a copy of Mr. Bruner's letter:

"The original plantation of jack pine planted in 1891 did fine. Fully 80 per cent lived, and they have been thinned once since. They range from sixteen to thirty-six inches in circumference and are from twenty-five to fifty feet high. The other varieties of pines that were planted at the time of the experiment were mostly shaded out by the jack pines, which did so much better that it was decided to keep the jack pines and let the others go."

Editor's Note—The jack pine is a native in a large part of our western territory. It thrives along the streams in northwest Nebraska and the Black Hills country.

Single Tax and Land Owners

J. H., Nebraska: I notice that some of your correspondents are still troubled about the single tax. One of them states that the farmers' profits are low at the present time, in which I agree with him, yet I would like to have him tell me how the renter is going to purchase high-priced land and pay for it out of his profits. He seems to think that the land owners' taxes would be greatly increased, which is not so, as by paying all taxes directly they will see to it that they are expended in a proper manner, something that is not done when taxes are paid indirectly. If all taxes were taken off money, it would bring large sums that at present are secretly hoarded into use, and this would lower interest rates.

When the money loaned out at interest by banks or private parties is taxed, the taxes are transferred to the man who borrows the money in the form of a high rate of interest, so that he pays these taxes indirectly. As to the retired farmer, he could sell his land and accept interest instead of rent, as he could get a good income that way if his money were free from taxation. A mortgage on the land would guarantee the principal and he would be free from troubles with a tenant.

It might be well for us to remember that the best interests of this country demand that the land be owned by the men who till it. Tenantry is on the increase, and all schemes for furnishing the farmer with cheaper money demand that he own the land in order to benefit by them. I do not see how it will be possible to furnish money to buy land at present high values, as it would require too large a sum and the borrower would be burdened with an interest charge too heavy to carry. Extremely high prices for land benefit no one in the long run, and I say let the land sell for a fair value so the farmer can pay for his land in a reasonable length of time. If a man is induced to pay too large a price for his land, he is going to find it out sooner or later and is going to be discouraged when he finds he is carrying too heavy a load, and a discouraged man is not the best farmer or citizen.

Many people have an idea that all property should be taxed, which is a relic of the time when land represented wealth, and the wealthy disguised the taxes in order to shift the burden onto the poorer classes. Instead of the single tax discouraging the ownership of land, it would encourage small holdings, as under our present system there has grown up a parasitic class of land agents who prey on a man's natural desire to own land of his own and are making most of the real profits out of the land and fattening at the expense of the farmers. Instead of paying tribute to a hoard of speculators the farmer would pay taxes to the government. Money being free from taxes could be invested to better advantages in other ways and a man would have no inducement to buy more land than he could improve and use.

Another Cream Station Agent

V. W. B., Nebraska: I have just been reading your article entitled, "Who Pays Cream Receiving Station Cost?" You mention that the station operator takes from one man and gives to another in order to keep the man that complains satisfied. I contend this is not a fact, as I have known of two cases where it was tried and in each case the operator was fined $25 by the pure food inspector, and it is not at all likely the operator would take these chances. There was a time when this method of robbing Peter to pay Paul was done by the operators, but not now, when the inspector is likely to come in on a man at any time.

You mentioned, further, that there was a difference of 5 cents per pound. This, however, is not always the case, as the cream stations at this place are now paying 28 cents per pound, and I asked a farmer what he was getting for his cream shipping direct, and he said 2[illegible] cents. I do not think there would be any money in shipping direct at such figures.

Another great object in favor of receiving stations, you can bring in any amount, and with the average farmer who keeps from eight to ten cows this is an object. True, he could buy more cows, but with the price of cows when it is at the present time it is no small matter to buy up half a dozen cows, and the average western Nebraska farmer could hardly find enough feed for them.

I do not think you will find the cream buyer any lazier than the average grain man or coal man or ice man. It is no uncommon to go into a bank and find the cashier not busy, and I think you will find the cream receiver like other men, busy at times and not busy at other times.

I will admit that at times and under certain conditions there might be some money in shipping cream direct, but would not this hold true with all a farmer's produce, and if everything were shipped direct, what would be the final result? All towns of 10,000 or less would become mere whistling stations. The who would be the losers? The farmer. For whenever a farm is listed for sale and a prospective buyer comes, what are the questions asked? How far from town are you? How many churches has your town? How many schools, with how many grades? According to the distance from a town the land is valued. There are many large tracts of land in the west and northwest that could be bought cheap, but that the people object to going so far from town. The farther you are situated from town the less your land is worth per acre, and the farmer will be the direct loser. Therefore, I say keep up your home town, and where it is possible to do so build a small e

operative farmers' creamery and keep your money at home.

Editor's Note—The article referred to was written after a careful investigation of the methods employed by cream receiving station agents and creameries throughout this territory, and the facts are as stated in that article. It is possible and likely that there are exceptions, but that is true of any rule. The method of taking from one man to give another is practiced in many places in spite of inspectors. The average difference between receiving station and direct shipping prices is 5 cents, as stated, notwithstanding exceptions in a few localities. This is balanced by the fact that in some places the difference is larger. As to the destruction of the small town, this is untrue. The small town would not be destroyed, but changed, if the direct method of disposing of produce could be made general. We believe in farmers' co-operative creameries where there are enough cows in a district to warrant them, and where they are really co-operative and well managed so that they may be successful. We do not believe in co-operative creameries, however, where there is not enough cream produced to warrant their establishment and assure their prosperity. We believe in co-operative elevators and think the time will come when the small town is merely a co-operative community maintained by the producers of the district. There will be perhaps fewer churches and schools, but better ones, and with larger attendance. This paper believes in church co-operation. These things are surely coming in the future, as the farmer is more and more taking his business into his own hands rather than delegating it to others.

Unsigned Letters

We are in receipt of some unsigned letters taking issue with us in regard to the article, "Who Pays Cream Receiving Station Costs?" published in our issue of February 28. While we have no objection to publishing letters disagreeing with us on this or any subject, and are always glad to allow the other man to have his say, yet we do not publish anonymous letters. When you write to us sign your name or your letter will receive no consideration. Your name will not be published, but unless you are willing to stand back of what you say to the extent of letting us know who you are, you cannot expect us to pay any attention to your letters.

Paris Green Spray Safe

G. L., Nebraska: I read in your paper to use one pound of paris green to each ten gallons of water to spray cabbage for worms. I want to know if it can be used when cabbage is heading or has heads partly formed without poisoning the cabbage or the person eating it. Also on cucumbers in spraying in a manner to kill bugs?

Answer—There is no danger in using paris green in this way. It is easily washed off, and neither of these vegetables is eaten without washing.

Balanced Hog Ration

E. F. M., New Mexico: I have a bunch of pure-bred Poland-China shoats, born last October, which I expect to run in alfalfa pasture this summer. What grain should I feed in connection with this pasture and in what amount?

Answer—It all depends upon the purpose for which you are feeding these animals. Corn is the best feed there is to supplement alfalfa. If you cannot obtain corn, these shoats might be fed Kaffir, milo, Egyptian wheat, barley or wheat. If you are fattening them for the market, give them all they will eat. If you want them for breeding purposes, keep them in good physical condition, but do not stuff them—well fed, but not fat. We are unable to give you as definite information as we would like to, as your letter contained so few details regarding animals themselves, and the feed obtainable in your locality.

Making and Marketing Butter

(CONTINUED FROM PAGE THREE.)

the proper size have been formed, use a fine-meshed wire strainer. If the butter is too firm, wash it in water a little warmer than the buttermilk was; if too soft, use cold water. Washing improves the flavor and keeping qualities, removes buttermilk and makes the butter firm and hard. When the washing is finished the butter should still be in small granules.

Butter is worked to complete the distribution of the salt, to give compactness to the butter and to remove all surplus moisture and buttermilk. It is worked enough when it is firm and glossy in appearance, resembling in structure the broken end of a steel bar. Mottled butter has not been worked enough. Salvy-appearing butter has been overworked and its keeping qualities injured.

Good butter should be marketed in an attractive print and package. In this form the butter is easily handled and can be used as an advertising medium. One or two-pound prints wrapped in parchment paper and enclosed in pasteboard cartons sell best. On these cartons the name of the butter and the name and address of the maker may be printed.

If butter is liked the consumer will demand more of the same kind, and an increased price is likely to be obtained. Patrons who appreciate butter of superior quality and are willing to pay something extra for it are especially desirable. When these are found, keep up the quality and a steady market is assured.

Better Farming —Less Work

Why take four or five days to do work that you could finish in one day with a Leader? And do it easily. Why have your wife board hired men, or you board idle horses when you can do more work on less expense with a

Leader Tractor

Try It Before Buying

Write us—learn how easily you can cut your cost of farming. The Leader is the ideal, practical, economical power for the average size farm. Saves its cost in one or two seasons. Has enormous strength—weighs only 2½ tons—built of highest grade, heat treated steel. Costs less to to keep than two or three horses. Ask for trial on your farm—you to be satisfied in every way before accepting. Write today—ask for "The Book of Farm Power." Address Dept. K3

Leader Engine Co., 15 State St. Detroit, Mich.

DE LAVAL
CREAM SEPARATOR
the most important machine used on the farm

SOME BUYERS OF CREAM SEPARATORS DO not stop to think why their purchase of the best cream separator is of greater importance than the purchase of any other implement or machine of any kind used on the farm, or for that matter anywhere else.

NEARLY EVERY PIECE OF FARM MACHINERY is only used a few weeks during the year, if that long, and when it is used simply saves time or labor over some other way, with comparatively little difference between makes of such machines except in design or size or possibly that one is better made than another and so lasts longer and probably costs more proportionately.

THE FACTS are very different in the case of the cream separator, which is used twice a day every day in the year, and very different as between the De Laval and other cream separators because the use of any other separator or creaming system involves not only the saving in time and labor a De Laval machine would effect but an actual waste in quantity and quality of product a De Laval machine would save.

The Cream Separator the most wasteful or most profitable

THIS IS THE VERY GREAT DIFFERENCE THAT MAKES the cream separator the most important of farm machines, the most wasteful or the most profitable, because used so often and involving a waste or a saving every time it is used. This is the reason why there are more De Laval separators in use than of any other kind of farm or dairy machines the world over, and more than all the other makes of cream separators combined.

NO MATTER WHETHER YOU HAVE YET TO BUY A SEPARATOR or are using an inferior machine, you must be interested in what a De Laval—not a 10, 20 or 30 year old one, but a De Laval machine of today—would do for you, and that every De Laval agent will be glad to make plain to you by the demonstration of a machine itself.

IF YOU DON'T KNOW THE NEAREST DE LAVAL AGENT, simply write the nearest main office as below.

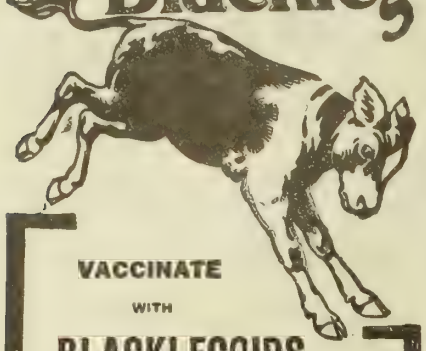
The De Laval Separator Co.

165 BROADWAY, NEW YORK. 29 E. MADISON ST., CHICAGO.

50,000 Branches and Local Agencies the World Over.

SEED CORN ST. CHARLES RED COB WHITE CORN
BEST FOR CORN; BEST FOR ENSILAGE
Grown in St. Charles County, Mo.; buy it direct and get the genuine article. Write for prices.
LOUIS F. MARTEN, Dept. K, St. Charles, Mo.

No More Blackleg



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and save the animals.

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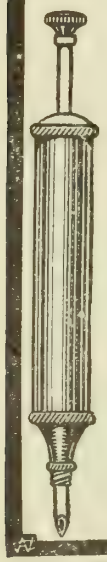

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Order through your veterinarian or druggist.
Write us for circulars describing Blackleg and telling how to prevent it.

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Department of Animal Industry,
DETROIT, · MICHIGAN.

"Good to the last drop"
Blatchford's Calf Meal
As good as New Milk at half the Cost.

100 pounds makes 100 gallons of Perfect Milk Substitute.

Send for pamphlet, **"How to Raise Calves Cheaply and Successfully Without Milk."**

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The HERCULES
All Steel Triple Power Stump Puller pulls an acre of stumps a day increases the value of your land 100%. Makes room for money crops. Guaranteed for 3 years against breakage from any cause. Send name for free book, 30 days free trial offer and special low-price proposition.
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Only $2 Down
One Year to Pay!
$24 Buys the New Butterfly Jr. No. 1. Light running, easy cleaning, close skimming, durable. **Guaranteed a lifetime.** Skims 95 qts. per hour. Made also in four larger sizes up to 1-2-horse here shown.
30 Days' Free Trial Earns its own cost and more by what it saves in cream. Postal brings Free catalog folder and "direct-from-factory" offer. Buy from the manufacturer and save half. (12)
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Which Dairy Do You Prefer?

Note the Rotting Wood Silo, the Untidy Lot and the Mongrel Cows

Here Are Permanent Silos, Clean Surroundings and Good Dairy Cattle

Dairying Methods for City Milk Supply

(CONTINUED FROM PAGE FIVE)

simply that after the drawing of each stream of milk from the teat the tissues and blood within the teat shall be gently pressed back toward the udder. The failure to do this invariably results in congested teats and sooner or later in injury to the cow, the extent of this depending upon her hardiness.

There is a great difference in cows as to their sensitiveness, nervousness, excitability and general makeup—therefore the importance of a milker that can adjust itself or be adjusted to suit any kind of teat or any kind of cow. But by the proper observance of this all-important principle the teats and udder of either the most delicate or the most hardy cow are alike kept in a soft, cool, natural and perfect condition.

Economizing in Helpers

The milking machine that will do the work satisfactorily for both cow and owner is certainly one of the greatest inventions of the age, especially so coming at this time, when the whole world seems to be interested in the increased activity of dairy production. There has never been a time when the outlook for dairy products have offered greater inducements for the farmer, the land owner and the renter to engage in the production of milk, in the keeping of a few cows for dairy use. The great drawback to the dairy business has been the labor associated with the milking of cows. This has always been a feature of embarrassment to the business, and has held back thousands of otherwise willing investors. Then there is also the difficulty of securing satisfactory hired help and the uncertainty of keeping such help. The expense of operation, which will largely be removed by the satisfactory milking machine, will be a strong incentive for increased farm dairies.

It is estimated by the users of this machine that one man is able to take care of an equipment for the milking of three cows at a time, or an average of thirty cows per hour. The cost of labor is 25 cents per hour, and the cost of the running expense of the machinery, etc., 10 cents per cow per month, or a total of 60 cents per cow per month. The saving on a fifty-cow dairy per month is placed at $15; for one year, $540. In other words, the dairyman may safely count a saving in the cost of operation alone of about $11 per cow per year by the use of the milking machine.

Proud of His Dairy

Mr. Skodsholm takes great pride in his dairy, in the quality of milk he is now producing and in his cows and their management. In his present use of the mechanical milker he is very emphatic in its praise as a great money saver in the matter of milk production, but no more so than in the quality of milk he is able to produce and furnish his customers. The comparative absence of all foreign substance or matter, even the bacteria that gets into the ordinary handled milk from the cow stable, air, dust, etc., is a source of comfort. The fact that this pail is securely covered, protected from any liability of air getting to the milk until taken outside the barn and emptied into cans, is a great satisfaction to both producer and consumer.

The health of the cow to start with is one of the strong points with Mr. Skodsholm. He is an advocate of the big, beef-type cow, since he feeds heavy, and as fast as his cows cease to be profitable in the dairy they go to South Omaha to the beef market, and bring

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You Can Do It While He Works.

We want to show you that there isn't any affection that causes lameness in horses that can't be cured, no matter of how long standing. We want to send you our instructive book, "Horse Sense" No. 3.

It describes all. And with the book we want to send you an expert's diagnosis of your horse's lameness All this is absolutely free. Simply mark the spot where swelling or lameness occurs on picture of horse, clip out and send to us telling how it affects the gait, how long animal has been lame and its age.

We absolutely guarantee Mack's $1,000 Spavin Remedy to cure Spavin, Bone or Bog Spavin, Curb, Splint, Ringbone, Thoroughpin, Sprung Knee, Shoe Boil, Wind Puff, Weak, Sprained and Ruptured Tendons, Sweeny, Shoulder or Hip Lameness and every form of lameness affecting the horse. We have deposited One Thousand Dollars in the bank to back up our guarantee. Cures while he works. No scars, no blemish, no loss of hair.

Your druggist will furnish you with Mack's $1,000 Spavin Remedy. If he hasn't it in stock, write us.

Price $5 per bottle, and worth it. Address **McKallor Drug Co., Binghamton, N. Y.**

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All the winter long, the troubled owner of a lame horse reads our advertisements. Then, day after day slips away, while he talks, laments, listens, takes advice and **hesitating —FAILS TO ACT**—till the **Springtime is on him** and his horse is not yet able to work. Meantime the thrifty, prosperous, resolute man, reads, considers the evidence carefully **—Decides Promptly—** and his horse is working in, say, ten days to two weeks. That's exactly what happens every winter.

We Originated the treatment of horses by mail—Under Signed Contract to Return Money if Remedy Fails—and every minute of every day for eighteen years our advice and treatments have been on the way wherever mails go and horses are. Our charges are moderate. Spring work is near. Write

Our Latest Save-The-Horse BOOK is a Mind Settler—Tells How to Test for Spavin—What to Do for a Lame Horse—Covers 58 Forms of Lameness—Illustrated. But write describing your case and we will send our—**BOOK**—Sample Contract and Advice—**ALL FREE**—to (Horse Owners and Managers—Only)

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Druggists everywhere sell Save-the-Horse WITH CONTRACT or sent by us Express Prepaid.

It lies within **your** power to wipe
Cow Abortion
out of **your** herd and **keep** it out.
Use Dr. Roberts' Treatment. Apply it yourself. Properly applied, it never fails to stamp out this disease and clean the herd. Saves lives of calves. Write at once to
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The old reliable remedy for curb, splint, bony growths, ringbone, spavin or other lameness. 35 years of remarkable results. $1 a bottle, 6 for $5. At all drug stores. Ask for Free Book, "Treatise on the Horse."
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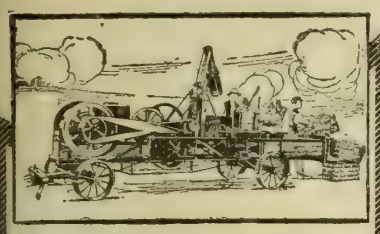

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"Making Money from Hay" contains many suggestions that you would like to have. Mailed free. Write today.

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The TOWER Does It——

MILLIONS BUSHELS
of corn added to crop by use of; and
MILLIONS BUSHELS
lost by failure to use the
TOWER SYSTEM OF SURFACE CULTIVATION

This gain and loss applies also to beans, potatoes, cotton, etc.

This system approved by experts and by the common-sense field use of many thousands of progressive farmers in the past dozen years.

True testimonials, and our Corn Book free for the asking, to the farmer who wishes to raise a larger crop this season.

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System guaranteed satisfactory or your money back. Just write a postal for our Proposition and FREE Catalog which makes everything plain.

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Thousands are turning to bronze in preference to stone. It's the modern memorial. Get our catalog of beautiful designs, and price-list. Dealers and agents have a wonderful business opportunity in Bronze Monuments. Write for full information.

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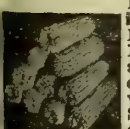

Picked in September, sure growing, big yielding, Reid's Yellow Dent, Johnson County White, Leaming, Improved Silvermine, and Bloody Butcher, grown by us on Sunnyside Seed Farm which we own and operate ourselves. Send today for the free corn book giving full particulars, prices, etc.

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World's best producers. Yellow Rose and White Salamander. Catalog and samples free. Address

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first cost and sometimes more. In case a cow proves her ability to excel as a milker, she is bred, dried off at the proper time and carried over to take her second year in the dairy at milk production. His experience has been that two years is about as long as the good cows will be able to hold out under the heavy strain of full feed and forced milk production.

This dairy is operated on business methods from beginning to finish, and is one of the educational dairy enterprises of the country. It is educational because of its efforts being directed toward production and quality of produce. It is based upon a profit on the money invested, and this investment is guarded carefully by economical methods of feeding and the saving of all waste to go back on the land.

Dry Straw Bedding

Too much of our good, hard-earned money expended for feed for our farm animals goes to waste on account of lack of plenty of good bedding. Feed is an essential thing in fattening our animals for market, and bedding is another essential. Some of us are good feeders when it comes to giving our animals plenty of the different foods we use in the fattening process, but fall down in the bedding end of the business.

To make an animal do well we must make it comfortable. This we can't do without plenty of the right kind of bedding, no matter how generously we pour out the corn, oats, etc. We believe that this is particularly true at this season of the year. The worst of the winter is past; we are busy caring for the spring crop of pigs and calves, and the weather seems nice and warm. The cattle in the fattening lot are doing all right and the fat hogs seem to be doing their best. Tomorrow may be a wet, raw day, yet not very cold. We forget that it is a time when these animals need bedding just as badly as they did in the middle of the winter.

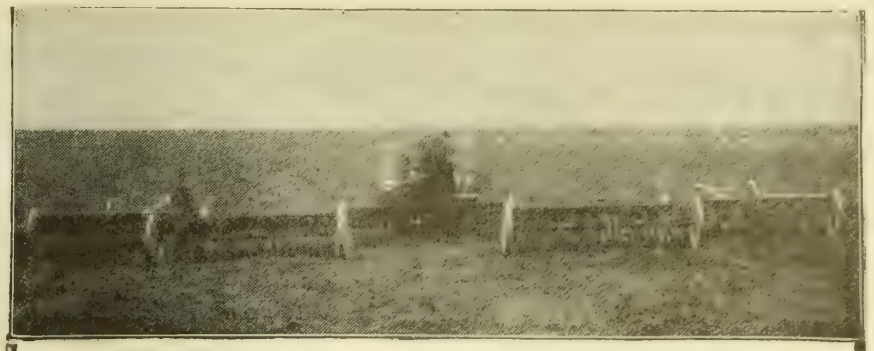
We believe that many dollars are lost to the feeder by overlooking the matter of bedding even later in the season. Our cattle in the fattening lot are very often compelled to lie down in the mud or stand up. The spring rains in connection with the going out of the frost make our feed yards damp and muddy. A good load or two of straw in the right place in the feed yard will save us many dollars, even up until the middle of May. Well does the writer remember, in the spring of 1889, stopping planting corn for half a day to haul bedding for our fattening cattle. We believe that no bedding we gave these cattle in the winter time did more good than did this.

Too many of us, about this time of the year, are burning up some straw piles to get rid of them. This is surely a mistake. We must get out of the habit of burning straw. It answers two purposes when used for bedding. It provides the animal comfort and makes manure, which is very useful on any farm. Don't burn the straw. Save it and make your animals comfortable and yourself money.

Breeders' Notes

Ashbourne Shorthorn Auction

On March 24, at Alma, Neb., Hon. A. C. Shallenberger will hold his annual sale of Shorthorn cattle, consisting of a select draft of high-classed individuals, representing the natural yearly increase from his great herd of Ashbourne Shorthorns. These sales of Mr. Shallenberger's are coming to be looked forward to by breeders in the west as a place where they can get some strictly first-class show and breeding cattle. The offering he will make at this time is without question the best that he has ever sold from this herd. They possess an abundance of size and quality and are in prime breeding condition. Among them are a number of individuals that are good enough to fit in with any show herd. In fact, he is selling his entire show herd of last year. The offering will consist of thirty-five females and fifteen bulls. Among the bulls there are certainly some great herd header prospects. One of the best bulls to be sold is Scotch Mist, a pure white bull, sired by His Highness and out of a dam by Imp. Scotch Bank. Mr. Shallenberger considers this bull to be one of the very best that he has ever produced. He is a long, deep, smooth, well balanced, thick-fleshed fellow, and certainly ought to



Every Acre Well Plowed—Well Seeded

"Big Four" farmers are always ready for the season's work. They plow when it is time to plow. Every acre is plowed deep and plowed well. When it is seeding time, the Big Four gets a whole crop in. Harvesting and threshing are also old stories to the Big Four. The farmer who gets results from every acre is pretty sure to own a Big Four.

Big Four Tractors are producing results all over the world. There are more Big Fours in successful operation than any other four cylinder tractor made. The first four cylinder tractor ever built was a Big Four. Every Big Four represents the combined force of these "year after year" results. We know the Big Four is the very best tractor built. Ask us to prove it.

A Size For Every Farm

Big Four "20"	Big Four "30"	Big Four "45"
4 Cylinders, 3 Speeds	4 Cylinders, 3 Speeds	6 Cylinders, 3 Speeds

Write today for illustrated catalog.

Emerson-Brantingham Implement Co. (Inc.)
Good Farm Machinery
431 W. Iron Street **Rockford, Illinois**
38017

SEED CORN

If you are interested in corn that will make you money, investigate my seed proposition.

Eleven years' experience growing and breeding of corn is back of every bushel you order from me. All corn picked from field in sacks and hung up to dry.

Well sorted, shipped in the ear. I never was accused of a poor stand. If interested in raising more corn, I can do you good.

J. H. PETTY, Elliott, Iowa

Strawberry Plants

Grown on North Slope.

Senator Dunlaps stand the drouth best. Price delivered by mail: 25, 20c; 100, 60c; 1,000, $5.00. Others as low as $2.50 per M. Send for list. Fallbearers 5c each, 50c doz., $2.50 per 100 delivered.

J. M. LANCASTER,
Beatrice and Rockford, Neb.

I have shipped Pears from Illinois for 16 years, so well known to thousands of fruit buyers.

CHOICE TREES AND PLANTS

Large assortment at less than half of agents' price. Best Everbearing and other sorts of Strawberries, all strong irrigated plants. Free catalog and coupon. NORTH BEND NURSERIES, Box 503, North Bend, Neb.

Good Fire Dried Seed Corn

From leading varieties — Silver Mine, Reid's Yellow Dent, Yellow Rose and Brown's Choice. For particulars, write **EMORY BROWN, Mitchellville, Iowa.**

Artichoke Roots. Great Hog Food; the old type and the New French. Bushel, $2.00, plants ¼ acre. Catalogue Free. **Vaughan's Seed Store, 31 W. Randolph St., Chicago.**

Horses, Mules & Cows Should be CLIPPED

They are healthier and give better service. When the heavy coat that holds the wet sweat and dirt is removed, they are more easily kept clean, look better, get more good from their feed and are better in every way. Horses and mules take on new life and energy when clipped and naturally work better. Clipping the flanks and udders of cows prevents the dropping of filth into the milk. The best and most generally used clipper is the Stewart Ball-Bearing Clipping Machine, the only machine that can be used on horses, mules and cows without change. It turns easier, clips faster and closer and stays sharp longer than any other. Gears are all file hard and cut from solid steel bar. They are enclosed, protected and run in oil; little friction, little wear. Has six feet of new style easy running flexible shaft and the celebrated Stewart single tension clipping head, highest grade.

Price $7.50 Get one from your dealer or send us $2.00 and we will ship C. O. D. for balance. Your money and transportation charges returned if you are not satisfied.

CHICAGO FLEXIBLE SHAFT CO.
112 La Salle Ave., CHICAGO, ILL.
Write for complete new catalog showing world's most modern line horse clipping & sheep shearing machines.

DISPERSION SALE

OF THE

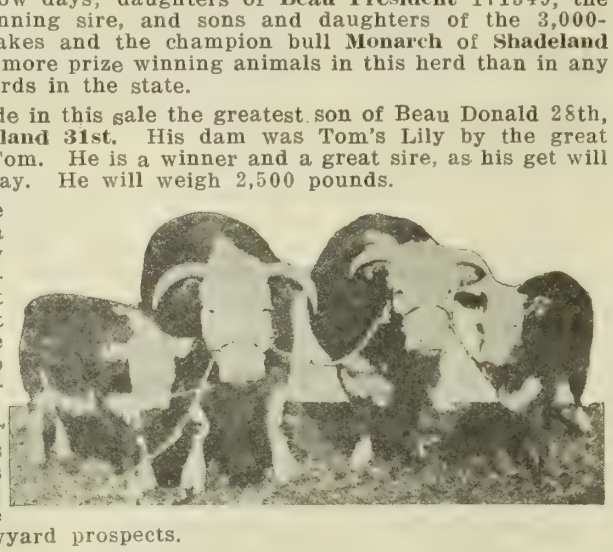
NOTED SHADELAND PARK HEREFORDS AT AUCTION

At South Omaha Steam Heated Pavillion, So. Omaha, Neb., March 25,'14

SALE TO BEGIN AT 1 O'CLOCK

This offering will consist of about 60 head, forty-five females and the balance bulls, being the cream of this well known herd of Herefords. It contains the blood of the greatest sires in the herd books, such as **Lord Wilton** the **Grove 3d, Garfield, Anxiety 4th,** etc. Also daughters of **Beau Donald 28th** 105168, winner of more prizes, sweepstakes and champion honors than any bull in the west in his show days; daughters of **Beau President** 171349, the great prize winning sire, and sons and daughters of the 3,000-pound sweepstakes and the champion bull **Monarch** of **Shadeland 3d.** There are more prize winning animals in this herd than in any herd of Herefords in the state.

Will include in this sale the greatest son of Beau Donald 28th, **Beau of Shadeland 31st.** His dam was Tom's Lily by the great $20,000 Wild Tom. He is a winner and a great sire, as his get will show on sale day. He will weigh 2,500 pounds.



This is the opportunity of a lifetime. Many of these animals could not be bought at any price if we were going to stay in the business.

About twenty of these cows will have calves at foot, which will include some fine showyard prospects.

The animals in this sale are the culmination of our 25 years of experience in breeding Hereford cattle. Every animal included is a producer and the highest type and choicest breeding is here represented. If you want to buy the best the breed affords, be sure attend this sale. For catalogue address,

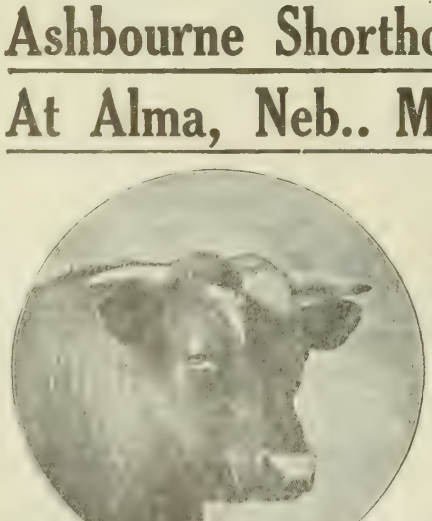
W. N. ROGERS,
McCook, Neb.

Auct.—Col. Z. S. Branson.
Auct.—Col. N. G. Kraschel.
G. E. Hall will represent this paper.

Ben Broughton of Lakeview, Ia., will sell 60 head of choice Hereford cattle on the day before my sale. Anyone intending to purchase should attend both sales, as they are only eighty miles apart.

Ashbourne Shorthorns at Auction

At Alma, Neb.. March 24, 1914



This will be a select draft, consisting of 35 cows and 20 bulls of choicest breeding. **IMP. DIAMOND REX, IMP. SCOTCH BANK AND IMP. SCOTTISH SENTINEL** are the sires of a large part of this offering. They have great scale, and every animal is a DOER. There will be many prize winners included and every animal is backed up by an ancestry that includes the best families of the breed.

My entire show herd will be included. There will be a number of outstanding herd bull prospects and also a number of females of different ages that will go to any show and give an account of themselves.

For catalogue address

A. C. SHALLENBERGER,
ALMA, NEBRASKA

Auctioneer—Col. H. S. Duncan Fieldman—G. E. Hall.

DUROC-JERSEY HOGS

Duroc - Jersey BRED GILTS FOR SALE—With length, bone and quality.
W. G. UNITT, Seward, Neb., Route No. 2.

prove an attraction. Another bull almost as good is Red Dale by Red Sultan, a grandson of Avondale and out of the dam Linwood Fancy, a granddaughter of Imp. Fancy of Ardmore. This bull is a good, deep red, just as smooth as an apple, and is the making of an outstanding herd bull in every respect. He is just simply right in every way. Another splendid young bull, also a red, is May King, sired by His Highness and out of a daughter of Diamond Rex. Still another good young bull is Watchfire by Imp. Scottish Sentinel and out of a daughter of Imp. Diamond Rex. These are only a few of the good ones. Among the females we want to mention first Maude 53d by Imp. Scotch Bank and out of Maude 48th, she being a granddaughter of the great cow Imp. Maude 44th. This cow is a beautiful roan, with lots of scale and splendid conformation, and certainly would add prestige to any herd. Another great young cow is Maude 57th, a daughter of Imp. Scottish Sentinel and out of Maude 49th. She is also a rich roan and is well along in calf to His Highness. Phyllis Byron, third-prize cow at Nebraska last year, with a splendid calf at foot sired by His Highness, is another one of the attractions. She is a big, deep, smooth, massive red cow, sired by Dreadnaught and out of a dam by Volunteer. Here is something of exceptional worth. Write for catalogue and arrange to attend this sale. Also watch these columns for further announcements as to the individuals in this offering. Kindly mention the Twentieth Century Farmer when writing.

Shorthorns at Scribner

This is the last call for the sale of Shorthorn cattle to be held at Scribner, Neb., on March 20 by Will Ferguson of that place. Mr. Ferguson has been breeding Shorthorns for a number of years, and the cattle he is going to offer in this sale are a representative lot of well bred, highly useful individuals that will go out and make good for anyone who buys them. These cattle have not been pampered, but have been carried along in first-class breeding condition and have grown and developed in a manner that insures their future usefulness as breeders. The offering will consist of thirty cows and heifers and about fifteen head of big, strong, young bulls. An exceptional opportunity will be offered here for farmers and breeders to get something to their liking in the bull line. Several of these bulls are out of the splendid breeding bull Bar None 3d, and others are by March On, Choice Hero and others. Quite a few of them are from particularly heavy milking dams and should meet with favor. The females are a strong, useful lot, mostly all of good, serviceable age. There will be a number with calves at foot and the balance of breeding age will be well along in calf to Scottish Lad, a son of the celebrated Acanthus Lad. Better get in touch with Mr. Ferguson and arrange to attend this sale. These cattle are right and are bound to make money for the purchaser. This is certainly an opportune time to get hold of some good breeding cattle, and here is a chance that should not be overlooked. Kindly mention the Twentieth Century Farmer when writing.

Stallions and Mares for Sale

There will be more ton stallions offered at the North & Robinson sale at Grand Island, Neb., on March 19 and 20 than you are likely to see at any other sale this season. These well known importers and breeders are including in their sale this year thirty exceptionally good, imported and home-bred Percherons, Belgians and Shires. If you want a first-class stallion, this is a good place to look for it. They range from yearlings to matured stallions. The matured animals weigh from 1,850 to 2,200 pounds. Some of the 2-year-olds weigh better than 2,000 pounds and every animal has plenty of bone, style and action. There are also included in this sale thirty head of imported Percheron and Belgian mares, ranging in age from 1 to 6 years. They are an extra good lot, with weight and bone, of good brood mare type and bred to a 2,200-pound stallion, which will be shown on the day of the sale. Stallions are to be sold under the regular 60 per cent breeding guarantee and mares are all guaranteed breeders. Everything will be sold to the highest bidder, without reserve. The sale will be held in Bradstreet & Clemmons sale pavilion. If you are interested in draft horses, arrange to attend this sale. Catalogues are now ready and may be had by addressing North & Robinson Co., Grand Island, Neb. Kindly mention Twentieth Century Farmer when writing.

Scott's Jacks and Jennets

We heartily recommend G. M. Scott, breeder of jacks and jennets at Rea, Mo., to any of our readers who are in the market for something in this line. We feel safe in doing this, because he is one of the oldest breeders in the country and also because we personally know the character and class of the animals he produces and handles. The fact of the matter is, the Scott family has been in the jack business for seventy years, and the business has descended from father to son until the present Mr. Scott began his breeding operations in 1873, and, as he says himself, he has hardly been out of the sound of their gentle voices in all those years. He has at all times on hand a good, reliable class of jacks and some of them are good enough to head any jennet herd in the land. They are a good, big, smooth, heavy-boned, good-footed lot of individuals, and they are sold to be just exactly as represented. The sales that Mr. Scott makes each succeeding year to men who have bought from him before are the best evidence of the manner in which he treats his customers. Mr. Scott is located at Rea, Mo., a short distance out of St. Joe, and it is certainly worth while to visit his farm if you are interested in anything in his line. He has forty head of jacks and fifteen jennets to select from at this time, all black and registered. Write him for further particulars, mentioning the Twentieth Century Farmer.

Shadeland Park Herefords

With this issue of the Twentieth Century Farmer we are starting the advertisement of W. N. Rogers of McCook, Neb., who will disperse his herd of Shadeland Park Herefords at South Omaha, Neb., on March 25. In making this announcement we do so with a great deal of regret, because we believe it means the taking from the Hereford business the man who has probably done as much or more for the breed than any man in the west. In his twenty odd years of breeding Hereford cattle he has won for himself an enviable record for his fair and honest dealings with his customers. The class of cattle he has produced and the high degree of perfection to which he has brought his herd have shown that he is a master artist in this line. Shadeland Park Herefords have been noted all over the country for their splendid scale, quality and bone, and the consistent winnings they have made at the leading shows of the country have proven that they are able to take their place with the best in this respect. In the many years that Mr. Rogers has been in the business he has built up a truly great herd and the cattle that are going to be offered at this sale are the culmination of his best efforts and could not be purchased at any price were it not for the fact that he is retiring from the business. There are many cattle here that he values almost beyond price, but they are going to be sold, and sold for the high dollar. The offering will be rich in the blood of Beau Donald 28th, Monarch of Shadeland 3d, Lord Wilton, Garfield, Anxiety 4th and other leading families in the breed. There will be many daughters of champion bulls in the sale, and these females themselves are also prize winners. There will be a splendid lot of big, strong females with calves at foot, sired by the 2,500-pound bull Beau of Shadeland 31st. This bull is one of the greatest breeders in the country, as will be evidenced by his get in this sale. He will be sold to the high bidder, and surely ought to go to head some one of the good herds of America. He is sired by the great show and breeding bull, Beau Doland 28, and his dam was Tom's Lily by the $20,000 Wild Tom. We will have something to say about the individuality of this offering in our next issue. In the meantime get your name on Mr. Rogers' mailing list for catalogue and arrange to attend this sale. We repeat again that it is one of the greatest opportunities ever offered Hereford men in the west to get some truly good cattle. Write Mr. Rogers at McCook, Neb., and remember the sale will be held at South Omaha, Neb. When writing kindly mention the Twentieth Century Farmer.

Kuzel's Duroc Bred Sow Sale

The Duroc-Jersey bred sow sale of L. J. Kuzel at Clarkson, Neb., March 2, resulted in an average of $35.18—this notwithstanding the fact that he had some fine animals. The crowd was small, due perhaps in a measure to the bad roads, and the hogs were not appreciated as much as their quality would warrant. Some wonderfully good bargains were picked up. W. C. Baum of Dodge, Neb., topped the sale with $69 on lot No. 11 in the catalogue. Sales of $30 and over follow:

Lot No.	Price.
1—H. D. Geiken, Gothenburg, Neb..	$62
2—Frank Verba, Schuyler	40
3—Frank Verba	43
4—W. C. Baum, Dodge	45
5—Frank Neilsen, Fremont	41
6—H. D. Geiken	47
7—F. B. Nelson, Lindsay	40
10—H. D. Geiken	41
11—W. C. Baum	69
12—John Sinderlund, Clarkson	31
14—Joe Lodl, Howells	40
15—George Buskirk, Pender	35
17—Julius Kuzel, Clarkson	65
20—Mike Vice, Howells	30
21—John Sinderlund	35
23—Joe Everetts, Howells	38
26—F. B. Nelson	30
27—Joe Everetts	36
28—Joe Everetts	31
29—Joe Everetts	34
30—George Buskirk	30
31—Joe Everetts	34
32—Joe Everetts	32
39—F. B. Nelson	30

McCullough's Polands Average $42

O. J. McCullough of Clarks, Neb., held his annual sale of Poland-China bred sows at Central City, Neb., on February 28, and put up an offering of hogs that

eally merited better support than it re-ived. A large local crowd was present, ut it did not seem disposed to take hold ery strong on account of disease in the icinity during the last few months. The lendid sow, Miss Columbus 2d, a daugh-r of Columbus, topped the sale, going Tim Neuhoffel & Son of Central City, eb., at $150. The offering was composed as clean a lot of high classed sows nd gilts as we have seen go through a le ring for some time. Colonels Duncan nd Fuller did effective work on the lock. Below will be found a list of hose selling for $30 and over:

o.		Price.
	—Tim Neuhofel & Son, Central City, Neb.	$150
	—W. A. Linford, Dannebrog	77
	—Grant Breman, Central City	60
	—Marcus Cornelius, Chapman	57
	—Clarence Stevens, Central City	62
	—Joseph Emmett, Central City	47
	—J. W. Root, Central City	47
	—Joseph Emmett	40
	—Marcus Cornelius	60
	—Marcus Cornelius	60
	—Grant Willets, Clarks	45
	—Ed Smith, Central City	37
	—Frank Corning, Central City	35
	—R. D. Horn, Central City	35
	—R. D. Horn, Central City	35
	—R. D. Horn, Central City	35
	—A. L. Frazier, Central, City	37
	—Percy Gardner, Archer	37
	—E. H. McIntosh, Alda	45
	—E. H. McIntosh, Alda	45
	—Marcus Cornelius	32
	—J. K. West & Sons, Morrill	50
	—W. A. Lingford	60
	—A. F. Beck, Kellerton, Ia	47
	—J. C. Tuck, Corning, Ia	40
	—L. A. Berg, Alda	30
	—J. W. Root	32
	—Albert T. Hein, Central City	47
	—Thomas H. Fowler, North Bend	60
	—Earl Lobb, Chapman	35
	—W. R. Durand, Albion	37
	—Edmond Webb, Longmont, Colo	35
	—W. R. Durand	50
	—J. E. Tucker, Lebanon, Ind	62
	—A. B. Hale, Cameron, Mo	45
	—J. K. West & Son	47
	—H. C. McGath, Foster	40
	—W. E. Bennett, Norfolk	35
	—Earl Lobb	35
	—W. A. Steinkle, Hordville	30
	—J. C. Tuck	40
	—J. K. West & Son	50
	—J. W. Root	32
	—H. Mers, Chapman	37
	—W. R. Durand	37
	—Earl Lobb	35
	—H. Mers	45
	—F. M. Smith, Huntington, Ind	45

mith & Sons' Durocs Average $52

The sale of Duroc-Jersey bred sows held Kearney, Neb., on February 27 by O. Smith & Sons of that place, brought t a nice crowd of breeders from a dis-nce, and also a splendid local crowd. aking into consideration the shortage corn and feed generally in this com-unity during the last twelve months, e average was a satisfactory one. The gs were not in high flesh, but they ill certainly go out and do good for ose who bought them. R. Widle & n of Genoa, Neb., topped the sale on t No. 1 in the catalogue, a splendid ung sow by Model Goods and out of ll's Crimson Beauty. The average on e entire offering was $52. Colonels Ray age and E. Z. Russell did the selling. elow will be found a list of those selling r $30 and over:

ot.		Price.
	—R. Widle & Son, Genoa, Neb.	$100
	—F. E. Merrick, Osceola	85
	—Albert Erricson, Riverdale	75
	—D. H. Rockefeller, Lowell	42
	—Robert Leisy, Wisner	50

This is the type of big, heavy-boned jacks being offered for sale by Al E. Smith of Lawrence, Kan.

6	—A. W. Lamb, Loretta	50
8	—O. T. Bastrom, Madison	52
9	—G. A. Firkins, Gibbon	40
10	—James Stack & Son, Shelton	41
11	—Arthur Smith, Lexington	43
12	—T. F. Evans, Kearney	41
12½	—D. H. Rockefeller	60
13	—G. A. Firkins	46
14	—James Stack	49
15	—James Stack	42
16	—E. R. Danielson, Osceola	56
17	—G. A. Firkins	45
18	—James Stack	45
19	—D. Henderson, Kearney	57
20	—E. Slater, Kearney	45
21	—George Vallentine, Kearney	46
22	—D. Henderson	51
23	—Herman Briggs, Clay Center	55
24	—James Stack	35
26	—R. E. Toof, Aurora	75
27	—George Vallentine	60
28	—G. Shada, Kearney	47
29	—E. J. Brown, Osceola	77
30	—George Vallentine	50
31	—A. Greenwood, Albion	41
32	—G. A. Firkins	40
32½	—G. A. Firkins	33
33	—H. D. Rockefeller	45
34	—James Stack	40
35	—G. A. Firkins	35
36	—G. A. Firkins	31
38	—James Stack	41
39	—H. A. Moss, Kearney	31
40	—G. A. Firkins	30

Sale Dates

Hereford Cattle

April 14 and 15—Breeders' Combination sale at South Omaha, W. N. Rogers, McCook, Neb., manager.

March 25—W. N. Rogers, McCook, Neb., dispersion sale, South Omaha.

Aberdeen-Angus Cattle

April 1 and 2, 1914—Charles Escher, Botna, Ia. Sale at South Omaha, Neb.

Hampshire Hogs

Shorthorns

March 11—E. H. Cosgrove, Farnam, Neb.

March 20—William Ferguson, Scribner, Neb.

March 24—A. C. Shallenberger, Alma, Neb.

March 20—Will Ferguson, Scribner, Neb.

Horses

March 19 and 20—North & Robinson, Grand Island, Neb.

Shorthorns at Auction

55 Head of High Classed Shorthorns, About One-half of Which Are Scotch and the Balance Highly Scotch Topped to Be Sold at

Scribner, Neb., March 20, 1914

This will be a strictly first-class offering of highly useful breeding cattle. There will be a number of cows with calves at foot and practically all of breeding age are safe in calf. With few exceptions, these females are under five years old and are just in the right condition to go out and do good for the purchaser. They are bred mostly to SCOTTISH LAD 304896, a splendid son of Acanthus Lad 293299. There are a number of extra choice young bulls by Bar None 3d by Bar None 2d. Catalogues are now ready.

WILL FERGUSON,

G. E. HALL, Fieldman. SCRIBNER, NEB.

HORSES

GREAT DRAFT HORSE SALE

60 HEAD -- 30 Stallions 30 Mares -- 60 HEAD

At Grand Island, Neb., March 19 and 20, 1914

This will be one of the best offerings we have ever put through a sale ring. We will show you more TON STALLIONS than will be sold in any sale this season.

We will sell 30 HEAD OF IMPORTED stallions and mares and 30 HEAD OF AMERICAN BREDS, mostly of our own breeding. They are pasture raised and will make good.

You can find what you want in either a PERCHERON, BELGIAN or SHIRE. They are BIG, with plenty of bone, style and quality. Along with this, they are thoroughly acclimated and are sold under an iron-clad guarantee. Catalogues are ready and will be mailed on request.

NORTH & ROBINSON CO., Grand Island, Neb.

Auct., Z. S. Branson. G. E. Hall Will Represent This Paper.

The Breeding Season Is Drawing Near

You, Mr. Farmer and Breeder, will be out looking around for **draft stallions**, and we want to impress upon you to come and see our offerings. You will find at our barns **two-year-old** Percheron and Belgian stallions weighing **2000 lbs.** and over—horses of **quality, scale** and **substance**—at the lowest possible prices. European and American prize winners—stallions that will go out and do you and your community good. We also have some extra good Imported and American Percheron and Belgian mares in matched teams. A certificate of soundness goes with every stallion. Correspondence solicited and inspection invited.

WOLF BROS., ALBION, BOONE COUNTY, NEBRASKA.

Foaled and grown on the farm, offered at farmer's prices. Eight coming 2-year studs, 9 coming 3-year studs, 8 3-year-old and over studs, registered Percheron Society of America. Of the big type with substance and from French ancestry on both sides. Just east of Omaha. **FRED CHANDLER, Rt. 7, Chariton, Iowa.**

JACKS

The kind all are looking for; large boned black Mammoth Tenn. and Ky. Jacks, 2 to 6 years old; guaranteed and priced to sell. All broken and prompt servers. Reference: Banks of Lawrence, 40 miles west of Kansas City on U. P. and Santa Fe.

AL. E. SMITH, LAWRENCE, KAN.

80 Imported Percheron and Belgian Stallions and Mares on Sale

My exhibit comprises the largest number of big, heavy-boned, 2000 to 2400-pound stallions to be found in the United States. The Cedar Rapids Jack Farm is the jack metropolis of the world. All nations buy jacks here. The majority of the best mules in the United States are the results of the past twenty years' improvement inaugurated and carried on here. Write for catalogs. Come to me when you need stock. I will make it worth your while.

W. L. De CLOW, Cedar Rapids Stallion and Jack Farm, Cedar Rapids, Iowa.

PERCHERON STALLIONS

I have several high class Percheron stallions for sale. All good, desirable colors, weighing 1,700 to 2,100 pounds and from 2 to 7 years old. These stallions are of my own raising and are absolutely right in every way.

GEO. W. SCHWAB, Clay Center, Neb.

RED POLLED CATTLE

RED POLLS

Bulls and heifers for sale. Prices reasonable. Quality the best. Satisfaction guaranteed. Write your wants or call.

W. F. SCHWAB, Clay Center, Neb.

50 Mammoth Jacks and Jennets

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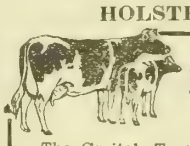

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Review of Live Stock Market

By A. C. Davenport

CATTLE have looked up during the last week, and the bulls have been greatly encouraged. The buying demand for good to choice beef was active at particularly all points, with the result that prices steadily firmed up until they were 15@20c higher at practically all the big market points. This means the market last week, so far as best, fleshy beeves were concerned, was the highest of the year to date. Best cattle touched $9.75 at Chicago, and other market points made correspondingly good tops. The common to medium cattle which constituted the bulk of the receipts did not show so much improvement, but they were at least steady and that means that, considering quality, they brought fairly satisfactory prices.

The recent advance in cattle values has given the bulls renewed courage and they are predicting that cattle will reach as high as $10.00 on the basis of Chicago in the very near future. Western cattle men are not quite so optimistic, but there are plenty of them who are looking for cattle to touch $10.00 at Missouri river points before the coming of grass.

Farmers and feeders have also experienced something of a revival in confidence, as shown by the fact that stock cattle and feeders have been selling somewhat more freely of late than was the case a few weeks ago. Prices on feeders have also firmed up and are at present writing the country over as high as they have been any time this year. There is a feeling among most stock men that feeders are, in fact, too high as compared with the way the general run of beef cattle are selling, but while realizing this it does not seem possible to break the market down, as the supply of feeders is so light as compared to the number of buyers. It has been remarked many times of late that the cattle market is high at the wrong end; that is, that feeders which are supposed to sell at the bottom are too high as compared with beef cattle, or that beef cattle are not high enough as compared with feeders and stock cattle.

Now that the winter is so far advanced, stock men are already speculating as to what the spring will bring forth. All advices agree that cattle losses on the range thus far have been extremely small, amounting to almost nothing as compared with previous years. Montana never had a more open winter with an abundance of feed for all the cattle on the range. In the sand hills country conditions were never more favorable for the wintering of cattle. In parts of Wyoming and Colorado they had a very severe snowstorm in October, and the snow in some sections has stayed on most all winter, but still cattle men were able to protect their stock and avoid losses of consequence. Even where the snow was the heaviest stock men are figuring that the draw backs will be offset by the large amount of moisture that has been put into the ground and by the abundance of feed that must result.

Hog Prices Stationary.

Hogs have developed no especially new or interesting features during the last few weeks. Prices have fluctuated back and forth within rather narrow limits, and without any marked change being scored in either direction. The fact is hogs are selling now about where they were the first of January and they have continued along in about the same notches, up a little one week and down the next. The high point of the year to date was reached during the latter part of January when the market spurted a little. Conditions have remained about the same from week to week, receipts running a little behind a year ago all the time, with the buying demand good, but with packers putting forth every influence to prevent further advances.

Sentiment in the hog trade has not been materially altered of late. Receipts have been moderate, as the bulls generally predicted they would be; still they are large enough to hold the market within bounds, so that current prices are at the present time no higher than a year ago, but still the highest that they ever were at this time in March, with the single exception of 1910, the record year in hog values. The immediate future of the market must depend largely upon current receipts. With the consuming demand as good as it is at present it would hardly seem possible that receipts could fall off very much without advancing prices. On the other hand the market is already so high that buyers and consumers as well may be expected to resist as far as they are able further advances.

Sheep Selling Slowly.

Sheep and lambs have not been selling as well as owners would like. While prices are about as high as most operators expected, they are not high enough to give the feeder any great margin of profit. The consuming demand has been good, but receipts at all market points have been large, the six big markets showing an increase of 270,000 head since the first of the year. All advices agree that prospects would seem to favor the belief that receipts will continue liberal for some little time to come. Should that prove to be true it will be readily understood that the chances of advancing prices are by no means encouraging. On the contrary, most operators on the market feel that if they can hold values where they are now, they will be doing about as well as can be expected.

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TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, March 28, 1914 | Number 694

Bright and Breezy

Wrong Diagnosis

"Many a girl," said the philosopher, "thinks she has broken her heart when she has really only sprained her imagination."

Broad Smile

Mr. Jones had recently become the father of twins. The minister stopped him on the street to congratulate him.

"Well, Jones," he said, "I hear that the Lord has smiled on you."

"Smiled on me?" repeated Jones. "He laughed out loud."

Accurate

Judge—What is your age, madam?

Witness—Twenty-seven and some months.

Judge—I want your exact age, please. How many months?

Witness—One hundred and twenty.

How Did It Get There?

Mrs. Clarke came running hurriedly into her husband's office one morning.

"Oh, Dick," she cried, as she gasped for breath, "I dropped my diamond ring off my finger and I can't find it anywhere."

"It's all right, Bess," replied Mr. Clarke. "I came across it in my trousers pocket."

Less Everything

"Say, Ralph, where's your father?"

"Oh, he's wirelessing to a man in Cleveland."

"Well where's your mother?"

"She's firelessing the dinner in the cooker."

"Jake at home?"

"No; he just horselessed to town."

"Sister in?"

"She's having a tooth painlessed at the dentist's."

"Well, what's this you are doing?"

"I'm just hairlessing the pup with dad's stropless razor."

True Chivalry

An old gentleman, always polite to ladies, was asserting one day that he had never seen a really ugly woman. A woman with a flat nose, overhearing him, said:

"Sir, look at me, and confess that I'm truly ugly."

"Madam," he replied, "like the rest of your sex, you are an angel from the skies; but it was your misfortune, rather than your fault, that you happened to alight on your nose."

Real Pathos

"Read that," said the author, thrusting a manuscript into his guest's hand. "It's my latest short story, and I want you to tell me what you think of it."

A few minutes later he was surprised to see his visitor wiping tears from his eyes, still more when he said:

"My dear chap, that is really the most pathetic thing you've ever done."

"What!" gasped the author. "I wrote it as humorously as I could."

[illegible] "Oh, I see. It's my mistake. I've given you the wrong thing. This is my letter to the income tax commission asking for some reduction."

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Mistakes We Make

WE ALL make mistakes, being human. The wise man makes as many mistakes perhaps as the fool, when he begins. The difference is that the wise man profits by his mistakes, looking into them closely and observing the whys and wherefores, and the next time he understands and does not make the same mistake again, while the man who lacks wisdom goes ahead in the same old way. This is as true of farming as it is of anything else, perhaps more so, as there are so many things in which the beginner in any particular line may make mistakes and so many things he must learn. One Nebraska fruit raiser and poultryman, who has now become well known in both these lines, will tell you, in the next issue of the Twentieth Century Farmer, of some of the mistakes he made when he first started in the business. This article cannot fail to interest you, no matter in what line you are specializing, and perhaps it may prove profitable in saving you from making the same mistakes.

Prattle of the Yougsters

Mother's Reason?

Teacher of Hygiene—Why must we always be careful to keep our homes clean and neat?

Little Girl—Because company may come.

Worn Off

A little girl's father had a round bald spot. Kissing him at bed time not long ago, she said: "Stoop down, popsy. I want to kiss the place where the lining shows."—Tit-Bits.

What Sister Said

"You can't guess what sister said about you just before you came in, Mr. Highcollar," said Johnnie.

"I haven't an idea in the world, Johnnie."

"That's it. You guessed it the very first time."

Couldn't Fool Artie

Little Arthur's mother, after trying in vain to get him to swallow a pill, concealed it in a banana, which she gave him. Presently, when she asked him if he had eaten the banana, he replied: "Yes, mamma, all but the seed."

The Wearying Chase

Tommy could not understand why his teacher thought that the following paragraph from his composition on "A Hunting Adventure" lacked animation and effectiveness:

"Pursued by the relentless hunter, the panting gazelle sprang from cliff to cliff. At last she could go no farther. Before her yawned the chasm, and behind her the hunter.—Youth's Companion.

Persuasive

A little girl wanted to go to church, and besought her grandmother to take her.

"I'm afraid I don't feel able to go this morning, dear," said grandma. "It's so warm, and I'm not well."

The child was silent for a moment before returning to the charge.

"Oh, grandma," was the manner in which she expressed her persistent longing, "be a sport and come to church!"

Ruling Passion

After a mission meeting a boy lingered behind and insisted on seeing the missionary. At length his wish was gratified.

"Well, my lad," said the kindly cleric, as he patted the boy's head, "do you wish to consecrate your young life to this noble work?"

"No, sir," replied the boy, "I wanted to know if you have any foreign stamps."—American Boy.

Willie's Confession

Little Willie had been very naughty; so much so, in fact, that after having reproved him several times his mother was at last forced to severely punish him.

When his father arrived home in the evening he at once perceived that Willie's eyes were suspiciously red.

"What's the matter, sonny?" he cried.

"Oh, nothing," responded Willie, uneasily.

"Come, don't be frightened," said the father in coaxing tones. "Tell me all about it; I want to know."

Willie remained silent for some time, then he suddenly burst out:

"Well, if you must know, I've had a thundering row with your w[illegible]

THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Putting Perishable Produce on Market
Why Farmers Make Small Profit

By Chester T. Crowell

ONE hot day during the summer of 1913 a farmer walked into the office of the sales manager of the Southern Texas Truck Growers' Association and leaned over the desk of the sales manager to read the latest telegrams from New York, St. Louis, Chicago and other large markets, to see what prices onions were bringing. He walked out, shaking his head disconsolately, but was called back a second later. He was wanted on long distance. The manager of his big farm wanted to know whether he should begin digging the onion crop, preparatory to crating and shipping it to market.

"No," yelled the farmer; "plow them under."

"Everyone else is shipping," came the voice over the telephone.

"They're crazy," replied the farmer.

"Well, they are trying to get what little they can before the market goes lower," said the manager.

The farmer growled "goodbye" and hung up the receiver.

Then he pulled a little book out of his pocket and made a few figures. Turning to the sales manager, he remarked: "My yield will be about 400 bushels to the acre; that's above the average around my place. The onions represent about 25 cents a bushel in the ground. It costs 25 cents more to dig, clean, clip, grade and crate them and put them on board the car. The price at present will return me about 25 cents a bushel net. I figure I save 25 cents a bushel by plowing those onions under."

But all around him the neighbors were rushing their stuff to market in order to get what they could before the market should go even lower. The rush was forcing a lower price, and by adding the cost of harvesting to the cost of growing they were increasing their losses.

So much has been said on the subject of keeping books on the farm that one approaches the subject with hesitancy, yet it has a special application to the business of truck farming that should interest everyone sending perishable produce to the market. It is the purpose of this article to point out that the amount a farmer has invested in a ton of cabbage, for instance, as it stands in his field is very small. He could probably make a considerable profit by selling it there at half a cent a pound or even less. But when he begins to cut and crate and handle the product preparatory to starting a carload on its way to market his principal cost begins. It is, therefore, of greater importance for him to know the producing cost of what he has to sell than any other farmer. He can always save money, and usually help the market back to normal, by refusing to ship at a loss.

The farmer has an investment in land, labor and product which is never considered in modern trade, because he is never a party to any transaction, unless perchance he is able to sell his product f. o. b. shipping point, and even then he does not fix the price, but simply accepts or rejects the price offered. The question of the cost of production, plus a fair profit, is not taken into account in agricultural transactions as in other productive enterprises; in fact, farmers themselves, with few exceptions, have no idea of the cost of producing many of the crops they offer for sale. The cost of production in any single year should not, however, be taken as the basis for the cost of a given product. Seasonal variations are so great that the only just basis for determining the cost of any product is its avererage on a given farm over a series of five to ten years.

A careful analysis of trade conditions indicates that from 33 to 36 per cent of the price which the consumer pays for a perishable product reaches the producer. This must cover the cost, as well as the risk of gardening, and must also provide the profit on the "know how" and money invested. About 26 per cent of the cost to the consumer is required for transportation and from 5 to 10 per cent for commission. Dealers' profits range from 50 to 100 per cent, for it is maintained that every time perishable goods change hands the selling price must double the purchase price in order to meet losses. As the retailer receives the goods he again adds 100 per cent or thereabouts to the cost to the consumer. It is easy to see how high costs necessarily follow such methods of marketing. If, in addition to these costs, terminal storage and cold storage charges are added, as is often necessary in order to maintain even distribution, and the retailer sells the goods by telephone and delivers them by horse or motor vehicle, all of these so-called conveniences must ultimately be paid for by the consumer. Under the present system it is possible for some of the common perishable products to carry eight distinct charges before they reach the consumer, all of which are legitimate; and as these charges on perishable products must be high in order to fortify the owners against loss, the reason for high prices for standard vegetable crops is easily explained. So long as society is constituted as it is and demands the services it now requires of the tradesman, little relief can be expected after the proudcts are delivered to the dealer.

But the interesting fact to the farmer is that in all these transactions he is the only man who sells without knowing what his produce costs him. If he does not go to the trouble to find out he cannot expect his agents to do it for him.

Why Does Your Boy Beat You Into Town?

EVERY once in a while, and sometimes oftener than that, I find some farmer wondering why the boy wants to leave the farm. Why wonder? Especially when you know that the boy knows that you really want to do the same thing as soon as you have saved up enough money to do it in the way that you want to do.

Is it not a fact that too many of you, by your daily lives and examples, are teaching him that the farm is only a place on which to work hard, and to live harder? And for what? To make enough money to move into town after you are too old to enjoy things, and when your spending muscles have been paralyzed by years of inaction and disuse. If your daily lives are along those lines, do not be surprised if your boy beats you into town by several years. And it may be that it will require years of tramping over the crippling pavements of the city before he realizes that after all the plowed ground was easiest on his corns and conscience—and far better for his comfort.

It is up to you to keep the boy on the farm. How? By teaching him, both by precept and example, that the farm is not merely a place to work and win wealth, by the sacrifice of many pleasures. But to teach him that the farm is the best place God ever invented on which to live, broad, free, efficient, serviceable, helpful, healthy, human lives. Thousands and thousands of such lives have been lived on the farm. Thousands and thousands of such lives are being lived today upon the farm, out in the open of God's sunshine. And it is because of this fact, in a large degree, that this country is great and good—and growing better.

W. H. MILLER.
Illinois.

Cheap Method of Winter Apple Storage

How the Apple Crop May Be Held for Better Market Without Payment of Storage Charges

WITH the revival of interest in commercial apple growing throughout the Missouri river valley, with increasing care in the handling of orchards and up-to-date management, we may reasonably expect a much larger production of apples in commercial orchards.

Winter apples ought not to be thrown on the market as soon as gathered in October. To throw the entire crop of the country on the market at that season would depress the selling value. If the entire corn crop of the country or hay crop were offered by the growers for sale at one time, lower values must inevitably result.

In the handling of the commercial varieties of winter apples, while it is highly important that apples should be placed in some form of safe storage as soon as possible after picking from the trees, there are not a sufficient number of ammonia cold-storage plants already constructed to give adequate storage to any large proportion of the apple crop at that season of the year. It then becomes important that the grower should have independent methods of storing his commercial apple crop the same as the farmer cribs his corn on his own premises, and not throw his crop on the market in October or November, thus depressing the market. He can store on his own premises or in his nearby town until the market will justify offering for sale.

Ventilation Necessary

In this connection some very valuable work has been done by the agricultural college at Manhattan, Kan. They have demonstrated by carefully handled and recorded experiments that large storage cellars can be constructed and held at such a temperature as will safely carry the late-keeping crops of the winter varieties until February and March. These storage cellars are equipped with upward ventilation, and air is admitted through underground inlets constructed with large tile. By receiving the outside air at a little distance from the cellar, the air is cooled somewhat in passing through the underground tile, or in changing the air in winter the temperature of the incoming air will be raised to a safe degree.

This method of storing has been outlined very clearly in a bulletin, which doubtless can be had by addressing Prof. Charles Dickens, professor of horticulture at Manhattan, Kan. This method of storage should be peculiarly appropriate to the rolling hill lands of the Missouri river district, since these lands furnish ideal conditions for deep cellar storage that shall retain an equable temperature, with only a moderate amount of attention.

Whereas in the case of large commercial orchards a greater storage capacity is desired, perhaps the method employed at Woodspur and at Fruitland, in Canyon county, Idaho, would be worthy of notice. In this district it has been found by experiment that a storage house with a capacity for holding forty carloads of apples can be constructed at a cost of about $140 per carload. Since the cost of ammonia storage for one season is $126 per carload, the amount expended in the construction of the building is nearly saved in one season, leaving the building ever after subject to only a small running expense.

Perhaps the district building in use at Woodspur would give interesting suggestions. Their building is 60x100 feet. The basement is eight in height, constructed with cement walls. The superstructure, a building with walls twelve feet in height, is of lumber, with the usual dead-air space walls. In this case, as the climate is mild, they have but one dead-air space of twelve inches. In climates of greater severity this twelve-inch dead-air space may be cut into two spaces or even a third added. Above this main storage room is simply the space under the roof, used for the storage of box material. The basement and first and second floors should be equipped with a carrier instead of an elevator.

In southern Idaho sunny, warm days are likely to occur in late autumn, during winter and in early spring. To guard against the effect of the sun heat a lumber hood or shield is constructed outside of the building proper. This hood or shield, standing eight inches away from the main building, allows free ingress of air at the bottom, and an outlet at the top allows the sun-heated air to rise and flow away, lessening the effect of sunny days on the temperature of the main building.

This particular building was constructed by commercial orchardists in the neighborhood. The building cost, including the expense of painting and electric wiring and ventilation, $5,500, or about $140 per carload of capacity. If filled solid full the building would hold a much greater number of cars, but alleys must be left for handling the fruit and the piles of boxes as tiered up must be separated by strips and spaces left between the tiers of boxes for ventilation. With this precaution it is found practicable to reduce the temperature of the apples when brought in from the orchard to a temperature of perhaps forty to forty-five degrees. By the use of ventilators and electric fans the warm air is rapidly thrown out and cold night air taken in. As far as practicable, the effort is made to retain the cold night air and renew it from time to time as necessity requires. During the winter, or at any time after low temperatures are available, it is found practicable to hold the temperature at about 32 to 34 degrees. With the advent of the warm days of February and March increased care is taken to throw out the warm air and to bottle up the cold night air, making it just as desired. Doubtless a house of this style of construction could be made use of in the orchard districts of the Missouri valley.

Method Used in Illinois

Since the autumn and spring nights in the Missouri valley are not as cold as in the elevated region west of the mountains, the method employed by L. R. Bryant of Princeton, Ill., will doubtless be found a desirable modification. The night temperature at Princeton, Ill., and in the Missouri valley varies but little. Methods which have been found useful at Princeton should be found worthy of consideration in the Missouri valley. Mr. Bryant, in the construction of his storage building, makes room for large ice storage in one end of the store room—remember, in one end and not over it. Should the great weight of the ice stored be over the apple storage room, then the building must be strongly constructed to support the weight of the ice. By Mr. Bryant's method of storing the ice in one end of this room and allowing the cold air to pass from the ice through the room, the building may be constructed with less heavy timbers and with less expense. Doubtless a combination of the method employed by Mr. Bryant and the method in use in southern Idaho will be worthy of study by the commercial orchardists of the Missouri valley.

These Big, Red Apples Were Raised in the Corn Belt

At Woodspur a number of commercial orchardists contributed to the cost of construction and shared in the use of the building in proportion to the amount contributed. The building at Woodspur will store about seven carloads of apples for each $1,000 cost. The neighbor, therefore, who feels able to contribute $1,000 to the cost of a building of this character would be allowed to use two-elevenths of the storage capacity of the building, costing $5,500.

Will Construct Own Storage Building

An illustration: The crop of 1912 was larger than usual throughout the United States, and some of those who were compelled from lack of storage to throw their crop on the October market received less than the cost of production. Mr. R. H. Woods of Woodspur, not being an owner in the building that had just been constructed by his neighbors, stored his crop in a nearby storage house until about the first of May and sold his Ben Davis fancy and extra fancy at $1.03 per box, f. o. b. growers' station. Since his crop, grown in a ten-year-old orchard, was 1,295 boxes of fancy and extra fancy, and sold at $1.03 by holding his fruit till May 1, he was able to sell for $1,333.85 per acre. This did not include 325 boxes per acre of third-grade apples, which in a glutted season he did not think it wise to pack. The total yield of his orchard, making the tenth season's growth, averaged twenty boxes per tree, eighty trees per acre, or 1,600 boxes per acre. Mr. Woods, encouraged by the success and profit in storing apples in an abundant crop year, will construct his own storage house and be prepared to store his crop whenever the autumn market does not justify early selling.

E. F. STEPHENS.

Welding Iron in the Farm Repair Shop

Takes Great Deal of Experimenting to Become Proficient

THE use of machinery on the farm has become such an important part of agriculture that the modern farmer must not only be able to handle machinery when it is in working order, but he should also be able to keep it in a fair state of repair. Every farm in the central west should have a repair shop and some tools. The most important of these tools are forge, anvil, vise and a set of thread-cutting tools.

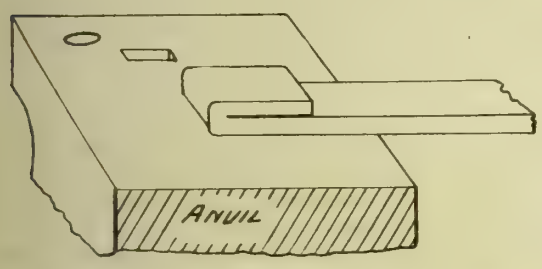

Fig 1

A farmer should not attempt to be proficient as a mechanic, but should be able to do many small jobs that are not worth while taking to a blacksmith, and should be able to handle, at least temporarily in case of emergency, some of the difficult repair jobs.

Welding Most Difficult of Repair Jobs

Of all the repair jobs on the farm probably welding is the most difficult, and the mechanic of the farm family should not waste time to make himself an expert at this, as it will be far cheaper to have the village smith do most of such jobs. However, the man about the farm who is inclined toward mechanics should prepare himself for doing at least a rough job of welding, for in the case of emergency he can then often save hours of time for a crew of men.

It doesn't take long to learn how to hammer a piece of hot iron into various shapes, but it takes a great deal of experimenting to become

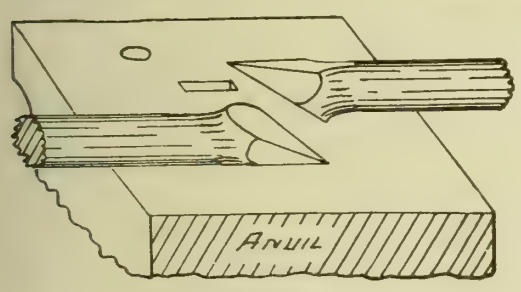

Fig 2

proficient in welding. The first attempts should be made with pieces of metal that are of little value, for the first ones are almost sure to be spoiled. Either the pieces will be overheated and the metal will burn or there will be a failure in making them stick, and the metal will then be so ill-shaped that it will be almost impossible to bring it back to normal. A clean fire has more to do with making a successful weld than being able to pound the iron together.

New Fire Should Be Started

Since most farm forges are used for soldering, babbiting, heating brass, copper and such work, it is generally best to remove all coal, clinkers and charred coal from the forge and build up a new fire entirely before attempting a weld.

Fresh coal should always be coked in order to drive off all sulphur. A fire which has blue or green flames coming up from the coal will never make a weld; neither will a dirty, yellow-flaming fire. The flame should be clear, glistening and of a lightest yellow.

The first weld should be made by bending the end of a flat bar back onto itself. The bar should not be less than one-fourth inch in thickness, and preferably three-fourths to one inch in width.

Insert the bar in the fire with plenty of hot coke beneath it and sufficient coke above it to hold the heat around the iron.

Care must be exercised in heating the iron so all parts of the weld are of the same heat. As the iron becomes hot it will be noticed that the part of the weld next to the long end of the bar is not as hot as the end in the fire. This indicates that the bar of iron is conducting the heat away and it should be pushed farther into the fire. All parts of the weld must be the same temperature, and this temperature must be a welding heat. It is known first by sparks which fly off and explode in the air; second, by being a very white heat, and third by the fact that the surface of the iron appears slightly plastic. If too many sparks fly off, it indicates that the iron is burning.

Use Sand to Form Flux

When the iron has reached a fairly white heat it should be withdrawn from the fire and about one-half teaspoonful of clean sand placed on it. The sand will melt and run over the iron,

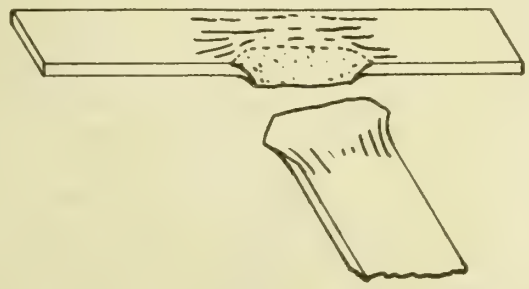

Fig 3

forming a flux, which keeps the air away and also carries off certain impurities.

Put the iron in the fire and bring it to the welding heat. While it is coming to this heat see that the anvil is clean, that the hammer is in a convenient place on the anvil and just before removing the iron from the fire have the feet set so that there will be no moving of any part of the body excepting the hands, arms and shoulders.

Rapidity Quite Necessary

In making a weld every instant of time possible must be saved from the time the hot irons start from the fire until they are hammered together. When everything is ready jerk the iron from the fire, give it a rap or two on the anvil, then lay it down, as shown by figure 1, and hammer the parts together.

Hit the iron with four or five medium blows,

Fig 4

and if there is a line appearing between the two surfaces cease striking, for the iron is not welding, and further hammering is injurious. Generally the reason the iron is not welding is because the pieces are not at a welding heat. Should the weld seem to hold, continue hammering the piece and gradually bring it into some desired form.

Never try to forge a weld when the iron is at a dull red heat, as iron at that temperature is not as strong as when white hot or when cold.

Lap Weld Comes Next

After learning how to get a welding heat in the previous weld, the beginner can try the lap weld, as shown by figure 2. For this weld take two half-inch or three-fourths-inch rods

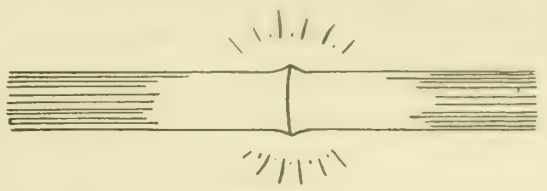

Fig 5

and upset an end of each, then scarf the upset ends until they appear as shown in figure 2. After scarfing the ends place both irons in the fire and practice removing them from the fire and placing on the anvil. While in the fire both irons must lie with the scarfed side down. In removing them from the fire seize the right-hand one so it can be turned over without changing the grip. Remove both irons from the fire at once, rap them on the edge of the forge, wheel around, place the right-hand one on the anvil with scarfed face up and then place the left-hand one on top of the right-hand one, with the scarf face down. Excepting for scarfing and placing the irons on the anvil, this weld is made in a similar manner to the lap weld. More care must be exercised in making the scarf.

Flat T Similar to Lap Weld

The flat T weld is made in a similar manner to the lap weld, excepting more care must be exercised in making the scarf. Make the scarf by upsetting both pieces, as shown by figure 3; then scarf them so that the stem of the T will lie on the anvil on top of the bar of

Fig 6

the T. Should the weld not stick perfectly the first time, care must be exercised in taking the second heat or the ends of the bar of the T will burn off. Keep fresh coke drawn in around these ends so they will not become too hot.

Scarf the irons for the round T weld, as shown by figure 4, then weld as in previous cases. Sometimes this weld can be made by binding the prongs of the fork around the cross-bar before the weld is made.

Butt Weld Very Difficult

The butt weld (figure 5) is the hardest of the iron welds to make, but when completed it is generally the smoothest. To make this weld upset the ends of the bars, then forge these ends to an oval shape. Heat the pieces as in previous welds, then butt the hot ends together and pound them up by driving on the end. An assistant is generally needed for the weld.

Steel to steel or iron to steel welds can be made by the split method, as shown by figure 6. The lips of the forked pieces should be clamped over the head of the wedge piece before the iron is brought to a welding heat.

Borax should be used on steel welds the same as sand is used on iron welds.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice, as well as the new.

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To all points in the United States and Mexico, per annum, in advance....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75

REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.

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Did you know that there are mines in New Jersey where sharks' teeth and bones are found, and oyster beds in Tennessee where oyster shells may be dug out? Of course, the sharks and oysters are ages old, left from the time that the ocean spread over these places, and the farmers in these vicinities dig them out for lime with which to fertilize their fields.

Is it adulteration to use lime to sweeten the cream for buttermaking? This question is now being discussed by the Denver courts. Lime that had been used for neutralizing exceedingly sour cream was found in the butter of a Denver creamery, and the government fined the creamery. Now the creamery is suing the government for a return of the fine. This is an interesting case to the makers of butter and the producers of cream, as the use of lime is very common in buttermaking, especially in summer, when cream becomes over-sour.

There is an unconfirmed report that English horse raisers have become so alarmed by the traction engine and the automobile that they are curtailing their production of horses and selling their best stock. If this is true, now would be a good time for the American horse raiser to get busy, as no thinking man doubts that as long as man lives and tills the earth so long will the good horse be in demand, let the power appliances multiply as they may. Prices are high now and will no doubt continue so for good horses.

Summer Crop of Grass-Fat Cattle

Several new factors will be felt this season when Kansas and Oklahoma pastures are stocked with cattle for summer grazing. These pastures furnish an annual crop of half a million beef cattle off the grass, but present prospects indicate that this number will be considerably curtailed this season.

Some of the biggest operators in the summer cattle-grazing business in Oklahoma have given up their leases because of repeated drouths there in the last four or five years. They say they have lost money every year, and they also claim that the pastures have deteriorated and now contain a lot of rag weed in lieu of grass.

Cattle in the Texas breeding grounds are in better condition than usual, because of the favorable winter, and they will go on grass in the north carrying considerable flesh instead of in their usual hatrack condition. Prices are about like a year ago, but the northern buyers are holding back. The good condition of the cattle at the beginning of the grazing period will permit of earlier marketing than usual, or, if the cattle are held till later, selling weights will be greater than in an ordinary season. Yet buyers hesitate as a body, although a moderate number of deals have been consummated. Young cows, bred to calve in the spring, have sold at $50 to $65, 3 and 4-year-old steers at $65 to $80, 2-year-olds around $45, and yearlings at $32 to $36.

Kansas pastures are being offered at a rate of $5 per head for the season, with a six-acre allowance for each animal, water guaranteed. In some cases seven acres for each head is being offered for $6 for the season, with water, and other pasture men are willing to contract to graze cattle at a rate of 3 cents a pound for the gain made, also with a water guarantee.

Fewer cattle in the Kansas and Oklahoma pastures from the Texas breeding grounds will be partly compensated for by more cattle from Mexico. If it is possible to get cattle across the line, Kansas pastures will carry more Mexican cattle this summer than ever before.

Some Kansas buyers are trying to get away from the practice of buying by the head, a custom that has resulted disastrously to many cattlemen. As high as 8 and 10 cents a pound has been paid for cattle to go on pasture, bought by the head, the buyers thinking they were getting their cattle at a reasonable figure. Buying by the head is not based on equity, and someone usually gets the short end of every trade made in that way. More complaint is heard from buyers on that score than from sellers. Cattle look big previous to the shrinking process incident to a railroad journey. A good many pasture men are now buying thin cattle at Kansas City, and the practice will continue the balance of the season.

Estimate of Crops Needed

Every business man makes estimates and calculations of his work and business ahead of his demands, ahead of the actual need of the material to carry his plans into effect. It should be so with the farmer, and is so with the farmer who is making the farm pay. It is an easy thing to say that farming pays, that the farmer is the only man who is making money, etc. All land owners, whether farmers or not, have made money right along for the last fifteen years, because of the steady and sure advance in farm land values. It was not necessary to farm the land, plan crops and supervise their marketing. The land had the lead, and the people with money and without money were clamoring or ownership of land.

The time has always been when the farmer who carefully looked after the details of his business and planned ahead for the keeping of a certain amount of live stock, horses, cattle, hogs, etc., made money by his farming operations. It is the farmer who plans his crop work early, before the season approaches for plowing and seeding, who is able to provide abundantly for all his live stock needs. A given number of horses and cattle require a certain tonnage of hay, straw, fodder and other forage crops to carry them safely through the severest of feeding seasons, and this is the basis upon which feeding estimates should be reckoned. It is comforting to have a surplus left over as spring opens up.

Provide liberally now with the acreage of the feed crops. Get an early start with the spring preparation. There are always circumstances intervening that cause delays in getting crops started. Estimate the live stock that you want to provide for next winter and guage your feed crops accordingly. This is the only basis of operation that is safe, except where the farm is partly devoted to the commercial production of feeds. In this event the live stock is practically a secondary matter, and is supplied out of the abundance that may be set aside for their use. Keep the crop schedule made out and aim to bring the farm demands up to it.

At a recent exhibition in Germany 1,000 kinds of sausages were shown.

Honest Packages

It is the honest package that makes for its owner and producer a reputation that will sell his stuff in the market. This can be acquired by any producer who desires to put his name forward as a guarantee of quality and condition. The dishonest practices resorted to by many fruit growers and dealers cannot receive too much censure.

In small fruits particularly there should be great care taken in the use of new boxes and cases. The work should be honestly performed in all respects. The fruit should be of even grade and uniform in quality; the measure should be full. A scanty measure is the source of dissatisfaction with the consumer and reflects on the honesty of the local retailer or dealer. Damaged and unsalable fruits are a loss and a nuisance to everyone in whose hands they chance to get. The placing of good-quality fruit on top and a poorer grade underneath is a practice that is damaging to the trade, and merits reproof by all dealers. Fruits should be packed so as to sell for what the face of the package represents.

There has for years been an urgent appeal to fruit growers and producers in general to create a market for their produce by selling under their brand. The producer of fruits who is willing to stamp his name and address on the case, box, barrel or package he sends his fruit to market in can have an assurance of getting some credit for the pains he takes in putting up his stock in fine salable condition. It pays to work honestly and fairly, and the fruits put up in this way will never lose anyone money.

It is an imposition on the commission merchant to have him humiliated before his customers by your dishonesty in preparing produce for sale. There is a respectable, honest, honorable class of trade in all markets, and there is a dishonest class. The latter, however, depend upon getting hold of damaged, refuse, poor quality of produce, repacking it and putting the damaged and poor stuff in the bottom and cover it over with a good quality on the top, to sell to unsuspecting buyers because it seems to be a little cheaper than the general market.

Associations are organizing for the sale of the produce of their members under guarantee. There are, however, individuals who could work up a local trade for all they could produce if they would be as exacting and specific in their guarantee of their produce by stamping each package with their name as a personal guarantee. Everything produced and put on the market for sale should be as represented or suffer the consequence. Buyers, after finding that a line of produce gives satisfaction to their trade, will favor it in orders. There is nothing lost in being honest in selling on a guaranteed quality.

Twenty years ago alfalfa was a comparatively unknown plant in Wisconsin; now over 30,000 acres of it are growing successfully in that state.

Care of the Meadow

The meadow on the western farm usually receives less attention than any other piece of land devoted to crops. The reason for this careless treatment of the meadow land is due, no doubt, to the long-accustomed abuse of the native meadow. The wild-grass meadow in the early years of the prairie farming districts did not present any special claims for attention more than any other piece of land producing less grass growth. Hay was cut any place in the bottom lands, and when not cut was often burned off. There was no stock in the country demanding the supply of wild-grass hay, and the economy of grass or hay was not a matter of consideration.

Conditions have changed. The country is filled up with stock, and it has been proven that the close cropping of the native hay lands causes a shorter and lighter growth the following season. The close pasturing of any of the native grasses tends to kill them out and encourage a growth of weeds. The same effect has been observed on the best native meadow lands. A too close pasturing of the meadow is a guarantee that the hay crop will be shortened.

The observing and thoughtful farmer or ranchman fences the meadow land separate from other enclosures and never lets stock on it at any season of the year, unless it is for special purposes, and when the weather and soil conditions are such as not to permit damage from trampling or a too close cropping of the aftermath. This practice, well observed, has increased the yield of hay, where formerly it gradually gave out under the influence of close cropping and trampling.

The meadow, in addition to its freedom from grazing animals, should be gone over in the early part of April and all rubbish removed that will in any way interfere with the operations of harvesting or detract from the yield of the crop. Old stack bottoms should be hauled out and thrown on the top of sheds that are provided with no better than hay or straw roof, or added to the manure piles to rot and be scattered on the land as manure. All bunches of old hay left in the meadow will rot and destroy a spot of grass and become the source of a growth of weeds. Sticks, stones, discarded parts of machines or tools have no right to occupy a place in the meadow. Clean it up thoroughly now while everything can be easily observed.

The meadow needs an extra wire around it. At no time or place should it be a temptation for a cow or horse to try to break through. When the grass in the pasture gets short and the meadow grass is tall and luxurient in growth, there is danger of cattle breaking through, and when once done it is almost impossible to fence against a breachy animal; best guard it in the beginning by a good fence. The native-grass meadow has been regarded a thing of the past by some; this is a mistake. If the native-grass meadow is used for meadow alone, it will last possibly for all time to come. The native-grass meadow on the lowlands is producing a heavy and excellent crop of hay where no other grass of good hay quality could be cultivated or successfully grown.

The tame-grass meadow demands the same treatment, except it may have a portion of the aftermath pastured off during the autumn season. But great care must be exercised even then to maintain the growth of the plant and not injure it by the exposure of the crowns of these grass plants to the severe winter influences of freezing. A light mulch of the aftermath is regarded of great advantage to the clovers; in fact, all varieties of tame grasses.

Grow More Cherries

A supply of cherries for home use should be grown on every farm. It was a custom among the early settlers of the old eastern states to plant cherry trees along the roadside and along the lanes and side roads leading into the farmstead, and was a source of great interest to the traveler, as well as to the land owner, conveying the sentiment, "A plenty and to spare." The old pioneer fathers always expressed a desire and belief that the birds should have a share in the orchard as well as in the grain fields, and to protect orchard fruits planted trees out over the farm for the birds.

The cherry is one of the surest growers in the catalogue of fruits. A good, live-rooted tree is sure to grow if given any kind of a chance. They can be planted in the apple orchard to fill up vacant spaces, in the fence rows—any place where there is room. The cherry tree is not out of place anywhere on the farm, even in the lots about the house and barns. It is a good shade tree when once developed, and will serve the birds if not needed by the family.

Many orchardists who grow cherries for the market claim that the best plan to keep the birds from destroying too many cherries is to plant a few trees on the outside of the orchard and give these over entirely to the birds. A portion of all fruit and grain crops must be conceded as feed for the birds. It is only just and right that these insect destroyers be given a good living of whatever they most enjoy. If it were not for service of the birds in destroying the insects that live on trees and vegetation, we would soon have no fruit to contend about.

It is the duty of every fruit grower to do all in his power to increase the bird population of the country. It is the duty of every grain-raising farmer to encourage the increase of birds in his neighborhood. There is not a bird but what is of some service to agriculture and that does not merit a good living from the farm. Be liberal with the birds; be a protector of the birds, and your crops will increase and your business prosper. In providing bird feed to keep the cherry crop protected, a few Russian mulberry trees will serve a good purpose. The mulberry provides a fruit supply for four or five weeks. The birds enjoy fruit and it is of little value for other uses.

There is no kind of fruit that furnishes a more healthful article of diet than the cherry. It excels all fruits when canned and used as a sauce. The growing of cherries on the farm is an important feature for the family, and should be provided. The cost is trifling and the benefit inestimable. The cherry varieties best suited to this country will be found in three or four kinds—the Early Richmond, the Wragg, Early Morrello, Montmorency and English Morrello are popular and sufficient for the family orchard.

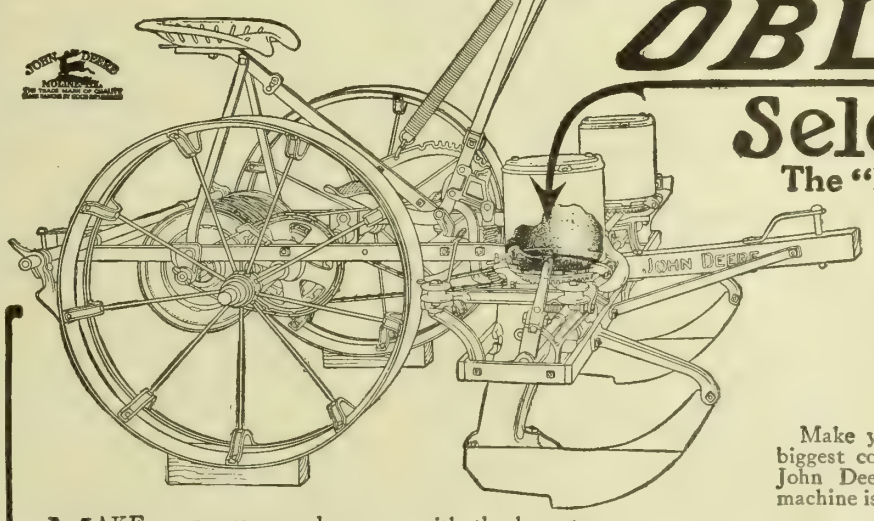
Farmers to the Rescue

Whenever labor conditions are such that there are a lot of unskilled workmen out of jobs and there is consequent suffering on the part of themselves and their families, the public seems to expect the farmer to step into the breach and employ these men. "You are always wanting help," they say. "Here are plenty of hands." The New York farmers have tried to use these men lately, with peculiar results. One man, a tailor, who had never seen a live cow or hen in his life, refused to work, though starving except for charity, unless he received $50, half of it in advance. Others were willing to accept the work offered them if they did not have to get up until 9 o'clock in the morning. The farmers were willing to pay $25 per month even for inexperienced help, but they drew the line at giving employment to such lazy, incompetent hands.

Farmers want help on their farms. They are always in want of help, but when they say help they mean just that, and not men who are so indolent and good for nothing that they are of no use either on the farm or in the city. When we give charity we expect no return, but when we hire assistants we expect to be assisted.

Have you raked up the hog lots and burned everything you can burn? This is most important. We have no disinfectant equal to fire. Remember that during the winter a lot of filth accumulates. If we are going to make our hogs do their best, and if we are going to keep them healthy, these yards absolutely must be cleaned up. Don't neglect it another day.

"Nothing takes the place of accuracy"



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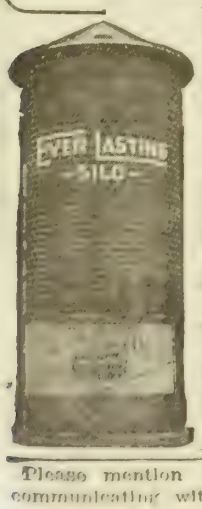

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How a Young Iowa Farmer Raised Good Corn Last Season

CONSIDERING that this case of heavy corn production was during last season's drouth, it is pretty conclusive evidence that the tending of corn ought to be very largely accomplished before the planting is done.

The young farmer I have in mind had good, heavy horses to do his stirring with. In early spring he plowed the land to a good depth. After the ground had settled several days, he put four big horses to a disk and gave the field a thorough disking.

Letting the ground lie yet a few more days, the young man put a three-section steel harrow on the field, harrowing and cross-harrowing. As he started over the field at the last harrowing he started the corn planter after the harrow, putting the seed down about three inches.

Let us consider the advantages of these numerous workings of the soil. At each period—between the stirring, disking and harrowing—the weeds started to come on and were as promptly annihilated by the subsequent working. All these workings also tended to establish the ideal seed bed by thoroughly pulverizing and packing the soil for the conservation of moisture.

But now comes another and most important step this young farmer took. As soon as the harrowing was finished—which was, of course, considerably in advance of when the planting was done—he started a man over the field with a good float, made of ordinary inch lumber. The team being of heavy build, the driver rode on the float, and wherever there had been any clods left, or where there was a low place, this tool finished the work of pulverizing and leveling the soil.

This last operation also further packed the soil, smoothed out the planter marks as a guard against washing the land, and left the ground in the finest condition imaginable for efficient cultivation. Some of the young man's neighbor farmers asked him if he was going to put the farm all in garden, but he made only a laughing reply and went his way good-humoredly. When the drouth struck his section of the country he still had the laugh on his neighbors, for with shallow cultivation to conserve the moisture the young man's corn stood the drouth exceptionally well, and it was estimated that he had many acres which would have weighed out fifty bushels, while over the most of the farm his yield would have beaten forty bushels, which, considering the conditions prevailing during its growth, is an exceptionally high showing.

M. A. COVERDELL.

Ringgold County, Iowa.

Feathers as a By-Product

MANY thousand pounds of feathers are annually imported into America to supply a demand that could be supplied at home if it were not for the enormous waste that takes place here in this product. These feathers are graded as to quality by the manufacturers who utilize them in making of beds, cushions, pillows, etc., and they range in price from 5 cents per pound for mixed lots of hen feathers to 60 cents for the feathers from white geese.

These feathers are the highest of all feathers in point of value, while those of the duck are next in the line of our domesticated fowl. The pure white duck feathers are worth from 35 to 40 cents in the Boston market, while colored and mixed lots are, of course, somewhat lower. They should, however, be kept separate from geese feathers, as the price received will be based on the lower quality in the lot, thus cutting the rate for the entire lot. The large duck farms where matured ducks are killed for the market receive considerable income from the sale of these feathers, and because of their extreme softness and quality the demand has kept pace with the increased production of Pekin ducks which has taken place during the last few years. The worst feature about duck feathers is their odor, and no system of cleansing has been found that will entirely overcome it. This, however, is the problem of the manufacturer, and the large duck farms receive the maximum for their feathers where only white Pekin ducks are raised, as a pound of feathers are picked from not more than ten birds.

Hen feathers as a rule seldom go for over 10 cents per pound, although pure white ones will bring considerable more than this if kept separate. In order to market them in the best condition and to secure the highest prices, the farmer should keep them spread out in an unused room, where they will dry properly and not mildew. In this manner the small amounts picked from fowl from time to time can constantly be added to and a sufficient quantity accumulated to make marketing profitable.

It is a wise plan to send a sample of the feathers to the dealer and to obtain prices before sending him a shipment. A better plan is to have a dealer call, if one has a large quantity, then there is no chance for mistakes and the farmer knows exactly what to expect. However, a market in one's own neighborhood can sometimes be found, and then the selling proposition is a comparatively simple matter.

Value of Silage

First—More feed can be stored in a given space in the form of silage than in the form of fodder or hay.

Second—There is a smaller loss of food material when a crop is made into silage than when cured as fodder or hay.

Third—Corn silage is a more efficient feed than corn fodder.

Fourth—An acre of corn can be placed in the silo at less cost than the same area can be husked and shredded.

Fifth—Crops can be put in the silo during weather that could not be utilized in making hay or curing fodder.

Sixth—More stock can be kept on a given area of land when silage is the basis of the ration.

Seventh—There is less waste in feeding silage than in feeding fodder. Good silage properly fed is all consumed.

Eighth—Silage, like other succulent feeds, has a beneficial effect upon the digestive organs.

Ninth—Silage is the cheapest and best form in which a succulent feed can be provided for winter use.

Tenth—Silage can be used for supplementing pastures more economically than can soiling crops, because it requires less labor, and silage is more palatable.

Eleventh — Converting the corn crop into silage clears the land and leaves it ready for another crop.

Hay is not very high, and if you are not sure that you are going to have enough to run your cattle to grass you had better buy enough to be sure. You will have better pasture all summer if you let it get a good start before turning in the stock in the spring.

Healthy Boys and Girls

Always Hungry

And for a quick, easily prepared lunch, a generous dish of

Post Toasties

and Cream

Can't Be Beat!

The nutritious part of white Indian Corn, skilfully cooked, rolled thin, and toasted to a rich golden brown.

Ready to eat right from the package—crisp, nourishing and delicious.

Children can't seem to get enough of Post Toasties, and they can eat all they want because this food is as wholesome as it is appetizing.

—sold by Grocers

Combination Live Stock Sales

Inferior Pure-Breds Hurt Breeding Business

THE public sale system of selling our surplus live stock is here to stay. We believe that in future years it will be more generally used than at the present time. Close observation at a number of public sales during the past winter has revealed at least one shortcoming of the parties who hold these sales, and that is the putting through the auction ring of too many inferior animals.

Do the best we may, we can't get them too good, or too many good ones in our offerings. Many—and we believe most—of the buyers are at these public sales for the purpose of buying something that will be a betterment to their own herds. Don't get the idea in your head that you are going to fool anyone and make them think they are getting something good just because it has a pedigree. Too often do we hear the expression that this or that animal is a good farmer's bull or boar. If it is a good farmer's animal it should be a good breeder's animal. Let us say right here that too many of our breeders underestimate the knowledge of good animals possessed by the average farmer.

In the average combination sale we find naturally a mixed lot of stuff, contributed by various breeders. We have noticed in some of these sales some very inferior animals—animals that would not make good beef. In sending such as these through the sale ring we do a damage to the pure-bred business in more ways than one. At every one of these sales we find someone who is figuring on starting a pure-bred herd. If he be a good judge he will at once think that there is nothing in the pure-bred business, for he knows that he is raising better animals that are but grades. If his judgment is not good, and he goes to the sale thinking that of course he is going to find good specimens of the breed there, he will buy, and when he tries out the experiment and finds that he has been fooled, this party is no longer a breeder. Many a good man is put out of the business of breeding pure animals because he did not get the right start, and many a good man does not start because he doesn't find at some of our sales animals good enough for him.

Be more careful about putting inferior animals into the sale ring. If you make a consignment to a combination sale, have as good an animal in that sale as the other fellow. Animals of inferior quality always hurt the price to be obtained for the good ones. Managers of these combination sales should see to it that better animals are consigned than some we have seen during the past season. It hurts their reputations to be in a manner responsible for the offering, for it is too often looked upon as their offering and not the offering of a dozen or more men.

Care of Ewes at Lambing Time

THIS is the most critical period in the entire year with the shepherd of the flock. The losing of a lamb practically means the loss of a sheep; or, in other words, every lamb saved means a prospective sheep for the flock. The price of a sheep is really represented in each of the lambs, as the employment of the ewe costs the same whether the lamb is raised or not, and there is no additional cost attached to the lamb that lives through with its mother to the weaning season.

The ewe flock requires especial attention during the lambing season, and for some weeks preceding as the physical condition of the ewe determines to a great extent the success of raising the lamb. The careful management of the breeding flock during the period of dropping the lambs means the constant presence of a shepherd who is well skilled in flock care. Ewes should be fed an allowance of grain twice a day until the grass has sufficiently matured to be a permanent feed. Hay given at night to the flock during this period will greatly aid in keeping the digestion in proper condition.

There is in all flocks more or less trouble with ewes that disown their lambs. This, however, may be greatly lessened by having the ewes in good condition at the lambing period. A strong, fleshy ewe seldom leaves her lamb to the mercy of the shepherd. The many devices for coaxing a ewe to give her lamb the usual attention due from natural motherly instincts should be well understood by the shepherd. It is often a great saving of time to apply some means to persuade the ewe to own her lamb at once. This may be brought about by one means when another has failed. Thus the bringing of a dog into the room or stable where the ewe and lamb are confined often causes the ewe in her fright to defend the lamb at once, and a few such tests of her motherly instincts cause her to take up with her lamb permanently. If there is any one thing more than another that the sheep dislikes it is to be left alone, and especially in the presence of a dog, its greatest enemy, instinctively recognized by all sheep at all times.

The confining of the ewe and lamb in a tight box, closely covered with a heavy blanket until the ewe becomes quite uneasy from the close confinement, will often cause her to own the lamb. Many other methods are known to the shepherd, and when one fails another is tried. Thus, as a convenience and last resort, some shepherds keep the ewe tied and hoppled so she cannot get away from the efforts of the lamb to suck, and as she is away from the flock or hearing of other sheep she submits to the lamb sucking, due mainly to her lonely situation.

The lamb must be kept growing rapidly from the start. It will be found a great damage to check the growth of the lamb by any influence—poor pasture, overcrowding in the flock or lack of water. The lamb that shows decline during the summer months is hard to winter. Nothing but liberal grain feeding during the autumn season will save it. The early shearing of the ewe flock will be found of great advantage to the lambs. The removal of the fleece lessens the chances for filth to accumulate about the udder, which often causes the lamb to starve or gradually wean off the mother's milk

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Have the main part of your garden so arranged that it can be cultivated with a horse. Don't have the housewife do all the cultivating of the garden with a hoe or rake. She has other things to attend to as well as you do. A couple of hours a week with a good, gentle horse and a garden cultivator will go a long way toward making your garden.

WANTED TO KNOW . .
The Truth About Grape-Nuts Food

It doesn't matter so much what you hear about a thing; it's what you know that counts. And correct knowledge is most likely to come from personal experience.

"About a year ago," writes a N. Y. man, "I was bothered by indigestion, especially during the forenoon. I tried several remedies, without any permanent improvement.

"My breakfast usually consisted of oatmeal, steak or chops, bread, coffee and some fruit.

"Hearing so much about Grape-Nuts, I concluded to give it a trial and find out if all I had heard of it was true.

"So I began with Grape-Nuts and cream, soft-boiled eggs, toast, a cup of Postum and some fruit. Before the end of the first week I was rid of the acidity of the stomach and felt much relieved.

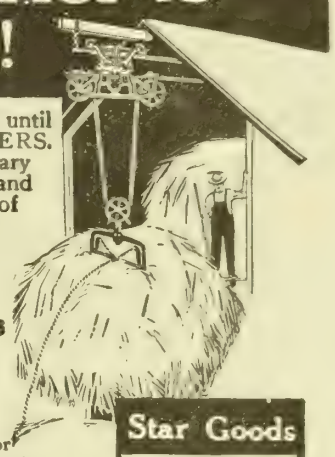
"By the end of the second week all traces of indigestion had disappeared and I was in first-rate health once more. Before beginning this course of diet I never had any appetite for lunch, but now I can enjoy the meal at noon time."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

This Hay Carrier Is 12 Months Ahead!

DON'T think of buying any Hay Carriers until you see the new 1914 Model HARVESTERS. They're at least one year ahead of ordinary kinds both in mechanical improvements and strength. Double the size and twice the weight of old-fashioned, everyday fork carriers. Simple and strong—practically no repair expense.



Harvester Hay Carriers

1914 Models—for Steel, Wood or Cable Track

Made in three types — sling or fork style. Eleven new and distinct improvements make them mechanically perfect. No matter where you unload your hay, the Harvester will handle it without re-roping or changing pulleys. You won't consider old-fashioned hay carriers after seeing the Harvester.

Our big "Hay Tool Book" tells the whole story. Let us send it. *We'll include the name of a dealer in your town who will gladly show you the Harvester Line for 1914.*

HUNT, HELM, FERRIS & CO., 85 Hunt St., Harvard, Ill.

This Is Yours
This Hay Tool Book is free for the asking and is well worth having. *Write for it.*

Star Goods
All Guaranteed
STAR Stalls, Stanchions, Litter and Feed Carriers, Harvester Hay Tools, STAR Hoists, Cannon Ball Hangers, etc. *Write for details.*

THE ONLY REAL ONE-MAN TRACTOR

Hoke Tractors turn square corners with plows, mowers, binders, etc.

Durable, Flexible, Simple

Draw all your machinery with a **Hoke Tractor.** No special attachments required. Operator rides on machines drawn.

Send today for catalog describing this Wonderful tractor.

HOKE TRACTOR CO., So. Bend, Ind.

SEED CORN

ST. CHARLES RED COB WHITE CORN
BEST FOR CORN; BEST FOR ENSILAGE
Grown in St. Charles County, Mo.; buy it direct and get the genuine article. Write for prices.
LOUIS P. MARTEN, Dept. K, St. Charles, Mo.

Dr. David Roberts Answers Some Vital Questions.

Are Your Cows Slinking Their Calves?

What causes it? A germ in the mother's blood causes abortion.
Does it spread from one cow to another? Yes, usually through the herd bull.
Is that the only way? No, infected stables cause it.
Can it be stopped? Yes, by hypodermic injection, washing the genital organs and disinfecting the stables.
Will any ONE medicine prevent abortion? No, because the germ must be met at every turn and no one medicine can do it. Dr. David Roberts' **Anti-Abortion** medicine overcomes the germs in the mother's blood; **Antiseptol** overcomes the germs in the genital organs; **Disinfectall** overcomes the germs in the stables. In this manner the germ is met at every turn and it is absolutely impossible for abortion to exist in a herd where this simple treatment—applied by yourself—is used.
Is the loss serious? Yes, both in milk and calves. U. S. Government puts loss at $12.00 to $25.00 per cow per year.
What will it cost to treat my herd? The price of a good calf. Write Dr. Roberts, telling him how many cows, heifers and bulls you have in the herd. He will answer you promptly. Address

DR. DAVID ROBERTS, Pres.
Dr. David Roberts Veterinary Co.
6147 Wisconsin Ave., Waukesha, Wis.

Make Your Lame Horse Sound, Like This

You Can Do It While He Works.

We want to show you that there isn't any affection that causes lameness in horses that can't be cured, no matter of how long standing. We want to send you our instructive book, "Horse Sense" No. 3.

It describes all. And with the book we want to send you an expert's diagnosis of your horse's lameness. All this is absolutely free. Simply mark the spot where swelling or lameness occurs on picture of horse, clip out and send to us telling how it affects the gait, how long animal has been lame and its age.

We absolutely guarantee Mack's $1,000 Spavin Remedy to cure Spavin, Bone or Bog Spavin, Curb, Splint, Ringbone, Thoroughpin, Sprung Knee, Shoe Boil, Wind Puff, Weak, Sprained and Ruptured Tendons, Sweeny, Shoulder or Hip Lameness and every form of lameness affecting the horse. We have deposited One Thousand Dollars in the bank to back up our guarantee. Cures while he works. No scars, no blemish, no loss of hair.

Your druggist will furnish you with Mack's $1,000 Spavin Remedy. If he hasn't it in stock, write us.

Price $5 per bottle, and worth it. Address
McKallor Drug Co., Binghamton, N. Y.

Steel Shoe Book Saves You $20!
1 Pair Outlasts 3 to 6 Pairs All-Leathers FREE

The comfort, economy and durability of Steel Shoes is amazing. Throw away leather-soled shoes, boots, rubbers, etc. Steel shoes keep feet dry. No colds, sore throat, pneumonia. Saving in doctor bills more than pays for them. They fit fine and feel easy—no corns, bunions or soreness. Write postal for book, The Soles of Steel, learn how to save $20 shoe money.

H. M. RUTHSTEIN, The Steel Shoe Man. Dept. 185 Racine, Wis.

Experience with Nurse Crops

By M. A. Coverdell

ONE spring two of my neighbors were sowing oats on adjoining fields, the road running between the two pieces of land. Their object was to sow the oats to act as a nurse crop for timothy and clover sowing in seeding the land down to meadow.

Mr. A. was putting on about a bushel and a half of oats to the acre. Mr. B. was sowing at the rate of about two and a half or three bushels to the acre. Mr. B. called across to Mr. A. and asked him how much seed he was putting to the acre, and when he was told Mr. B. said: "He who sows sparingly will reap sparingly."

Mr. A. laughingly accepted the friendly thrust, but went ahead as he had started, sowing the one and a half bushels of oats to the acre and putting on a generous amount of timothy and clover seed. As might be inferred from the fact that these fields were so close together, the soils were of practically the same fertility, but when harvest time came Mr. A., who sowed lightly of oats, threshed thirty-five bushels of grain from every acre; while Mr. B., who sowed about twice as many oats to the acre as Mr. A., threshed twenty bushels of oats to the acre.

This proves conclusively that such seeding on land of but ordinary fertility must needs be light. The result of this experience proved another point: Not only was Mr. A.'s yield of grain so much greater than Mr. B.'s, but the thickness of the oat plants on the ground (which cut down the yield of grain) so barred the sunlight from the oncoming timothy and clover plants that the latter were smothered and crowded out. Two bushels of seed to the acre is plenty in seeding any land to oats as a nurse crop, and if the soil runs somewhat light one bushel is sufficient, as it will prove economical thus to make sure of the high-priced meadow seed producing a good "set," even though the oat crop may fall a little short of the average.

Crop of Corn in Western Nebraska Raised in 1913 by Moisture Storage Methods

Treatment of Oats for Smut

THE farmers of Nebraska lose annually more than a half million dollars caused by oat smut. To many this seems like an enormous sum, but it is a fact. This loss could be entirely prevented at a cost of from $1,000 to $2,000. Canadian farmers would be almost considered to have committed a crime against their government were they to sow their oats untreated, yet less than 1 per cent of the Nebraska farmers ever treat their oats before planting.

With every bushel of seed oats sown in the state this spring that are previously treated for smut we can double our yield over any previous year without increasing the acreage. I have more than doubled my yields on experimental plots by treating seed over others that were allowed to go untreated.

The treatment consists of making a solution of one pint of formalin to forty gallons of water. This formalin is obtainable at any drug store and should be 40 per cent strength. It should not cost you to exceed 80 cents a pint and can sometimes be bought as low as 50 cents. Spread a convenient amount of the seed on a tight floor to a depth of three or four inches. Then, with an ordinary garden sprinkler, sprinkle the formalin solution on all parts of the grain until the top of the pile is thoroughly wet. Stir the pile with an ordinary shovel until the damp grain is mixed with that beneath it, and repeat the sprinkling and stirring process until every kernel is thoroughly saturated with the solution.

After it is thoroughly mixed put the treated grain in a pile and when all the seed has been treated cover the pile with an old buggy or binder canvas. If these are not accessible, use an old blanket or ordinary grain sacks. The covering process is the most important part, as the gas that is formed should be retained beneath the covering so it can do its most effective work of killing the germs. The grain should be covered from sixteen to twenty-four hours. It should then be allowed to dry, after which it is ready for sowing.

The best time to treat your seed is some time before sowing time. Then when the weather is favorable you are ready to rush the work along. The rate of applying this solution should be about one gallon per bushel of seed, which will mean an expenditure of about 1½ or 2 cents per bushel to treat grain sowed.

CORN-BELT FARMER.

Sound Legs Pull Big Loads

No horse with a Spavin, Splint, Curb, Ringbone, Bony Growth or Sprain, can do himself justice. Often these ailments put a horse out of commission. Thousands of farmers and horsemen have been keeping their horses *sound* by using Kendall's Spavin Cure—the old reliable, safe remedy. We have many letters like these to prove it.

Wm. Lucciarone, Hubbard, Ohio, writes: I have a horse that had a *sore leg* for about two weeks and could not get cured. One day one of my neighbors told me that Kendall's Spavin Cure would be a good remedy. So I got a bottle and *it saved me a horse.* I will never be without Kendall's Spavin Cure in my stable.

KENDALL'S Spavin Cure

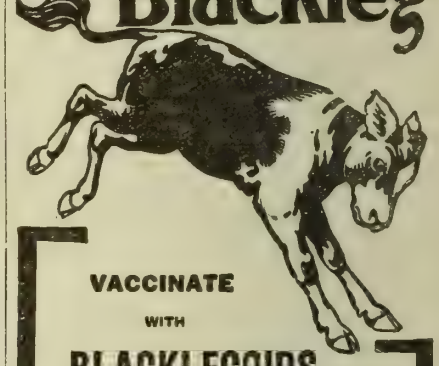
keeps the horses working—making money in the field instead of "eating their heads off." It acts quickly, leaves no scars or blemishes and costs little. Don't risk experiments with unknown, untried brands when Kendall's costs no more (often less.)

Be ready for any emergency. Keep a bottle of Kendall's in the barn. Then if anything should lame your horse you can apply it quickly and save big money as others have done and are doing. Tear this advertisement out to remind you to get Kendall's Spavin Cure next time you go to town.

Price $1 per bottle—6 bottles $5. Ask druggist for free book "Treatise on the Horse" or write direct to us.

Dr. B. J. Kendall Company
Enosburg Falls, Vt., U. S. A. 18

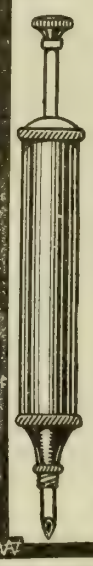
No More Blackleg



VACCINATE WITH BLACKLEGOIDS

and save the animals.

BLACKLEGOIDS



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Write us for circulars describing Blackleg and telling how to prevent it.

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LIGHTNING RODS 9c PER FOOT

Best Quality Copper—Extra Heavy Cable

System guaranteed satisfactory or your money back. Just write a postal for our Proposition and FREE Catalog which makes everything plain.

The J. A. Scott Company
Dept. Z Detroit, Mich.

An additional line stating that you saw it in Twentieth Century Farmer will be appreciated by both advertiser and publisher.

Spring Work in the Cornfield

Insure Your 1914 Crop by Early Preparation

THE one big item of expense in the raising of the corn crop is that of cultivation. We believe too many farmers do not pay enough attention to the cultivation of the corn crop before planting, or the preparation of the seed bed. A great number of our readers will plant their corn this year in fall plowing. How many of them will leave this field just as it now is until they are ready to plant, and then give it one disking, perhaps a harrowing and perhaps not, then plant and follow the planter with the harrow?

If you have your corn ground fall plowed, if possible disk this field the first field work you do. In about ten days, if it is loose and mellow, give it a good harrowing and follow in another week or so with the disk. By this method you are doing two very important things—you are conserving the moisture already in the ground and you are killing a crop of weeds. The more weeds you kill before planting the less you will have to kill after that time. It is much easier to do this work and much cheaper before planting than after. If we get the best crop possible we must have the field as clear as possible of weeds, and we can, if we will, have practically no weeds.

Most of the subsoil in the territory covered by the Twentieth Century Farmer is in prime condition, with a good amount of moisture. We all fully realize the lack of moisture during the past season. No one knows what will be our rainfall this coming summer, so it stands us in hand to keep in the ground every bit of this moisture possible. We also know that a dust mulch is the greatest help in doing this. Our corn crop is one of our most important crops and we should be prepared to lend our every effort to make it as good as possible. On our fall-plowed fields the disk and the harrow are our best tools to accomplish the end. Let us use them freely.

How about the fields we are going to plant to corn that are in stubble or cornstalks? Here again is where the disk is of the greatest importance. Get at these fields as soon as possible and disk them over. Don't delay too long before you give the field the second disking and a third.

The best field of corn the writer ever raised was on a field in which we had wheat the previous year and did not fall plow. This field was disked four times before plowing and then the plowing was delayed until just before we wanted to plant. By this method we killed the weeds, conserved the moisture and warmed up the ground. While this ground was creek bottom land and very rich, we had very little trouble in keeping it absolutely clear of weeds. The cultivation was done before planting to a large extent.

Another important thing that is too often not observed is never to leave a field in which you are plowing until all the ground is harrowed. How often do we see a field of forty or more acres plowed and a harrow never used until the plowing is all done. Tons and tons of moisture have escaped by not thoroughly harrowing each half day, and in consequence there is a reduced yield of corn. Make up your mind that you are going to give more attention to cultivation, not only for the purpose of killing weeds, but to conserve the moisture. We don't lose corn crops very often by having too much water during the growing season.

New Rural School Idea

A new system of administration of rural schools has been installed by a county superintendent in Montana. All the schools on the Huntley project have been grouped together under one principal, who not only has charge of the school in a similar capacity to that of superintendent of city schools, but also acts as clerk of the district, purchasing all supplies. By buying large quantities of supplies considerable money is saved to the district. By the elimination of duplication of work in various grades the efficiency of the schools also is increased.

LUMBER AND MILLWORK
WHOLESALE TO FARMERS
Quality Guaranteed

We handle only HIGH CLASS LUMBER, MILL-WORK and BUILDING MATERIAL and can convince YOU by hundreds of references that the lumber we ship is the BEST MANUFACTURED and our grades always uniform.

We ship to YOU DIRECT at prices far below those you are now paying. We have no branch yards or agents to support, which means a big saving to you.

We don't ask you to buy sight-unseen and we don't ask you for money in advance. We PAY ALL FREIGHT CHARGES—YOU UNLOAD, COUNT and INSPECT and if anything is satisfactory send us your check. We WANT YOUR TRADE—WE'LL HELP YOU SAVE YOUR MONEY and guarantee to MORE THAN PLEASE YOU.

Mail us your carpenter's list and get OUR FREE ESTIMATE—WRITE TODAY.

GUIOU & LEDWICH
1021 N. 19TH ST. OMAHA, NEB.

Factory Price Saves You $25

Every style of vehicle and harness for every purpose of pleasure and business. Many new styles and big improvements in 1914 line. 40 years of success selling direct proves quality and big savings.

Large New Book—FREE

Handsomely illustrated. Let us send you a copy and quote prices that will surprise and please.

Elkhart Carriage & Harness Mfg. Co., Elkhart, Indiana

Our 10,000-Mile Tests

Reo the Fifth

Is built on a chassis which we have kept running for three years in test cars.

The test cars are kept running at high speed on rough roads. They are run night and day up to 10,000 miles. Then we take them apart and inspect them.

We require that vital parts, after 10,000 miles, shall remain about as good as new.

To insure this, all our steel is made to formula and each lot is analyzed twice. Our gears are tested in a 50-ton crushing machine. Our springs are tested for 100,000 vibrations.

Each driving part must stand a test for at least 50 per cent over-capacity. After radical tests we take apart each engine and inspect it.

We use 15 roller bearings—190 drop forgings. We use a very costly clutch to avoid clashing gears. And our gear shifting is done by moving a small rod three inches.

Takes Six Weeks

It takes six weeks to build this car as we build it. And it adds one-fourth to the necessary cost of each car.

But the result is a car to keep. Year after year it stays new. And you save trouble, save upkeep, save repairs. Mr. R. E. Olds builds every car as though he built it for himself.

Now $220 Less

This year's Reo the Fifth sells for $220 less than last year's model, equipped with electric starter. This saving results from confining our output for years to this single chassis. Now all the special machinery has been charged against previous output.

Yet this season's model with the new streamline body, is the handsomest that ever went from our factory. And the best equipped.

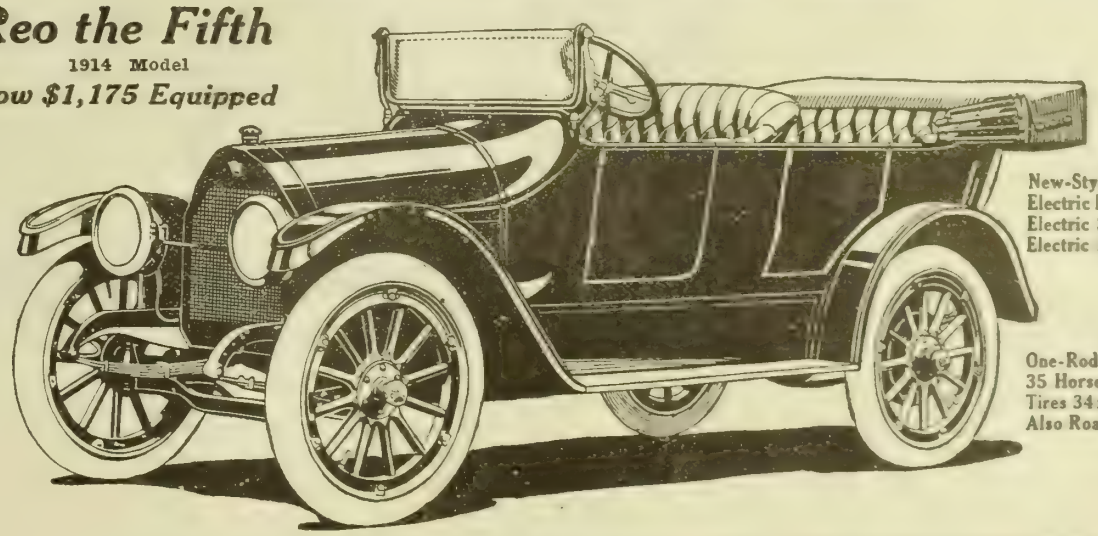
You men who buy a car to keep want a car like this. It marks the best that Mr. Olds can do after 27 years of car building. The demand for this car, almost every month, far exceeds our output.

Sold by a thousand dealers. Ask for our catalog and address of nearest showroom.

Reo Motor Car Company, Lansing, Mich.

Canadian Factory, St. Catharines, Ont. Canadian Price, $1,575.

Reo the Fifth
1914 Model
Now $1,175 Equipped



New-Style Body
Electric Lights
Electric Starter
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One-Rod Control
35 Horsepower
Tires 34x4
Also Roadster

(243)

"RANGER" BICYCLES

Are equipped with puncture-proof tires, imported roller chains, imported English flangedsprockets, English featherweight steel mud guards, imported Brampton pedals, motor style saddles, bars and grips, and other distinctive features possessed by no other bicycle. No effort or expense has been spared to make the "Ranger" the World's Best Bicycle. Improved factory methods and greatly increased output for 1914 enable us to make a *marvelous new price offer*. Something *very special* to the first purchasers of 1914 models in each town. Write us *today*.

WE SHIP ON APPROVAL *without a cent in advance*, to any person, anywhere in the United States, and *prepay the freight*. We only ask you to examine and try the "Ranger" *without a cent expense to yourself* before you think of buying any other bicycle.

10 DAYS FREE TRIAL is allowed on every "Ranger" bicycle. *Not a cent cost* to you if you do not wish to keep it after riding it for 10 days and putting it to every test. Our "Ranger" bicycles are of such high quality, handsome appearance and low price that we are willing to ship to you, *prepaid*, for your examination and trial, and leave it entirely to you whether you wish to keep it or not.

LOW FACTORY PRICES Our great output, perfected methods and machinery enable us to offer you direct from the factory the best bicycle ever produced at a price that will be a *revelation to you*. Do not buy a Bicycle or a pair of Tires until you receive our large complete catalog and learn our direct factory price and *remarkable special offer*.

SECOND-HAND BICYCLES—a limited number taken in trade by our Chicago retail stores will be closed out at once, at $3 to $8 each. Descriptive bargain list free.

RIDER AGENTS WANTED in every town and locality to ride and exhibit a sample 1914 "Ranger" bicycle furnished by us. In your spare time you can take many orders for our bicycles, tires and sundries. Write at once for our large Catalog and a remarkable *special proposition* we will make you on the first 1914 models going to your town.

TIRES, rear wheels with coaster brake, inner tubes, lamps, cyclometers, parts, repairs and everything in the bicycle line at half usual prices. Do not wait—write today for large catalog containing a great fund of interesting, useful bicycle information. It only costs a postal to get everything. Write it now.

MEAD CYCLE CO., Dept. R186 CHICAGO

Expert automobile mechanics get $100 to $150 a month, demonstrators and salesmen more. Good jobs are going begging—there are not enough experienced men to fill them—because the automobile industry is growing faster than men can be trained. Equip yourself for a good salary as expert mechanic or for entering the automobile business for yourself. Ours is the largest and best equipped auto school in the west, the only school in Nebraska with its large building devoted entirely to automobile training. Complete machine shops, all accessories, many makes of autos. Individual experience in large touring cars. Write for booklet.

NATIONAL AUTO TRAINING ASS'N.
2852 North 20th Street. OMAHA, NEB

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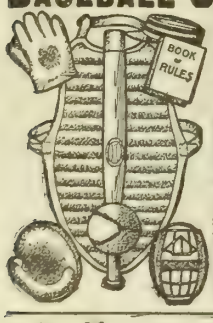
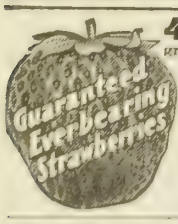


BOYS! Here is your chance to get a fine baseball outfit, consisting of complete suit, including shirt, pants, cap and belt, good quality, extra well sewed, or combination of big catcher's mitt, fielder's glove, catcher's mask (extra strong and durable) and rubber center ball, big league style, or fine chest protector. **Will Not Cost One Cent.** Send your name and we will send you 8 set of our fine pictures to dispose of at 25 cents each. Send us the $2 you collect and for your trouble will send you outfit as described. **WRITE TODAY** for pictures. No harm done. I take back what you can't sell.

M. O. Seitz, 3M 81 Chicago

Onion Sets Chicago gardens grow for all America. They are small, dry and hard. Red, White and Yellow. These grown from our own seed produce Green Onions and later large table Onions. We supply by Quart, Peck, Bushel or Carload. Sample pint postpaid 20 cents, with 160-page Catalogue.

VAUGHAN'S SEED STORE, 31 West Randolph Street, CHICAGO



40 ACRES solid to Superb, Progressive, American and other best everbearers. Get acquainted offer for testing. Send us 10c for mailing expense, and we will send you 6 high quality everbearing plants (worth $1) and guarantee them to fruit all summer and fall, or money refunded. Catalogue with history **FREE** if you write today.

THE GARDNER NURSERY CO.
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PEACHBLOW POTATOES

Early Ohios, Cobblers, all the best yielders. Pure northern genuine Red River stock. Grown from special heavy yielding seed, free from blight or scab. Guaranteed best seed stock. Write today for our 76-page catalog and circular on Potato Growing. Double your yields and profits. One customer made $225 an acre. Write

A. A. BERRY SEED CO., Box 807 CLARINDA, IOWA

Did you ever stop to think how much more valuable advertising space is in a publication that refuses to accept advertisements meant to deceive and defraud its readers?

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

A Boy's Mother

My mother, she's so good to me,
'Ef I was as good as I could be,
I couldn't be as good—no, sir!
Can't any boy be as good as her!

She loves me when I'm glad or mad;
She loves me when I'm good or bad;
And what's the funniest thing, she says
She loves me when she punishes.

I don't like her to punish me.
That don't hurt; but it hurts to see
Her cryin'—nen I cry, an' nen
We both cry—an' be good again.

She loves me when she cuts an' sews
My little cloak an' Sunday clo'es;
An' when my pa comes to tea,
She loves him most as much as me.

She laughs an' tells him all I said
An' grabs me up an' pats my head;
An' I hug her, an' hug my pa,
An' love him purt' nigh much as ma.

—James Whitcomb Riley.

The Editor's Corner

As usual, we have numbers of letters from our young people, and some are the kind that make us feel pretty good and some are the kind that do not. For instance, a very polite letter from a boy who won a prize, telling us how much he liked his book and that he expects to write more stories, is one of the letters we like to get. Another is from a little girl who says she wrote her story entirely without help and would rather not get a prize than to get it unfairly. We are glad to say most of you feel the same way about it. Unfortunately, this little girl's story did not get the prize or even get printed. But you would often be surprised to know how near some stories come to getting printed. If you did, you would often not get discouraged as easily as some do.

Among the other kind of letters is one from a little girl who has sent in a number of stories, mostly either copied or re-written from books she has read. She has written us once or twice asking us to send her a book. Now she writes that if we don't send her a book she will tell Uncle Sam. Who Uncle Sam is we do not know, but we hope whoever she tells will explain to her that if she is to receive a book she must write a story entirely original and that it must be the best story received by us during the week.

One young author says: "Hoping to get an answer from you as soon as you get my story." Isn't that expecting a good deal of us? When you look at the list of additional stories, and think how many letters that would mean writing each week, you really would not expect us to do that, would you? Then another little girl says she will not be angry if her story is not printed, but will write again, trying harder than ever. We are glad she will try again, but why should she even think of being angry? There is nothing personal about the awarding of the prizes. We send a book to the writer of the best story and print others we think may be of greatest interest to our readers. This is one of the many places where keeping one's temper is the only reasonable thing to do. Your stories are always welcome, and will be printed if we think they are better written and more interesting than others.

HOME EDITOR.

(Prize Story)

A Trip to Niagara

By Elaiza Sisneros, Aged 14, East Las Vegas, N. M.

Last year I started in August for Niagara Falls. First I went to Cleveland, O., and, having a wait of four hours there, I spent my time in wading and playing in sand on the beach. At 8 o'clock we went to the boat station and got our baggage. Then we went on deck, where a strange sight met our eyes. It was a very large boat, the largest I had ever seen. We got on board, and after cleaning up—for we were very dirty—went to supper. The saloon was under the deck and we could see the water splashing through the little glass windows. The boat didn't rock at all, as I had expected, but once or twice our chairs nearly tipped with us.

After eating we explored the boat. The lower deck was the saloon; on the next deck were the sleeping rooms. We saw the engines, which were immense, and then we went on deck. We had been out there for about half an hour, when we heard some music, and, going to the parlor, found they were playing the victrola. We listened a while and then we went to bed.

When we awoke in the morning we dressed quickly and, going to the deck, found we were pulling into Buffalo harbor. Soon a very small tug boat came out and tugged us in. We got off and got on an interurban car and rode to Niagara Falls. We went to the hotel and after putting out suit cases in our rooms went out to see the falls.

We could hear them roaring for blocks, and on arriving found them beautiful. I took a picture of them, but, as I had no finder on my camera, I only got the top. I don't know why, but every time I went near them it made me tremble. When I got a fi r for my camera I got some very good pictures. We took a good ride and it certainly was beautiful, even if I did think we were going to tip over. We stayed a week and then came home.

Note—Lest there may be some misunderstanding among children who are not used to terms used on the water, we want to explain that "saloon" is a word used on board boats for dining room. This is a very well told and interesting story. We wish one of the photographs mentioned had been sent with it.

(Honorable Mention)

Story of a Horse

By Wesley Mansfield, Aged 13, Cedar Rapids, Ia.

I am a horse. I was born in a large pasture. My mother was a black pony. When I was a year old my owner gave me to his little son, Willie. They took me to pasture the next summer. In the middle of the summer I got my foot cut on a wire fence. Willie's father came and got me and took me home. I became very tame and would eat out of Willie's hands.

When I was 3 years old they broke me to ride and drive. Willie and I had many good times together. Willie lived about two miles from the school house. When I was a 4-year-old Willie rode me to school.

The next year Willie got sick and his father had to take him to a different climate. They sold me to a young man. He was a good man, only he drank. One night he tied me to a post in town and left me out in the cold all night, and this was not the only time he left me out in the cold. He had no respect for me or anyone else when he was drunk, but he was very kind to me when he was sober. Many times he made me run all the way home. I don't see why men drink, because it makes them cruel to their animals and their fellow men.

But Willie has come back and owns me now. I am getting old, but Willie will keep me through my old age.

Additional Stories

Esther Kruse, Boelus, Neb.; Beatrice Sartorius, Wynot, Neb.; Elsie Korfhage, Leigh, Neb.; Ruby Robinson, Primrose Neb.; Ruby Wolfender, Ansley, Neb.; Madge Roberts, Rose Hill, Ia.; Viola Rossback, Akron, Ia.; Marion Clark, Terrill, Ia; Vera Mallonee, Bagley, Ia.; Bessie Strasser, Loup City, Ia.; Katherine Erpalding, Pringle, S. D.; Clara Larson, Strandburg, S. D.; Charley Kuntz, Pueblo, Colo.; Louise and Annie Askland, Esmond, Ill.; Donald McLeod, Hawthorne, Nev.; Rufina Reitober, Viola, Kan.; Olive and Ruby Clark, Horse Creek, Wyo.; Frances Stevens, Williams, Ariz.; Edna and Imogene Crosby, Deming, N. M.; Froebel Clark, Schaberg, Ark.; Nada M. Phillips, Kilbourne, Ill.; Emma Gobby, Riverdale, Cal.

Picture Contest No. 12

Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it bright and original. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than April 25. Answers to Contest No. 11 will appear in the next issue.

Of Interest to Our Women Readers

A Legend of Character Building

Years ago, in an ancient city, in a kingdom by the sea,
Two weavers sat at their oft-used looms, each weaving a tapestry,
Weaving with threads the thoughts they had into a picture strange,
Making a wonderful curtain there that time alone could change.

One sat near a wide-open window, where gay sunbeams warm and bright,
Played hide-and-seek o'er the casement with fantastic shapes and light,
Or danced o'er the little strip of land that lay twixt the house and sea
Pied with a hundred daisy blooms, all nodding cheerily.

The other had pulled his mystic loom away from the light and cheer,
To a spot that lay in the shadow, with outlook bleak and drear;
Day after day he sat and wove and thought of self alone,
Till in the pictured cloth he made his very self had grown.

And then, so runs the legend old, the king came by that way,
Heard of the wonderful weavers and the cloth they had made for aye;
Stopped to gaze on the pattern, but a look so strange to see
Came over the face of the leader so kind as he gazed at the tapestry.

Then, seizing them both in his outstretched hand, the king cried loud and clear,
"Listen my children to what I say, heed it, but have no fear;
As these weavers have spun their curtains, wonderful, rich and rare,
You spin by the things you think of the threads of your character."

"And he who thinks of beautiful things and loves the pure and true,
Shall weave a life that will correspond; your threads are the things you do.
Whatever you think or do, whatever you hear or see,
Determines the person you are, at last, and fathoms your destiny."

—Myrtle B. Carpenter.

Our Home Chat

Little Grace and her mother were out to "tea" and Grace asked for more bread and butter.

"Why, Grace," said her mother surprised. "You never eat bread and butter at home."

"I know it," answered the small lady, "but Mrs. Price makes such nice, thin bread. It just goes right down."

Mrs. Price did not make a bit better bread than Grace's mother, but she cut it thin, buttered it evenly for the little girl and made it look so tempting that, as the child said, "it just went right down." Not all people like their bread cut very thin, but one always likes it cut evenly and neatly, and it is surprising how much difference such things make. There never seems to be so much of something that is served temptingly, it melts away so fast.

For instance, the potatoes. When they are served just as they come from the kettle in which they are boiled, one may mash them up, butter them and fix them on the table, but if the cook mashes them thoroughly and beats them to a froth, with butter, salt and cream, and serves them in a snowy mound, with little dabs of yellow butter on the top, they melt away like the snow which they resemble. Perhaps they do not taste so much better, but they look so pretty that you keep on wanting to eat them.

For the ordinary hungry man or boy it is usually not necessary to worry about making things look good; they are conscious of a yawning cavity and only want something to fill it up quickly. The time such things as daintiness count is when some member of the family is not feeling quite so well as usual, when nothing looks good to eat, and the plate is pushed back with the food untouched. Quite frequently this is the very time when food is especially needed, but not in large quantities, and lumps of meat and wedges of bread not only fail to make an appeal, but make the thought of food absolutely repulsive. At such a time, knowing the secret of attractive service may make all the diference between recovery from an indisposition and the beginning of an illness.

HOME EDITOR.

Making Our Schools Fit

I am so glad to see the country school question coming to the front. It is much more important than the tariff or currency reform or the trusts. I here set down a few of my ideas and hope everyone who agrees or disagrees with them will say so and tell the reason why. That is the way to start something, and it is surely time we started.

The same methods will not meet the needs of different communities, and I do not believe in making every part of the country do the same things. First, decide what is best in your own case and then go to work and get it. Don't let anyone fool you into thinking that a bigger school means a better school, as the reverse is often the truth. There may be cases where the consolidated schools, one in each township, will do good work. They would be impossible here. In other cases I would favor uniting two, three or four districts, as is most convenient. I think it is silly and cruel to send children on a long drive to any school.

With us and many others the district school is like an old garment that needs to be remodeled. It has cost a lot and has plenty of good material in it, but it no longer fits. You do not throw such a garment away—at least I hope you don't; you cut it over, buy new trimmings perhaps, and have a little better one than you can get in town.

I was so surprised to hear someone say country schools were "dirty." I had ten years' schooling in one and never found it so. In sixteen years in a small city I was completely sickened by the frequent outbreaks of vice and lawlessness in their large and highly advertised high school. This is a matter in which both city and country parents are much too careless and indifferent, and an overworked teacher in a graded school has a poor chance to handle the case without their active co-operation. I have seen both sides and have a powerful conviction that young children are better off and get a better education in a good, small country school near home. And I say if it is not good enough now, keep it and work at it until it fits.

About the poorest method ever devised for giving instruction to children is to let one teacher have a large room full, all about the same age. It is not possible in any graded school I have ever seen for a teacher to give her pupils any attention as individuals. Question—Are children "grist" for the school machine to grind out, so many grades in so many years, or are they human beings in need of some training for the business of life?

If we do not keep our country schools and make them over until they serve the real needs of our country people, both young and old, it will be worse for everyone concerned, and that means the whole country. Already the cities are far too attractive to our young people. Let us make our schools the center for an attractive country life. We can if we try.

C. L. D

Iowa.

What Can Women Do?

"Woman's sphere!" A very commonplace and every-day expression when speaking of woman's ability and opportunity to make a livelihood in the world of business. Woman's sphere need not be circumscribed by the kitchen and household duties unless her circumstances and family relationship have given her these obligations as the part she is to take in making a home.

There are thousands of ambitious women who have their own way to make through life, unaided, unadvised by anyone especially interested in their success or welfare. What can they do as homesteaders, as land owners? Many of these women have ambitions to own land, realizing that this is getting down near to the source of all prosperity, the basis of business activity, the foundation of wealth. Their ideas so far are practical. How can they make a success of this venture that has practically since the foundation of the world been put into the hands of man to manipulate?

Woman has in divers ways and under many embarrassing circumstances proven her ability to manage business and make it a success. If she has the will she can find the way to become a land owner, and in a small way become a producer of crops and an earner of a livelihood, independent of outside assistance or the charity of the world, the very things her ambition is striving to ward off.

An acre of ground near town or city will, when rightly planned, provide a good living for any woman whose ambitions are not too extravagant. A larger acreage will multiply these opportunities, but will also increase labor and responsibility. Small fruits, vegetables, poultry and bees form an acre combination that will make a good living for any woman, and this may be mainly handled by her own labor. The greatest source of revenue is the honey bee, and this demands but small space and no expense except working accommodations, such as hives for storage of the nectar that the bees go out over the country for miles around and gather from garden, orchard and field.

For many years there resided in Columbus, Neb., a Mrs. Heater, a woman of ambition and business enterprise, who, for want of diversion, decided on studying the apiarian industry with this idea uppermost and bought three or four colonies of bees as a basis of her enterprise. She soon became interested in the progress and activities of her bees in collecting the nectar from the fields and orchards. The profit in bee culture induced her to devote all her time to the development of her apiary. From her original idea of a matter of diversion she grew to be the largest producer of bees and honey in the state, producing honey by the tons each year, and selling colonies of bees by the carload, until her annual sales ran into thousands of dollars. She occupied with her apiary one city block of ground, not to exceed an acre in all.

What this woman accomplished in this particular line of work only illustrates the possibilities open in this branch of agricultural industry for thousands of other women to take up and make equally as great a success. It is comparatively light work. It is in operation and doing business during the spring, summer and fall seasons, and is idle and resting during the cold and disagreeable weather of winter. Honey is a product that sells every day in the year. There is more consumed now than formerly. There is no need of fear of an over supply. It demands less capital than any other business

(CONTINUED ON PAGE EIGHTEEN.)

This Power Washer Is Made For YOU

Simple and Easy to Operate

This "Eclipse" Power Washer has a large, substantially built cypress tub which is practically indestructible. All metal parts subject to any strain whatever are made of malleable iron. Fitted to this is one of our famous metal frame, ball bearing wringers, absolutely the best wringer ever made. The pulley is 10¾ inches in diameter with a 2-inch face which will run at 150 to 160 revolutions per minute.

FAIRBANKS-MORSE & CO.,
Reputation - Back of It.

Remember this machine has the same quality reputation as all Fairbanks-Morse products.

Fairbanks-Morse Co., - Omaha, Neb.

AVERAGE 17c A POUND FOR YOUR HOGS

Butcher your hogs, cure your meat with **Wright's Ham Pickle** and smoke it with **Wright's Condensed Smoke.** Sell meat by parcel post to city people. **LET UNCLE SAM BE YOUR ERRAND BOY.**

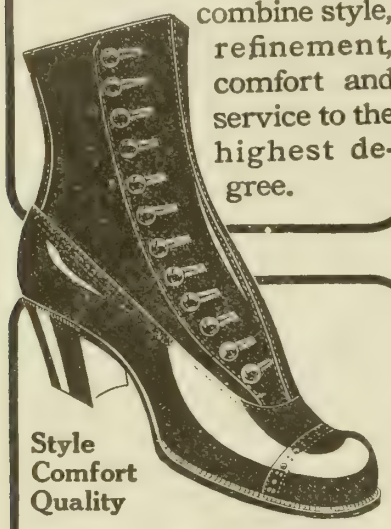
Wright's Ham Pickle, a scientific combination of meat curing materials all recommended by Dept of Agriculture. A $1.00 box cures a barrel of meat.

Wright's Condensed Smoke, a liquid made from hickory wood, for smoking all meats. A 75c bottle smokes a barrel of meat. Send names of five neighbors who cure meat for **Free Sample and Book.**

The E. H. WRIGHT CO., Ltd. 820 Broadway, Kansas City, Mo.

Mayer HONORBILT SHOES

There are no shoes at popular prices that in any way compare with the classy Mayer Honorbilt shoes for women. They combine style, refinement, comfort and service to the highest degree.



Style Comfort Quality

Mayer Honorbilt Shoes are not only fine looking but dependable for wear. They are "built on honor." The finest upper leather is selected, and the soles are of special tannage—everything first class throughout. If you want the dressiest and best wearing shoes obtainable, demand Mayer Honorbilt Shoes.

WARNING—Always be sure and look for the Mayer name and trade mark on the sole. If your dealer cannot supply you, write to us.

We make Mayer Honorbilt Shoes in all styles for men, women and children: Drysox, the wet weather shoe; Yerma Cushion Shoes and Martha Washington Comfort Shoes.

F. Mayer Boot & Shoe Co.
MILWAUKEE

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With this book in your home you can buy by mail from the large assortments of Omaha's quality furniture store just as well as if you came into the store. We want you to visit us when in Omaha, but in the meantime write us for the catalogue.

Beaton & Laier Co.

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Twentieth Century Farmer will not knowingly accept for publication any advertisement that is meant to deceive or mislead its readers in any way. Kindly inform us of any advertiser who does not do as he advertises.

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6501—Ladies' Waist—This model may be used either as a shirt-waist or as a waist for a costume. It has a full-length tuck and a shorter one at each side of the front closing and two full-length tucks forming a panel in the back. The neck is low, the sleeve plain and there is a fancy strap holding the tucks together in front. Messaline, crepe de chine, French flannel, linen and other wash materials can be used for such a bodice. The pattern No. 6501 is cut in sizes 34 to 44 inches bust measure. Medium size requires two yards of 36-inch material.

5429—Ladies' and Misses' Shirt-Waist—Linen, madras or China silk can be used to make this shirt-waist. It is made perfectly plain. The standing or rolling collar and long or short sleeves can be used. The pattern 5429 is cut in sizes 32 to 44 inches bust measure. Medium size requires 2⅝ yards of 36-inch material.

6526 Ladies' Flounce Skirt—This model gives us the minaret style. It may be made with either two flounces or three. These are attached to a three-gore foundation and may be of one material or may contrast. Naturally a light-weight fabric must be selected in order to avoid weight. Lawn or silk makes a good foundation, as the outer skirt is of cotton or woolen material. The pattern No. 6526 is cut in sizes 22 to 30 inches waist measure. Medium size requires 2⅝ yards of 36-inch material for the foundation and 1⅞ yards of 54-inch material.

6456—Ladies' Dress—This model shows the elegance of the more simple styles. It has a very plain blouse, with the drop shoulder and plain, full-length sleeves. The neck is trimmed with a pretty collar and the closing is in the front. The skirt may be made in one piece or in two, as preferred. It also closes in front. Cheviot, serge, velveteen, satin, messaline and many of the novelty woolen fabrics are suitable for a dress in this style. The pattern No. 6456 is cut in sizes 34 to 42 inches bust measure. Medium size requires three yards of 50-inch material, with one-half yard of 27-inch silk for the collar.

6533—Ladies' Skirt—Serge, cheviot or broadcloth can be used to make this skirt. The skirt is cut in two pieces and closes at the left side of the front. The high or regulation waistline can be used. The pattern 6533 is cut in sizes 22 to 32 inches waist measure. Medium size requires 2¾ yards of 36 or 44-inch material.

6520—Boys' Dress—This dress for a very small boy has a panel front and back formed by outward turning tucks at the shoulders. The neck is cut out in front to show a V-shaped shield and the sleeve has a few tucks instead of a cuff at the wrist. Gathers and a band may be substituted. Wash materials, such as linen, duck, galatea, heavy-grade ginghams and also check and striped cheviot are used for these suits. The pattern No. 6520 is cut in sizes 2 and 4 years. Two-year size requires 2¼ yards of 36-inch material.

6487—Child's Dress—Dainty and novel, this dress is closed at the back and is plain in both front and back, the front having a box plait folded in at the waistline. The sleeve is plain and is full length or shorter, and an ornamental sash completes the frock. Linen, duck, moire, cashmere, cheviot and serge are suitable for frocks in this style. The pattern No. 6487 is cut in sizes 2, 4, 6 and 8 years. Medium size requires 1⅜ yards of 44-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Sprains, Bruises Stiff Muscles

are quickly relieved by Sloan's Liniment. Lay it on—no rubbing. Try it.

Ankle Sprain and Dislocated Hip.

"I sprained my ankle and dislocated my hip by falling out of a third story window. Went on crutches for four months. Then I started to use your Liniment, according to directions. I must say it is helping me wonderfully. We will never be without Sloan's Liniment anymore."—*Chas. Johnson, Lawton Station, N. Y.*

SLOAN'S LINIMENT

Kills Pain

Splendid for Sprains.

"I fell and sprained my arm a week ago and was in terrible pain. I could not use my hand or arm until I applied your Liniment. I shall never be without a bottle of Sloan's Liniment."—*Mrs. H. B. Springer, Elizabeth, N. J.*

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"Sloan's Liniment has done more good than anything I have ever tried for stiff joints. I got my hand hurt so badly that I had to stop work right in the busiest time of the year. I thought at first that I would have to have my hand taken off, but I got a bottle of Sloan's Liniment and cured my hand."—*Wilton Wheeler, Morris, Ala.*

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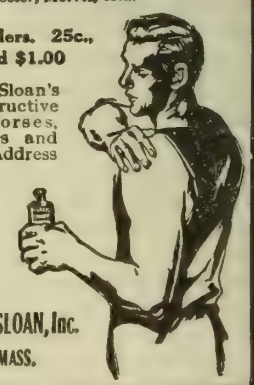

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LAND and Water Fowls. Farm-raised stock, with eggs in season. Send 2c for my valuable illustrated descriptive Poultry Book for 1914. Write Henry Pfile, Box 625 Freeport, Ill.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

A WRITER in Successful Poultry Journal has these trenchant remarks to make about our meat supply through cattle, hogs and poultry:

"The cattle industry is now becoming a matter of national concern. Grazing lands have turned into farms, and the herdsman is fast passing. Disease has made hog raising precarious. A meat-eating nation is becoming alarmed. Where shall we turn for our meat? We answer, 'To poultry.'

"But how can we hope to raise poultry sufficient to satisfy the meat-loving appetites of 92,000,000 people? The present mortality of the chick industry is now 66⅔ per cent of the yearly hatch. Think of that loss, will you, out of every hundred chicks? The turkey industry has decreased over half in the last ten years. Unless blackhead is checked the zoological garden will contain the last of the rare turkey. Leg weakness in ducks, cholera in chickens, and the poultry-raising public gets disheartened.

"And yet, despite the big loss, the poultry industry stands today greater than cattle and hogs, wheat or cotton, and pushes close to King Corn. And now how can this great industry be assisted, be made to increase?"

The writer then goes on to show that of a necessity to the public the greater part of that 66 per cent could be saved if strong effort be put forth to discover some solution of these principal diseases that lay hold of the fowls, and quite often in spite of the best of care.

The old hatchet remedy was the best in the past, but it is a poor remedy. A better one should be sought. Here we have the blackhead in turkys, the cholera in both small and adult chicks, lameness in ducks, and really microscopic examination shows them in most instances to be products of the same destroyer—a certain bacterium that takes on a slight difference in form, according to the fowl it attacks. Specialize the search for this particular enemy, learn the best plan to destroy it without destroying the poultry at the same time, and shut off the greater part of the 66 per cent loss.

Turkeys

While there is no doubt but that disease, well set in the soil of many farms, is responsible for the decline in turkey raising, yet I am sure there is at least one other factor at work in making the industry a partial failure, at least in many neighborhoods, and this factor is the knowledge that one fertilization is sufficient to fertilize all the eggs of one laying, and, in fact, even far into the next in instances, and so because of this many persons simply keep a couple or a few more hens, depending upon the males in their neighbor's flocks to provide the fertilization, and in this way the turkeys have been inbred year after year until there is neither vigor or vitality with which to sustain life and ward off disease. If every breeder of even a few turkeys each year would keep up the vigor of his flock by introducing strong, standard-bred blood on each side every couple of years, or even but on one, the male, there would be more turkeys raisd.

Males and females should be unrelated in domestication, and for breeding purposes they should not be under or over-sized for the breed—medium-sized, healthy and vigorous females, preferably over 1 year of age.

From the middle of March to any time in April you may expect the turkey hen to begin laying, and if she be standard bred she should lay not less than three clutches, if not allowed to brood the first two. If the fertilization was perfect, every egg should hatch a live bird; if not, there may be none hatch. This last is why it does not pay to keep too many male birds with the flock. From six to ten hens is the number thought best for each male. There are instances where twenty and even more hens have been kept with one male, but it is not safe to thrust this if hatching eggs are on sale from the flock. If more than one male is kept in the flock, unless they are on wide range, one male should be penned while the other is with the flock.

Breeding turkeys will bear confinement quite well, and if you want them to stay close at home while laying they can be kept in a reasonable-sized inclosure at least until the laying for the day is over. If the turkeys will not lay in a barrel that you have turned down, but determine their nest must be out where the eggs may be broken or disturbed, try turning over the nest a tent-like enclosure made of light boards. Old chicken hens make the best mothers for the young turkeys, but they must be entirely free from lice. Turkey coops should be placed as far as possible from where young chicks that have had white diarrhoea have been raised.

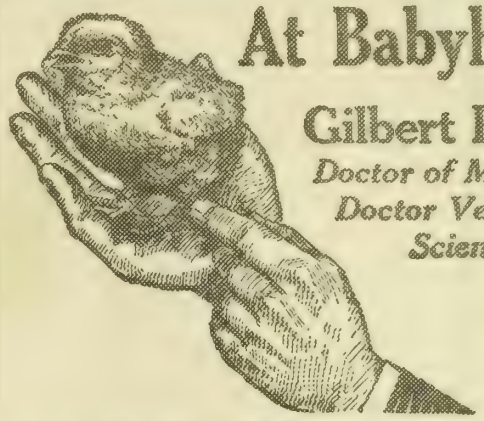
Sick Pigeons

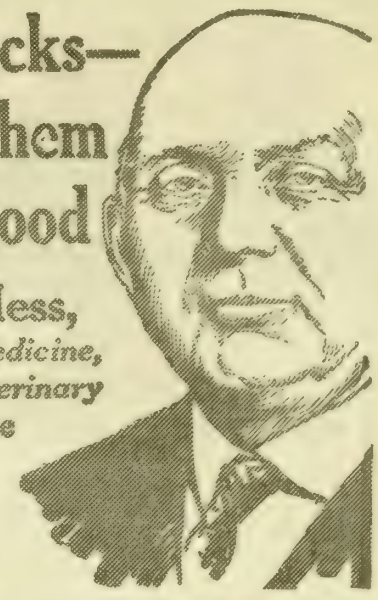
J. L., Nebraska: Will you kindly tell me what to do for my pigeons? They seem out of sorts and do not eat as well as they should, and the squabs are poor. How much should one pigeon consume in a day, and do the Homers bear confinement as well as other kinds, and as long?

Answer—Do you keep them in plenty of grit and salt-cat and fresh water? For lack of appetite the lack of these three may be altogether responsible. If they have these at hand always, then for the "off" condition try feeding them some hemp seed, and with this also try precipitated chalk in their drinking water for another help in getting rid of the indigestion.

If you have some pretty bad cases, take these away from the other pigeons and try doctoring them in a room to themselves. The Homer is thought to bear confinement best of all pigeons. And it ought to bear it from five to six years, as that is about the limit of their usefulness as breeders.

Save *All* your Chicks—Put Stamina into Them At Babyhood





Gilbert Hess,
Doctor of Medicine,
Doctor Veterinary Science

The annual loss of young chicks in the United States is staggering. *More than one-half* the yearly hatch die before reaching pullet age—die through leg weakness, gapes and indigestion. Talk about conservation—think of the millions of dollars that poultry raisers could save by saving most of these chicks.

Yes, most of them can be saved—saved by starting them on

Dr. Hess Poultry PAN-A-CE-A

Right from the very first feed. During my 25 years' experience as a doctor of medicine, a veterinary scientist and a successful poultry raiser, I discovered that, by using a certain nerve tonic and appetizer, *leg weakness could be absolutely overcome;* that the use of another certain chemical that is readily taken up by the blood would cure gapes, by causing the worms in the windpipe (the cause of gapes) to let go their hold and helping the chick throw them off. By combining these same ingredients with bitter tonics and laxatives, I found that I could control and invigorate the chick's digestion.

My Poultry Pan-a-ce-a helps put stamina into the chick, strengthens and cleanses its system and sends it along the road to maturity, hardy and robust. Most of the biggest poultry farms in the United States, where chicks are hatched out by the thousand every day during hatching season, feed my Pan-a-ce-a regularly.

Dr. Hess Poultry Pan-a-ce-a is the result of my successful poultry experience and scientific research in poultry culture—there is no guesswork about it. Ingredients printed on every package. Now listen to this

Get-Your-Money-Back Guarantee

You buy Dr. Hess Poultry Pan-a-ce-a of your dealer. If it does not help your chicks grow, keep them well, make your poultry healthy and your hens lay, he is authorized to refund your money; you can't possibly lose—Pan-a-ce-a must pay or you get your money back. Costs a penny a day to feed 30 fowl. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West. Buy of your dealer—Pan-a-ce-a is never sold by peddlers.

Dr. Hess Stock Tonic

Your stock need this tonic now to harden and condition them after the confined heavy feeding of winter. There's nothing better to put horses in trim for hard spring and summer work. Milch cows need it badly just now to prepare them for the heavy milking season ahead. Dr. Hess Stock Tonic makes all stock healthy—keeps them toned up and expels worms. Sold under money-back guarantee. 25-lb. pail $1.60; 100-lb. sack $5; smaller packages as low as 50c. Except in Canada, the far West and the South. Send 2c. for my *new* free Stock Tonic book

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Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks or if kept in the dust bath the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans, 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. I guarantee it.

DR. HESS & CLARK, Ashland, Ohio

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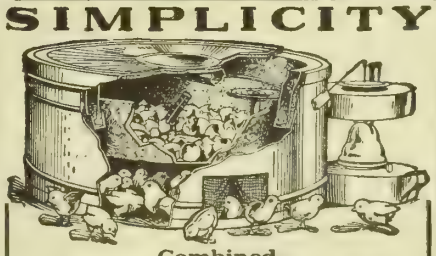

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EGGS from select pure-bred stock: B. Rocks, W. Rocks, B. Orpingtons, W. Orpingtons, S. C. W. Leghorns, S. C. Brown Leghorns, W. Wyandottes, S. L. Wyandottes, Light Brahmas, Blk. Langshans and R. C. R. I. Reds. Eggs fresh, fertile, from farms where only one breed is kept. Sent prepaid by parcel post to any address in U. S., 15 eggs for $1, or 100 for $6.
Your check with exchange accepted.
Norfolk Breeders' Co-Operative Assn., Norfolk, Neb

Tells why chicks die

J. C. Reefer, the poultry expert of 1619 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

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Double cases all over best copper tank; nursery, self-regulating. Best 140-chick hot-water brooder, $4.85. Ordered together, $11.50. Freight Paid (E. of Rockies). No machines at any price are better. Satisfaction guaranteed. Write for book today or send price now and save time.
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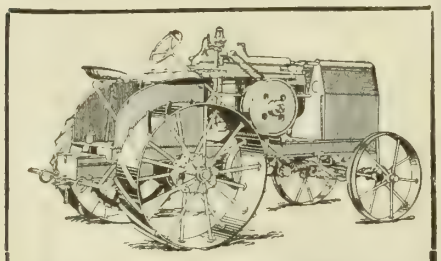

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A two-cylinder opposed engine. Uses gasoline or kerosene. Outfit is the lightest for power produced.

Get the most profit and pleasure out of your farming by using one of these Tractors. You will save on expense and do your work better and quicker.

Ask for descriptive literature.

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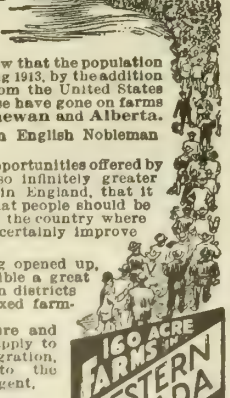

Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in **Manitoba, Saskatchewan and Alberta.**

Lord William Percy, an English Nobleman says:

"The possibilities and opportunities offered by the Canadian West are so infinitely greater than those which exist in England, that it seems absurd to think that people should be impeded from coming to the country where they can most easily and certainly improve their position."

New districts are being opened up, which will make accessible a great number of homesteads in districts especially adapted to mixed farming and grain raising.

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MONTANA RANCHES COMPANY,
Helena, Montana.

Highest Copper Mines in World

By Frank G. Carpenter

CERRO DE PASCO, Peru—I have come to the top of the Andes to tell you about the greatest copper mines of this continent. They lie here on the roof of the world—more than 1,200 miles south of the Panama canal and something like 3,000 miles from the Strait of Magellan. They are about 200 miles east of the Pacific ocean and 3,000-odd miles from the Atlantic. Their actual altitude is over 14,000 feet, and one has to go over a pass which is 5,665 feet above sea level to reach them. I came here by the Central railway of Peru. This brought me over the Andes and down to the 12,000-foot level at the town of Oroya. There I got the Cerro de Pasco railroad and climbed up the plateau to where I now am.

Cerro de Pasco is the highest mining town of the world. It is three or four thousand feet above Leadville, and almost twice as high as Mexico City. There are peaks near it which are 20,000 feet high, pered with holes that one would hardly dare to go about alone after dark. The native miners do their work in the old fashioned way. They dig out the best ore with picks and carry it up ladders in rawhide sacks on their backs. I saw many piles of such ore as I rode through the city. An Indian will carry from sixty to eighty pounds at a load and they are now bringing the ore out upon ladders from a depth of 300 feet.

Ore Now Mostly Copper

The ore taken out by the Indians is now largely copper, although most of it carries more or less silver. The real value of the mines is in the copper, the ore containing more and more copper as the mining goes down. The silver, which near the surface often assayed 100 ounces to the ton, has gradually fallen in quality until it is now less than ten. All of the ore, however, has more or less gold and silver in it and the American company finds that

American Headquarters in Cerro—Miners Being Paid Off

and its surroundings are some of the grandest on earth. The town is right over treasures of silver and copper of incalculable value. They have been mining silver here for 300 years, and that metal is almost played out. The outlook is that they will be mining copper for 100 years more, and the copper mines are really just beginning. Today the town is like a great colander, the holes of which are the openings of mines. The Spaniards and Indians have been mining here for eight generations and now the Americans have bought the most valuable deposits and the outlook is that they will be mining for many generations to come.

Indian Makes Discovery

The story of Cerro de Pasco dates back to 1630. At that time an Indian who was watching his llamas and sheep, had to stay here over night. He built a fire on the stones to keep warm and when he awoke in the morning he found the rocks specked with globules of silver which the fire had boiled out. This story went forth and as a result something like 500,000,000 ounces of silver have been taken out of these mines. They are mining some silver here now and as I rode on mule back about through the town I could see great pits large enough to swallow the vatican at Rome or our national capitol at Washington from which that ore had been taken. The silver ore comes from a yellowish rock which lies near the surface. It disintegrates easily, and much of it is taken out in the form of a powder.

The first working was done by the Spaniards, who used Indian slaves and flogged them to keep them at labor. Later on the mines fell into the hands of Indian Cholos, and when silver was high they were owned by capitalists who paid the miners something like 40 cents a day for twelve hours' work, with an ounce of coca leaves to keep them hard on the job. Today the silver ore and many of the petty copper propositions are worked by Indians. Outside the American holdings there are many small mines; and the town of 30,000 is so peppered with holes that one would hardly dare to go about alone after dark. The native miners do their work in the old fashioned way. They dig out the best ore with picks and carry it up ladders in rawhide sacks on their backs. I saw many piles of such ore as I rode through the city. An Indian will carry from sixty to eighty pounds at a load and they are now bringing the ore out upon ladders from a depth of 300 feet.

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It was the great copper value that attracted the attention of American capitalists to Cerro de Pasco, and today a syndicate composed of some of our richest men have bought the mines here and they are operating them on a scale such as exists nowhere else on this continent. Among the members of the syndicate are such men as J. B. Haggin, Henry C. Frick, the Vanderbilts, the Hearst estate and others. These men have already spent tens of millions of dollors in developing the property and they have mines here that are worth, I am told, at least $50,000,000. The business is not a stock proposition. The shares are not quoted on the exchange and so far as I know no stock has ever been offered for sale. The operation of the mines is on a plain business basis. No expense is spared to produce economic results and for some years the company sank millions without being absolutely sure of return. Today their mines are worked at a profit, and this has been the case for several years back. In 1907 they shipped over 20,000,000 pounds of copper and the smelter near here is now turning out 4,000,000 pounds of copper matte every month. This matte goes to New York, where, as I have said, the gold and silver in it about pays the expenses of mining and reduction, leaving the copper as almost clear gain.

Operations Almost Inconceivable

The extent of the operations of this American syndicate is almost inconceivable. They have come here to the tops of the Andes, at an altitude of almost three miles above the sea, and have developed an industry which would be enormous in any part of the world. They have built a smelter about six miles from here which surpasses anything on the South American continent and which in

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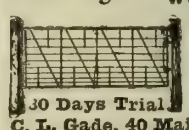

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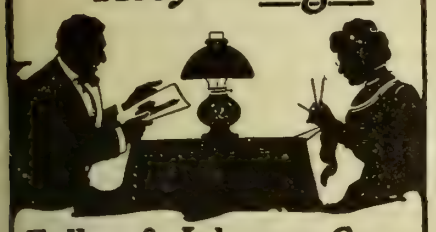
By George! Wife, They're Right!



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Get the new catalogue with a full complete description. Convince yourself that this engine is one of the biggest labor savers for the farm. Fits any pump, no belts, no anchor posts, no special platform needed, no extras to buy. Comes complete. Sets right up to the pump ready to run. Don't wait until you are too busy. Get Catalog No. 17 NOW."

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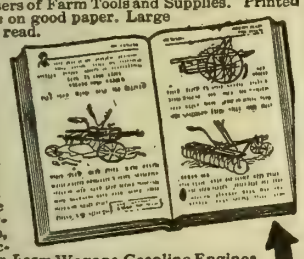

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many respects is like nothing else ever known. They have built up a town there and they practically support this city Cerro de Pasco. They have thousands of men in their employ, and there are perhaps 6,000 or 8,000 Indians or native Peruvians working in the mines and the smelter. They have within about twenty-five miles from Cerro de Pasco great mines of bituminous coal, which they have connected by railroad with this town and smelter, and they make their own coke and furnish their own fuel. They have built a standard-gauge railroad, which is by far the best in Peru, from Cerro de Pasco to Oroyo, and they have more than 100 miles of track, over which cars go as smoothly as any in the states, and that notwithstanding the altitude of the road ranges from 12,000 to 14,000 above the sea. It is this road that connects them with the Central railway of Peru, by which their ore is taken down to the coast.

In its purchase of the mines the company included a great deal of land. It has here a hacienda which covers about 200,000 acres. It would take a day and a half to ride all around it. This hacienda is highly mineralized, but the title to such lands in Peru gives only surface rights, and any one can prospect and claim any mine he discovers. In addition to the mines the syndicate owns, through one of its branch companies, a great copper property at Morococha, where, I am told, the ore is even richer than that at Cerro de Pasco. The mines there are almost three miles above the sea level and they are now being worked. They are not far from the Central railway and they will have a down grade all the way to the seacoast at Callao, starting within a few miles of the mines.

Outside the Mining Town of Cerro de Pasco, 14,200 Feet Above the Sea

Values Hard to Realize

Indeed it is hard to realize the values in the copper which is being found here at the top of the Andes. The ore which is now coming out of Cerro de Pasco averages from 8 to 10 per cent of pure metal. That means that there are 200 pounds of copper in each ton. From a single ton of ore they are now gettig a product equal to $32 worth of copper, $10 worth of silver and $2 worth of gold. This represents the values in the rock at the mines and, of course, the expenses of getting it to the market and of smelting and reducing must be considered. Nevertheless, it is doubtful whether there is any other place in the world which has such valuable copper deposits, and but few where the deposits are of such enormous extent. So far the Americans know that they have a great mass of ore right under this city with veins running out in a dozen directions. How big this mass is they have not discovered. They have been going down deeper and the copper is richer all the way. Said one of the superintendents to me:

"You might compare the copper formations here to your hand. Let the palm represent the great mass and your fingers the veins. As it is now we are working on one of the veins, and we have enough ore in sight to keep us busy for ten years or more without doing further development, and it is my personal opinion that we have not yet scratched the surface of what is to come. In the United States we think it a good copper mine if the ore will yield 1 or 2 per cent to the ton. Here if the ore does not assay more than 3 per cent we throw it away. Our average is about 8 per cent or more, and we have taken out some which has yielded 10 per cent to the ton."

Forty Miles of Workings

During my stay here I have gone down into the mines. They already comprise about forty miles of underground workings, although where they are now mining the operations are confined to a space of about one mile by a mile and a half. The mines are worked from the 200 to the 600 foot level, and tests have been made which show that the copper goes down far below.

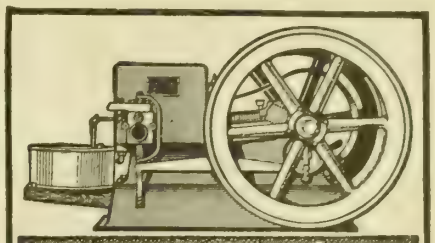
Entering the shaft, we dropped to the 400-foot level and then took the electric trolley which carries the ore through the narrow tunnels to the shaft. The tunnels are so small that we could barely stand upright within them and from the center of the track one could easily reach the sides of the walls. Some of the tunnels are timbered with Peruvian eucalyptus or with Oregon pine, but everywhere the work is so scientifically done that the rock in most cases upholds the walls. Here and there we stopped in a chamber where the miners were taking out ore. The machinery is of the very latest invention and the drilling is done with compressed air. The workmen are Cholos or native peruvians, who are paid from 60 cents and upward a day. They make excellent miners and some of them do quite as well as men of the same class in the states. They work in eight-hour shifts with two shifts a day. The shifts are so arranged that the second stops at 2 o'clock in the morning, so that all of the men can sleep a part of the night.

Everything is managed after the most approved mines of the states and this same plan is preserved in all the operations of the work. About 150 samples of ore are assayed every day and the miners know exactly what they are doing. They have a curious way of determining without a scientific assay, as to whether the ore is valuable or not. This is by means of a tallow candle. They light the candle and by dusting it with the ore the copper in it gives forth a green flame, the color of which shows just about the percentage of metal the ore contains. As I went through the mine with Mr. Glidden, the assistant manager, he made such a test and told me that the car of ore averaged probably about 12 per cent.

Beehive of Industry

During our journey we went from chamber to chamber, now walking through the tunnels and now jumping aside to let the cars pass. The whole of the underground workings are a beehive of industy and the work of getting out the copper goes steadily on without friction. The mines are so arranged that the cars are loaded by gravity, and the mining is most economically done.

In going through the tunnels we used acetylene, the carbide for which comes from the United States, and every miner we met had an acetylene lamp on his cap.



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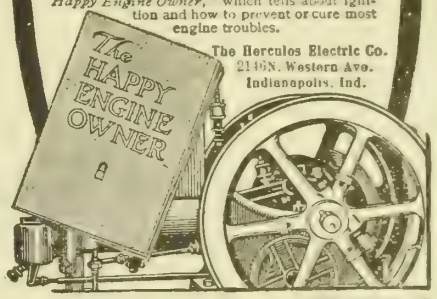

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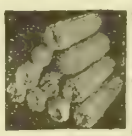

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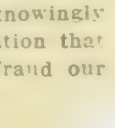

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The managers find that this is much cheaper than candles. The mines are worked by electricity which is now generated by steam, but the company is installing a great electric plant at Oroya, about seventy-five miles away, where they own a stream with a fall which will generate about 15,000 horsepower. Within a short time all of their works here and at the great smelter and also at the associate mines of Morococha will be operated by the fall of this river. At present the steam is produced by coal from the company's coal mines, which are about twenty-five miles from Cerro de Pasco. They use this to make coke for the smelter, and they have great quarries of almost pure limestone, half way between the mines and the smelter, which is only six miles distant and 200 feet lower down.

During my stay, I have spent some time at the smelter. The place is known by the Peruvian name of La Fundiction. The works are situated on the side of the mountain, so that the ore starts in at the top and goes by gravity through the various processes until it comes out in copper mattes as big around as a bread bowl, ready to be sent down on the cars. The smelter is the largest in South America. It must cover several hundred acres. It consists of great buildings, colored black with the smoke. They are walled with glass windows and have roofs of galvanized iron. Rising above them are three mighty smokestacks each so big around that you could run a Pullman car through it without touching the walls. These stacks are about 300 feet high and from them day and night pour out vast volumes of white and yellow smoke into the clouds of the Andes.

Finest of Modern Machinery

The smelter has the finest of modern machinery and every pound of it came from the states. This is so also of the great iron buildings and of the wood used for the structures and railroad. The establishment has duplicates of everything needed for smelting. It runs three eight-hour shifts and keeps busy Sunday and weekdays all day and night. I am told that it is the largest copper smelter outside of the United States and that it is patterned after the mighty works at Great Falls, Mont.

In building this smelter the engineers had to contend with difficulties unknown before. No one had ever constructed a smelter at 14,000 feet above the sea and the experts said that furnaces could not be run at that altitude. They claimed that the air was so rare that you would have to blow through the fire several times as much air per minute as is usually done in order to secure the oxygen sufficient for the reaction. Nevertheless, the syndicate determined to try it. They got the best men they could find and put up the buildings. But the furnaces would not work and one engineer after another came here and left, throwing up his hands in despair. At last there was a man from Mexico who had passed through Missouri and had to be shown. He said he did not believe that the figures told the real story. He was an old smelter man and he said the furnaces did not sound right. He began by taking off all the gauges and putting the blasts in such a way that he got the right sound. He then started to working and, lo! the plant did its work.

Up to that time it looked as though these mines, which had already cost tens of millions, would fail. The capitalists poured in money like water, and they had poured in so much that they could not let go. Since that discovery their fight has been successful and it is now a proposition which pays exceedingly well. As soon as they discovered the secret of the smelting they got an expert engineer, named Frank Klepetko, who had been connected with the Guggenheims, and who had built, I think, the smelter at Great Falls, Mont. It was he who planned the great buildings here and made them successful. He introduced new inventions and put in treatments that are especially fitted for these mines and works high up on the roof of the world. One of the curious things used is called the cindering machine. This takes the fine ore and turns it into a coke so that it can be easily smelted.

But I wish I could take you through this great working monument of American industry that has been created away out here on the top of the Andes. I should like to show you our men directing the work and bossing the mines. I would show you the ore as it flies over an American railroad and we could watch it as it rolls from the cars to the furnaces. We might even open the furnace doors and see the crimson copper blazing within. We would feel flames that are seven times hotter than those through which Meshach, Shadrach and Abednego walked and later on in the converters we could watch the liquid gold emptied by a seventy-ton crane, worked from above. We could see the golden sulphur flying off into the air, and the iron slag running away while the pure copper, silver and gold flowed into the molds. We could see the metal change in color as it cooled and watch the round blocks of 300 pounds as they were loaded on to the cars to be shipped to the states.

I spent the better part of a day in the smelter, and it made me feel proud that I was an American born. The output of the works, as I have said, is now more than 4,000,000 pounds of matter every month, and that means 4,000,000 pounds of copper, silver and gold. It is equal to more than 133,000 pounds every day or to more than 5,000 pounds every hour of the day and the night, Sunday and week days, all the year through.

(Copyright, 1914, by Frank G. Carpenter)

What Can Woman Do?

(CONTINUED FROM PAGE THIRTEEN)

of equal producing capacity or opportunities. It is a business that any woman can manage and make profitable who owns a little home not too centrally located in thickly populated town or city neighborhoods.

Then there are these other lines of industry referred to that can be carried on in conjunction with the apiary and thus by a mixed industry, such as small fruits, vegetables, poultry and bees, provide a business that will make most any woman a good living and still maintain the dignity and respect that she owes herself in being a homemaker.

The opportunities for woman as a land owner, on a small acreage near or in town or city, is just as good for thousands of other women all over this Missouri valley country as it was for Mrs. Heater, who demonstrated at Columbus, Neb., the possibilities of woman in bee culture.

G. E. H.

Nebraska.

Sell Produce of Quality

"Whenever the farmers in any community produce a sufficient quantity of any product of high quality more than sufficient to supply the local market, there is opportunity for the successful handling of that commodity through co-operative effort," so declared B. H. Hibbard of the College of Agriculture of the University of Wisconsin at a recent meeting of farmers engaged in the production of truck crops and other marketable products.

Among the essentials of successful co-operation which he enumerated for a commodity producing a sufficient amount of superior products were "honest, able, and unselfish leadership, the intelligent co-operation of the membership in enforcing the production of a product of uniform quality, a fair representation of the interests of all concerned, efficient business organization, a thorough knowledge of markets and marketing machinery, and an adequate system of accounting and auditing."

"These objects," he said, "can best be attained by the farmers concerned getting together, organizing a co-operative company, incorporating under the laws of the state, and putting the entire business of the company in the hands of a competent manager. Making each patron a stockholder, with but one vote, promotes equality of representation at all stockholders' meetings, and encourages the hearty support from small operators."

"To insure complete success the manager must be entirely efficient and trustworthy, since each member really co-operates more with him than with other members of the company."

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Rural Schools

L. P., Iowa: I notice that you would like to know why shouldn't the rural schools be as good as those in town? I cannot answer that question, but I can tell you why the country school is better than those in town.

In the first place, it pays to hire a good teacher in the country school. I have seen just as poor a teacher trying to teach a town school as ever tried to teach a country school. Whose fault is it that these poor teachers are teaching? One thing is the supply and demand. The main person that is to blame is your county superintendent. When they run short on teachers they go and get a kid 15 or 16 years old, and if it is a girl they get them a long dress and start them out to teaching. It has been done here and probably it has been done in other places. Sometimes when they need more teachers the questions are not as hard as they ought to be. There are several ways for poor teachers to get their certificates.

If your director is any good, he can tell a good one from a bad one, and if you get a good teacher, you can have a better school than they have in town. They can keep better order, give more time to each pupil, and the air is lots purer than it is in your city school or college. If you have pupils that have passed the eighth grade, let them keep going to your country school and hire a school teacher that can teach high school work. If you can't get the money to get this kind of teacher, go to the parents of these eighth-grade pupils and they will be glad to pay the difference in teacher's salary rather than to send them to town, where they have to pay their own board, and in lots of cases they have to pay $2 a month tuition. It won't cost so much to hire a good teacher as you might think it would, and you will find out that it is a lot better than it would be to rent or sell your farm just to move to town so that they can get an education or to let them board in town and run about over town till 11 or 12 o'clock at night. They may get an education this way, but it is not the kind their parents wish them to get. The average city boy has a lot more bad habits than the country boy has, but most of the country boys will be just as bad as the city boy if their school life doesn't change and their parents don't stop letting them go to town every time they want to at night.

I had two cousins that thought they were too smart to learn anything at a country school, so they went to the city school for three years. They were in the sixth grade when they left the country school, and so was I. At the end of three years they quit the high school because they had not gotten their eighth-grade diplomas, and I received my eighth-grade diploma and also got a year in the ninth grade. I don't think a pupil has the chance in a city high school he has in a country school if you get a good teacher.

Note—The writer is mistaken. We did not ask why rural schools are not as good as town schools. We think such a discussion profitless. We only wish to know what may be done to make the rural school better than it is, so that many of the people who are moving to town to educate their children may realize that they may be better educated in the country. It is evident that the rural school is not meeting the demands of the people. It is easy to say "hire better teachers." How may this be done? In the first place, if competent teachers are to be secured, not only must they be paid better salaries than the "kids" demand, but they must be given pleasant boarding places and enough social life to keep them contented. It is an undisputable fact that teachers, salaries being even, would always far rather teach in town schools. A teacher in a rural school with eight or nine grades to teach must work much harder to prepare and plan lessons in so many different grades and branches than she would have to work to arrange lessons for fewer grades, even if there were many more pupils in each grade. These are some of the many problems that must be faced by the rural school. We all want the boys and girls to stay in the country. We know it is better for them than town. Forbidding the boy to go to town whenever he wants to will accomplish nothing. Man cannot be made better by law, and the same is true of a boy. If we can make the boys realize that country life may be made pleasant and profitable, and that in the country they may find more opportunities than they can in town, we will be able to keep them there. If not, they will go to town in spite of commands.

Not an Open Joint

T. H., Nebraska: I have a brood mare that has an open sore on her hind leg right in the joint. Our veterinarian says it is an open joint. It is open all the time. There is but little moisture coming out and there is not much of a sore, just little crags in the hide, and she has never been lame. Please tell me what to do.

Answer—A joint does not stay open very long. The moisture you mention is evidently thin pus. There is a small pocket formed, which should be drained.

Kudzu Plant

A. J. W., Nebraska: Can you give me any information in regard to the kudsu plant or vine? Where can a person obtain the plant. What have you to say in regard to its uses. An item in your next issue would be appreciated by several of your readers in this vicinity.

Answer—The kudzu plant is a perennial vine, with large, tuberous, starchy roots, belonging to the pea family. Sometimes the root sends up many slender, hairy stems, as well as the distinctly twining or vinelike stems. The stems bear small, pealike flowers, which later become large pods. The plant is native to Japan and China. Bailey says: "Remarkably hardy and most useful for covering arbors and verandas. From a well established root the vines grow forty to sixty feet in a single season, producing a profusion of large, showy leaves. It usually freezes down in the north; that is, the stems do not persist north of Philadelphia. In the south the top becomes woody and perennial as well as the root. A sort of cloth is sometimes made of the tough fibers of the inner bark. The plant is propagated from seeds or by division of the

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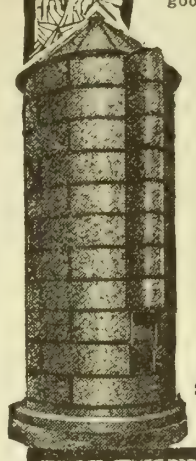

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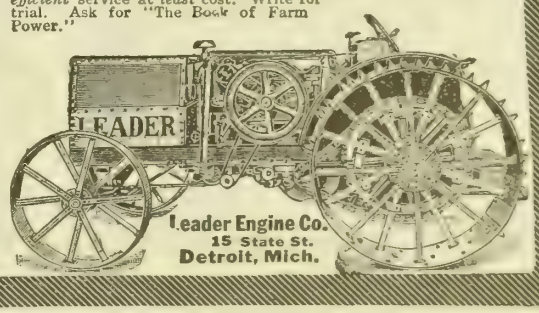

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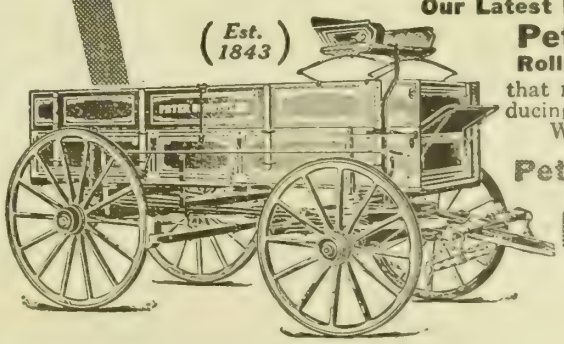

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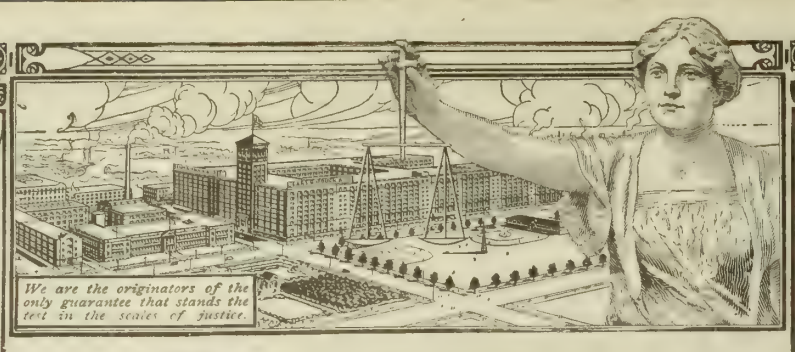

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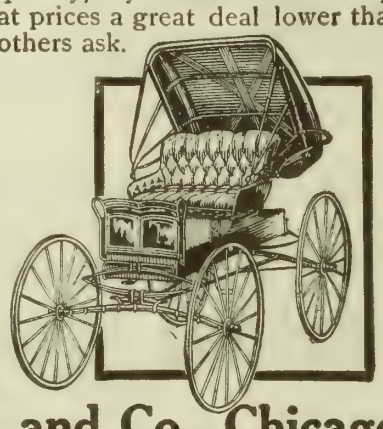

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large roots." You can probably obtain seeds by sending to any general seed house.

Farm Demonstrators

W. C. S., Nebraska: Under the heading "County Demonstrators," in your issue of March 7, you explain editorially the claims of V. S. Culver, a Merrick county demonstrator, setting forth his plans and ideals. In that report he says he "is not an expert, but is in a position to get for you expert advice." Can't the farmer get expert advice without paying for second-hand stuff? He "is not a boss," he says. Please tell us farmers what he is if he is not an expert or a boss. He says further that he is an "investigator." If so, he ought to pay the farmers instead of their paying him, for he says he "learns new things and gets new ideas from nearly every farm which he visits" and he carries them to other farmers in the community.

He admits there are successful farmers in every community, but what bothers me is, why can't his "closest neighbors'," who live there year in and year out, find out these things more readily than some fellow who charges the "closest neighbors" and makes both the farmer that furnishes, as well as the one that receives the information, pay him.

Mr. Editor, Mr. Culver tells the truth, which, summed up, is simply that this is a scheme by which the farmer is filched. It is only one of the many and ought to be nipped now. If these fellows could only make it rain in Nebraska every two weeks and control the seasons so that what the farmer plants would grow, I am here to say Old Hayseeds would open up his bulging purse strings understandingly, but to hire a man who admits that all the knowledge he possesses he picks up from one farmer and hands on to the others, charging both for it, seems to me to be setting the farmer down as a nincompoop.

Note—The farm demonstrator is not forced on the farmers. Unless they hire him themselves, they do not get him. If the majority don't want a farm demonstrator in your neighborhood, all that is necessary is not to ask for him. However, there are more and more progressive farmers who are seeing the advantage of having a trained investigator to help them in the study of their problems who has time to go from one farm to the other in the locality, watching the development of various experiments and reporting results. Have you time to go to the farms of your various neighbors every few days in the busy seasons and watch and investigate for several hours at frequent intervals? Most farmers have not. This is a question for the men living in the localities to settle. If they do not want the demonstrator they do not need to have him.

Calves and Potatoes

A Reader, Nebraska: Would you let a calf run to a stack of alfalfa or millet hay and eat all it wanted? About how deep should potatoes be planted, and how far apart? To what age should a cow be kept? Some people say not over 7 years old.

Answer—It will not hurt a calf to eat all the alfalfa hay it wants. Many successful stockmen and dairymen allow the calves free access to alfalfa hay at all times. Would not advise feeding young calves or colts millet hay at any time.

On sandy loam soils potato seed may be planted three or four inches deep; with other soils, two or three inches deep—three feet apart, under ordinary conditions, but a little farther if irrigated.

Keep a cow as long as she is a paying proposition, no matter what her age. Good breeders and good milkers are too scarce to be sacrificed. As long as a cow gives enough milk to pay for her keep and a profit, or raises good calves, she should be retained.

Advice from the Hired Man

C. D., Iowa: I nave been reading in one of your papers about the hired help question. Well, I never went to any agricultural college, but I have worked out ever since I was big enough, and for all kinds of people. It seems to me that some people forget that a hired man is human. They think more of their horses than they do of him. They send him out stormy, bad days to split wood or fir fence, while the boss has to go over to one of the neighbors to see him a little while or help his wife do something in the house. The truth of the matter is, he hunts up some fire and bakes his shins and cusses the hired man and forgets he ever was a young man or that he wanted to spend a Sunday afternoon or evening with his best girl or with his young companions, but just keeps on growling after the man has done six days' work and gotten up Sunday morning and done odd jobs until he misses Sunday school and church services, and after dinner he hunts up something that ought to have been done last week and says it has to be done today. Now, right there is where I balk.

The hired man never gets tired. He can work for twenty years and then if he wants a few days off to rest or visit he is lazy and "left me right when I needed him most." Years ago, when a man worked for $18 or $20 a month, everything cost about half as much as it does now; and the only place where the hired man is equal with the boss is that the boss can't take one "red" into the world to come and the hired man, even if he worked all his life, won't have one to take.

But I will quit quarreling and try to give a little advice. If you want to get out of a hired man what is in him, don't treat him worse than your dog the first week he is with you. Don't lay off three days' work for him to do in one, for that will discourage him. Don't start raving because he doesn't do things the way you want them done, but tell him how you want them done and talk to him as if he were a little more human than a mule. And last, but not least, don't talk to your neighbors about him, for they will see how quickly they can tell him what you have said, and no boss and hired man can get along when they are feeling sore at each other.

What farmers need, if they want to keep their hired men, is to remove those $20 gold pieces from in front of their eyes so they can see something besides dollars. I don't mean to say all hired men are what they ought to be, but some farmers couldn't keep the best hired man alive.

Note—This is good advice. When a young man comes to live on a farm and help with the work it would be far better for all concerned if the farmer and his family were to consider him not only in the light of a human being, but as in some sense a responsibility. If the farmer objects to his going to town and carousing so that he is no good on Monday, he might try to make life so pleasant or him on the farm that he would not seize the first opportunity to get away and "break loose." By doing this it would be more often possible to get a good class of young men for farm hands.

Wintering Stock

A. R. W., Nebraska: I notice a short article in the March 7 copy of the Farmer. The idea or sentiment is so adverse to mine—backed by some experience—that I am in doubt whether I ought to express myself through the columns of the Farmer. I realize that I am just a common farmer in Holt county, Nebraska, making objections to an article written by someone who no doubt has had more experience than I

and made a success of farming. I have had it in mind for some time to give my experience and ideas about feeding stock on parts of a field or fields that is light or quite sandy soil. It happens quite often here that pasture is short about October 1, and those having no winter pasture feed their stock hay or other roughage. Quite often we cannot use the stalk fields, owing to poison or stalk disease. The results are, under these conditions we have to feed in the yard, unless the fields are so we can feed on the stubble. This has been an open winter, with but very few days, or even nights, but what the stock could be fed in the field. It saves labor, and the stock needs the exercise. Our experience has been that when our fields are divided we may use them for feed lots when necessary, the weather being favorable. I am inclined to think that if we arrange our fields with that object in view our stock would do better on less feed.

Editor's Note—We are unable to decide just which article it is to which the writer takes exception. We advised not feeding stock on a wind-swept point where they would be unduly chilled, but in a sheltered spot. This did not necessarily mean within a building, but in spots where the land lay in such a way as to break the force of winter and spring cold winds. We also advised editorily that cattle be not allowed to lose heavily in flesh during the winter months, as it costs more to put the flesh back on in the spring than it does to feed the animals some during the winter. We do not see that either of these articles are criticisms of A. R. W.'s methods and would be glad to have him write us further. We believe that he will find we do not disagree as much as he thinks if we reach a better understanding.

State Cream Inspectors

O. B., Nebraska—I have been interested in the talk about cream buying and selling from the different standpoints. I am a producer of cream, and of all vexing things one meets with on a farm one of the most trying is to dispose of the cream to good advantage. Many times I have been tempted to dispose of my cows and go out of the business, as a number of my acquaintances have done for the same reasons—namely, failure to get an honest test and weight of cream. We have a law against under or over reading of the test and against dishonesty in any way in handling cream, but it seems not to be operative to any great extent.

Now, I could take a column of this paper, if not several of them, in relating incidents connected with selling cream, both amusing and instructive, of the methods used by both buyer and seller to cheat and deceive. Many would say, "That is just the experience I have had." But what is the use? All this talk gets nowhere except to add to the agitation.

I have long been thinking of a law which, if enacted and properly enforced, would bring both peace and justice to both buyers and sellers of cream. It is this, in the rough: Let the state put a thoroughly competent person in each town where a creamery is located, equipped with every convenience for sampling and testing cream and grading the same; then everyone who had a five or eight-gallon can of cream to sell to the creamery could ship it to the state inspector, have it graded, tested and weighed, and the grade, test and weight put on the can, with the inspector's seal.

In this way the creamery could contract with anyone for cream and know exactly what grade and how much they are getting, and the seller would have nothing to think about except to produce more and better cream, being fully assured that he would be paid for every ounce of butter-fat that belonged to him. The inspiration to produce first-grade cream would be irresistible and soon none other would be produced. Now, would not this be a wise thing to do?

I am aware this would not provide for the small producer of, say, one or three gallons of cream at a time. But in such cases oftentimes two or three neighbors could have their milk separated by one separator and an account of the weight of each one's cream kept and all put into one can of eight or ten gallons and shipped.

The appointment of inspectors should be made by civil service examination, and good moral character should be shown. The pay of the inspector could be provided for by a fee for testing each can of cream sold, to be paid by either buyer or seller, as might be arranged.

This would do away with the multitude of cream stations in every town and would bring peace to the trade. The state would be at no expense and would lay no burden on anyone. Milk and its products are as universally used as meat. We have state inspectors of meat at the packing houses; why not state inspectors of milk and cream at the creameries?

Who Would Pay Single Tax?

S. T. S., Iowa: I have just been reading Mr. J. H.'s letter on the single tax, and it appears that he is a renter. It also appears that he has been reading both for and against single tax, for he advances arguments both for and against it. In the first place, he says taxes under the single tax system would not be greatly increased, but he winds up by saying it would encourage small holdings. Instead of paying tribute to the land owners they would be paying taxes to the government.

Now, J. H., do you know that the renter of today is making more money, considering his investment and the amount of work he does, than the land owners? Do you know that the only way you can reduce land values is to put such an enormous tax on the land that it would consume the entire income from the land? That if the tax was only doubled or trebled, the renter would have to pay most of it? So, in case the taxes on land were raised, the renters would have to suffer with the landlords.

Do you know that all that has been said in favor of single tax is supposition? There is no proof of anything. Do you know that nearly every millionaire corporation in existence is in favor of single tax Why? Because they want their large holdings in personal property to go free of taxes and let the farmers pay it all. Do you know that if you reduced the value of land enough to discourage land owners and cause them to let go their land would not bring them anything? Would you call that just? This is what would follow if the single tax scheme were to become a law.

Would you be any better off if you paid half of what you make as taxes

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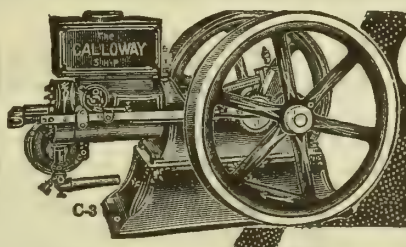

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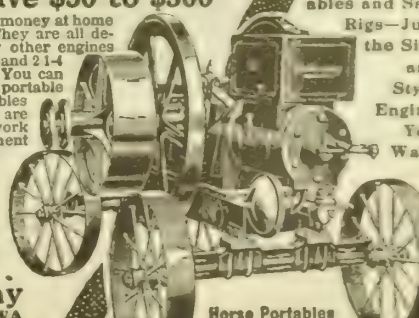

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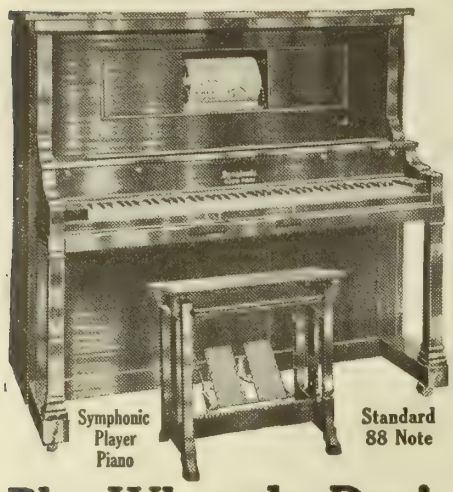

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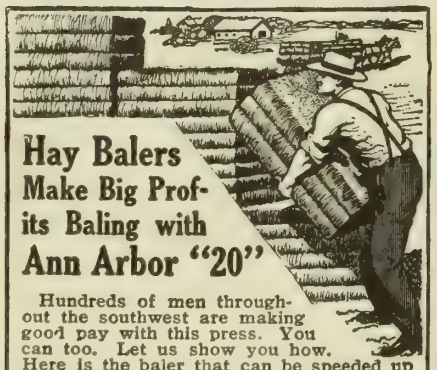

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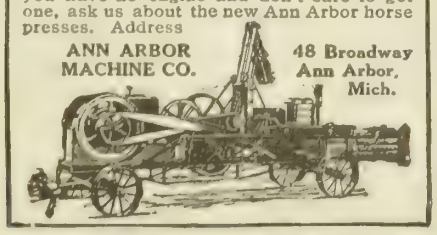

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than if you pay one-third of it as rent? Do you know of any good reason why large personal holdings that are making for their owners immense fortunes should not be taxed? Do you know of any reason why any man who is making good money in any vocation should not help contribute to the support of the government under which he lives, or to the free schools which he enjoys?

I want to say to you that the supporters and agitators of the single tax scheme are not looking after your or my interests, but after their own interests, and to have their personal holdings exempt from taxes and let the land owners pay it. That is as plain as the nose on your face.

Note—Is it because tenants are making more money than the owners of land that the number of tenants are increasing each year? It is the general opinion that the more thrifty and prosperous tenants would become land owners if they could get the land. It is interesting to the editor to receive letters from those who have opinions on these live questions. People reach conclusions through their own experiences and their relation to the subject under discussion.

Barley and Spring Wheat Smut

W. S., Wyoming: Will you kindly advise me, through your paper, the best way to dip barley and spring wheat for smut, and how to prepare the solution?

Answer—Quoting from Bailey, we give you the following treatment for closed smut in barley, but it is not effective for open smut:

"Make a solution by pouring one pint of formaldehyde into twenty gallons of water, the solution to be placed in barrels or a trough. Sacks of barley should be submerged in the solution ten minutes, then emptied on a threshing floor or platform to dry. After the treatment, if the seed barley is covered for about two hours with oilcloth or blankets so that the fumes of the formaldehyde can act on the spores, the treatment will be much more effective.

"Extensive experiments have been made at the Wisconsin station with the hot water treatment of seed for smut. The hot water treatment was found thoroughly effective against both kinds of smut, and it is a very simple operation. The grain is placed in gunnysacks and submerged for twelve hours in cold water to soften the hull and berry. It is then removed and allowed to drain for an hour. The sacks are then submerged in hot water at a constant temperature of 130 degrees Fahrenheit for a period of not over six minutes. Provisions must be made to add hot water to keep the temperature constant, as it will otherwise be lowered when the grain is put in. It is well to put the grain in another tank of hot water that has a temperature a little below 130 degrees in order to heat the grain before putting it in the tank with the constant temperature. The seed should be sown the same day or the day following, as it will sprout."

There are two forms of smut that attack wheat. For the loose smut no satisfactory treatment has been found. For the stinking smut use a solution of one pound of formalin to five gallons of water. Sprinkle the wheat, covering afterward with canvas or other cloth soaked in the solution; or sacks of the grain may be immersed in the solution for thirty minutes.

Free Your Swine from Lice

By Corn-Belt Farmer

LIKE the politician, the hog has numerous local enemies. The most important of those the hog encounters are parasites. Among these parasites, and the most common, is the hog louse. The hog louse is a dirty, dark iron color on the back, gray and yellowish on the belly, and has long legs. They are usually and almost wholly the result of filthy pens and unsanitary feeding and watering places. When they are once introduced into a herd, steps should be taken immediately to eradicate them or there will be an end to the proper development of the herd, if not the death of many pigs.

The hog louse multiplies very rapidly. They usually make their first appearance on the inside of the ear, next around the ear and on the neck, and finally all over the body. There need be no doubt in your mind as to whether or not your hogs have lice, as they can be seen with the naked eye crawling along the back and up and down the sides of the animal. They can be found in large numbers in the wrinkles and folds of the flesh between the thighs and hind legs and back of the front legs.

These pests may be got rid of if one will attend to the matter and do the work thoroughly. This should be done, as no pig can make a hog of himself when bothered with lice. The chances of a herd in a battle against cholera are lessened more than 50 per cent if infected and weakened by lice. Many a hog raiser has lost some of his best sows or entire litters of pigs from this cause from worms or cholera that he thought they had only in a light form. Truly, it can be said that the louse is one of the hog raiser's worst enemies.

A cure that I have successfully used for treating hogs bought from neighbors for breeding purposes and found to be infected with lice, is 2 ounces of Stavesacre seeds boiled in about two quarts of water, then allowed to simmer for several hours. Take off and allow to cool, adding water enough to make about two or three quarts of the mixture. One application of this will usually kill lice and nits, but it is a long and tedious job and is not practical where there are many hogs to be treated.

There are dips on the market today that are being used very successfully by some of our best breeders. These, along with crude petroleums and other crude oil preparations, rank highest among the practical cures used by large breeders, because of their being less expensive and taking less time to apply. As a breeder, I like the patent hog oilers, many of which are on the market today. These use crude oil in some form or other and are accessible to the hogs in all kinds of weather and at all seasons of the year. They not only eradicate the lice and nits, but are of great benefit to the hair and skin of the animal. They also remove scurvy and excretions of the skin. The hogs thus treated disinfect the whole premises, keeping them clean and sanitary.

But whatever the method used, the main thing is to get rid of the lice, as these parasites weaken the hogs, lowering their power of resistance to cholera and are thus a menace to all the hogs of a neighborhood.

The windmill is one of the most neglected pieces of machinery we have on the farm. It's a good deal of trouble to climb the tower to oil the thing and we generally neglect it until we hear the mill gently "cussing" us for the neglect. Make it a point to oil the mill regularly. It means dollars in your pocket.

O. H. C. Best Hog Oiler

THE POST THAT USES CRUDE OIL

Automatic in action, perfect in results, economical. Cannot get out of order. Requires no attention, except to fill when empty. Will not clog up when used by muddy hogs. **The Only Post With Five Rubbing Parts** for the hogs to oil themselves on.

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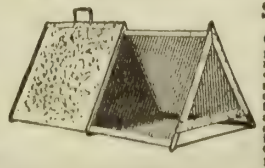

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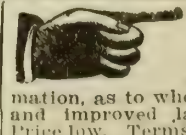

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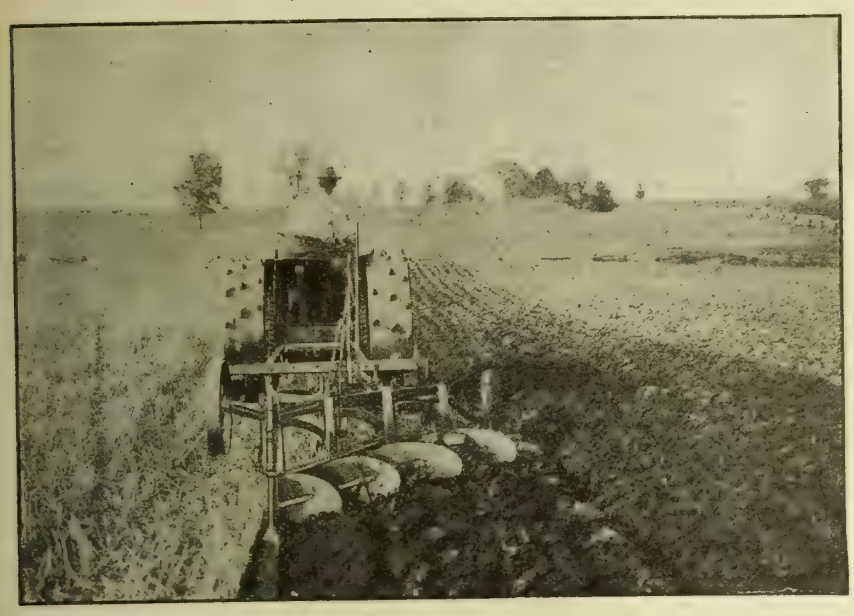
We can save you money, if you see us first. Absolutely, reliable information, as to where the best of wild land and improved lands can be procured. Price low. Terms easy. We pay purchaser's fare. Call or write before you buy your transportation. **WESTERN CANADA LANDS, Room 104 Hackney Bldg., ST. PAUL, MINNESOTA.**

Power Farming in Corn Belt



The time is rapidly approaching when farming with a tractor will be a common sight throughout the corn belt. With plenty of proof that from $1 to $1.25 an acre in plowing alone may be saved with a tractor, not to mention the better work done, how long can we afford to continue the use of horse or mule power? If farming is to meet with the greatest possible success, then, just as in every other business, operating costs must be reduced to the minimum, and the use of the tractor is one way to help solve the problem.

Tuberculous Cattle as Breeders

IN VIEW of the enormous practical difficulties in the way of complete eradication of tuberculosis in cattle by the wholesale slaughter of all animals known to be infected with tuberculosis, schemes for utilizing the latter have been devised. The most prominent of these is the system whereby tuberculous cows are isolated and used for breeding purposes, the calves being removed from the mothers at the earliest moment and brought up without further exposure to the disease. This has been rendered possible by the finding that such young are regularly born in perfect health, and entirely free from tuberculosis. The affected breeding cattle in this way do not become an entire economic loss. A ten-year investigation, carefully verified and supervised by government officials, has just been reported by Brooks in connection with what is probably one of the most valuable herds of Holstein-Friesian cattle in the world.

The object was to produce a herd of Holstein cattle free from tuberculous taint and yet endowed with all the most valuable strain characteristics possessed by this breed. Animals were selected because of their desirability, entirely independent of the presence or absence of tuberculosis. The tuberculous animals greatly outnumbered the nontuberculous. Three hundred tuberculous animals were studied. The existence of tuberculosis was determined by the administration of treble the official dose of tuberculin, repeated in non-reacting animals three times at intervals of six months. All animals reacting to either test were removed at once to the tuberculous farm so that there was no possibility of the transmission of infection from the tuberculous group to the healthy one. At birth the calves are immediately taken from the mother. Feedings are on pasteurized milk collected indiscriminately from sound and tuberculous animals.

Of more than 200 calves born of the tuberculous herd, not one has become tuberculous, although all have been tested three times by massive doses of tuberculin. These animals are rather more resistant to tuberculosis than animals born of nontuberculous parents. No falling off in type, in milk production or fertility is present in these calves, no increase in death rate exists among them as compared with the offspring of healthy cattle, no falling off in value takes place, and several of the most valuable cows and bulls in the world are of this ancestry. These facts, says the Journal of the American Medical Association, remain constant even where at least three generations of known tuberculous parentage exist.

The use of all the stable manure and a crop rotation, including grasses and legumes are needed to keep up the fertility of American farms. Where all the plant food produced on the farms is saved and returned to the soil, there are no abandoned farm communities, with deserted schools and neglected churches.

Missouri Heard from Again

Missouri in 1913 produced 7,087,500 pounds of wool, valued at $1,417,500.

How the Lawter Tractor Does the work of 12 Horses

You can plow an acre an hour with the new Lawter "One man" tractor—ten acres in a ten hour day, the work of six good teams. Figuring the average cost of a team, you save over a dollar an acre in every acre you plow with a Lawter.

Furthermore the Lawter is the Only Tractor that Plows the Corners.

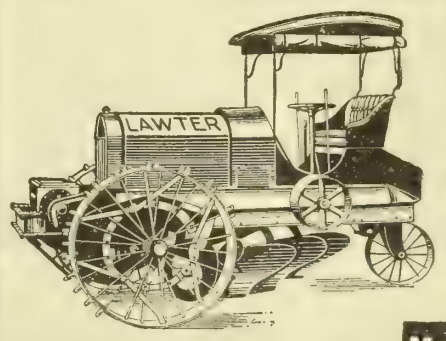
You can plow into every corner of your fields with the Lawter. You can plow a garden as economically as a large field. The new double transmission of the Lawter gives it this great advantage over any other tractor or team.

Field Plowed with a Lawter — Note the Land Saved in Fence Corners

Field Plowed with any other Tractor. You lose one eighth of an acre in every corner

Plows Deep into the Rich Subsoil.

You can plow deeper with a Lawter than with a team. You get below the upper crust and give your crops the moisture that makes the crop. Even your horses will compress the soil as much as the Lawter. It is moderate in weight and perfectly balanced. The plows are so scientifically hung that



You Save 15 per cent More Fuel.

You operate the machine from your seat as you ride. One tractor wheel takes the old furrow. The caster wheel takes the new furrow. The bed mechanically levels itself—making it a perfect tractor for work on rolling as well as level land. You can use it for the roughest kind of work year in and year out.

In Only 200 Working Days Your Saving Over Horse Power Will Pay for a Lawter.

This is exclusive of the big saving the Lawter makes in belt work of every description. In belt work the Lawter has no rival. It has no vibration.

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You can't spend a penny for the Lawter tractor unless it is exactly what you need in your work. Its advantages are so many that you can't fairly estimate them from this small ad. Send at once for complete details of our proposition. We will show you the biggest money saving proposition you ever received. The coupon brings everything. Mail it to us today.

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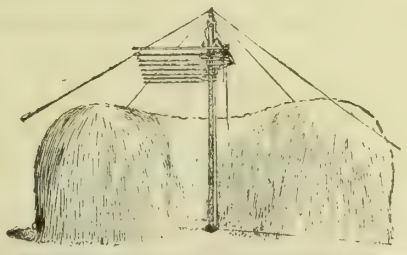
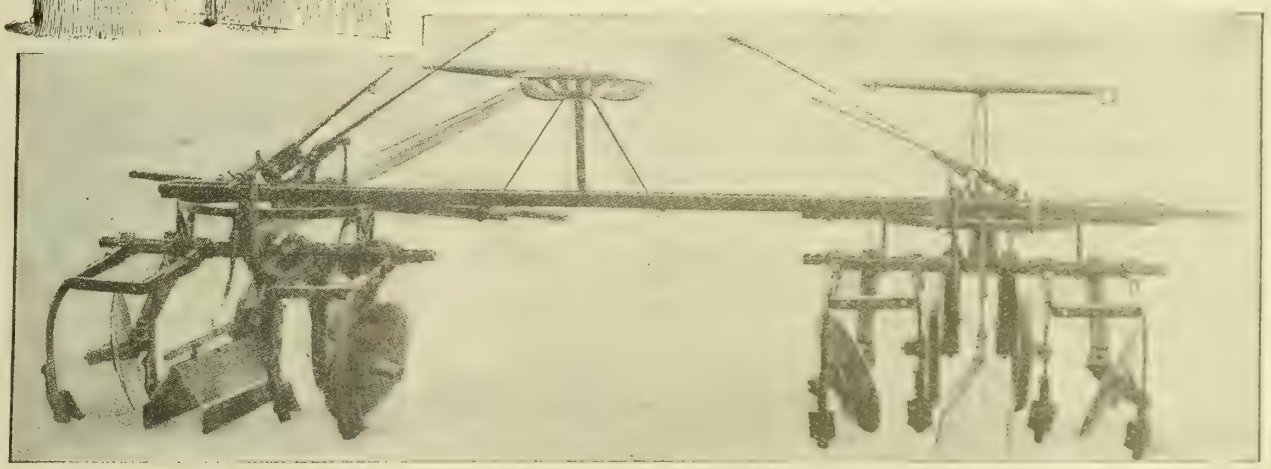


WITH the O. I. C. Flag Mast Hay Stacker you can build circle stacks, long stacks, high stacks. You can build them so they will shed the rain because the Stacker delivers the hay to the middle of the stack; reduces the work of stacking, increases the capacity, reduces the work when pressing, is easily moved, is light and durable. If properly taken care of will last for years. Get the catalog and prices today.



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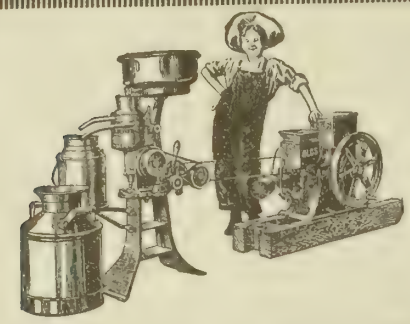

More Cream

The highest percentage of cream possible is what you get from a

Rumely Cream Separator

It has larger capacity than most other separators of same size—starts from any position without jar and skims to 3/100 of 1% or better. Run your separator with a

Rumely-Olds Gasoline Engine

1½ horse power to 65 horse power

Even-running, well-balanced—runs smoothly under any load. It adjusts automatically to changes in load. Start the Olds and it will run itself.

The Olds was the pioneer gasoline engine, and its merit is shown in its successful use by thousands of prosperous farmers.

The Rumely-Olds engine will pay for itself in a hundred ways—pumping, spraying, sawing, feed-cutting—you will find a new job for it every day.

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Great Public Auction

INDIANA'S FAMOUS HERD OF

Holstein Friesian Cattle

Indianapolis, Ind., April 13, 1914

40 Head Very Best Young Grade Cows. 75 Registered Cows and Heifers. 40 Head with A. R. O. Records.

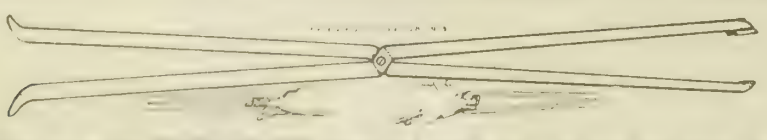
Cows with records up to 30.648 butter, 677.3 milk in 7 days. 57.818 butter and 1,400 milk in 30 days. Heifers with records of 15 to 20 lbs. of butter and over in 7 days. Daughters of Sir Pontiac Korndyke, grand-daughters of King of the Pontiacs, Pontiac Korndyke and King Walker. Cows in calf to a son of King Walker and Count of the Pontiacs.

The sale will be held at

ZELDEN RUST FARM

3 miles S. E. of Indianapolis Court House. Shelbyville Interurban cars come within ¼ mile of farm All cattle over 6 months will be tuberculin tested by State Veterianarian and none affected will be offered. Catalogue gives full particulars and terms of sale. Send for copy today, mentioning Twentieth Century Farmer.

C. M. BOTTEMA, R-1, Indianapolis, Indiana



Why not use the FORTIN FORCEPS instead of a rusty wire? The main hold under the jaw and over the nose, or legs, don't interfere with passage. No danger of hurting sow or pig. Made of malleable iron, tin plated. Satisfaction absolutely guaranteed. PRICE $1.50.

TO WHOM IT MAY CONCERN:—This is to testify that I have thoroughly tested the Fortin Pig Forceps and find them far superior to any I have ever seen. H. C. GALE, D. V. S.

Address all communications to FORTIN & L'ECUYER, CLYDE, KANSAS.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Review of Live Stock Market

By A. C. Davenport

THE cattle trade was in the dumps last week, the unsatisfactory conditions of the previous week having continued in full force. Cattle values had been bobbing up and down, and when the market two weeks ago began slipping back it was looked upon only as a natural reaction that would likely be made good the following week. When the following week brought no relief, but on the contrary a still further downward movement in prices, the trade began to sit up and take notice. It suddenly dawned upon operators on the market that something more than the ordinary fluctuations of trade must be at the bottom of a movement that had caused a break of 25@50c per 100 pounds on beef steers in less than two weeks, and at a time when receipts were by no means large enough to be considered burdensome.

The packers have been placing the blame for every break in prices on Argentina beef, but their talk along that line has been given little credence by the trade, most operators believing that supplies of beef cattle in the country are so small that the removal of the tariff on beef would not have any appreciable effect. Most cattle men have not only believed in this, but have talked it to such a large extent that the country has become more or less indifferent as to the tariff on live stock and meat products, being disposed to lay the responsibility of price fluctuations to the natural up and down movement due to temporary scarcity or over supply of stock on the selling markets. Last week's developments, however, caused considerable doubt in the minds of many stock men as to whether they are entirely right in their conclusions regarding the tariff. The press dispatches had reported larger receipts of Argentina beef than ever before, the total for last week being almost 30,000 quarters. This being more than New York City could readily absorb, considerable quantities of it were shipped to Philadelphia and Pittsburgh, and many smaller eastern cities. Two carloads of Argentina beef were actually shipped to Chicago. Packers used these facts to pound the market on fat cattle, and the trade throughout the week just closed was about the dullest and most unsatisfactory experienced in a long time. Prices at the close, as noted above, were around 25@50c lower than the high time two weeks ago.

With conditions such as this prevailing in the trade at all the big market centers of the country it will be readily understood that the announcement from the department of agriculture regarding the importation of beef did not tend to relieve the feelings of stock men. While the monthly receipts of Argentina beef amount to only about 9,000,000 pounds, which of itself is not a sufficient quantity to have any great influence on the total supply of the country, the announcement of the agricultural department that of the nine big meat concerns in Argentina five are under the control of American packers, started a serious train of thought in the minds of many operators on the market. They are asking themselves and each other what the outcome of it all will be. Have the packers planned on using Argentina beef importations simply to depress the market on live cattle, and if so where will it end? Stockmen, however, are no alarmists and the majority of them still prefer to believe that the tariff will not prove harmful to their interests, but the events of the last two weeks have given rise o some serious thoughts along that line.

Every cloud has a silver lining, and while the cattle market for the two weeks has been a disappointment to the sellers it might be well to keep in mind that the price on all kinds of cattle is still very high for this season of the year. What the future will bring forth no one can say, but the great majority of cattle men were bulls, and were generally looking for higher prices for fat cattle before the coming of summer. While events of the last two weeks may have shaken the faith of some, there is still a feeling that barring outside and unnatural influences, the market ought to work higher in the course of the next month or two. But the immediate future of the market does not look especially promising unless receipts of cattle should prove very light.

Hogs See-Sawing Back and Forth

Hogs have see-sawed back and forth without getting anywhere, the market continuing about the same as during the previous week. Receipts have been quite liberal, taking the country as a whole, although the six big markets are about 250,000 head behind in receipts since January 1 as compared with a year ago. The trade as a whole seems to be in a pretty healthy condition and is generally satisfactory to the selling interests. That the market should continue as strong as it has with receipts not showing as much decrease as had been anticipated is taken as a good indication of strength in the trade.

Sheep Still Coming Forward

Sheep have been coming forward very freely during recent weeks the same as they have throughout the whole season, but in spite of the fact that they are running considerably larger than a year ago the market has been able to take good care of the arrivals. The trade, in fact, has been in a good healthy condition. Prices fluctuate a little from week to week, but the general market still continues about where it was a month or more ago. While big inroads have been made upon the supply of both sheep and lambs on feed in the country it is pretty generally agreed that there are still a good many to come and that there is not likely to be any shortage during the present season. Some operators on the market are looking for a little improvement later on, but thus far receipts have proven large enough to prevent any permanent price gain being made. While current prices are not so high as many would like to see, they are fully as high as anyone could reasonably expect under prevailing conditions.

Spring Management of Bees

The bees are at their lowest ebb when taken out of the cellar in the spring. There are only old, worn-out bees from the preceding fall in the hive, greatly decreased in numbers by winter losses. The old bees will die in about five weeks so the queen now begins to lay eggs in the wax cells which the bees feed and keep at a temperature of about 98 degrees. To provide food for the growing swarm the bees begin to forage the surrounding country for honey and pollen. To keep the brood warm they cover it with their bodies and wings. If there is no pollen or honey in the hive, or if the brood gets chilled, the larvae or young bees will die, and their white bodies will be found in front of the hive in large numbers some morning.

A good bee keeper will not allow this waste of life. He will feed his bees sugar syrup if there is no honey in the hive or put some scented rye flour in the sunny place near by to take the place of the pollen if no natural pollen can be had. It is especially important to keep the hive warm by covering it with tar paper, sacks, or blankets, and closing part of the entrance, and to see that there are no cracks or openings left in the hive through which the wind may blow. Such management lays the foundation for a large crop of honey.—University Farm, St. Paul.

Up with the Angels Now

Unfortunately, the name of the writer of this classic has been lost:

Mule in the barnyard,
Lazy and sleek;
Boy with a pin on the end of a stick
Creeps up behind him, quiet as a mouse—
Crepe on the door of the little boy's house.

Holsteins at Auction

C. M. Bottema, proprietor of Zelden Rust farm, near Indianapolis, Ind., will sell seventy-five registered Holsteins and forty head of choice young grade cows April 13, 1914. Thirty-three have A. R. O. records running as high as 30.648 butter and 677.9 milk in seven days; 57.818 butter and 1,400 milk in fourteen days. The catalogue gives full information and will be mailed free to those who write, mentioning the Twentieth Century Farmer.

Railroad Stock and Live Stock

"ALL Holsteins," said the farmer, indicating a large number of heads extended through stall stanchions. "Some like the softer breeds, but these give the most milk. We raise 85 per cent of all they eat, right here on the farm."

There was a moment's silence. The naturalist was examining an alfalfa stalk. The air was growing so warm that I was glad that I had given away my overcoat.

"Interested in cows yourself?" asked the farmer.

"Who, me?"

"Yes."

"No. I'm interested in railroad stock."

"That reminds me," said the farmer. "Five years ago I inherited one share of New Haven stock and one of B. & M. They were worth together just $421, and they earned me only $15 a year income in dividends. That didn't look right—not to a farmer. So I sold them and put the money into cows."

'Into cows!"

"Yes. Fact is, I had raised hogs, but never kept many cows, and my fertilizer bills were getting pretty large. Cows, good cows, were selling in Brighton five years ago for $45. I made a good buy of a lot of ten for $421. I've raised quite a lot of young stock since then, and have some of it now. In fact, I sold two young head in Brighton last week for $100 apiece."

"Hold on a minute," I gasped. "Your two shares of railroad stock, if you had kept them, would have brought $108 this week, and earned no dividends. Do you mean to say that you sold two shares of cow stock for $200, and still have your original investment?"

"Sure. I have fourteen cows at the present time, and averaging the price at $80 apiece, they are worth $1,120 this minute, with the market slowly but steadily rising. The best thing a man could have bought, even three years ago, was a cow, to hold for a rise in the market."

"And you've had dividends all the time?"

"Well, I wouldn't keep a cow that didn't pay."

"And no one has watered the stock on you?"

"What do you mean? The hired man waters the stock."

"I mean no one has passed off a paper cow on you for the price of a real one?"

"I guess you don't live in this part of the country," he remarked.—Courier Citizen, Lowell, Mass.

Early Oats Most Profitable

Before buying his seed oats this spring it will be well for the farmer to consider the fact that the Nebraska College of Agriculture has found, after conducting many experiments, that the early varieties yield an average of fourteen bushels an acre more than the late varieties. The kinds used by the college have been rather small-grained and dark in color. Eight pecks of seed to the acre has given the best results with drilled oats and ten pecks to the acre when the oats are sown broadcast. Harrowing of drilled oats has given an increased yield of 4.8 bushels an acre, while harrowing of broadcast oats has given a decreased yield. Additional data may be obtained regarding the variety test of oats by sending for bulletin No. 113 of the bulletin department, University Farm, Lincoln.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Friesland Farm Holsteins

Those of our readers who are in the market for a Holstein bull or a few choice females will do well to get in touch with Dr. B. B. Davis, room 200, Bee building, Omaha, Neb.; proprietor of Friesland Farm Holsteins. Dr. Davis has one of the very best herds of Holstein cattle in the west. Every animal in this herd must come up to a required standard or it is eliminated. Dr. Davis has spared neither time nor money in the securing of the very best breeding animals obtainable. Every animal he offers for sale is backed up by a line of ancestry representing the best families of the breed. He has one of the best equipped modern dairy farms in the country, and it is possible for the purchaser to visit this farm and see for himself what he is buying and also what there is behind the animals he purchases from this herd. Write Dr. Davis for further information, mentioning the Twentieth Century Farmer.

Wolf Bros.' Stallions

The well known importers and breeders of Percheron and Belgian stallions, Wolf Bros., at Albion, Neb., certainly have a grand lot of stallions that they are offering for sale at this time. This is one of the largest and best known farms in the west and the class of horses they are offering is beyond question. They are the big, drafty kind, with plenty of bone and quality and are guaranteed to be just as represented. They also have some especially desirable imported and American bred Percheron and Belgian mares, in matched teams. It is certainly worth the while of any prospective purchaser to see what they have for sale before buying elsewhere. They are nicely located adjoining the town of Albion, and will be pleased to have you call and inspect their horses.

Farm-Grown Percherons

Fred Chandler of Chariton, Ia., is offering some splendid bargains in American bred Percheron stallions from the very best ancestry on both sides, and they are the big, rugged kind, with bone and substance enough to suit the most exacting buyer. These stallions are farm raised and are being offered at farmers' prices. Better get in touch with him if you are in the market for a stallion. Kindly mention the Twentieth Century Farmer when writing.

Percheron Stallions

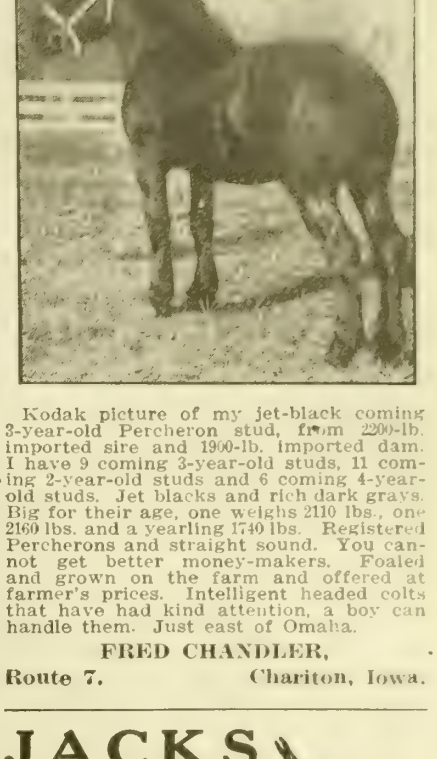
George W. Schwab of Clay Center, Neb., is offering some extra choice Percheron stallions for sale at this time. These stallions are all of Mr. Schwab's own raising and are big, strong, heavy boned fellows, weighing from 1,700 to 2,100 pounds They are thoroughly acclimated, have been grown in the right way and will go out and make good as breeders. Not only is this true, but he is pricing them worth the money. Write him for further particulars, mentioning this paper.

Sale Dates

Hereford Cattle

April 14 and 15—Breeders' Combination sale at South Omaha, W. N. Rogers, McCook, Neb., manager.

HORSES AND MULES



Kodak picture of my jet-black coming 3-year-old Percheron stud, from 2200-lb. imported sire and 1900-lb. imported dam. I have 9 coming 3-year-old studs, 11 coming 2-year-old studs and 6 coming 4-year-old studs. Jet blacks and rich dark grays. Big for their age, one weighs 2110 lbs., one 2160 lbs. and a yearling 1740 lbs. Registered Percherons and straight sound. You cannot get better money-makers. Foaled and grown on the farm and offered at farmer's prices. Intelligent headed colts that have had kind attention, a boy can handle them. Just east of Omaha.

FRED CHANDLER,
Route 7. Chariton, Iowa.

LEARN TO BE AN AUCTIONEER
Nat'l Auctioneering School of America, Box 34, Lincoln Neb.

HORSES AND MULES

50 Mammoth Jacks and Jennets

A lifetime experience in breeding the large, thick, big-boned, good head and eared kind that produce the good Missouri mule. Two extra good Black Percheron 4-year-old Stallions.
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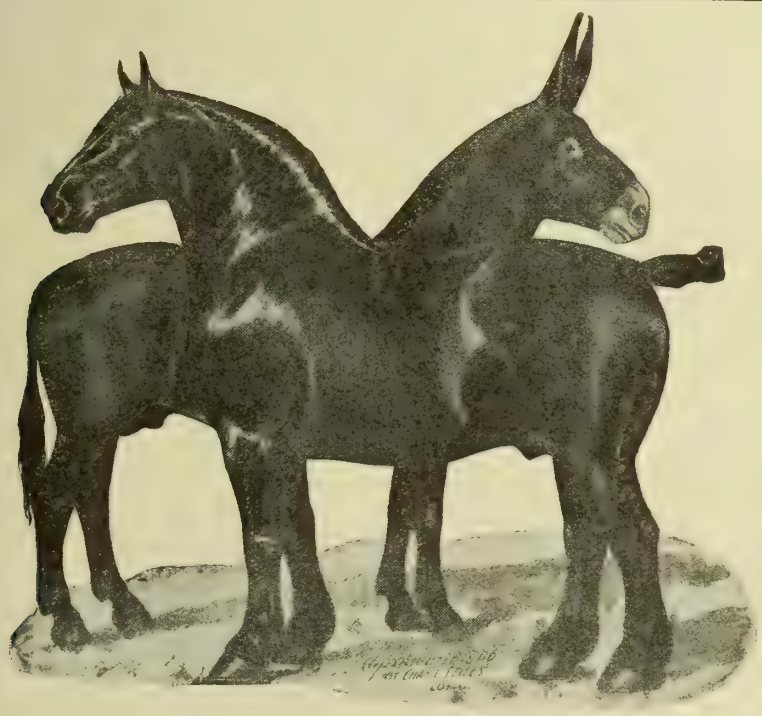

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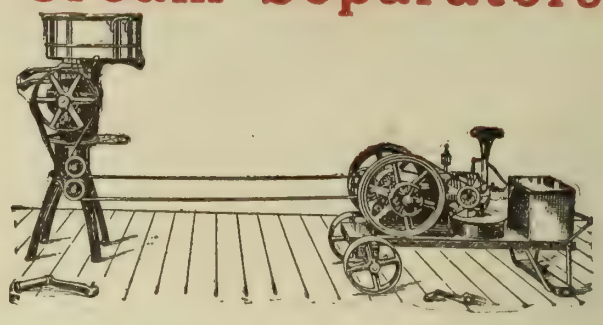

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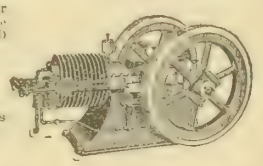

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The Heart of the Farm---the Home

WHILE the women on the farm are, or should be, interested in all things connected with the life of the farm, yet the house, the schools and that which is in a more intimate way connected with the welfare of the members of the family concern them more especially. The next issue of the Twentieth Century Farmer will be particularly a women's issue. We have an article on the farm house; its suitability to the needs of the people who live in it, and ways of building economically but satisfactorily. Mrs. Shepler writes on the needs and privileges of the country women, and we will have a number of other matters of particular importance to the farmer's better half.

The farmer himself will not, however, be entirely forgotten We will have for him an article on the care and feeding of weanling pigs, which is especially timely and entirely reliable, being written by a man who has had a quarter of a century of success in the business. Also, our Readers' Exchange, which is growing in popularity every day, will have an unusually large number of letters on various topics that are interesting the farmer at the present time.

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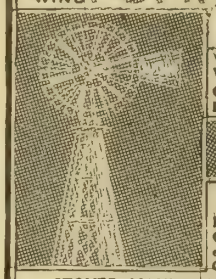

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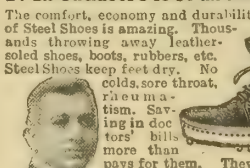

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THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Facts for Beginners in Alfalfa Culture

ALFALFA is fast becoming one of the most important forage crops in the corn belt. It has a high feeding value and is adapted for feeding more different farm animals than almost any other feed; also, while the plant above ground is developing into an extremely valuable animal food the roots, with the help of bacteria on them, are feeding the soil with a plant food, nitrogen, which costs 20 cents a pound on the market. Another feature of alfalfa growing which makes this crop a favorite wherever it is grown is that, pound for pound, it produce more beef, more milk, more mutton and more pork than any other hay plant known. Feeding experiments indicate that the cured hay is worth more than two-thirds as much as an equal weight of wheat bran. An acre of alfalfa produces about three times as much food as an acre of clover.

Inoculation Generally Recommended

Alfalfa never grows well unless the little bacteria which help it get nitrogen are present. The same bacteria which are on sweet clover roots will adapt themselves to alfalfa, so alfalfa will grow and do well on sweet clover sod, or 300 to 400 pounds of surface soil from a sweet clover field may be added to every acre sowed to alfalfa, or the same amount of soil may be taken from another alfalfa field where the bacteria are present. Another method in common use is to sprinkle the seed immediately before sowing with bacterial cultures. Several companies sell these cultures and they seem to give fairly satisfactory results, though the use of "inoculated" soil is more generally recommended. The bacteria needed are present on nearly all rich bottom lands and on most good uplands. Whenever they are present the alfalfa grows just as well without additional seed or soil inoculation. The presence of the bacteria will be indicated by the plants having a very dark green color and a vigorous stem and leaf growth. In inoculating with soil be sure that the soil is harrowed into the ground immediately, as sunlight kills the bacteria quickly.

Preparation of the Soil

For fall planting a seed bed plowed deep early in the summer and harrowed often until the seed is sowed is best. The harrowing keeps down the weeds, makes the ground fairly firm and insures the saving of most of the moisture. If the ground is plowed rather late, it may be necessary to roll it so the capillary connection with the subsoil will be restored immediately and the soil kept from becoming too dry and well aerated. Ten to fifteen loads of manure are usually recommended for spring plowed land. Very little manure should be used on land plowed just before planting. The best time to sow alfalfa in the Missouri valley is from August 15 to September 15. In some seasons it may be best to sow a little earlier, and spring sowings are quite often successful on very fertile soil, and are best for the dryer sections in western Kansas and Nebraska.

If the soil is slightly acid or poorly drained, it must be limed and drained thoroughly before alfalfa can be grown. In liming use 3,000 or 4,000 pounds an acre and be sure that it is well scattered. The subsoil of an alfalfa seed bed must not be tight, for alfalfa roots extend twelve or more feet into the ground.

Fifteen to twenty-five pounds of seed to the acre are sowed, either broadcasted and harrowed or drilled. If drilled, alfalfa should be planted about one inch deep, or somewhat less if planted in clay soil. When broadcasted and harrowed in, it does well when covered to a depth of one-fourth to one-half inch. The sowing of half the seed one way and cross-seeding the rest is preferred by some growers, because they believe that in this way a better stand is obtained.

When the first blooms appear, alfalfa is ready to cut. In Missouri and Iowa it is often hard to cure the hay properly. The first crop, if the weather is bad, may be used for silage or pastured by hogs. Subsequent crops may be saved if, after being partially cured, the hay is raked into windrows or put in small shocks. When cured in small shocks it should be protected from the weather with canvas covers and turned often to prevent molding. However, the leaves are particularly rich in plant food materials so any unnecessary handling which causes them to drop off is to be avoided. In the western states the hay is nearly always stacked on the same day it is cut. This can be done because the hay quickly cures in the drying winds occuring there during the summer months.

After the first year the alfalfa field should be cultivated regularly. Blue grass, crab grass and foxtail should never be allowed to start growth in alfalfa. They can be killed by careful cultivation with the harrow. Either the disk or the spring-toothed harrow is good. After the second and third crops cultivation will not only kill the weeds, but, if the season is dry as was last summer, will save moisture to help grow the next crop.

Importance of Mature Breeding Stock

THE importance of mature breeding stock cannot be emphasized too strongly in any line of breeding. It is not always economical from a feed point of view; as, for instance, with the swine, it seems extravagant and a waste of feed to keep the old sow for breeding purposes, or hold the young sow until she is fully developed before she is bred. The usual custom among many hog raisers is to breed undeveloped sows so they have their first litters before the age of maturity. They are then dried off, turned into the feed lot, and a new lot of brood sows are taken from the increase to fill their places for the next generation.

There is one principle in breeding that, if adhered to, would soon make great improvement on every farm and ranch where breeding stock is kept. It is the choosing of the best qualified animals for breeders and retaining them as long as they are profitable, or until better animals can be had to take their place. This disposition among stock raisers is weakening as time moves on, rather than gathering strength by the influence of better animals. The tendency nowadays is to produce baby beef and baby pork, to make the greatest amount of gain with the least expense of feed and time. The hurrying process is approved of at every step in feeding and growing the animal.

It is very seldom that a breeder has an inquiry for a mature boar, bull or ram. The common farmer or stock raiser wants a young animal, wants all his years of usefulness, wants him in his cheapest, undeveloped form, wants to breed him and get through with him before he really arrives at his best. Then, the prejudice against an animal that has been used in a flock or herd is usually so pronounced that he goes to the shipping trade as soon as through the first hands, sometimes by way of the feed yard, but often direct to sell for a canner—any way to get rid of him to make room for another immature young animal to be tested as a breeder. Thousands of excellent breeding animals are thus sacrificed every year before their real worth has been found out.

It is not every well-bred animal that is a good producer of his kind. The excellent breeding animals are scarce enough so that special effort should be exerted to save the really good ones and pass them around, while the less valuable fill the demand at the butcher's block. The saving of all the sows that prove prolific breeders, liberal milkers and attentive, careful mothers is a duty every hog raiser owes to himself and the swine industry. The sacrifice of all sows lacking these properties is a duty just as imperative. It is better for the hog raiser, better for the hog industry and better for the consumer of pork that a stronger, more vigorous and healthy type of hog be produced for the pork markets of the country. The same tendencies apply to all our domestic animals, both common and pure-bred.

Spring Show and Comparison of Stallions

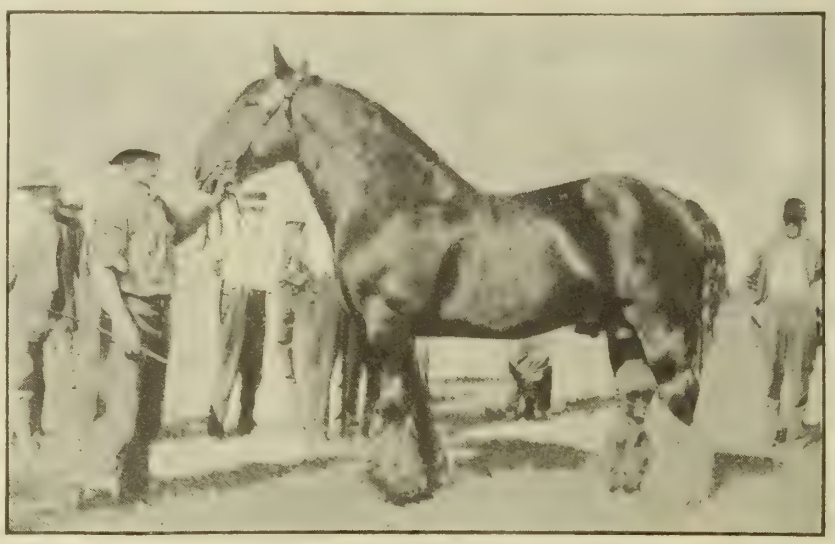
Both Stallion and Mare Owners in Community Would Find It Profitable

By H. J. Gramlich

FOR many years it has been the custom in the horse breeding districts of Europe to hold spring stallion shows. At this time all of the stallions which are to stand in a certain community are lead to the town and put on display. In some instances judging is done and in others it is not. The stallions are merely given a parade and then placed in a convenient place so that all of the mare owners in the community can look them over, compare them and judge them for themselves.

If such a procedure is practical under the old world conditions, it surely would be doubly so under conditions as we have them today in the horse-breeding districts of the United States. Much good should come from a properly conducted and well advertised spring stallion show, and the benefits should be mutual to all concerned. The owners of the stallions receive considerable advertising, while seeing the horses together gives the mare owner an opportunity to compare them closely and make a better selection of a sire than would be possible were the horses in barns located some distance apart. It is rather difficult for a person to carry a complete picture of an animal in his mind, then go look at another animal some distance off, and thoroughly compare the two. No horse judge would ever think of passing upon two animals without seeing them together. Into most communities one or two new stallions are shipped each spring, then there are colts which have developed considerably since the last breeding season. By bringing these into the public square the people are given an opportunity to see how they have grown out.

April is the logical month to hold these shows. A Saturday afternoon would be the best time in the week, as at that time one would be sure to catch a good many people in town. In trying to hold these earlier than April one stands a risk of striking a stormy day, in which case, of course, the show would have to be postponed. As May and June are the two busiest months in the breeding season, a show held along about the middle of April would be early enough to give the mare owners a chance to make their selections before the season opens.



The Owner of a Good Stallion is Always Proud to Show Him

Mare Owners Want the Best Sire in the Community

Some stallion men might object to showing their horses at this season of the year on the ground that the horses are not fat and will not look good. This objection is unsustained, however, as any wise man, in making his selection of a breeding sire, knows better than to pick the fat one. There are very few horsemen today but what can size up a horse as he should be without considering the fat. Possibly the horse's feet will need trimming up, and in rare cases it might be necessary to apply the currycomb and brush for the first time since last fall. However, neither of these treatments will do the horse any harm and should do him considerable good. Consequently the show, insofar as that is concerned, would be helpful, as there are many stallions which are sadly neglected during most of the year.

The horses should be brought in before noon and placed in a stable which is convenient to the central part of the town, and the stalls into which they are placed be well lighted so that visitors may come in and look them over closely. Then, at a certain time in the afternoon, say 2:30 or 3 o'clock, the horses should be taken out and paraded through the main streets of the town. In case it is preferred to have the horses judged and ribbons placed on them, a competent person should be secured to do the judging and give a few brief remarks relative to his work.

The horse market at present is at low ebb on the poorer classes, but now is the time for the corn-belt breeder to stay with the ship, as periods of good values have always followed periods of depression, and colts foaled in 1915 should reach the market at a time when prices will much more than repay feed bills. Auto trucks have usurped the city work of thousands of the little 1,100-pound so-called wagon horses, but we still find the draft horse at work pulling the coal wagon up the muddy alley, and probably will for all time to come.

Calf Crop is of Vital Importance to All

EVERYBODY is interested in the calf crop—more now, possibly, than at any past period in the history of cattle raising in this country. This is true because there has never been a time when the prices for beef have seemed so prohibitive from the standpoint of the laborer, the consumer of uncertain means to provide the necessaries of life for himself and family. The evidence tends to the belief that prices will not be materially lower for several years, or until more cattle are produced than are demanded at the present rate of consumption.

The importance of the calf crop should be recognized by every interest associated with beef production. It is of first importance to the owner of the breeding herd that the calf crop be large and that the quality be good. On numbers and quality depend the extent of profit in the business. If the cow is carefully looked after at this time, feed and shelter having been provided during the cold and stormy season, there need be but little risk in securing satisfactory results during the period of calving.

The careless methods under which a large per cent of the cow herds of the farm and range are managed are not conducive to the best results in raising a large per cent of the calves or the best quality possible. Cows that are forced to rustle for a living during the winter, or a greater portion of it, on farm or range will drop down in flesh and weaken as the calf they are carrying develops. The demand on the cow is too great for her strength under the influence of a depleting ration. This process of gradually diminishing the vitality of the cow by denying her the necessary hay and feed supply to keep her properly nourished and strengthened for the trying period of gestation is, more than all other causes, responsible for the low per cent of the calf crop raised and the large per cent of the herd loss in mature animals.

The old range plan of conducting the breeding by letting it conduct itself, the bulls permitted to run with the herd the year around, the calves coming at all seasons—spring, summer, autumn and winter—illustrates how difficult it is to guard against loss when there is lack of system in controlling the breeding. The low or high per cent of the calf crop has been governed by the various conditions incident to the well-being of the herd; as, for instance, a mild winter and an abundance of good grazing, with an early spring, brings the breeding herd through the winter in stronger condition than where reverse influences exist. The importance of better care, more feed and liberal shedding

will be emphasized by increased numbers in the calf crop.

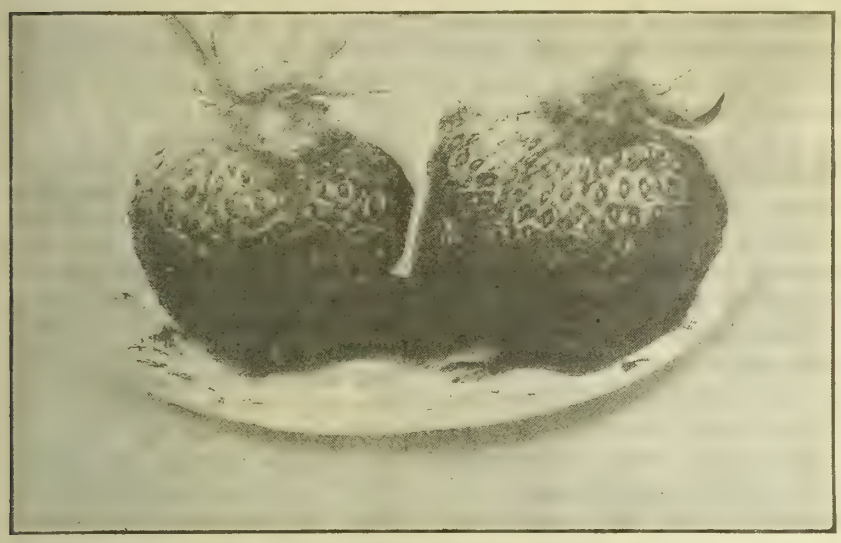
The disposition to multiply and increase the herds must be governed by the ability to bring each of the unborn calves into an active living member of the herd. It does not pay to keep cattle in a way that invites disaster or loss to the cow or her offspring. A cow cannot be profitably carried a year and not produce a calf. This is the only source of profit in handling the cow in the breeding herd. Destroy this source of income and she at once becomes an item of expense rather than one of profit. It is conceded by those who have been familiar with the breeding herd interests on the range that the per cent of increase is not what it should be, that it too frequently does not justify the industry. This, of course, is the result of poor management, and is being corrected of late years by better winter care and attention to ward off disease due to neglect and lack of feed. Fewer cattle, better quality and better kept will increase the chances for a more remunerative business.

The importance of more system and better conditions in the management of the calf crop of the country is appreciated by the feeder of cattle, by the dealer, by the slaughterer, by the retail meat man and by the consumer. Improve-

(CONTINUED ON PAGE NINETEEN)

Learning Through Mistakes and Failures

Being the Story of a Real Man Who Finally Made a Success of Fruit and Poultry



I Use the Senator Dunlap Variety and Give Them the Best Care I Know How

I Am Increasing My Strawberry Acreage as Fast as I Can

WHILE living at Niagara Falls we got the "back-to-the-farm" ide As I was born in the city and ha always lived there and worked there, I had no farm experience at all, but I had read that there was money in poultry. It didn't seem to matter whether you raised them in the back yard or on a big farm, just as long as you did it right.

Then, on reading the fruit papers, I discovered where a Michigan fruit man got $900 from three acres of strawberries, and another man down in Mississippi got $450 from one acre. A farmer in Wisconsin sold $250 worth of strawberries from one-fourth of an acre of land. A man near Superior beat these men a little bit, getting $800 from one acre of strawberries.

I knew it was hard work living in the city, having to work every day, shut in and under a boss. It looked good to me to be my own boss, out in the fresh air and able to rest on stormy days. So in April, 1908, I arrived in eastern Nebraska, with my family, and in April, 1909, leased a small farm near town and decided to try farming.

Took Neighbor's Advice

To tell the truth, I didn't know exactly what kind of farming I was going to do, perhaps a little of everything. There were plums, cherries and grapes on the place. We bought a horse, cow, two pigs and some chickens. I had heard good reports on poultry raising, so I told my wife I believed I'd try that kind. A good neighbor advised me that whatever I went into to go into it good and strong so that it would be worth while.

I bought two incubators and two brooders. Then I bought eggs from the store and some from farmers and loaded up the incubators and kept them going from February until June. From 1,090 fertile eggs we got 920 chickens. We also kept an egg record and from our forty-one hens we got as high as 661 eggs in the month of March. I was very much pleased and wrote my city friends that there was nothing to this poultry business but what was simple and easy.

About this time something started to go wrong with my incubator chicks and they began to die. I tried the ideas and remedies my neighbors suggested—all different—but they still kept dying. We had an incubator chart, and it kept us quite busy burying our dead chicks and recording the losses. To help matters out, several cats got into the brooder and helped themselves. At another time a rat or weasel got in and killed forty chicks in one afternoon while I was in town. My books showed we raised 140 chickens.

Another neighbor of mine, who was a successful fruit grower, advised me to go to strawberry raising. As I had read good reports on the business, I decided to try that, but on a small scale, because after my poultry experience I was not so sure I could make it worth while.

Another Mistake Discovered

I got some good plants, after I found I could not buy seeds. I set out exactly one-fourth of an acre. I set my rows three feet eight inches apart, using the Senator Dunlap variety, and gave them the best care I knew how. Different from my baby chicks, most of the plants lived. In the fall I covered them with straw. The next spring I dug plants worth $40 and sold fruit worth $55.46, making the total receipts from my first patch of one-fourth acre of strawberries $95.46.

The next year we bought a ten-acre farm one mile south of town. The place had been in corn the year before and I decided to leave the old corn roots when I set out my plants, which I afterward discovered was a mistake. I managed to set out 10,150 plants, making a little over one and one-half acres. We got a hard rain, which washed out and covered up about 3,000 plants in my big patch. Later the weather got dry and the old corn roots in the patch absorbed the moisture and hundreds of the plants died.

Pure-Bred Poultry Pays Best

With the poultry we decided to do away with our mixed flock and raise only pure-bred stuff, and started in by setting only eggs from pure-bred Barred Plymouth Rocks. We were very careful and went about it in a modest way, and succeeded in not only hatching but raising a very good per cent of our chickens.

In the fall we covered our acre and a half patch of strawberries, with all its faults, with a good coat of straw. In the spring we set out a bigger patch, and sold about $200 worth of the fruit and several thousand plants.

Strawberry Plants for Pasture

It was not long till I had another experience that gave me quite a jolt. After my strawberries were all picked a well-meaning neighbor advised me to turn the cattle into the patch, and instead of mowing the patch and burning it over, as is customary, to let the cattle eat them off, and he wound up with, "Don't waste a lot of good feed." A good man does as he is told, so I turned in the cattle and they ate. The weather was dry and the ground was trampled so hard I couldn't plow it until fall. However, I did the best I could. Another neighbor near me had a patch exactly the same size as mine, but he didn't economize on feed as I had, but mowed his patch and renewed it at the proper time. The next season from his one and one-half acres of strawberries he got 210 crates of strawberries, which he sold for $2.50 per crate, except ten crates, which he sold for $2.40.

From my one and one-half acres I got my cattle feed and exactly twenty-six crates of strawberries, which I sold for $2.40 and $2.50 per crate.

Still in Fruit and Poultry Business

But I am still in the fruit and poultry business. I am selling my eggs for hatching purposes, and all my cockerels at good prices for breeding purposes. Last season I sold and shipped thousands of strawberry plants all over Nebraska and six neighboring states. I am increasing my strawberry acreage just as fast as I can, but I have to turn down hundreds of orders I cannot fill, and I have had commission men offer me good prices for my strawberries in carload lots.

There are wonderful opportunities for the fruit grower in Nebraska, and any man who will start in determined to win and not get discouraged, and will use his hands and brains, will surely make good.

TWENTIETH CENTURY FARMER

Farmer Flag Staff
Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices
New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
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Subscription Rates
To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
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Advertising Rates
DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
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Abraham Lincoln said, as long ago as 1859: "Unquestionably it will take more labor to produce fifty bushels of wheat from an acre than it will to produce ten bushels from the same acre; but will it take more labor to produce fifty bushels from one acre than from five? Unquestionably thorough cultivation will require more labor to the acre, but will it require more to the bushel?"

The New York court of appeals has decided that a dealer may not sell or give away coloring matter with the sale of oleomargarine. The court held that the law does not prohibit the selling, giving away or delivering of this coloring matter at any time except at the precise time of the sale of the oleo. This seems to be a half-and-half decision—you can't and you can.

Kerosene oil and crude carbolic acid make an excellent cure and preventive of mites and chicken lice that annoy fowls on the roost and on their nests. This mixture has no special or fixed portions. A very good application calls for three parts kerosene oil and one part crude carbolic acid, to be used as a spray on roosts and in nests. It cannot be commenced too soon, as a good, thorough spraying once every two weeks will be found effectual, and no lice will be found during the season. In very hot weather the spraying should be given once a week for perfect security, and the droppings carefully removed each day.

Wages and Opportunities of Farm Hands

The farm hand supply is not in excess of the demand. Consequently the tendency in farm hand wages is to a higher level, the country over. Iowa reports the annual increase per month in that state to be approximately $2 for some years past, and that the present standard has reached from $35 to $42 for good, experienced farm help. As an illustration, an example is given where a prominent farmer has contracted with a hand at $42 per month for the entire season, and another in a different part of the state for $35 per month, commencing in March and continuing until September, when the wages are to be increased to $40 per month, terminating at the closing of the corn husking season.

In various sections of the agricultural and farming districts from $30 to $40 per month is offered and paid, depending upon the experience and ability of the farm hand to do the work demanded. Some hands are cheaper at $40 than others at $30 or even $25. It is a commercial proposition when the farmer is asked to pay a specified price per month for farm hands. It is a question of what can the applicant give in exchange for the wages offered? Some farm hands are so slow and indifferent to the interests of the work they are given to do that they are really not worth their board, while others it is a pleasure and satisfaction to have around, because of their active, earnest, cheerful way of adjusting themselves to the work.

There is nothing so varied and unsatisfactory in a general way as the scale of wages for the hired help on the farm. A live, wide-awake, hustling farm hand can earn more than he usually receives, while the stupid, listless, lazy, indifferent hand gets more than he earns. Besides, he demoralizes all system, good humor and activity that should be encouraged on the farm and in its operations.

The farm hand who has no ambitions other than being some man's hired hand all his life is to be pitied. In this country of high-priced lands he cannot build castles of farm possibilities by saving the cash out of his monthly wages to buy for himself a farm and home Therefore, the usual farm help that is constantly coming up out of the great army of unemployed, who uses this position as a makeshift until something better is offered, can be reckoned with as only temporary.

The greatest mistake that is made is in the belief entertained among those ignorant of farm requirements that any man can fill the position of a farm hand, no matter how inexperienced and ignorant he may be in the handling of teams and machinery on the farm. The farm hand rightly disposed to make the most out of his position, practicing economy in the saving of his wages, will in a period of years have more ready money than a score of globe trotters who are obliged to consume all they earn, no matter how flattering the wages may be at times, on the special work they chance to pick up.

Skilled agriculturists, men of intelligence and experience in handling land and crops, will be in demand more and more as time moves on, and as the demand for better and more intensive cultivation is urged upon land owners.

Farm Gardens

The garden is one of the most important adjuncts to the farm and farm home—one feature of good living that seems to naturally go with the farm. The possibilities on the farm for growing anything and everything in way of vegetables and fruits is recognized by everyone as being not only of economical advantage to the dweller on the farm, but a source of satisfaction and independence that only the land owner or farmer is in a position to enjoy.

Every farm should have its garden and truck patch in close proximity to the residence. The farm garden should be fenced with a tight, woven-wire fence so as to exclude all chickens and other barnyard fowls and defy even the rabbit. It is very seldom that the poultry will persist in trying to get into the garden if there is a good, tight, wire fence to contend with. This may be not more than four feet high, with a couple of strands of barbed wire on top. The garden and truck patch may be in the same enclosure, and can be handled more economically in the matter of fencing and labor of cultivation than when separate.

There are many garden crops that can be grown under conditions of cultivation where the horse is employed to furnish the power in place of the man with the hoe. Beans, beets, onions, tomatoes, cabbage, carrots, parsnips, cucumbers, melons and many other vegetables can be raised in the truck patch, and receive all their cultivation by the one-horse cultivator after well started by hand cultivation. Early potatoes for family use are usually grown in the truck patch. An acre of ground is not too much to devote to this use. There is not enough ground devoted to garden on the average farm and there is not enough of variety grown in the garden to satisfy the appetite of the average hungry man or woman.

The old-fashioned farm garden should be adopted on our present-day farms, where a little of everything was grown and where the family garden became a strong factor in the provision supply for the family during all seasons of the year. The people who occupy the land are not earnest enough in its use. There is too much disposition to let the other fellow cultivate the soil and raise the crops, and we will buy from him. This principle is impoverishing the country.

Every citizen of town or village who owns or rents a home could produce a large part of the living for the family by garden cultivation if they desired to do it, and would thereby be much better off in the matter of living and more contented and happy in the satisfaction of producing these articles of food. Besides, the diversion it would afford from the every-day duties of business and labor would be of mental and bodily advantage. But to the farmer, who enjoys all the advantages of soil, labor and means of cultivation, there is no reasonable excuse for not being abundantly and well supplied with everything in the line of garden vegetables and fruits.

The time is not far distant when these little matters of production that can be acquired from the garden will become a necessity with many persons who now choose to buy rather than exert a little extra labor to acquire these common necessities of present-day living.

Foot and Mouth Disease

The prevalence of foot and mouth disease throughout Argentina suggests the possibility of introducing contagion through importation of Argentine products into the United States. It is authoritatively stated that the prevalence of this disease in Great Britain is due to imports of foreign food products. Argentina is now engaged in shipments of various kinds to this country. Among these most prominently mentioned are corn and oats, which would be a good medium for carrying the disease directly to our live stock. Expert opinion has sounded the note of warning to the authorities at Washington to be on the lookout lest a too general distribution of this disease be introduced and serious results follow. By former experience it was found to be the hardest disease to keep under quarantine that our veterinarians have ever experienced.

Get Ready to Spray

If you are not already supplied with a full and complete outfit of spraying appliances for handling every feature of garden crop, shrub and tree on the farm, it is now urgent that this equipment be procured without delay. Spraying preparations for the various kinds of insects and plant disease should be investigated and these supplies laid in in advance of their needs. The successful orchardist is now practicing four sprayings per season, and his results are healthy trees and full crops of perfect fruit. It pays to spray, and this is the testimony of all the scientific and practical orchardists of the country.

Dooryard Decoration

"There is no place like home." If such sentiment can be applied to all homes, then how immeasurably beautiful and grand may the average home be made by a little attention and expense in planning, platting and planting of shrubs, flowers, ornamental shade trees and the general front lawn decoration that the landscape artist has selected and developed for just this feature of home comfort.

It will not hurt the farm or the farm home for the farmer to give some attention to horticultural and floricultural decoration, especially that feature of it which instructs and advises in the planting of shrubs, flowers, ornamental and shade trees about the dooryard and farm home. It is not too late to make extensive improvements in this direction for the present year. We urge that more attention should be given in making the farm home as pleasant and attractive as possible for the everyday, every-hour inhabitants of these homes.

The home is the basis of the farm's success. Without the home there can be but little comfort or enjoyment on the farm. A continual drudgery of hard labor, either in the field or in the home, will not satisfy the ambition of man or woman, exclusive of the home comforts, which in a great measure come from the beautifying and ornamentation of the dwelling and its surroundings. The farm home is most likely to be neglected in this respect in the economy of starting and managing the farm. Cheap buildings for the family, no conveniences for doing the home work, are often the rule. The horses must have a good barn, and the cows a good stable, because they contribute directly to the operations of the farm; but the housewife can get along without any of the conveniences or comforts, as the housekeeping is an expense at any rate; it does not contribute a dollar to the business and is a constant source of expense. This is the way some farm owners view the home. They know better and should act better, and would if they could but give the matter a moment's consideration.

The ornamentation of the dooryard will do as much for the diversion of mind and the cheering up of the housewife in the performance of the daily routine of home duties as any other investment that can be made, at ten times the cost. The planting of flowers, shrubs and trees, the sowing of grass seed, the persistent replanting and cultivation of these features of home ornamentation is the first duty on the new farm, and should be the first thing now taken up on the old farm where neglected from any cause.

To make home beautiful and pleasant should be uppermost in the purposes of the farmer. This little horticultural study will make the home happy and the farm attractive and valuable. Arrange for a general overhauling of the home surroundings for this spring, if possible, where they are not already to the taste of the housewife. Lay off a large dooryard and lawn; fence it substantially to keep out all stock. Get it in shape as soon as possible to be sown to tame grass—blue grass is preferable. Plant trees, shrubs and flowers. It is a great deal easier to live comfortably, pleasantly and contentedly than otherwise, and just about as cheap.

Growth of Parcel Post

Bearing in mind that the parcel post was designed as general and not class legislation, and that it is being worked out along the broad lines as a comprehensive utility, should dull the point of criticism and complaint urged by express companies, one of which has announced its plan of dissolution and retirement. The government, by means of the parcel post, has simply set to work a vast machinery of public service for the benefit of all, which all too long lay dormant. The progress and development have been rapid simply because of the over-ripe and insistent demand for the service, and yet we have reason to believe the amplification has only bgun.

At first, for some reason thus far unexplained, the system did not apply to books, but does now. The book publisher, seller and lender may avail themselves of it. The lender and borrower—that is, the patrons of the circulating libraries that merely let out instead of sell books—are perhaps the largest beneficiaries of this kind. The publisher, who under the old system paid a flat rate on the book regardless of distance, now pays according to zones, and may or may not appreciate the parcel post. But in general the new arrangement minimizes the expense and difficulty of disseminating book lore and therefore renders the highest of service. Many people will now be reading books of the better character who otherwise, if they had to buy them, might not. They can get them more freely this way from the libraries that loan instead of sell books.

Now, as signifying the all-sided character of the parcel post, it is to be made the connecting link between the farm and the consumer, affording facility for transporting the products of the farm direct to the home in the city and town, mutually benefiting producer and consumer. Thus it becomes, as was originally contemplated, the servant alike of the physical and intellectual wants, and that, too, at smaller cost of both time and money.

The organization of milk condensories is attracting the attention of the states west, and large companies are now organizing in view of using the milk of thousands of cows each. One at Lamar, Colo., is reported to be ready for the product of 10,000 cows, and shipments of cows from the eastern states are being received. Whole communities have signified their intention of devoting their farming efforts to the milk cow industry as the best outlook for profit on the crop and labor expended in producing it.

Nearly one-half the cows in the Missouri valley states are not paying for their board. Who wants to milk a cow just for the fun of it and board her besides?

Use Horse Clippers Now

The horse fancier knows the value of the clippers, but he is not the only horse owner who should own and use the clippers for the removing of the old hair from these animals. The advantage and convenience of handling the horse with his old coat of shedding hair removed is just as much appreciated by the farmer as any other class of horse users, and surely the farm horse appreciates all the little attentions contributing to his comfort as much as any other horse. In fact, the farm horse needs this dressing up more urgently than any other class of horses.

What is more annoying to the person who takes care of the team and handles it every hour through the day than the loose hairs constantly flying in the air and settling all over his clothes. The currycomb and brush will take care of this to an extent, but not like the clippers. The comfort of the horse and his driver is beyond estimate when the old coat is removed. Of course, the animal needs to be blanketed for a few days, until he becomes tempered to the change, but the advantages are so great that the critical horse handler never thinks of permitting his horse to cast his coat by the tedious and annoying methods of shedding a few hairs at a time.

The clippers are a necessity in every horse stable on every farm. The colts that are slow in shedding should be clipped. The clippers can be used to great advantage on cattle, especially the milk cows that are heavily covered on the udders with a growth of hair. This hair holds dust, dirt and dandruff that cannot be taken out or cleaned off by rag or brush, and is a constant source of contamination of the milk, when by the use of the clippers this annoyance may be entirely corrected. The clippers are not expensive and their service about the stable in one season will many times pay for their cost.

Immune Stock Hogs

The contracting by cattle feeders of immunized shoats and lightweight hogs from the serum companies operating at the central live stock markets, where thousands of these immature swine have been dumped by their cholera-scared owners, has resulted in a new middleman industry that promises to work out to the ultimate saving to the consumer of a large per cent of pork that otherwise would never have found its way to the pork barrel and the consuming trade. These contracts usually call for a specified number of immunized hogs, not to exceed an average weight of around 100 pounds. Cattle feeders have been testing out this class of hogs on a small scale and do not hesitate to take 500 or more with an assurance that they are a safe proposition, since they usually get a guarantee against cholera with their purchase.

Clean up that old stack bottom and don't be plowing around it all season. Get what is left that is not good for bedding scattered out on the field and have it helping you to make a better crop instead of having it in the way, and to that extent prevent your making several more bushels of grain.

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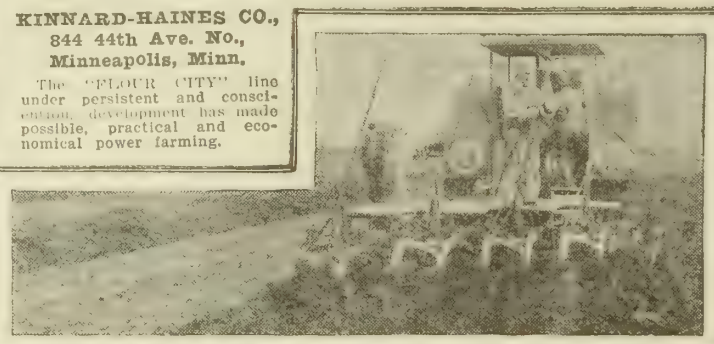

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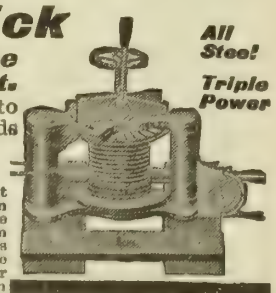

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From Michigan

How to Sell Your Live Stock

Let People Know What You Have for Sale

THERE are thousands of persons—yes, tens of thousands—scattered all over this country who are engaged in the breeding of live stock and are not able to dispose of their surplus at prices that correspond with the prices paid for the foundation herd stock. Why is this? It is not because the country is full of improved animals representing these breeds. The evidence of every-day sales indicates plainly that there is a great demand for more of these good animals. The influence in all directions is to improve and breed up the grade stock of the country, make them better and make them larger, increase their resources for producing beef and pork, and therefore add to the profit of the business.

It matters not how many animals a breeder has to sell or how good they are in pedigree and herd history, or how meritorious they may be as individuals, if the purchasing public has no knowledge of them, has never heard of them, don't know where they are, they hold just the same relation to the live stock trade of the country as though they did not exist. The mere fact of owning and breeding good stock is not a guarantee of profit in the stock business. The production of live stock and the selling of live stock introduce different principles of business management, and the success of the one does not necessarily argue the success of the other.

In the last few years there have been thousands of herds of pure-bred cattle and hogs established throughout the western country where formerly but few breeding farms were known. These new breeding ventures do not all develop into recognized breeding establishments, and they do not all deserve such public recognition, but they all have the right and privilege of meeting a merited ready sale for every good animal they produce. This is a privilege they cannot be denied, and it is a privilege they control independent of combined interests or acquired reputations of great show herds.

In this line of pure-bred stock breeding there are two distinct divisions that must be recognized in the successful management of the business. The one is purity of blood and all that can be contributed to it by the influence of feed and care; the other is the most extended and general acquaintance possible with the public.

The new breeder purchases his breeding animals, lays well the foundation of his herd, adds to it the increase year by year, and wonders why there is not more demand for the surplus. There is one thing, however, he has neglected, and that is to introduce himself and his business to the public. He has been wrapped up in his own conceit; he has fancied that the whole live stock world has been enviously watching his efforts in developing this herd, and that he is known far and near, while in fact but very few people outside of his near neighbors know he has pure-bred stock.

It is one thing to buy, breed, feed and produce good animals, but an entirely different thing to sell them. You cannot sell without a buyer. You cannot have a buyer without enlisting the attention of someone desirous of owning such live stock. How can this be done? How shall the buyer and seller be brought together? There is but one medium of introduction, one system of information whereby the seller and buyer are made mutually to profit by the results, and that is advertising. Any method used by the stock breeder to convey the news to the public that he has stock to sell may serve this purpose. Advertising means much. It is of far-reaching effect. Its benefits are measured by the extent of its influence in pointing out to an inquiring public the location of articles desired.

The breeder or owner of live stock who has animals to sell cannot afford to keep this information from the buyer. The person who wants to buy will pay a better price than the person who only buys because he sees a great bargain in the purchase. There is no need of sacrifice being made, and live stock sold for less than market prices, or at "great bargains," if there were more advertising intelligence practiced by the seller in letting the public know what he had to sell.

The country is not overstocked or overcrowded with live stock, and a proper distribution, such as may be had by judicious advertising, is a guarantee against sacrifices or damaging prices. The breeder who is not well known cannot make money faster than by making himself known to the live stock world, in keeping a breeder's card in some of the good farm and stock journals by the year. His name should be known to every reader of that paper. It should be indelibly impressed upon the mind, so that it would be available in all reference to such stock interests. It is reputation and acquaintance that sells the great bulk of improved live stock. This acquaintance and reputation grows out of advertising largely. Many a good breeder has failed because he did not advertise, and many a poor breeder has succeeded because he did advertise. The one availed himself of the advantage of buyers, while the other deprived himself of the advantage of buyers.

If you have live stock of any kind to sell, remember there are buyers looking and inquiring for just such stock. They may be in your own neighborhood. Notify the public and secure its attention.

Who Makes Our Toys

United States yearly produces toys valued at more than $9,000,000. Germany, with a total production of playthings amounting to $29,750,000 annually, leads all other countries in this industry. Of this amount $21,420,000 worth are exported.

Shearing and Dipping Sheep

Much Care Should Be Exercised

THE time to dip is soon after flock is shorn. The time to shear is between May 10 and June 1 in this climate. Sheep should not be shorn as early as April for shipment to market, unless they are fat sheep; then it is admissable to shear at any time in April, when there is a prospect of a few days of mild weather, sufficient to get the sheep into the market. But for the general flock care must be exercised, as a cold storm may come, and unless the sheep can be closely housed there is sure to be a big loss. Early shearing has some advantages. The flock, if weather is favorable, commences at once to improve. Lambs and suckling ewes do better when the dirt and filth that adheres to the wool of the ewe is clipped off. The flock, if ticky, soon loses the greatest portion of the ticks. The sheep rid themselves of many, while birds of several varieties busy themselves riding on the backs of the sheep picking the ticks off.

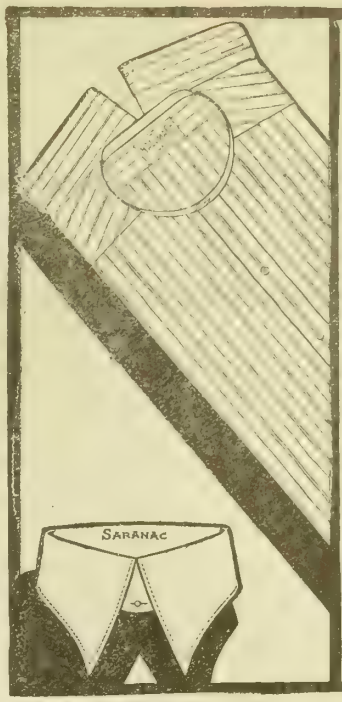
The general influences are for improvement in the flock as a result of early shearing. The habit of letting sheep run unshorn until very hot weather—the last of June or the first of July, as is frequently done by owners of small flocks, is very injurious to the sheep, and often results in loss of sheep and wool. The filth oftimes causes worms, being started from the green fly, an insect propagator that never misses an opportunity and is always on hand where there is a chance to start a crop of maggots to work. The dipping immediately after shearing is the most satisfactory and safe plan to pursue in getting rid of ticks. It is advisable to dip the second time about three weeks later, and always dip late in the autumn and before cold weather in order to get the flock free from any liability of ticks in the winter, when it is too cold for dipping, and multitudes of ticks feed on your sheep until shearing, damaging the flock and costing increased feed to support these ticks.

The liability of scab is a matter that all flock owners must keep in mind. If there is a start of this disease it must not be neglected until cold weather. The time to treat the flock for scab and ticks is when the wool is off and before it has gained a new growth. It is cheaper at this time to treat it. It takes less material to dip successfully. It is performed at a time that seems to answer the convenience of the shepherd and best serve the flock interests in the matter of cure.

The lambs are liable to have the full crop of ticks soon after shearing, as the ticks change to some extent from the bare body of the newly shorn ewe to the lamb, where there is a good covering of fine, long fleece. It is a good plan to dip each year after shearing. It prevents any start of ticks or disease, and is a good, healthy bath for the animal. A small tank can be had which may be used on the farm. The galvanized iron tank is regarded the best and most durable. As to dips, the market is full of them. There cannot be much mistake made, as they are all meritorious, judging from the testimonials.

What Mexicans Call Us

The story is that when the United States troops invaded Mexico in 1846 they used to sing a popular song of the day that began, "Green grow the leaves of the hawthorn tree." The Mexicans came to associate the song with the invading army until they began to call the detested Americans "the green-grows," or "gringos." Mexicans now apply it as a term of contempt to all Americans.—Youth's Companion.



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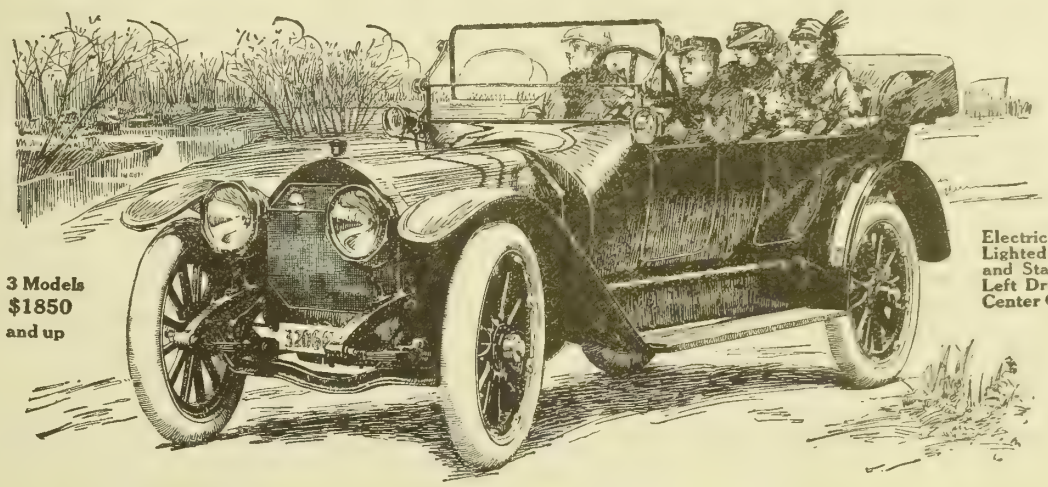

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The KisselKar is a strikingly handsome automobile—outbending panels, graceful curves, streamline body, round fenders, big electric lamps, running board free from boxes and brackets. The large comfortable seats have eleven inches of seat upholstery in which you recline in solid comfort.

All these advantages are now available to you at a reasonable cost. If you contemplate buying an automobile, why not get a good one, one that will give your family the fullest measure of comfort and one that you will be proud to own.

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Read the small poultry and egg ads on page 22 if you want to buy eggs for hatching. Every advertiser is a reliable breeder.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

In April

BY VIRGINIA BAKER

See Mary and Johnnie and Frankie and Ella,
And each of them carries a big, black umbrella;
See Bessie and Minnie and Annie and Fred,
With each an umbrella held over the head.

Now, what is the reason, I wonder, that they
All carry umbrellas this sunshiny day?
Why, it's because April is here once again,
And they are afraid that it's going to rain.

What Rose and Harry Learned

"What are Uncle Jack and father doing to that tree?" asked Harry as he and Rose and the two dogs came scampering around the corner of the house and saw their father and their much beloved young uncle scraping the bark off an apple tree.

"Let's go and see," said Rose, and in another moment the two men were surrounded by what seemed like a crowd of noisy, bouncing children and dogs.

"What are you doing?" the children cried.

"Feeding apple worms to the birds," said their father, laughing.

"Oh, tell us about it!"

"Well," said Uncle Jack, pulling off a piece of bark, under which there were three fuzzy things that looked like little pieces of dirty cotton batten. "These little things are cocoons. Last fall the little white worms that you sometimes bite into when you are eating an apple got tired of crawling about inside the apples all day long and just eating and eating, and some of them decided to go and take a long trip. So they crawled out of their apple houses and hid under the bark here, especially in the crotches of the trees, and spun thmselves all up in these silky, gray cocoons and went to sleep. They have been sleeping all winter, and now the birds are here, so we are scraping some of the bark off so the birds can get them and eat them before they wake up."

"The birds can't get them unless you move the bark, can they, Uncle Jack?" asked Harry.

"Only our friend the woodpecker, with his long bill. The others would have had to wait until they came out of their cocoons and then they would have wings and be harder to catch."

"Wings!" said Rose, wonderingly.

"Yes," said Uncle Jack. "When the worm comes out it is a little grayish brown moth. You would call it a butterfly if you saw it, but you don't see it often, for it hides all day and comes out at night and lays forty or fifty eggs in the apple blossoms, and these eggs hatch out and turn into little white apple worms that spoil our apples. The moth dies, but the little worms live and turn into cocoons, as their mothers did before them, and so we have more and more of them every year."

"But I thought that was why you sprayed the trees," said Harry.

"It is," said their father, "but we need the birds to help us, too."

"Oh!" said Rose, starting away. "What did you say was the name of that moth, Uncle Jack?"

"I don't believe I told you," he answered, "but they call it the codling moth, and it is a very wicked little insect, too."

HOME EDITOR.

(Prize Story)

A Dreadful Fishing Day

By John Wiebe, Aged 13, Bingham Lake, Minn.

One bright summer morning when I got out of bed and went out into the beautiful summer air I thought it would be a fine fishing day. So I went and told my older brother and sister of my plan. They agreed at once, and so it was understood we were to go.

On our way to the lake, which was about two miles from our home, we had a splendid time, because two of our neighbors were with us; but the breeze ceased and the sun shone hotter and hotter. At last we came to the place where we were to fish. I was not a big boy at that time, and I did not notice the clouds coming from the west. Nobody seemed to know it, because everyone was talking. But all at once a heavy thundering was heard from the back of us while we were facing to the east. Everyone looked dismayed.

Not far away was a bush of trees growing, and we all rushed to this shelter. While standing there lightning struck the ground; it seemed to me about two feet away from my own body. Then everyone was in terror and took their way home. It was not an easy thing to go against the wind and rain. The rain came down so fast we were soaked with water through and through, but at last we came to our neighbor's place and there we found shelter and dry clothing. The fish were left behind and nobody seemed to have enjoyed the sport.

Note—As John Weibe won the story prize on March 7, making this his second prize for story writing, he is now a member of the honor department. He makes the fourth member, the others being Ytole Norris, Orrie Campbell and Bertha E. Hayes. This means that he may not win the first prize again, but may send in a story whenever he wishes, and if we consider it good enough to print we will do so and send him a book. But a first prize is always given just the same whether an honor story is published or not. This means that prize winners must not stop writing, but try to get into the honor department.

(Honorable Mention.)

Story of a Cat

By Jessie Davidson, Mt. Sterling, Ia.

One day a woman and her daughters found me and my three brothers along the road. They got out and got us and took us home. After taking us into the house a dear little girl came, and my three brothers and I were given to her. She named me "Boy Blue," and one of my brothers "Kitty Gray," and we were treated very kindly.

One day my brother, "Kitty Gray," took sick, and for fear I would get the disease they put him into the hen house. A blizzard came up and it turned very cold. He got into a nest with a sitting hen. He would crowd out to eat and then get back into the nest again. He is well now, but very weak.

My master takes me into the house very often because I am so good. I first jump from one lap to the other. When I get tired of playing I get on the couch and sleep awhile. When I wake up I play with a fern which they keep in the bay window. The little girl puts a button on a string and we romp with that on the floor. When she puts me out I often wonder why, for we have such good times.

But I won't complain, because there are two maltese kittens that they raised on a bottle and a white cat named "Snowball," besides Kitty Gray, for me to play with. You should have seen the little girl feed the maltese kittens on the bottle. One of them would take its paw and try to knock the other away.

The Scared Boy

By Percy Neidig, Aged 11, Madison, Neb.

One time James' uncle gave him a book for Christmas. It was entitled, "Stories of Indian Fighters." James read the book and one day he made a revolver, belt and holster and told the neighbor boys that he was going out in the valley that night and shoot Indian. The boys laughed and said if he should see or hear an Indian he wold run home, but he said, "If I see or hear an Indian I will shoot him."

That night he went, as he had said he would go, but just as he was

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passing some bushes he heard a noise. At first he thought it was the wind, but then he saw something move. He yelled as loud as he could, "Help! Help!" and ran home at the top of his speed. When he reached home he told his father what he had seen and heard, but his father did not think there had been anything in the bushes.

The next day at school he told some of the boys about it and they told him they were waiting there for him to come so they could scare him, and when he came they began to crawl around on their hands and knees in the bushes. Ater that he never bragged about his bravery again.

Our Pigeons

By Annie Askland, Aged 7, Esmond, Ill.

When we first moved up here we only had a few pigeons, and they didn't seem to be very happy on account of their poor old house. But, anyway, they raised quite a few little pigeons, although several little ones rolled out of the nests and got killed, and a few of them our cats killed when they came down to get food, because they weren't strong enough to fly up to their house again.

A few days ago pa thought he would make a house for them up in the peak inside the barn. He made a door so we could look at them and their little ones. But they seem to be afraid of their new house and stay outside. I think after a while they will get very happy in their new house, and I hope they will raise a lot of little pigeons next summer. It will be a lot of fun to look at them.

My Five Pigs

By Howard Renshaw, Aged 10, Armour, S. D.

I bought five pigs for $5, and I fed them milk every day for about a month, and then they were quite fat. One day we heard that our nearest neighbors had the cholera. I could not get more than $3 for them, but I thought I would sell them, because I thought they would get cholera and die before long. Now they have had the cholera and there are three living, and I wish I had kept them, for by this time I could get twice as much as I paid for them all in the first place.

My Pup

By Clifford Thrett, Aged 7, Brunswick, Mo.

Once my papa got me a pup. I was very proud of him. One day when sister and I were playing I saw that my pup did not look right. Then he began to run after us. Then we went around to the house. My sister went in, but the dog was so close I kept on running, and I ran around the house three times before I could get in. I was very frightened.

My pup had fits often after that. We kept him three more days, but he got no better. Then my papa killed him. I was very sorry, for I wanted to keep him. This is a true story.

Our Colt Jenny

By Louise Askland, Aged 9, Esmond, Ill.

We have a little colt by the name of Jenny. She is a nice colt, full of fun and play, but foxy some of the time, so we keep away from her heels. Two weeks ago when papa was fixing a window and had Jenny out among the other horses in the yard for exercise, he noticed Jenny was outside the fence. He hurried down to the yard to see how she got out, and to his surprise saw that the colt had jumped the fence and cut both her hind legs on the barbed wire. One of the cuts was a big cut. Papa washed her legs off with clean warm water. The next day it was badly swelled. Now he washes the sores every day with salt and water and it seems to be getting pretty well. So I guess Jenny will come out all right, after all. This is a true story.

Additional Stories

Neil Harvey, Burwell, Neb.; Esther Keefer, Papillion, Neb.; Lizzie Berner, Carrie Kelley, Pender, Neb.; Esther Strickler, Paxton, Neb.; Martha Burger, Nebraska City, Neb.; Alpha Wells, Waterloo, Neb.; Oscar A. Legler, Schuyler, Neb.; Agnes Nilson, Litchfield, Neb.; Roscoe Briard, Madison, Neb.; Glenora Young, Halsey, Neb.; Florence Armbruster, Stanton, Neb; Leslie Weston, Norway, Ia.; Carl Boer, Gilman, Ia.; Gladys Osler, Macedonia, Ia.; Maxine Morris, Council Bluffs, Ia.; George W. Isaacs, Faucett, Mo.; Clyde Corner, Ritchey, Mo.; Mabel Davis, Baring, Mo.; Elnora Weigel Victoria, Kan.; Esther Evans, Republic, Kan.; Gladys Peterson, Marquette, Kan.; Hilda Luoma, Leo, Wyo.; Beatrice Renshaw, Armour, S. D.; Jane Allen, White Bear, Minn.

Awards in Picture Contest No. 11

Not so many answers as usual came in to this contest, probably for the reason that we had a week less than we have had for some of the others, but there were enough answers to show that you are still interested, and no doubt we will continue to get answers for almost a week after closing time, as usual.

(First Prize)

By Myrtle Wolery, Aged 13, Whiting, Ia.

I wish I had a horse and sled,
Like these gay children four;
But if I had them, then I know
I'd soon want something more.

(Second Prize)

By Walter Wassmann, Aged 12, Ocheyedon, Ia.

On winter mornings we jump from our beds;
We put on warm wraps and go for our sleds;
Then, with Carlo, our dog, we go for a slide;
We are happy and free until eventide.

By Ruth Fye, Aged 8, Valley, Neb.

The horse I have is brown and white;
The dog I have would never bite.
My brothers think the sled is fine;
I like to ride it all the time.

By Iva Babcock, Aged 12, Meeker, Colo.

Little Bea is on the sled;
Standing are Jack, Joe and Ned;
Spot and Queen look on to see
That no harm comes to little Bea.

By Allen Ritzlaff, Aged 11, Aneta, N. D.

Jack and his pony and little dog, Bun,
Have come from the city to have some fun
With their friends, who are coasting down the hill,
On the nice new sled sent by Uncle Bill.

By Della Marks, Aged 12, Ord, Neb.

There stands Robert with the sled;
On it is our little May;
Close beside are Bob and Jack,
And old Nigger, munching hay.

If Coffee Don't Agree

Much of today's nervousness, indigestion, languor, kidney and liver trouble, come from indiscretions in eating and drinking, so commonplace that they are seldom considered till Nature pulls one up with a sharp jerk.

More often than is suspected, coffee is the cause of these troubles.

A simple, easy way to discover the real cause and relieve one's self of a lot of discomfort is to quit coffee for ten days and try

POSTUM

This beverage contains none of the coffee drugs (caffeine, tannin, etc.) which are responsible for many human ailments, big and litule. Postum is a food-drink made from prime wheat and a bit of molasses. It is pure and contains only the wholesome goodness of the grain.

Postum comes in two forms:

Regular Postum—must be boiled. 15 and 25c packages.

Instant Postum—a soluble form. A teaspoonful stirred in a cup of hot water dissolves quickly and makes a delightful beverage, with cream and sugar added to taste. 30c and 50c tins.

The cost per cup of both kinds is about the same.

Thousands who have changed from coffee to Postum know.

"There's a Reason"

Grocers everywhere sell Postum.

Looks-Works Like a Gas Stove

Burns Oil or Gasoline

No matter where you live, you can bring city gas convenience into your kitchen. Many city folks who live just outside of the large cities where they cannot get gas are using these stoves because they cook and bake to perfection.

You don't need to "fuss" with a *Detroit Vapor Stove*.

Simply light the burners and put the cooking on at once—just like a city gas stove. You do not need to [illegible] to put in gasoline or pressure [illegible] DETROIT VAPOR STOVES WORK LIKE GAS tanks therefore do not have to cut any holes in the floor. The stove [illegible] itself and can be placed in any part of the kitchen.

The burners are durable and as simple as gas stove burners. They require no attention as they have no wicks, asbestos rings, or anything to get [illegible] looks like a wick.

If you knew more about *Detroit Vapor Stoves* you would want one at once. They are made in fifteen different styles and sizes from $10.00 up.

Ask your dealer about these splendid stoves.

Write us today for our new free catalog No. 81, which fully describes and illustrates these stoves.

The Detroit Vapor Stove Co., Detroit, Mich.

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Canada's grain yield in 1913 is the talk of the world. Luxuriant Grasses give cheap fodder for large herds; cost of raising and fattening for market is a trifle.

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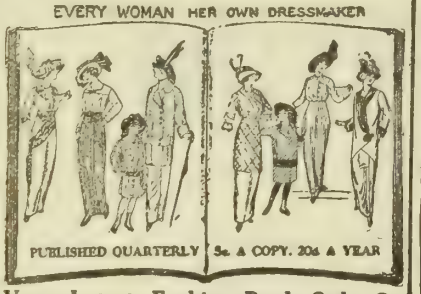

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GET SPECIAL OFFER—IF you use patterns, or if you order any pattern shown in this or any other issue of our magazine, we will send you the very latest issue of "EVERY WOMAN HER OWN DRESSMAKER" for 2c. Just send your address and 2c. to Pattern Department Twentieth Century Farmer, Omaha, Neb.

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6572—Ladies' Shirt-Waist—This simple model has a short tuck at each shoulder in front and a plain back. The neck may be made high with band and collar or open with large, square collar. The sleeves are plain and straight, ending in a cuff at the wrist. The pattern 6572 is cut in sizes 34 to 44 inches bust measure. Medium size requires 3⅝ yards of 27-inch material.

6618—Misses' and Small Women's Skirt—Serge, cheviot or broadcloth can be used. The skirt is made with three sections, closing at the left side. It is joined to a two-piece foundation. The pattern 6618 is cut in sizes 14 to 20 years. Age 16 years requires 2¾ yards of 36-inch material for the skirt and 2⅜ yards of the same width for the foundation.

6589—Ladies' Breakfast Jacket—This smart little sacque for morning wear can be made in one piece or two. At the neck is a wide ornamental collar and the closing is in the front. Ribbons fasten the garment together under the arms. The pattern 6589 is cut in sizes 34, 38 and 42 inches bust measure. Medium size requires 2½ yards of 36-inch material.

6605—Ladies' Apron—For the woman who works this apron will be satisfactory without being too much of a covering. The front panel is shaped in a little to the figure and continues in a bib and shoulder straps. The pattern 6605 is cut in sizes 34, 38 and 42 inches bust measure. Medium size requires 4¼ yards of 36-inch material.

6607—Boys' Dress—This is for a very little boy. The blouse has a deep neck. The small bishop sleeve has a mere suggestion of fullness at the shoulder and is gathered or plaited at the cuff. The pattern 6607 is cut in sizes 2 and 4 years. Medium size requires 3½ yards of 27-inch material.

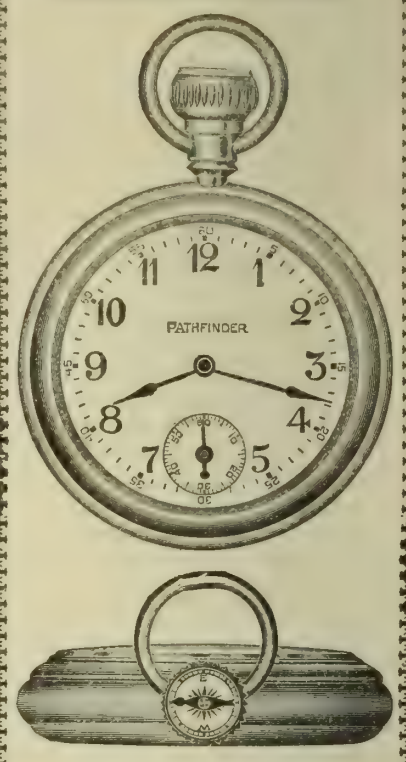
6604—Girls' Dress—This model is of sacque cut, with a medium-sized box plait down the center of the front and back, the closing beneath this plait in front. There is a deep yoke facing in front, and this may be omitted. The pattern 6604 is cut in sizes 6, 8, 10, 12 and 14 years. Medium size requires 2¾ yards of 36-inch material.

6606—Ladies' Home Dress—This simple frock has a blouse which is plain except for a full-length tuck at each side, extending from shoulder to belt. There is also a front side closing and a high or flat collar. The seven-gore skirt may have habit back or a reversed plait, as preferred. The pattern 6606 is cut in sizes 34 to 44 inches bust measure. Medium size requires 5⅛ yards of 36-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

BOY SCOUTS

Look Here!



This Compass Watch is free. No fake about it either — it's really and truly free.

Get your father, mother, or big brother or some neighbor to subscribe for the Twentieth Century Farmer, or renew their subscription for one year at the regular price of $1.00, and we will send you this watch free. It's new and just out and will please you. It is guaranteed to run and keep accurate time.

A Watch and a Mariner's Compass are two indispensable articles to a proper equipment for hunting, fishing, outings, hikes or cross-country runs.

The "PATHFINDER" Watch combines these two necessities without sacrificing the efficiency or appearance of either.

It is a 14-size, thin model, German-silver nickel-plated case, open face, Arabic dial, with red minute numerals around outer margin, "pull-out" stem set, and is guaranteed a first-class time-keeper.

The unique location of the compass in a recess formed in the top of the watch crown obviates all necessity for increasing the thickness of the case or distorting the appearance of the watch to accommodate the compass, and at the same time the compass is far enough removed from the steel parts of the movement to prevent its being deflected thereby.

Every Boy Scout should have one.

Make up your mind to get it today.

Address,

Twentieth Century Farmer
OMAHA, NEB.

Of Interest to Our Women Readers

The Lost Trail

Green woodland heals the ancient scar;
Spring after spring, through still unresting years.
In little saplings and the tufted pine,
The old trail disappears.

Forbidden vine and fern-brake come once more;
Brown leaves have hid the secret deep and well;
Only the scattered blaze-marks, blurred and dim,
A fading message tell.

One coming here might seek for it in vain;
There is no sign above the guarded gate
To point the path, to where the still wood keeps
Its heart inviolate.

The old path fades, forgotten; only guessed,
And scarcely found and once more lost again.
No record serves to show the long-healed wound
Of havoc and of pain.

God send all trails forgetfulness as this!
Such healing pity of the kindly years,
That no swift-footed memory may find
Lost places of old tears!
—Arthur Ketchum in Atlantic Monthly.

Our Home Chat

"I'm just beginning to learn," said a middle-aged woman, "how unimportant things really are."

"What kind of things?" asked the younger woman, who had worry lines about her mouth and creasing her forehead.

"Everyday things," answered the middle-aged woman. "I used to think when people didn't do things my way the world was positively coming to an end. I fretted and fussed about what I couldn't help and what wasn't even any of my business—about how John did his work, and how my sister brought up her children, and even about the methods my brother's wife employed in washing the clothes. But John has been successful in his work in spite of me, and my sister's children have all turned out well, and my brother has never lacked a clean shirt when he wanted one. I might have saved myself years of worry if I hadn't spent so much time criticizing things I couldn't help."

"Do you mean to say," answered the younger woman, "that it would have been unimportant if your sister's children had not turned out well?"

"Not at all. But the things I worried about were unimportant. I worried because she let them do things and eat things I didn't approve of and because she did not insist on foods and standards of conduct I thought right. I couldn't make her do my way, so I might have made the best of it. And the same with John's work and everything else. I worried about details. Now I realize that it is only results that count and that other people have a right to try their methods of arriving at a given result."

"Well, I just can't help worrying about things," said the younger woman. "They seem important to me and I know they are important."

"They are," said the middle-aged woman, "as long as you can help, and if you have a right to concern yourself. If not, there is an expression my boys use that expresses the way I feel about it, and that is, 'Forget it!'"

HOME EDITOR.

At Housecleaning Time

Every housewife has her own particular method of cleaning house, and she is no doubt convinced that it suits her better than her neighbor's way, but there are a few suggestions that may not come amiss, which do not exactly apply to the work itself, but which make the final results the best that can be secured.

If shades are soiled, get a can of cleaner sold for the purpose and go over the whole surface, and if much worn remove from the roller and put on again upside down, using small tacks like those used by the manufacturer, lest the spring be interfered with. Sometimes the soiled part may be cut away entirely, if the shade is much longer than the window. Be sure there are shade pulls, as these will save from direct contact with the hands when raising or lowering the shade. If the commercial cleaner cannot be had, a substitute may be made by soaking dry bread in a mixture of half and half water and household ammonia and adding enough flour to make a dough that is so stiff that it will not stick to the hands.

Fresh curtains may be made of any kind of inexpensive cotton material, whether cream or white, depending upon the furnishings. The cream lends itself better to the sitting room, or living room, as it is popularly called, while in a bed room if the dresser and bed coverings are white, the curtains are pretty if they match. Stencilling is now the fad, and very pretty effects can be obtained by using common house paints thinned with turpentine to a consistency like thick sweet cream. Be sure to take only a little paint on the brush, and apply it lightly at first, having a dish of gasoline in which to dip the brush to remove all superfluous coloring.

Three or four 10-cent cans of paint will ornament many pairs of curtains and dozens of other articles besides, and friends could divide the expense by each buying one or two. Different shades can be obtained by mixing the colors so that the furnishings in different rooms can be easily matched. These paints do not fade from washing if a hot iron is passed over the wrong side of the material stencilled; this fixes the color.

Patterns are advertised in every magazine, but if one is clever with pencil and knife, patterns can be made from figures on wall paper or fabrics having bold conventional designs, drawing the pattern first, then cutting along the lines with a sharp knife. Different parts of two or more patterns can be combined to make beautiful figures that will adapt themselves better to the article to be ornamented than any one alone of those used in the combination. Where one has painted walls, a border may be stencilled with good effect, but the paint must be thicker and some varnish added.

If the rugs or carpets are showing wear and have faded, the colors are brightened by washing with warm water that has ammonia added to it; a teacupful to a ten-quart pail of water. This should not be done until the dust has been well beaten out of the pile or it will soon be dingy again. If the light portions of the carpet cannot be made clear and clean they are much improved by going over with a brush and boiling hot dye. Use a package of dye to a quart of water. We have tried this repeatedly and know that it works all right. Do not attempt to change dark colors, but the pale shades will take the dye.

If any of the furniture has been damaged, repair it instead of buying new that may not be as good. A little glue and a few screws and brads will mend many breaks. If the varnish or other finish is much marred it can be removed entirely with a strong solution of concentrated lye, provided the wood is solid and not veneered, but an article so treated must be allowed to become entirely dry before being refinished. Good pieces should not be subjected to the lye bath, but may be sandpapered to remove the finish if one cannot get a "boughten" paint remover.

Scratches in mahogany can be obliterated by rubbing with the cut kernels of Brazil nuts or "nigger toes," as they are often called, and like disfigurations of oak will usually yield to a dressing made of equal parts of boiled linseed oil, turpentine and strong vinegar, applying

CONTINUED ON PAGE TWENTY

"You Wouldn't Know the Old Chair Now"

The last time you saw it, it was scarred. The varnish was scratched and it looked fit only for the attic. But it was too comfortable to part with. It looks new now, just like the table and the rest of the furniture. All that was needed was a coat of Lincoln Lin-Co-Lac.

Why buy new furniture? A coat of Lin-Co-Lac makes old pieces bright and as attractive as new. Save your furniture money. Try Lin-Co-Lac on one or two pieces—see the effect. It's easy to apply—any one can do it.

LINCOLN
Paints and Varnishes

There is a Lincoln paint, varnish, stain, enamel or finish for every purpose. Give the floors a coat of Lin-Co-Lac, too. Make them easy to clean and keep clean—floors that you will be proud of. Insist upon seeing the name "Lincoln" on the can whenever you buy paints, varnishes and enamels. It assures you of the highest quality.

Write for Our Book "Home Painting Jobs"

It tells you how easily you can enamel, paint or varnish old shabby furniture, floors, walls, doors, pantry shelves, etc. Make old pieces look like new. Also learn about Lincoln Climatic Paint—the house paint that is made especially for *your* climate. Write today for book, color cards and name of our nearest dealer. Address

Lincoln Paint and Color Co.
Dept. 86 Lincoln, Nebraska

Factories: Lincoln, Nebraska, and Dallas, Texas

Washing Made Easy
With This Power Washer.

Why?

Because—
Simplest in Construction.
Easiest to Operate.
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Cheapest to Buy.
Gives Service and Satisfaction.

Connect this "Eclipse" Power Washer with your gasoline engine. Fill the tub two-thirds full of water, throw in the clothes, close down the lid with the clamps—turn on the power and the dreaded washday is turned into a pleasure.

The "Eclipse" Power Washer runs easy because it is constructed right. Equipped with ball bearing wringer and everything tested carefully before it is sent out. The Power Washer with a reputation back of it.

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Here Is the One Best Buy in Hay Carriers

The *Harvester!* The biggest "buy" because it's the biggest, strongest, most modern hay carrier.

The eleven big mechanical features of Harvester Hay Carierrs *begin where others leave off.* They mean greater durability, trouble-proof simplicity, and an enormous saving of labor. They mean money in your pocket—every one of them!

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1914 Models—for Steel, Wood or Cable Track

Both sling and fork styles—three types. Heavily re-inforced—extra strong where extra strain comes. Drive clear in or pull up at the end of your barn—unload the hay either way—the Harvester handles it without re-roping or changing pulleys.

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We'll send you our new HayTool Book *and the name of a dealer in your locality who can show you the Harvester itself.*

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Free Hay Tool Book
This book gives full Harvester Hay Carrier details. Write us today—we'll send the book tomorrow.

Largest Barred Plymouth Rocks

Winning again last year at **Great Coliseum Show, Chicago,** December, 1913, with three entries, 2d pullet, 3d pullet-mating pen. At **Illinois State Show,** January, 1914, with entry of 13 birds, 11 were winners; also best colored female, best shaped female and **Champion.**

My strain is second to none in size and color of barring. I have furnished 87 of the winning birds this winter at some of the largest shows in the United States and Canada. For the season of 1914 I have the grandest breeding pens I have ever had and can furnish eggs in any quantity. Write for catalogue of the largest exclusive Barred Rock farm in the Mid-West. Eggs for hatching $3 for 15, $8 for 45, $15 for 100.

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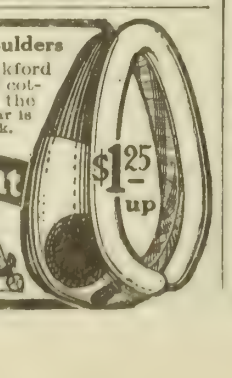
AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh.

This humane Collar makes your horse 100% efficient

You can cure that horse of galls and sore shoulders without taking him from his work, with the Lankford Humane Horse Collar. Filled with soft medicated cotton, it absorbs sweat and impurities thrown off by the sores. When fitted properly the Lankford Cotton Filled Collar is guaranteed to cure galls and sore shoulders. Fits any size neck.



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Always look for this Trade Mark.

Every one of your horses should wear this humane collar. Allows them to use full strength without danger of boils. Your horses never will be laid up with galls and sore shoulders if they have Lankford Horse Collars. Will not worry the horse. Over 1,000,000 sold last year. Acts as pad and collar combined. Get one for your horse today.

FREE BOOK to those sending for information regarding Lankford Horse Collars. Write today.

The Powers Mfg. Co., Dept. R-2 Waterloo, Iowa

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

THE farmer in this day, in many instances, prefers to buy a good brand of protein food, for there is no doubt but that hens lay better and chicks and ducks thrive better and grow better if fed some form of animal food, and to leave the chopping or cooking of this to the household usually results in limited supplies; so it pays to buy it. Simply cracked corn and some beef scrap each day will, with the grass, bring on the range or penned chick and duck into a growth that often astonishes one. While the different meals named variously as meat meal, meat and bone meal, beef meal and so on are excellent as mixers in a mash, yet for all purposes the beef scrap is most dependable, as it carries a high grade of protein and plenty of fat and almost nothing of ash. Most poultry people of experience prefer the beef scrap to the fresh cut green bone, as one must be so very careful not to use too much of the latter and bring on diarrhoea in the flock. All of the meals, except the blood meal, are cheaper than beef scrap, but blood meal and blood meal flour must be fed sparingly, because both are nearly all protein. Bone meal contains about 60 per cent protein, the rest fat. Many prefer meat meal. None of the meals or scrap must be left where the damp reaches them.

Children Showing Chickens

Two years ago the Agricultural Department started some boys' and girls' poultry clubs in three counties in Virginia. For study they read several bulletins issued for their benefit, and wrote compositions on poultry management. There were eleven clubs, with a membership of something like 200 children. Each member of the clubs was obliged to secure a setting of standard-bred eggs and show what could be done by each in raising the chicks. They were expected to learn how to care for poultry, how to take care of sitting hens, how to grade eggs, etc. Their enthusiasm for the work proved greater than that of older people. At the Virginia State Fair last fall these boys and girls entered 150 of their standard-bred fowls.

About Squabs

An expert in squab raising advises the beginner to buy squabs instead of adult birds. The reason given is that the beginner is liable to make mistakes, and if his mistakes bring sickness on his breeders, which are valuable paired stock, his money loss is liable to discourage him in the beginning. On the contrary, if he begins with squabs from strong, healthy stock, by the time they are grown he has learned their needs, and, though he lose a few, the loss is little to what it might be had he invested in the older birds. Another thing, if you buy squabs you can keep them in and about their home, but often the older birds, especially Homers, will hunt every egress to get out and be away to their old home. Squabs take lots of food. All day long they like to stuff. Never expect them to drink from their bathing pans. Give pigeons, adult or squab, their drinking water in fountains, something they can merely get their bills in. The bathing pans need only be put in once or twice a day, then taken away. Sand is the best material for their floor, and with this on it the floor needs cleaning but once or twice a week.

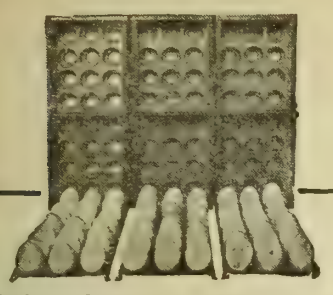
Equal to Turkeys

The farmer can thank the agricultural press for his increase of profit in poultry of all kinds, but especially chickens. For years and years the editors of farm papers have kept hammering away at the farmer to drop his mongrel flock and put in standard bred, to increase his poultry output, to feed and house it as it should be housed and fed, to give it care, and keep it free from disease and inbreeding. It has patiently kept before the farmer the records of pure-bred stock in laying contests or individual cases, and the farmer finally began to notice and think, and little by little, here and there only at first, increase his flocks, and look up the standard bred, and guess that maybe poultry keeping was worth while, although in some cases they would agree that with the increase of poultry prices were bound to fall. Instead, as the output increases the price increases, it seems; at least it gets no lower. This spring chickens on the farms are bringing turkey prices per pound. Think of 14 cents a pound for chicken on foot, ye farmer woman? Think of going into the flock and culling out sixty Brahma hens—as I saw the other day—and the huxter handing you over a check for nearly $70—over a dollar apiece on an average. The agricultural editor surely should have your thanks that he put you on to raising that big flock, and in your case that kind. It is he who has put it into the head of the American farmer to keep nothing but pedigreed stock in chickens, as well as horses, hogs and cows. Not but what in chickens anything would have brought that 14 cents a pound on ffoot, but if it had been a mongrel flock the check would not have been so high, because the weight would not have been so evenly large.

To Get Rid of Tuberculosis

If, through microscopic examination or other means, you are shown that you have tuberculosis in the flock, the best of authority gives you this advice as to how to get rid of it and make yourself safe. The better plan is to get rid of the whole flock, for if you keep the well ones it means a constant lookout that it does not appear, and also constant care and disinfection. Kill and burn all showing traces of the disease; the well and hearty ones may be used as meat, as these are not as yet diseased.

Eggs can be saved from the well birds in the flock, as there is slight danger of it passing down to the unhatched chick. The first step toward



Eliminate 95% of the Breakage

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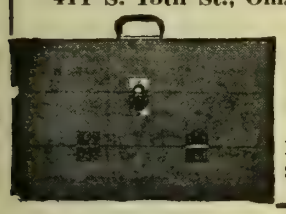

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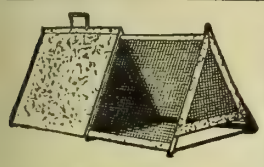

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Can White Diarrhoea

and other bowel troubles be prevented? Write **CHICKLIFE REMEDY CO., Clay Center, Kansas.**

Tells why chicks die

J. C. Reefer, the poultry expert of 1619 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

getting rid of the bacteria on the place is by furnishing new quarters and new yards, if this be possible. Old houses should be burned, and the yards plowed up and seeded. If the houses are new and valuable, then all fixtures should be removed and destroyed and the house well disinfected and whitewashed. All loose dirt in the house and yards should be scraped and treated with some antiseptic solution. The droppings must be scraped up and disinfected with a strong solution of sulphuric acid. Not until all this is done will it be safe to turn in a new and healthy flock to take the place of the old.

Setting the Hens

One should never carelessly set a hen. Some poultry keepers merely chuck the number of eggs they call a "setting" under the hen wherever she happens to have last laid and become broody. On the same old nesting material, under the same system of any hen that wants to lay in with her; then they scold because the eggs break and all manner of disasters beside make it a poor hatch. If the nest be secure and other hens not liable to bother it, let the hen brood the chicks where she laid, but if not, put her in a safer place, and make her brood where you want her to. With the standard-bred you can do this, nine times in ten.

Where the hens lay in movable boxes or otherwise, before setting, the box should be thoroughly burned or scalded out. Fresh nesting material must be put in, and it is best to sprinkle vermin powder in this, as, if mites are not in evidence, those big lice always are, and it is the nests they hunt, to worry the hen and help make her break the eggs, for this is often why she breaks the eggs from so much uneasy moving about as she is bound to do.

When the nest is ready give the hen a thorough dusting, but don't put in the eggs until you are sure she means business, for often a hen does not at all, or else takes her time to by staying on the eggs well for a day, long enough to start the germ, then she may leave the nest for a day or night, or altogether, if you are not on the close watch, and the eggs are both spoiled for market or hatching—the latter especially, for the start must not be interrupted. Afterward, when the chick is well started, the hen leaving the nest for several hours may not hurt the chicks in the shell at all.

In about seven days go over the hen again, and this should be the last going over with most vermin powders, as too late a dusting often results in weakened or sore-eyed chicks.

When the hen comes off don't make the mistake of giving her too many chicks to hover. She cannot warm more than a good dozen at any time through cold, damp weather, or even chilly spring nights. Giving a hen too many chicks at such a time simply invites a big loss from chill. Keep her much of the time tight in her coop, wherever it is—that is, at first. If let loose she is too prone to travel, even about a room given over to her, and let the chicks get too cold. If kept in a coop tight she coaxes the chicks to stay close to her,

An Aristocrat

and though they run out in the snow, t. soon scurry back to the heat.

Several Facts

One of the greatest losses to the poultry trade, so a manager of a large poultry packing house declares, is from poorly fattened chickens that come off the farms. The packers call these "ranger" chickens. Of all poultry breeding places the farm should not be the one to put out such a loss—a place where feed is plenty. The farmer who sends "rangers" to market should be ashamed of himself.

***

If you breed for a purpose, and never breed except from your strongest birds, inbreeding is not dangerous; that is, breeding from your own flock year after year; because in a large flock many are bound to be too distant in relationship to make inbreeding a menace at all. It is breeding indiscriminately, with no regard to selection for strength and difference in relationship, that works disaster.

***

One can keep a pen of the same geese for ten years. At 10 years old the goose looks young and is still producing strong goslings. Sometimes a hurt of some kind on foot or wing has been known to make her rest over one season without laying, but the next she is likely to be good as new. A goose certainly pays for itself ten times its patronage, corn and housing bill in the eggs, the goslings and the feathers it gives you to turn into hard cash.

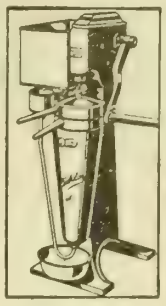
***

Hard frozen and dried eggs are used by bakers, but will soon be marketed in small packages to the household trade, thus solving the high price of fresh eggs, as well as the cold-storage corners, so says the head of the food research work in the Department of Agriculture. Frozen and dried eggs keep longer than cold-storage eggs.

Never Lost a Chick

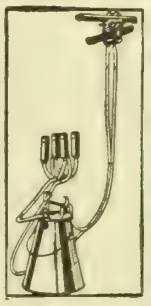
Dear Sir: For the benefit of those who have trouble raising incubator chicks, I thought my experience would be helpful. I used to have so much loss from bowel trouble or white diarrhoea. Last year I sent 50c (m. o.) to the Walker Remedy Co., D N 5, Lamoni, Ia., for their Walko Remedy, but got it too late to save all of first hatch. I gave it to my second hatch of 74 chicks and did not lose a single one, and what I had left from my first hatch did fine, growing very rapidly. Given to your chicks occasionally, it will prevent bowel trouble and you will be surprised how much more rapidly they'll develop Mrs. Wm. Hardy, Morrisonville, Ill.—Advertisement.

SHARPLES TUBULAR CREAM SEPARATOR



Patterned after the great world spinning on its axis, the revolving bowl of the TUBULAR has no fixed shaft and no fixed bearing. It is suspended by a flexible steel spindle, its weight being borne by a resilient ball bearing, permitting the bowl to run practically without rocking, with ease, smoothness and precision. Increases the centrifugal force without increasing the speed. The TUBULAR skims close, is easily and quickly cleaned, is built sturdily in all of its few parts. All gears are enclosed. It is constructed to afford a lifetime of durability and consumes little oil. Its suspension is natural and is not eccentric to its center of gravity.

SHARPLES MILKER



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The SEPARATOR CATALOG and the MILKER BOOK give full details regarding the construction and utility of these dependable SHARPLES products.

The Sharples Separator Co.
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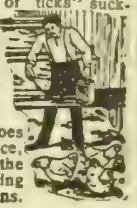
Agencies Everywhere

300 LICE Or More on One Hen



is by no means uncommon. No one would expect to fatten a steer with that number of "ticks" sucking his blood, but many expect the old hen to go ahead shelling out eggs while lice and mites are sapping her very life. We have counted over 2000 dead lice under a row of ten hens, on a roost board painted the night before with Lee's Lice Killer. This great killer does double duty—contact kills mites, lice, bedbugs, etc. about the roosts; the vapor kills lice on the chickens sitting over it. Put up only in airtight cans. For sale at over 10,000 towns.

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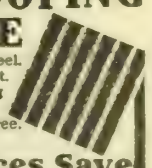

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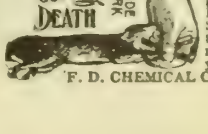

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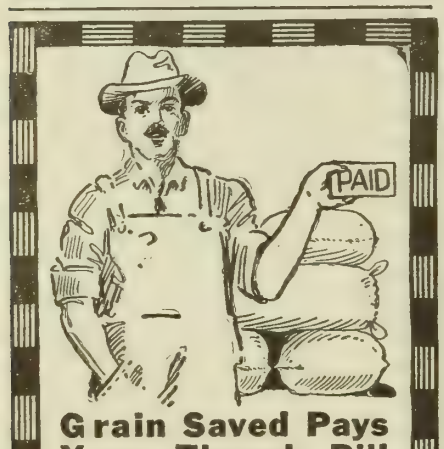

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when the Red River Special does the work. It *beats out* the grain.
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Strange Features of Life at Cerro De Pasco

By Frank G. Carpenter

CERRO DE PASCO, Peru, March 29.—I want to give you some pictures of Cerro de Pasco, the highest mining town of the world. It is situated here in the tops of the Andes on the very roof of South America, at an altitude of 14,200 feet above the sea. There are snow-capped mountains about it, and the town lies in a valley which runs north and south between two mighty ranges. The mountains are filled with minerals. There are copper and silver and vanadium within a few miles, and right under the city are great beds of ore which is almost pure copper, but with a slight mixture of silver and gold.

The great plateau, which runs north and south through Peru, contains a great part of the population of the republic. It is divided up into enormous haciendas and other lands, upon which are squatters who have great herds of cattle and sheep. They also raise some barley, and in the deep valleys that sink down into the plateau are regions growing all kinds of temperate and tropical fruits. We are here just about as far south of the equator as Panama is north of it, but at this altitude of almost three miles in the air the climate is more like Canada than that of Jamaica. There are frequent snowstorms in the winter, and at night the thermometer then goes down almost to zero. In the summer it rains in the afternoon, but the mornings are clear, and for about six months of the year the sun shines all the day through.

Cerro de Pasco, the Highest Town in the World. It is in the Tropics, but It Has Frequent Snow Storms, and at Night the Thermometer Sometimes Falls to Zero

Something of the Native Parts

I shall first show you something of the native parts of Cerro de Pasco. The town has about 15,000 Cholo and Indian residents. The most of them live in one-story houses that are made of adobe and plaster outside. The buildings are in blocks, walling the streets. They are painted in the brightest of colors. One house may be bright green, the next may be blue, and the next red or golden yellow or white. The houses have roofs of thatch or galvanized iron, that extend out over the sidewalks. There are no drains from the roofs, and when it rains the water pours down the back of your neck as you go through the streets. The sidewalks are narrow, and the principal roadways are paved with cobbles, with a gutter of slabs about ten inches wide and six inches deep that runs through the middle of the street. They do not put the gutters at the sides of the roadway as at home. The streets all slope to the center, and the sewage runs off through this gutter.

As I walked through the town. I observed that the woodwork was freshly painted, and the American who was with me told me that the law is that all houses facing the street must be painted once every two years. If they are not, the owners are fined. He said that the painting time had just passed, and therefore the city looked fresh.

Strolling up the main street we passed the principal stores. They open out on the sidewalks, and are filled with goods from Europe and the United States. I saw canned fruits from California, and salmon from Oregon, cotton cloths from Massachusetts and sewing machines of well known American makes. There were also many articles of native manufacture, such as ponchos made from the hair of llamas and sheep, rude sandals used by the Indians and shoes so clumsy that I know they could not come down from Massachusetts. Over some of the doors I noticed tassels and fringes of tissue paper. I asked what they meant, and was told that they were the signs of chicha saloons.

Some Interesting Scenes

The scenes are interesting. The crowd was typical of backwoods Peru. There were better class Peruvians, dressed as we are; there were scores of Indian Cholos or half-breeds, and there were Indian men and women who had driven their llamas in from the country about with goods and vegetables and other freight of one kind or other. There were many cargadors with great loads on their backs. Indian women and girls wearing big hats on their heads, shawls around their shoulders, and such bunchy skirts that they made me think of the song of Miss Hook of Holland, in which she tells of her petticoats, the gifts of her lovers:

I have one red petty from Peter,
And another green petty from John,
And one colored yellow, from some other fellow,
And one that I haven't got on.

I am told that neither the Cholo nor the Indian female ever changes her skirt. She puts one on and keeps it there until it is worn out. As it grows thinner, she adds others, until at last she reaches the dimensions one sees on the street. She wears her shawl and hat in house and out, and in hiring a servant it is difficult to persuade her to remove these garments while at her work.

The Indian men and boys wear ponchos and hats, with coarse suits of clothes under them that are of the same size for children and grown-ups. They have sandals, or go barefooted. The streets swarm with children. Babies are plentiful, and nearly every woman and girl has a child tied to her back. Sometimes the baby is on the outside of a burden, and it bobs up and down as the mother carries the heavy load over the road. She bends half double as she goes on a dog-trot, and covers much ground.

Women Far from Beatiful

Very few of the women are beautiful, and they all look dirty and rather repulsive. They start carrying loads while they are children, and I see girls only as tall as my waist with babies strapped to their backs. The people are very strong, and the men can carry enormous weights up hill and down. Their chief strength is in their backs and their loins. They are weak as to their arms; and have to get under a load in order to carry it. I saw eight of them trying to move a piano. They would not raise it with their hands, but tied ropes to the legs and then pulled on the ropes over their shoulders until they were able to life the piano to their backs. After that they trotted on up the hill.

Cerro de Pasco has a plaza, about which the chief buildings face. There is a church at one side, and as I went through I saw here 150 llamas lying down on the stones and resting. Each beast had a package of ore strapped to his back; they had probably come in from the mines and were on their way to the smelter. They will carry merchandise to the homes of their owners. As I looked, some of the llamas got up. They rest very much like camels, putting their knees under them and sitting flat on their bellies. The most of the beasts were chewing their cuds, and I could see their jaws moving back and forth, showing the teeth. Some of the llamas were as white as snow, others were brown and white and yellow, being spotted like a calico pony. The animals look somewhat like an ostrich. They are as observing as a fox terrier and turn their heads this way and that for every new thing in sight. Their wool looks like that of the Angora goat, but it is coarser. It is used chiefly by the natives, and is not exported.

A Visit to the Outskirts

Taking ponies in company with Mr. J. T. Glidden, the assistant superintendent of the Cerro de Pasco mines, I rode through the city, visiting the outskirts and some of the native mines. Cerro de Pasco is situated on a great shell of rock, from beneath which several hundred millions of dollars' worth of silver and vast fortunes in copper have been taken, and from where they are taking millions more now. The streets and back yards are honeycombed with mine holes, many of which belong to the natives. The Americans have bought what they could, but some of the miners would not sell. They keep on burrowing away, taking out the ore by old-fashioned methods and carrying it to the surface in rawhide sacks, laced together with thongs. There are mines of this kind in the midst of the houses, with people living so close that a baby crawling out of doors might fall into a mine and stay there until one of the Indians brought up a load. Here and there are the remains of the great mines of the past. There have been frequent caveins, and if the buildings had anything like the weight of our houses it is probable that the whole town would drop down into the mining excavations below.

Today the prosperity of Cerro de Pasco, and, indeed, of this whole mining region, is dependent upon American capital. The Americans have already paid out millions, and they are now spending thousands of dollars a month for wages and native supplies. They are employing 8,000 or 10,000 people, and the money they spend goes from here out to the villages of the high Andes and down into the Chaucho Mayo valley, as well as to Oroya, which is situated seventy-five miles from here at the other end of the Cerro de Pasco road. The freight supplied by these mines is the chief support of the Central railway, which comes over the mountains to Oroyo, and in fact the mines have added largely to the prosperity of all Peru. Much of the millions of the original purchase went to Lima, and the present outlay affects many people.

The American company pays higher wages than any other institution in the republic, and it works its men on shorter time. At present the working day is eight hours; and the ordinary wage for natives as about 75 cents per day. It ranges from that up to $200 per month, which is the amount paid to some of the Peruvian foremen.

In addition the company is building home for its native employes. It has two classes of houses, one of adobe and another of brick. The rent is a nominal one of 50 cents per month. This is charged in order to keep hold of the property, for if it furnished rent free the native would

think he owned it and would sue the company on the slightest pretext.

The foreign colony here is quite as interesting as that of the native. Here at a distance of more than 3,000 miles south of the United States, almost three miles above the sea, is an American industrial center. I call it American, for it is run by American money, but in fact the foreign employes come from all over the world. We have Australians, Germans, Austrians, Irish and Danes. We have graduates from the Boston technical, of McGill college in Canada, and of the leading universities of Germany, and, in short, the experts of a half-dozen different nations. The manager of the mines and two of the doctors are Canadians. The head of the company hotel at Cerro de Pasco is Mr. Tocci, an Italian, and the manager of the hotel at the smelter, seven miles off, is a Mormon, Mr. Spillsbury, whose native home is Salt Lake City. Mr. Spillsbury is a strawberry blonde, with hair of bright red. The natives find his name hard to pronounce, and so they call him "El Gringo Rubio," which means the red gringo. The manager of the mines is Mr. W. T. Hamilton, who made a reputation in the far west, and who is said to receive here a salary two-thirds as large as that of President Wilson. All of these men are well paid. They are employed on contracts of two years, and it costs $300 or more to pay their traveling expenses from the United States to the mines.

Many of the foreign employes have their wives and families with them, and so far I have not met a man or woman who is not pleased with his or her lot. The company does everything it can to make life agreeable, and the people live almost as well as at home.

Maintain Modern Hotels

In the first place, both the smelter and the mines have hotels built of stone, with bathrooms and all modern conveniences, put up for the employes who are bachelors. They get room and board for $25 per month. The married employes have comfortable stone cottages, and they can buy their foreign supplies at the company store. At both La Fundicion and Cerro de Pasco there are clubhouses, with libraries and reading rooms supplied with the latest magazines and papers and also bowling alleys, billiard halls and rooms for entertainments and dances. They have tennis courts, where they play matches, and base ball grounds, where the smelter employes sometimes contest with those of the mines on the diamond. In addition to this there are pony riding into the country and excursions to the tropical valleys. The foreign settlement has a creditable monthly magazine, the Inca Chronicle, edited by A. E. Swanson, which has the distinction of being published nearer heaven than any other periodical on earth. It has also a hospital with expert physicians and trained nurses, and when the men are sick they are well cared for or are sent "down the hill." The words "down the hill" and "up the hill" mean to and from the sea coast. The distance is about 200 miles by railway, and the hill from which they drop or ascend is above the top of Pike's Peak.

Acclimated Foreigners Healthy

Most of the Americans and other foreigners who live here in the Andes tell me they are healthy, and that this is so of men, women and children. There are, however, some who come who cannot stand the rarity of the air, and many are afflicted with pneumonia and have to be sent back posthaste on special trains. I know of employes who have come up three or four different times, and, going down sick, have at last had to give up in despair.

As to soroche, or the mountain sickness, that seems to attack everyone when he first reaches an altitude of two miles or more above the sea. Every foreigner I have met has been more or less afflicted with it. It usually comes the first day after his arrival, and may last two or three days or two weeks. Those who have weak hearts are likely to drop insensible, and it sometimes causes death. As a rule most people get over it, although it will return at any overexertion or imprudence, and that after months of freedom and health.

The first symptoms of this illness are pains in the head and nausea. Then comes vertigo, dimness of sight and hearing. Fainting fits may follow, and the blood may flow from your eyes, nose and lips. Those who have weak lungs are liable to hemorrhages, and many tell me they have a pain at the heart. I had my first atack fifteen years ago, when I stayed over night at the Casapalca smelter, which is less than 14,000 feet above the sea. I thought I was safe at Cerro de Pasco, although it is 200 feet higher, but the morning after my arrival, after a sleepless night, I felt as though the top of my head was being pried off with a crowbar, while a steam engine was running away inside my brain. When I tried to get up I almost fainted, but I persevered, and that afternoon I was able to go about by resting every few steps. As it is now, my boots are heavy and my five-pound camera weighs a ton. In riding my mule over the mountains this afternoon I made him go on the walk, and when he once started to gallop my heart seemed to be hitting the crown of my head.

The soroche attacks different persons in different ways. My stenographer had a slight attack when we reached the smelter, but this soon passed off and he thought he was proof against further trouble. He walked six miles that day and then spent an hour in the club bowling alleys. At the same time he ate like a Virginia razor-back hog, and the result is that he has now a beautiful case of soroche. He is the color of Canadian cheese, he does not take three steps without resting and he loathes all manner of meat. A man named Cutler, who came with me says that his head began to ache during the night, and his pulse jumped to 120. The soroche affected his feet and they kept rising and falling under the bed clothes. A young mining engineer who came here last week to take charge of the big Morocha copper property was met at the depot with horses and he galloped about a mile to the mines. This sent his pulse to 120 and he was kept in bed for a week. Growing no better, he went down to Lima to spend a while on the coast. On his way back he will stop at Matucana at the 8,000-foot level, and then take easy stages higher up to the mines.

Cause of Soroche

I have talked with the doctors here as to the cause of the soroche. They say it comes from the rarity of the air and the lack of oxygen in the amount of air taken in by your ordinary working machinery. The system has been accustomed to a certain percentage of oxygen with each breath. You breathe just as fast here as at the coast, but you get less oxygen, and as a result your blood becomes impure and there is a loading up of refuse here and there throughout the body, causing auto-intoxication. This goes on until finally you have the soroche. If it is in your head you have headche, if in the stomach nausea, and if in the bowels you have diarrhea. The pressure is very much less here than at the seacoast. At Lima it is about fifteen pounds to the square inch and here it is less than nine pounds. It is so light that it effects everything. It takes six minutes to soft-boil an egg, and you may boil beans all day and not have them cooked through.

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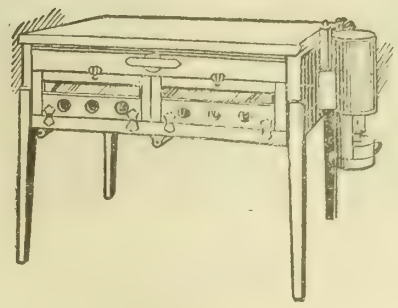

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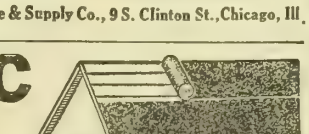

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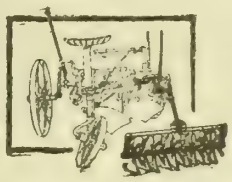

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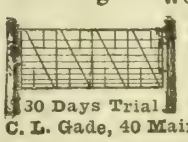

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Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Paris Green for Cabbage Worms

We are in receipt of a letter from the substation of the University of Nebraska at North Platte, questioning a statement recently made. The letter reads as follows:

In your issue of March 14, page 21, I notice that "G. L." writes an inquiry about using paris green, one pound to ten gallons of water for cabbage and cucumbers. Is not this an error in print? I have always considered one ounce of paris green sufficient for cabbage worm. It seemed to me that your attention should be called to this, as it might possibly be misleading to those intending to spray for cabbage worm.

We did not recommend spraying cucumbers with this spray. The question asked was in reference to two short paragraphs run in our issue of February 21, recommending dusting cucumbers with paris green and spraying cabbage with a one-pound to ten-gallon spray of the same. This was not a misprint. In support of this solution would quote from Bulletin No. 23 of the Minnesota Farmers' Library in relation to cabbage worm: "Spray with paris green, five pounds to fifty gallons of water; add enough soap to make liquid spread evenly all over leaf. The spraying may be done up to within a week of gathering. Do not use paris green as strong as this for other plants."

Single Tax Unfair

I. J., Missouri: I notice in the Twentieth Century Farmer of March 14 an article headed, "Single Tax and Land Owners." I would like the writer to inform me why taxes on land would not be higher under the single tax system. It is an evident fact that there is a certain amount of tax to be paid, and if it is taken off of all personal property it is sure to be put on real estate. So the man with the land would have to pay all the taxes, and the man with money and other personal property would sit back and pay nothing and get just as much benefit from the revenue as anybody.

As to making cheaper interest, I cannot figure out where it would have a thing to do with that. Even if it did, there is a majority of the farmers that do not have to borrow money.

Now I want to tell just what I think about it. It is a scheme gotten up by parties that own money and other personal property and want to get out of paying any tax and put the farmer's nose a little tighter to the grindstone. Now, brother farmers, beware of any such stuff. The single tax proposition is one of the most unfair propositions I ever heard of. I believe in equal rights. Let everyone pay taxes on what he has—real or personal property, just the same. It would be just as fair to tax the personal property and leave out the land as it would the other way. But the farmers never have asked that and never will. They want to tote fair. I live in Webster county, and there was not a farmer, nor very many others, that voted for the single tax here last election. Nor will they the next time you hear from them.

Barren Cow

D. J. B., Utah: I have a cow that has been to three different bulls, and to one of them several times, without results. She is in heat much more often than is natural. Is there any remedy so she can get with calf? She is past 12 years old and a fine twelve-pound-a-week butter cow.

Answer—It is difficult to say what causes your cow not to breed. There are many derangements of the organs that might have produced her present condition. If you have a veterinarian of experience in your locality he might be able to suggest some treatment, after seeing the cow and learning of her past condition. It is, however, a difficult matter to find an effective and satisfactory treatment in such cases. The fattening of the cow for market is usually the cheapest and best way out of it. A large percentage of old cows become barren. It is a fortunate thing that the fat cow and canner cow market stands ready to relieve us when they become a nuisance in the herd.

All Farmers Not Alike

H. C. M., Neb.: In reply to the hired man's article of March 21 stating that the farmer ought to use better judgment in selecting hired men, I claim there is not much selecting to do when it comes to hiring men, because good men are scarce and the good man has a job all the year around. I have hired men now for twelve years and have had some good men and more poor ones. I have had men work for me two and three years at one time, and when they got through it was not because I was putting more work on them than they could do, but because they were ready to start out for themselves. I have treated men better than myself and family and then had them quit after working a week or month without any cause at all, and just when I needed them most.

Now I differ with the hired man's article in the Twentieth Century Farmer of March 21, where he says that farmers are all alike in their treatment of hired men. I say they are not all alike. I think if he would take notice he would find as much difference in farmers as in hired men or any other class of men.

When he speaks of doing odd jobs on Sunday, I claim a hired man is entitled to Sunday the same as others. I think he was referring to the article in the Twentieth Century Farmer of March 7, where it read that the hired man would leave every Sunday afternoon and would not return until Monday morning. Now, that was a misprint; it should have read Saturday afternoon. I don't mean to say that a hired man is supposed to do jobs on Sunday, but I do think he ought to help with the chores every other Sunday, because the farmer ought to have a Sunday as well as the hired man, and the hired man expects his board on Sunday the same as on Monday. From the way this man speaks in the issue of March 21, I think he is a pretty good man, and the farmer loaded too many extra jobs on him, if they were regular jobs; but if this hired man thinks all farmers are alike, he is mistaken.

As a rule the hired man is the most independent of all men. He sets his own wages and tells the farmer what he will do and what he won't do. Now, I don't say they are all that way, but most of them are that way. I think Mr. A. M. T.'s proposition is all right for most of us that try to farm too much land, but if very many of us went into the dairy business we would put the price of butter and cream down so there would not be much in it, because it is low enough now—too low for the price of cows and feed. I have kept stock of my own, and some of my neighbors that are milking from ten to twenty cows all claim that there has been no profit in it this winter at all, especially those

that made butter. Those that haul their milk to the creamery are a little better off than those that do not. When a milch cow is worth around $100 and feed and labor as high as they are now, and butter 18 and 20 cents at the country stores, and milk $1.30 per hundred, which is all we can get this winter, why, in that kind of business there is a good chance to lose money. Of course, you can get your place in better shape by keeping more cattle, for that is what all these farms need that have been grained to death.

The different articles appearing in the Readers' Exchange from farmers are interesting to me, and many are profitable to farmers that will take notice, and I thank you.

Note—The subject of marketing farm products in an economical manner is, it seems to us, far more important at the present time than that of raising more and better crops and improving our live stock. Our correspondent says they cannot get over 18 and 20 cents for butter. The consumer has been paying from 30 to 40 cents for butter all winter. It certainly would be profitable if someone would take notice and think out and put into practice a way whereby the producer might get a fair price for his products. The real incentive to increased production is what the producer can get for his products. Farmers have too often made the mistake of looking to legislation for relief. What is needed is practical co-operation and the use of business methods. Investigation shows that only 46 cents of the consumer's dollar ever reaches the producer. It is time for the farmer to study how he can get his products to the consumer without paying tribute to unnecessary middlemen.

Clearing Timber Land

H. S. B., Nebraska: I want to tell you how I cleared up seven acres of stump land on my farm that I considered of not much value. We had cut the timber all off, leaving the stumps about twenty-four inches high. We burned the brush and then went in with a puller. I ordered the next to the largest puller I could get, as there were some large stumps, as well as a number of small ones. It took us six weeks in all, from trees to stove wood. Then, last year I planted the land to corn, and it grew fast until it began to tassel, when the hot weather caught us. I got some corn, but not very much.

There are four or five different sizes of pullers. I used mine on stumps from four to twenty-four inches across on the ground. I used it single power on the small stumps and double power on eight or ten-inch ones and triple power on the large stumps. It pulled every stump I put the cables on. I used a 1,000-pound team and it was easy for the team. I used it on oak, ash, walnut and elm, and the oak pulled hardest because they have a tap root that goes straight down in the ground. I remember one oak stump I pulled had a tap root nine feet long. We could work on side hills or anywhere. The machine I had was sold on a three-year guarantee, the seller agreeing to pay all breakage except the cables, providing you go according to directions sent you. I considered the land with stumps worth nothing, and today it is the best land I have.

Asked of Our Readers

C. U., Nebraska: I like your paper better every issue. It has more interesting points than any others, especially your Readers' Exchange. It would please me if you could find space in your good paper to print these questions: Does cement crack on the sides of a pit silo? Would like to hear from some subscribers that have a silo in or on the ground through your paper. How can a person tell a cow has tuberculosis without having a veterinarian test her? What does it cost to have a cow tested? Do you know of a remedy that might help a horse that has the heaves? He is 11 years old and weighs 960 pounds. Have tried several different remedies, but they don't cure him. He coughs after a drive. I am feeding bright corn fodder and oats. Oil of tar seems to help the cough, but wouldn't cure the side movements of the stomach that goes up and down.

Note—We have answered these questions at one time or another in our columns, but, like the writer, would be glad to hear from the readers on these questions. Veterinarians' prices differ in different localities. What is your experience? Some farmers test their own cattle, but in making the test a temperature chart must be kept and certificates permitting interstate shipment must be signed by a qualified veterinarian.

Stick to One Variety

L. F., Missouri: I wish to write you some of my observations on poultry raising. I notice one great drawback to so many farmers is that they attempt to raise two or three or possibly half a dozen different varieties of poultry at once. You will notice in passing farms that you will often see turkeys, geese, chickens and possibly ducks. There is no farmer or his family that can give all these varieties proper attention at the same time, and the result is that they make very little profit, if any, to their owner.

I have raised chickens for several years, but I never made any money at the business until I sold off all my scrub stock and got some pure-bred Brown Leghorn chickens, and the more and better attention I give them the greater are my profits, which for the last year have amounted to 300 per cent. I personally prefer the Brown Leghorn to all others, although the white is more frequently found on successful poultry farms, but where there is timber they fall too easy a prey to foxes, skunks and small animals like that to be profitable to raise.

But the best and finest chickens will not give satisfaction unless the keeper gives them the very best of attention. If he does not, he might as well keep mongrel stock. By keeping in touch with the leading thought of the most successful poultrymen, through the best farm papers and the various experiment stations and the United States department, much can be learned.

Calf Crop of Vital Importance

(CONTINUED FROM PAGE FIVE)

ment in cattle, in breed and in quality must commence with the calf. The feeder who takes into his feed lots the immature steer is interested in his ancestors, for through his lineage he has some assurance of his development into a profitable beef. The commission man, through whose hands he passes on his way to the packer, is interested, because he has a pride and ambition to sell his consignments at top prices, and he looks for these from the well bred, thrifty calves of good parentage. The packer is interested because a good beef carcass is always in demand at a price that needs no recommendation. The man at the retail counter is interested because he delights in a quality of meat that needs no apology or excuse for its appearance.

The calf crop is the key to the whole cattle and beef situation. The extent of the calf crop determines the supply of cattle; the quality of the calf crop determines the character of beef supply it is possible to produce. The importance of the calf crop plainly demands a better system of general conditions than now exists in the common breeding herds. The percentage of increase can be raised a fourth to a third and a much higher standard obtained for the cattle quality of the country.

The present prospects for a successful crop of calves for 1914 could scarcely be more encouraging over a very large district of the cattle-producing country. This is due largely to the open winter, the lack of storm and severe cold and general conditions of an abundance of feed to keep the cow stock in a thrifty and healthy condition, but spring storms of rain and snow may interrupt the most flattering outlook.

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South Omaha, Neb., Tuesday and Wednesday, April 14 and 15, 1914

In this combination sale there will be ten head from the noted Shadeland Park head, which completes the entire dispersion of this great herd of cattle. A choice string of **good, big, rugged bulls of serviceable ages.** Klaus Bros. of Bendena, Kan. are consigning a choice bunch; Jesse Engle & Son, of Sheridan, Mo., are putting in some of their best cattle, and twenty-eight head come from the herd of A. W. Elliot, of Reynolds, Ill. Other consigners are Binger & Son, Callaway; W. E. Stryker, of Rising City; Fooke, of Ludell, Kan.; R. P. Clark, Brayton, Ia.; Tim Neuhoffel, Central City; E. Winder, Tilden, Neb.; Guy Schwab, of Murray, Iowa, and others. For catalogue address

100 Head **60 Bulls** **40 Females**

W. N. ROGERS, Sales Manager,

Col. Kraschel; Col. Zaum, Aucts. McCOOK, NEB.

HOLSTEIN CATTLE

Holsteins at Auction

INDIANAPOLIS, IND., APRIL 13, 1914.

40 Head Very Best Young Grade Cows. 75 Registered Cows and Heifers. 40 Head With A. R. O. Records.

Cows with records up to 30,648 butter, 677.3 milk in 7 days. 37.818 butter and 1,400 milk in 30 days. Daughters of Sir Pontiac Korndyke, grand-daughters of King of the Pontiacs, Pontiac Korndyke and King Walker. Cows in calf to a son of King Walker and Count of the Pontiacs.

The Sale Will be Held at ZELDEN RUST FARM.

3 miles S. E. of Indianapolis Court House. Shelbyville Interurban cars come within ¼ mile of farm. All cattle over 6 months will be tuberculin tested by State Veterianarian and none affected will be offered. Catalogue gives full particulars and terms of sale. Send for copy today, mentioning Twentieth Century Farmer.

C. M. BOTTEMA, R-1, Indianapolis, Indiana.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

Purebred Registered

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Large sums are put into land, buildings, horses, machinery and labor in order to maintain cows that are utterly unable to return a profit.

On a dairy farm the efficiency of the herd should be the first consideration. With good purebred Holsteins you are sure to earn a generous profit on any intelligent investment of your money, time and labor.

After the cost of her feed is deducted a good Holstein will return a profit of $60 to $100 per year in addition to a valuable calf.

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50 Mammoth Jacks and Jennets

A lifetime experience in breeding the large, thick, big-boned, good head and ear kind and that produce the good Missouri mule. Two extra good black Percheron 4-year-old stallions.

G. M. SCOTT, Rea, Mo.

MULE-FOOT HOGS

Blue Ribbon Mule Foot Hogs. Largest herd in U. S., the most hardy, prolific, healthy and quick growing breed; they bring top prices on market; for breeding buy the best and start at the top; 350 for fall. Ike Dunlap, Box 406, Williamsport, Ohio.

HORSES AND MULES

Kodak picture of my jet-black coming 3-year-old Percheron stud, from 2200-lb. imported sire and 1900-lb. imported dam. I have 9 coming 3-year-old studs, 11 coming 2-year-old studs and 6 coming 4-year-old studs. Jet blacks and rich dark grays. Big for their age, one weighs 2110 lbs., one 2160 lbs. and a yearling 1740 lbs. Registered Percherons and straight sound. You cannot get better money-makers. Foaled and grown on the farm and offered at farmer's prices. Intelligent headed colts that have had kind attention, a boy can handle them. Just east of Omaha.

FRED CHANDLER,

Route 7. Chariton, Iowa.

Review of Live Stock Market

By A. C. Davenport

THE cattle trade of the country has assumed a condition that is about as unsatisfactory from a seller's standpoint as could well be imagined. To be sure, a few of the choicest corn-fed steers are selling up as high as any time, but these cattle are few in number, being scarce at all the big market centers. On the other hand, the great bulk of the common to pretty good cattle has been steadily and rapidly working lower during the last two weeks or more. Many of these cattle are 40@60c lower than at the beginning of March.

Cause for dissatisfaction is not limited merely to prices, but embraces other features of the trade of almost equal importance. Sellers are complaining as loudly regarding the lack of demand as they were of ruling prices. For the last two or three weeks it has seemed every day as if packers cared very little whether they secured any cattle or not, the trade being a drag from start to finish. Sellers have not only been forced to lower prices, but have been compelled to beg packers to take the cattle even at reduced figures. It has seemed as if every particle of life and snap has been taken out of the market. Everywhere conditions have been the same, the big markets being as dead as the little markets.

Selling interests have been unable to fathom the cause or to understand what it all means. The prominence given to Argentine beef by the packers and the fact that it has been sent to the heart of the cattle feeding country, shipments having come as far west as the Mississippi river, has led some cattlemen to believe that the packing interests have simply been making a tremendous raid on the market for the purpose of getting prices down more nearly in accord with their ideas of values. In other words, to get the market on live cattle so low that beef can be sold profitably at a price that will increase the consuming demand. Others are inclined to take a more serious view of the situation, regarding it as the natural outcome of unfavorable industrial conditions that have caused a shrinkage in the amount of beef consumed and that the importations of beef, by increasing the supply at the big consuming centers, has tended to still further limit the demand for the American product.

Whatever may be the cause or causes, the fact remains that a general feeling of discouragement is noticeable among western cattle feeders. The stock that they placed in their yards last fall cost more money than ever before, and after feeding high-priced corn and hay the cattle are not bringing enough to justify the labor and expense of fattening. How long such conditions can prevail no one is prepared to say. Those cattlemen who figure that the depression in the market has been brought about through raiding by the big packers figure that the trade will take on a more active condition as soon as the raiders have accomplished their object. They figure that cattle are still running behind last year's record, there being a falling off at six market points since the first of January of 160,000 head. This, according to their theory, means a lighter supply of cattle in the country than last year, and the most hopeful still believe beef cattle will be scarce enough to again force prices upward. They are advising cattlemen to keep their nerve and not be frightened into sacrificing their stock on a low market when no one seems anxious to buy. It is an old market adage that one can take a loss at any time, and if the cattle on feed would lose money at present prices it would be better to hold them until later in the season and take the loss then, with the possibility that the market might be higher.

Values in the hog market have been swinging up and down at quite a lively rate during the last week or two. Early last week prices bounded upward, touching the highest point reached thus far this season, then the market declined just as rapidly as it had advanced until it was clear back to the low point of the previous week. The buying demand has been very good and that fact may be taken as accounting for the high spots in the market. On the other hand, the low points have been due to unexpectedly large receipts. The truth is, receipts of hogs have been very much larger than anyone expected, so large in fact that the shortage in totals at the eleven big markets, as compared with a year ago, has been largely wiped out. One or two days' runs at any one of the larger markets would be sufficient to make up all the decrease that has taken place since the first of the year. This of itself is a bearish influence that has had a great deal to do with holding the market down so that current prices are at present writing 40@50c lower than at this time last year. The bulls, however, point with glee to the fact that hogs right now are the highest that they ever have been in March, with the exception only of 1913 and 1910. Viewed from this standpoint, sellers have very little fault to find with the market, and hog producers are as a rule well satisfied with existing conditions.

The bears in the trade are anticipating that the April report will show an increase in the visible stock of provisions, which would have a still further bearish influence on the trade. The bulls, while admitting that receipts have been very much larger than they had anticipated, are still confident of the future, believing that hogs will continue to bring good prices throughout the season. They are basing their belief largely on the assumption that present large receipts of hogs will begin to grow less before many weeks roll by, but as yet there are no visible signs of such an occurrence.

Feeders of sheep have not been any too well pleased with the market this year to date. They paid very high prices last fall for their feeder lambs and the fat lambs, while bringing good prices, have not sold high enough to make their profits entirely satisfactory. During the last week the market has shown decidedly more strength and sellers have been very much encouraged, although the best lambs are still selling 75@90c lower than the tops a year ago, with ewes around 25c lower. Considering that receipts for the year to date at the six markets have shown an increase of 360,000 head since the first of the year, it must be admitted that the market on both sheep and lambs is fully as good as anyone could reasonably expect.

At House Cleaning Time

(CONTINUED FROM PAGE THIRTEEN)

freely, then rubbing off the surplus, and, lastly, polishing with a soft rag; nothing is much better than an old, black stocking, as it leaves no lint. A good polish that also cleans the furniture is made of equal parts of sewing machine oil and gasoline.

Painted floors can be beautifully cleaned with this preparation by using a mop made of old black socks or hose. This takes up all dust and leaves the paint fresh and new looking, and not dingy like when water is used. If matting has become worn, it is much improved by painting, but there must be much varnish in the paint to get the right effect. This is true also when freshening willow or wicker chairs, and, by the way, fix up some of the old chairs for porch use, so that they may be left there and not dragged from the other rooms. Live outdoors as much as possible and you will not have to spend so much time cleaning, and you will have more good of the spring and summer.

CENA S. CORNMAN.

Missouri.

Duroc - Jersey BRED GILTS FOR SALE—With length, bone and quality. W. G. UNITT, Seward, Neb., Route No. 2.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Holsteins at Auction

C. M. Bottema, proprietor of Zelden Rust farm, near Indianapolis, Ind., will sell seventy-five registered Holsteins and forty head of choice young grade cows April 13, 1914. Thirty-three have A. R. O. records running as high as 30.648 butter and 677.9 milk in seven days; 57.818 butter and 1.400 milk in fourteen days. The catalogue gives full information and will be mailed free to those who write, mentioning the Twentieth Century Farmer.

Herefords at South Omaha

On April 14 and 15, at the South Omaha sale pavilion, W. N. Rogers will manage a combination sale of Hereford cattle. In this offering there will be about 100 head sold, sixty of which will be bulls and the others females. W. N. Rogers will put in ten head, which completes the entire dispersion of his great herd of Herefords. There will be twenty-eight head of cattle consigned from the Elliot herd of Reynolds, Ill., and he writes Mr. Rogers that he is putting in some of the very best stuff that he has ever sold. Jesse Engle & Son, the well known breeders of Sheridan, Mo., will be there with a choice bunch of cattle, and also Klaus Bros. of Bendena, Kan. There will be a choice line of good, big, husky, serviceable bulls, carrying good pedigrees and good individuality. There are some herd bull prospects in this offering, and breeders looking for good, useful stuff will find it to their advantage to attend this offering.

Schwab's Red Polls and Durocs

George W. Schwab of Clay Center, Neb., has twenty-five bred sows and gilts to farrow in April and May for sale, also twenty summer and fall boars ready for service, also several good Red-Polled bulls ready for immediate service. Pleasant View breeding farm has had a splendid season's business in hogs and cattle, but still there are a good many good, useful animals to be sold. The sale of February 18 was a success, but, as he had a large number of gilts and sows bred for later farrow, there remains a good number to select from. Private sales since this sale have been made to Minatare, Neb., of four bred gilts, at $50 each; one to Arapahoe, Okl., same price; one to Basin, Wyo.; a splendid young boar to Memphis, Tex.; two gilts and a boar to Elsberry, Mo.; a fine yearling bull to Dannebrog, Neb.; several bred gilts and boars to points in Kansas, and a good number of prospective sales in sight. He has an order here now ready to fill for Loveland, Colo., for a boar and gilt. These gilts are mostly large for their ages, with good bone and stretch, mostly all a good, dark red color, and splendid prospect for the farrowing pen. Sows and gilts that have already farrowed have a large number of pigs in their litters and are being saved in good shape. He always has a number of good, young, serviceable boars for sale, and always pleases the buyers in quality and price. His stallions are large, all good colors and ready for business. He has some excellent blacks, dapple grays and roans, heavy weights, with quality, weighing 1,750 to 2,000 pounds, at prices that will move them—three yearling bulls that are the equal of any he has ever had on his farm; also females for sale.

Shallenberger Makes Good Sale

The sale of Shorthorn cattle held at Alma, Neb., on March 24 by ex-Governor Shallenberger of that place brought out a goodly number of breeders from Nebraska and Kansas, one of the largest local crowds we have seen at a sale in years. The offering was an especially attractive one; in fact, it was, in our opinion, one of the best Governor Shallenberger has ever sold from this herd. The demand for females seemed to be reasonably strong, but bull buyers seemed to be rather conspicuous by their absence, except on a few of the extra good ones. The top bull of the sale went to W. Watts of Clay Center, Kan., for $450. This was lot 2 in the catalogue, The Cardinal, a grandson of Imp. Scotch Bank, out of a daughter of Imp. Maud 44th. F. J. Kerkow of Scribner, Neb., was the runner-up on this bull. The top female was Maud 53d, also a granddaugther of Imp. Maud 44th. This is a beautiful roan cow, with great quality and scale. She went to Anoka Farms, Waukesha, Wis., for $390. Colonel H. S. Duncan of Clearfield, Ia., was the auctioneer and certainly deserves commendation for the admirable manner in which he conducted this sale. Below

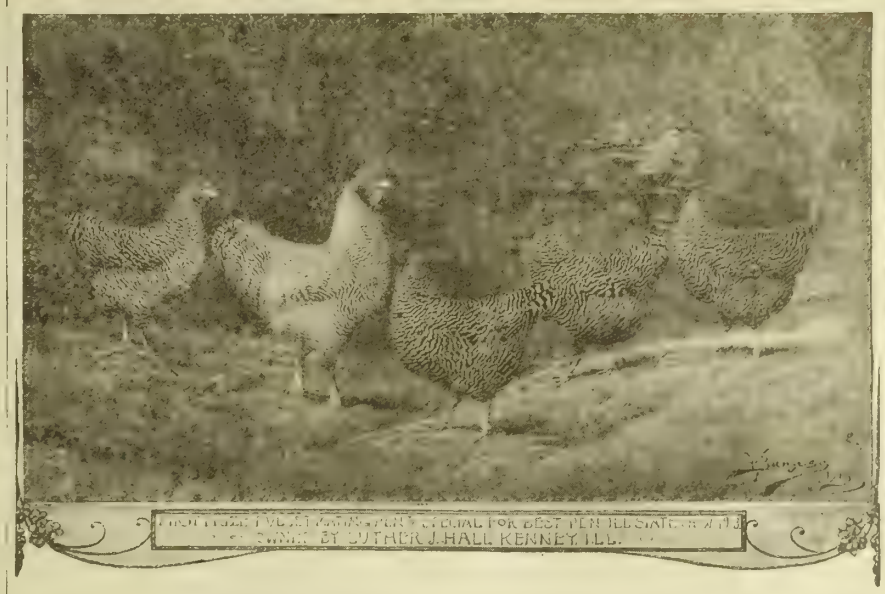
(CONTINUED ON PAGE TWENTY-TWO)

DUROC-JERSEY HOGS

DUROCS AND RED POLLS

25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed.

GEO. A. SCHWAB, Clay Center, Neb.



The above is a likeness of real farm poultry. Mr. Hall's breeding pens are filled with just such stock. They are all prize winners or from prize stock. This is the largest strain of Barred Plymouth Rocks in the world and have an unsurpassed record for layers.

GRAIN BELT BRAND
Vegetable Hog Potash

The Perfect Worm Expeller, Appetizer, Conditioner and Bone Builder.

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I'll let you try my New Improved Galloway Sanitary any way you wish. I'll send you one of my wonderful new separators, size you want, right to your farm for 30, 60 or 90 days' trial absolutely free. I want you to test it out every way you can think of. Compare it with any other machine that you know of, no matter what the price. If anybody else is trying to sell you a separator, make them let you take their machine and set it right up by the side of mine. Compare them at every point—easy running, easy cleaning, close skimming, mechanical construction, sanitary features, in any way you can think of and then keep the machine that suits you best.

If you think that there is any other separator in the world at any price that you would rather have than the Galloway, after you have given it a good, fair test, ship it right back to me at my expense. I'll agree right now to pay all the freight both ways so you won't be out a penny or under the slightest obligation if you decide not to keep the separator after having had the free trial. If you decide to keep it, I'll guarantee to save you from $30 to $50 besides giving you a separator that absolutely has no equal in the world at any price. Then on top of this remarkable offer, remember my New Galloway Sanitary is backed by a

$25,000 Bond

10 Year Guarantee—$25,000 Bond

Every single New Galloway Sanitary cream separator that leaves my factory has a straight 10-year guarantee on materials and $25,000 legal bond back of it. You take no risk of my separator not only giving you the greatest of satisfaction for a 90-day trial period but for practically a lifetime. My 10-year guarantee and my bond are printed in black and white and there are no strings tied to them. They are regular contracts that protect every Galloway customer. Accept this most liberal offer with this positive protection back of it. Don't delay. Write me now. Get my catalog and full details of my Offer. Just fill in, cut out and mail the coupon.

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My New 1914 Book shows my New Galloway Sanitary Cream separator and explains my liberal, direct from factory, plan of selling it at the lowest prices ever made on a strictly standard, high grade separator. Don't fail to get this book and investigate my new separator before you think of buying any other style or make. It's money in your pocket for it means a saving of $35 to $50 to you.

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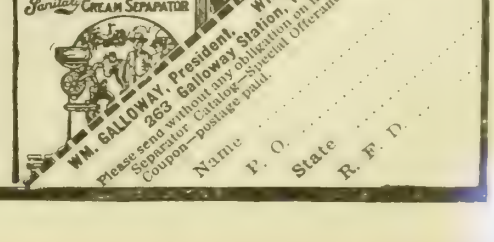

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STANDARD FAWN RUNNER DUCK eggs, $1 dozen. Mrs. Geo. Houx, Bosworth, Mo.

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INDIAN RUNNER AND BUFF Orpington duck eggs; also Light Brahmas. Circular free. Frank Healy, Bedford, Ia.

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SILVER-SPANGLED HAMBURGS—Eggs, $1.25 per 15, postpaid; $4 per 100. Chas. Voss & Son, Hubbard, Neb.

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SINGLE-COMB WHITE LEGHORN hens, 2 years in flock, blue ribbon winners, $1.50. Eggs for setting, $1.25 per 15, $7 per 100. Ivar Johnson, Fremont, Neb.

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SINGLE-COMB WHITE LEGHORNS of the world's best strain. Eggs, $3.50 per 100. Geo. L. Darling, Doniphan, Neb.

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BUFF LEGHORNS—ENGLISH VARIety, larger than white or brown variety; lay a larger, white egg. Eggs, $1.50 per 15. Particulars. E. B. Mehl, North Irving St., Fremont, Neb.

POULTRY—Langshans

BLACK LANGSHAN EGGS—CIRCular. Jake Hetrick, Wahoo, Neb.

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LIGHT BRAHMA EGGS FROM PRIZE winners at $1 per 15, $2.50 per 50. Wilhelm Andreas, Beatrice, Neb.

LIGHT BRAHMA EGGS, $4.25 PER 100, $1.25 per 15. Mary Palmer, Broken Bow, Neb.

LIGHT BRAHMA EGGS—15, $1; 45, $2.50; 100, $5. Fair hatch guaranteed or another order, half price. Frank A. John, Bedford, Ia.

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HIGH-CLASS BLACK MINORCA AND Buff Orpington eggs. Frank A. Agnew, South Omaha, Neb.

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EGGS FOR HATCHING FROM THOROughbred White Orpingtons, $1.50 per 15. Wm. Langbehn, Avoca, Ia.

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Plymouth Rocks

EGGS—BARRED ROCK, WHITE Rocks, Buff Orpingtons, White Leghorns, Brown Leghorns, Black Langshans, Toulouse geese. Mrs. Frank Davis, Holbrook, Neb.

BARRED PLYMOUTH ROCK EGGS, both matings. Pens 1, 5, $5 per 15; pens 2, 3, 4, $2.50, 15; $4.50, 30; farm range, $1 15; $5, 100. Circular free. G. W. Feuerstein, Fremont, Neb.

BARRED ROCKS, CHOICE PEN—Eggs, $1.75 per setting. Mrs. Will Brown, Fairmont, Neb.

BARRED PLYMOUTH ROCK EGGS from greatest prize winners of Nebraska. J. W. DeVore, Valley, Neb.

A FEW GOOD RINGLET COCKerels for sale. Eggs, both cockerel and pullet matings. Satisfaction guaranteed. D. N. Emig, Fremont, Neb.

BUFF ROCK EGGS—SIRES SCORED over 90—$1 for 15, $4 per 100. Mrs. Roy McClimans, Burwell, Neb.

BARRED ROCK EGGS—$1, 15; $5, 100; specially mated pen, $2.15. F. G. Selden, Rising City, Neb.

RINGLET BARRED ROCK EGGS from fine pen and range flock. Jos. V. Beran, Verdigre, Neb.

BUFF ROCK EGGS FROM STATE Fair and Lincoln winners, $5.50 per 100. R. E. Thompson, Normal, Neb.

POULTRY—Plymouth Rocks

PRIZE-WINNING BARRED ROCK eggs; cockerel matings, $2, 15; farm range, $1, 15; $2, 30; $3, 50; $5, 100. Mrs. Geo. W. Schulz, Yutan, Neb.

BEAUTIFUL GOLDEN BUFF ROCK eggs for sale. Carefully selected from farm-raised stock; 15 for $1.50 or 100 or $6. Address Mrs. J. E. Harding, O'Neill, Neb. R. 1.

PARTRIDGE PLYMOUTH ROCK eggs for sale—$3 for 15 eggs. A. G. Burbank, Cordova, Neb.

BARRED ROCKS EXCLUSIVELY—Choice, pure-bred stock; 100 eggs, $5; 50, $3. Safe delivery guaranteed. Adam A. Weir, Clay Center, Neb.

BIG PRIZE-WINNING WHITE Rock eggs. W. W. Liebhart, Nemaha, Neb.

EGGS—FARM RANGE AND PEN—Barred Rocks. Prices, $1 to $2 per setting, $4 per hundred. Will Loebe, Stanton, Neb.

CHOICE BARRED ROCK EGGS FOR hatching. Mating list free. Arthur Gillette, South Omaha, Neb.

BUFF ROCK EGGS, $1.50 PER 15, $5 per 100. Free range. S. H. McNeely, Cedar Vale, Kan.

BARRED PLYMOUTH ROCK EGGS—Best quality stock. Davis Bros., Lincoln, Neb.

WHITE ROCK EGGS—$1.50 PER 15, $5 per 100. Mrs. Harry Butler, Bellwood, Neb.

HILLCREST—BARRED ROCK EGGS, 15, $1; 100, $4; Indian Runner duck eggs, 13, $1. Also some fine cockerels. D. T. Gantt, Crete, Neb.

EGGS—BARRED PLYMOUTH ROCK—Grand champion sweepstake Iowa State show. Free catalogue, showing real photos, champion winners, price of eggs. A. D. Murphy & Son, Essex, Iowa.

EGGS FROM CHOICELY MATED pens—"Ringlet" Barred Rocks, "Golden" Buff Orpingtons, Silver Campines, $3 per 15, $5 for 30. Archdale Farm, Fremont, Neb.

BARRED PLYMOUTH ROCKS—ADD weight and vigor to your flock. Note my prices. Eggs, 30, $2; 50, $3; 100, $5. Postpaid within second zone. Margaret Powers, Route 2, Palmer, Neb.

JOHN CROFTON, THE BUFF ROCK man, Dorchester, Neb., sells 100 eggs for $5.

Rhode Island Reds

EGGS FOR HATCHING FROM SINgle-comb Rhode Island Reds, $1, fifteen; $5, hundred. Mrs N. Brodahl, Box 3, Wahoo, Neb.

ROSE-COMB RHODE ISLAND RED eggs, $1 per 15, $5 per 100. A. L. McPherson, Craig, Neb.

SINGLE-COMB RHODE ISLAND RED eggs from Reds that are red. J. W. DeVore, Valley, Neb.

L. A. WHITTEN—ROSE-COMB Rhode Island Reds, state winners. Eggs and day-old chicks for sale. Prices in reach of all. Send for mating list. Fairmont, Neb.

SINGLE-COMB REDS—LARGE, dark, even color; heavy layers. Egg circular free. Scott Covalt, Box O, Council Bluffs, Ia.

Breeders' Notes

(CONTINUED FROM PAGE TWENTY-ONE)

will be found a list of the sales, also the names of the purchasers:

BULLS

Lot No.	Price.
1—Thomas Andrews & Son, Cambridge, Neb.	$360
2—W. Watts, Clay Center, Kan.	450
3—Peter Martin, Royal, Kan.	215
4—Andrew Peterson, Huntley, Neb.	170
5—D. H. Mayden, Riverton, Neb.	145
6—F. B. Kerr, Farnam, Neb.	165
7—A. Lauderman, Orleans, Neb.	160
8—O. Hull, Alma, Neb.	125
49—John Dunlee, Orleans, Neb.	160
52—J. B. Coffrey, Orleans, Neb.	130
53—J. S. Williams, Edson, Kan.	145
54—James Wilson, Moorefield, Neb.	225
55—H. W. Cramer, Orleans, Neb.	120

COWS

12—Anoka Farms, Waukesha, Wis.	390
13—E. Colson, Fremont, Neb.	310
14—H. E. Wilde, Grafton, Neb.	170
15—Wm. Kiskalt, Central City, Neb.	295
16—E. Colson	285
17—Geo. Allen & Son, Lexington, Neb.	300
19—Wm. Kiskalt	275
20—W. H. Harper, Bennett, Neb.	170
21—F. B. Kerr, Farnam, Neb.	230
22—John H. Caldwell, Edgar, Neb.	305
23—W. C. Reed, Stockville, Neb.	165
24—H. H. Kuper, Humboldt, Neb.	260
25—Byron Perry, Alma, Neb.	195
27—W. C. Reed	240
28—S. B. Amcoats, Clay Center, Neb.	200
30—Blank Bros. & Kleen, Franklin, Neb.	180
31—W. C. Reed	175
32—Geo. Allen & Son	135
33—Geo. Allen & Son	175
34—Cosgrove & Son, Farnam, Neb.	95
35—James Wilson	125
36—John H. Caldwell	200
37—F. B. Kerr	150
38—Wm. Gregory, Alma, Neb.	115
39—Leo Beninghoven, Omaha	200
40—Leo Beninghoven, Omaha	150
41—W. H. Harper	165
42—Leo Beninghoven	200
43—J. S. Williams	110
44—D. H. Mayden	115
45—Joe Webber, Orleans, Neb.	140
47—D. H. Mayden	100

Thirteen bulls brought $2,380, an average of $184; thirty-two cows brought $6,440, an average of $201; forty-five head brought $8,820, an average of $196.

North & Robinson Sale

The sale of draft horses held at Grand Island, Neb., on March 19 and 20 by North & Robinson of that place brought out a splendid crowd of horsemen from Nebraska and surrounding states. The lineup of horses offered in the sale was one of the very best we have seen in years, especially the stallion end of it. The prices paid were not quite what could reasonably have been expected, considering the quality offered. However, North & Robinson fully demonstrated in this sale, as they have in the past, that every animal that came into the ring was sold for the high dollar. The top of the sale was $1,750, paid by Sample Bros. of Belgrade, Neb., for the splendid 2,200-pound imported Percheron stallion, Kaneton 97344. Below will be found a list of those sold, together with the name of purchaser and price:

STALLIONS.

Lot No.	Price.
1—Sample Bros., Belgrade, Neb.	$1,750
2—Skoag & Reed, Holdrege, Neb.	1,000
3—Coon & Carleson, Shelton, Neb.	950
6—H. W. Burkett, Lewiston, Neb.	570
7—E. G. Seward, Wauneta, Neb.	560
11—H. W. Burkett	385
12—Skoag & Reed	900
13—J. O. Simpson, Parks, Kan.	575
14—Peter Geerson, Palmer, Neb.	1,500
15—Skoag & Reed	300
16—J. W. Swanson, Smithfield, Neb.	325
17—Van Syoc & Ryon, Wauneta, Neb.	85
39—Geo. Carter, Hastings, Neb.	395
42—Henry Beck, Litchfield, Neb.	480
44—A. J. Carleson, Loomis, Neb.	1,130
50—J. W. Johnson, Loup City, Neb.	710
51—A. B. Patterson, Denver	395
53—John Harrison, Indianola, Neb.	490
54—Henry Beck	480
56—Skoag & Reed	300
57—W. R. Hankin, Ravenna, Neb.	

MARES.

18—Henry Beck	440
19—H. W. Burkett	405
20—Fred W. Sawyer, Brewster, Neb.	675
21—Skoag & Reed	610
22—Henry Beck	500
23—Raymond Bros., Dalton, Neb.	445
25—Henry Beck	550
26—M. B. Sheldon, Ansley, Neb.	475
27—Henry Beck	300
28—August A. Junge, Benedict, Neb.	420
29—Henry Beck	500
31—W. H. Kerr, Tekamah, Neb.	440
32—M. M. Medbery, Fullerton, Neb.	325
33—Henry Beck	505
37—E. F. Eberly, Hampton, Neb.	220
38—E. F. Eberly, Hampton, Neb.	150
41—Henry Beck	325
45—H. D. Reed, Holdrege, Neb.	450
48—John McCutcheon, Abbott, Neb.	330
58—W. C. Muirhead, Bradshaw, Neb.	345
59—W. C. Muirhead, Bradshaw, Neb.	345

Twenty stallions brought $13,310, an average of $667; twenty mares brought $8,140, an average of $420; forty head brought $21,750, an average of $544.

The Market Place

FOR THE BUYER AND SELLER

POULTRY—Rhode Island Reds

I GUARANTEE MY EGGS ARE 85 per cent fertile—Rose-Comb Reds—vigorous, hardy stock and great layers; $1 for 15 or $5 per 100. A. H. Baker, R. F. D. 2, Benson, Neb.

SINGLE-COMB RHODE ISLAND RED eggs from pure-bred stock—$1 per 15, $5 per 100. Mrs. Chas. Kellett, Waterloo, Neb

SINGLE-COMB REDS—THIS ADVERtisement will be accepted for $1 on $5 order of eggs from my Single-Comb Reds—$2 and $4 per 15. A. L. Hepp, Greeley, Neb.

ROSE-COMB RED EGGS FROM GOOD stock, $3.50 per 100. Glen Wilson, Blair, Neb

ROSE-COMB REDS—LARGE, DARK red; heavy layers. Mating list free. C. E. Datesman, Council Bluffs, Ia.

Wyandottes

BEST STRAIN GOLDEN AND WHITE Wyandottes. Eggs in season. Write for prices. Wm. Schreiner, Exeter, Neb.

ROSE-COMB WHITE WYANDOTTES—Baby chicks and eggs for sale. Will Jansen, Exeter, Neb.

WHITE WYANDOTTE EGGS FOR hatching. Best blood in America. Won highest honors Nebraska State Poultry show 1914. Send for mating list. Oscar L. Bock, Council Bluffs, Iowa.

WHITE WYANDOTTE EGGS FROM prize-winning, vigorous stock; $1.50 per setting. Excellent layers. Circular free. R. Petty, Martland, Neb.

PEERLESS WHITE WYANDOTTES—Winners at Nebraska State Poultry show 1914 and at Fairbury. Eggs for hatching. Prices reasonable. Write for mating list. Mrs. M. L. Burbridge, Fairbury, Neb.

WHITE WYANDOTTE EGGS—15 FOR dollar, $4 per 100. J. C. Schmucker, Swanton. Neb.

WHITE WYANDOTTES—EGGS FOR hatching, $1.50 per setting of 15. B. Carl Peterson, Avoca, Iowa.

WHITE WYANDOTTES AND SINgle-comb Reds; eggs, 75c per setting. Amos D. Birky, Bancroft, Neb.

IMPERIAL WHITE WYANDOTTES direct from Sherman Bowden; 15 eggs, $2; 30, $3.50. M. Mogensen, Fullerton, Neb.

SILVER-LACED WYANDOTTES—English breed; no better layers of large eggs. Fine, large birds. Only one pen. Fair dealing to all. Satisfaction guaranteed. Eggs, $2 per 15. W. H. Mead, 404 East 10th St., Fremont, Neb.

BUFF WYANDOTTE EGGS FOR SETting. Mrs. Chas. Hough, Weston, Ia.

WHITE WYANDOTTE EGGS, REAsonable. Heads high scoring. Owen Rummell, Pierce, Neb.

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BABY CHICKS—TEN VARIETIES—Annual incubator capacity, 100,000. Eggs for hatching from vigorous, farm-ranged birds. Write your wants. Maplewood Farm, Exeter, Neb.

Miscellaneous Poultry

EGGS! EGGS! FROM THOROUGHbred turkeys, geese, Pekin, Rouen, Muscovy and Runner ducks, pearl and white guineas, Bantams, Rhode Island Reds, Houdans, Games, White and Brown Leghorns, Hambergs, White and Buff Orpingtons, White and Silver-Laced Wyandottes, Buff, White, Barred Plymouth Rocks, Cochins, Langshans. Hen eggs, 15 for $1. Also dogs, rabbits, fancy pigeons. Free circular. D. L. Bruen, Platte Center, Neb.

55 BREEDS PURE-BRED CHICKENS, ducks, geese, turkeys, collie dogs. Catalogue free. Belgrade Poultry Farm, Mankato, Minn.

ROTTEN EGGS—WE SELL NICE, fresh eggs from 26 varieties of chickens. Catalogue free. Aye Bros., Box 3, Blair, Neb.

43 VARIETIES CHICKENS, BANtams, guineas, Bronze, White Holland, Bourbon Red turkeys, Toulouse, Embden, African geese, Pekin, Indian Runner, Muscovy ducks. Catalogue 2c. Theodore Franz, Mankato, Minn. Box 102.

WYANDOTTES, LEGHORNS, ROCKS, Reds, Orpingtons, water fowls. Free catalogue. C. W. Brehm, Harvard, Neb.

ANCONAS AND THIRTY OTHER varieties. Booklet free. Erle Smiley, Beaver Crossing, Neb.

EGGS FOR HATCHING—ALL VARIeties of Plymouth Rocks, Wyandottes, Rhode Island Reds, Orpingtons, Leghorns, Hamburgs, Brahmas, Langshans, Minorcas, Campines and Bantams; also ducks, geese and turkeys. Write for catalogue No. 11. Logan Valley Poultry Farm, Wayne, Neb.

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FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

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SHETLAND STALLIONS, JET black, high-class fellows; two spotted ones. Frank Healy, Bedford, Ia.

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COLLIES—SEND FOR LIST. W. R. Watson, Box 501, Oakland, Ia.

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I AM IN THE MARKET FOR CLOver, timothy, alfalfa, cane and millet seed. Send samples. I have 1912 crop seed corn grown in Washington county, Nebraska. Werter DeVaughn, 1914 Harney St., Omaha, Neb.

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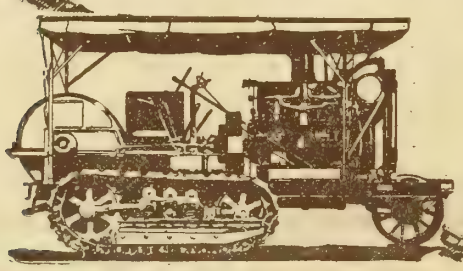

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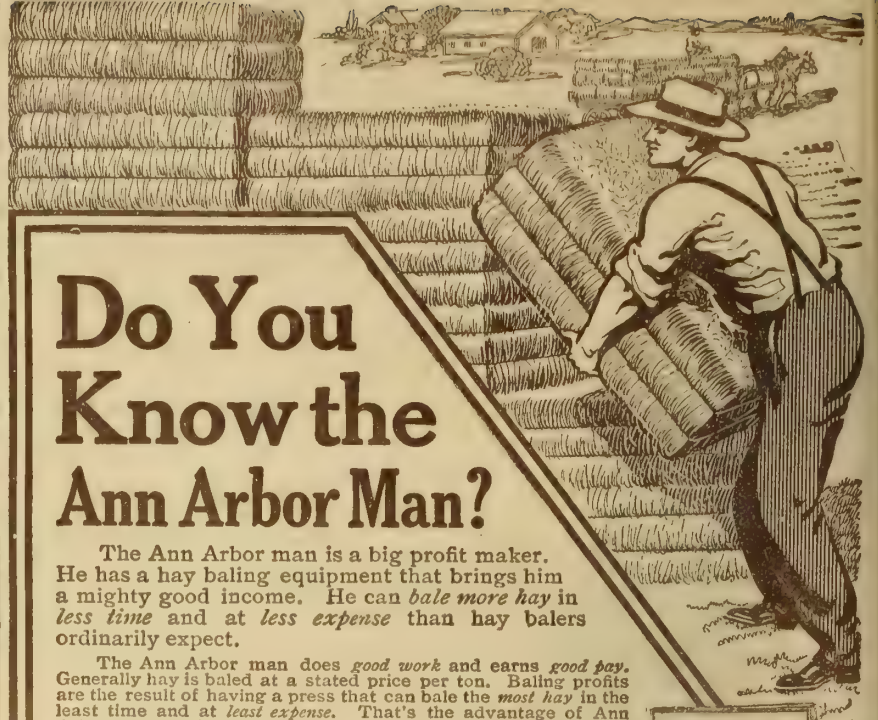

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The Ann Arbor man does *good work* and earns *good pay.* Generally hay is baled at a stated price per ton. Baling profits are the result of having a press that can bale the *most hay* in the least time and at *least expense.* That's the advantage of Ann Arbor construction. And that's why the Ann Arbor man makes *good profits.*

Why not be the Ann Arbor man for your locality? Bale your own hay and your neighbors', too. You will find lots of orders for your work. Ann Arbor work wins preference everywhere because of the smooth, square-cornered bales, with no tails on them. Shippers get full weight in every carload. Ann Arbor work means freedom from expensive, time-eating breakdowns. It means speed and economy of power and crew. This makes Ann Arbor baling profitable for the man who hires your baling outfit as well as yourself.

Get an Ann Arbor press and give yourself a good extra income in your spare time. Write us for the booklet "Making Money from Hay," and learn how easily you can do it.

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The Big Profit Maker for Western Balers Especially Designed for Baling Alfalfa

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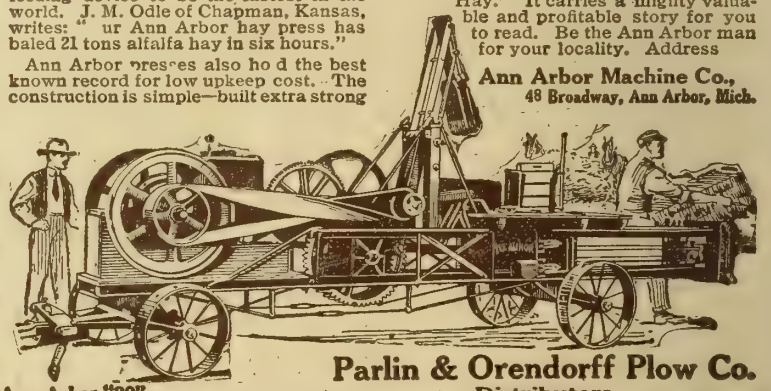

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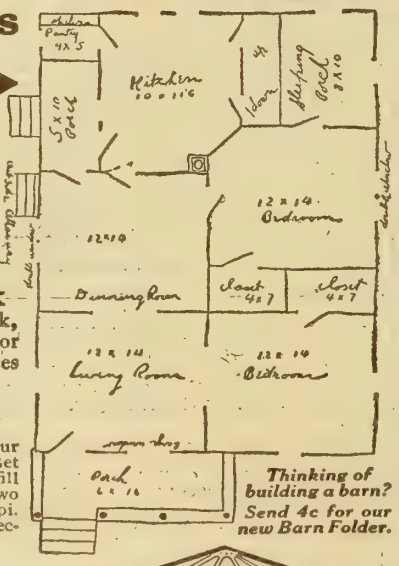

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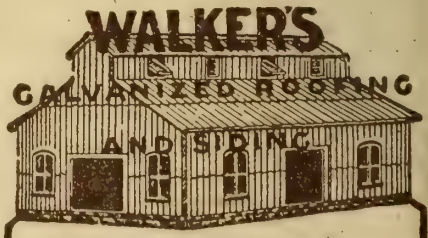

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A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

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is the BEST and CHEAPEST. Why? Beause it will not rot, will not burn up, will not shrink, can not blow down, no hoops to rust, tighten or burst, needs no repairs, no mice or rats can gnaw into it, the longer it stands the better it is. Heat nor cold does not affect it. ***Ensilage Keeps Perfectly.***

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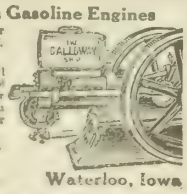

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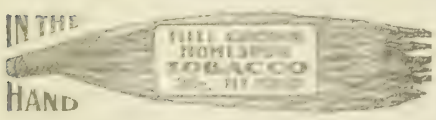

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4 lbs. (Smoking or Chewing) **PREPAID $1.00**

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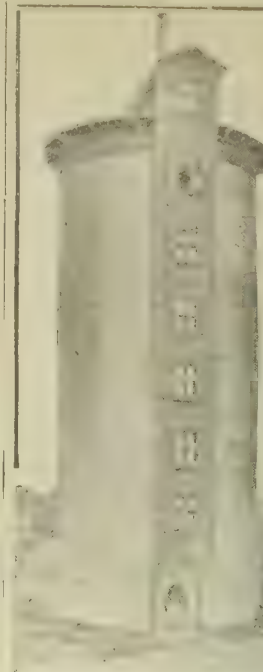
How to Battle with Hog Cholera

ABOUT one year ago the Twentieth Century Farmer made two very thorough investigations into matters of vital interest to the farmers of the corn belt—the creamery situation and the silo business. The results of these investigations were published as articles in this paper, and these articles were afterward gathered into pamphlet form and distributed widely, on request, throughout the entire middle west.

The subject of most vital importance to the farming interests at the present time is hog cholera. The Twentieth Century Farmer has employed a man who has been successful hog raiser for the past quarter of a century. For many weeks and months this man has been traveling about the country, visiting experiment stations, farmers, college veterinarians, commercial serum plants and every source from which information might be gathered. He has talked with the men who own the hogs, the men who doctor them, the men who make the serum, the men who invented the serum and every other class of men interested in this matter.

The results of this careful investigation will be published in the Twentieth Century Farmer. The first article will appear in the next issue. Watch for it. Based, as they are, on careful investigation and thorough knowledge of the situation, these articles will be of the utmost value to the hog raiser.



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PERFECT, PERMANENT SILO and at a cost so little above any other kind as to make the difference insignificant.

DON'T DELAY WRITING if you want to get on while the going's good. We are very anxious for orders now—anxious enough to grant concessions that we shall not have to give later on. Do it now. Write for Catalogs and information.

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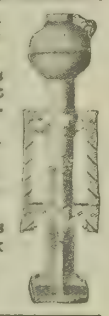

First successful crude oil machine invented. The hog man's wish is now a reality.

Hogs positively rid themselves of lice and mange. Don't cost much more than inferior imitations.

The best is the cheapest. Sold under a written guarantee to do the business. We want a live agent around every town to handle our line of Hog Yard Necessities.

The Oiler with the Flexible Arms

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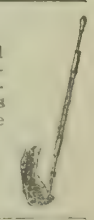

Keep the colt's hoofs trimmed and avoid cracks, thereby increasing their value. Safe, reliable, easily operated, always handy. Lasts a lifetime. Price very small.

Ask for free circular.

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INVESTIGATE THIS: Excellent land in Minnesota, North Dakota, Montana, Idaho, Washington and Oregon adjacent to the Northern Pacific Railway—the best developed sections of the Northwest, obtainable at low prices. State land on long payments and deeded land on crop payment plan; good climate, good schools—no isolated pioneering. Send for literature saying what state most interests you. L. J. BRICKER, Gen. Immig. Agt., 377 Northern Pacific Ry., St. Paul, Minn.

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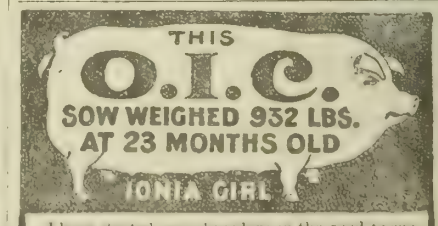

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Read the small poultry and egg ads on page 26 if you want to buy eggs for hatching. Every advertiser is a reliable breeder.

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Are Farmers' Wives Neglected and Abused?

We Have Been Investigated by the Government and Found to Be Overworked. Are We?

By Ida M. Shepler

THE Agricultural Department of our government recently sent out 55,000 letters to farm women in different parts of the country asking them concerning their condition and what should be done to improve it. The answers have been received and the verdict is given. It is this: The rural districts need a new standard of living. The neglect of the forgotten woman on the farm is one of the most serious indictments that can be drawn against our civilization.

Isn't that putting it pretty strong? Is it true? If true, whose fault is it? Is it your hard-working husband's, your father's, your brother's, your son's? Do you farmer women really believe a word of this to be true, leaving out the exceptional cases or places? I don't; not one bit of it! There is no forgotten women, even back to the days when our grandmothers did work the farm housewife is not expected to do today at all—carded, spun, wove and made the clothing, to say nothing of all the other work—and now these things have long been taken from her by invention and put into the hands of men instead of women. I once heard an old, but very intelligent, woman say: "There is no housework today of much account; invention took it all from us." Then say invention has not saved woman's muscles and time!

Have You Any Complaint to Make?

Is the country condition so desperate? Are you worked to death? Do you really fear that your own and your neighbors' children will never be healthy because your husband makes of you a household drudge, your "tightwad" husband, who wouldn't to save you let go of a dollar to buy you a washing machine, etc.? You are now dubbed the forgotten women on the farm because of these answers.

There is a considerable amount of hysteria, it seems to me, in the government looking into the farm home and social life. That social conditions may not be in all places as they once were, when the church and school house was the social center, is true, but this has come about naturally and really by the wish of the people, and whatever goes naturally because of change of view, change of people, better roads, swifter means of getting away, I judge, cannot be brought back. Good schools and good roads are in demand. These the government should grant in a sensible manner and drop the hysterical maligning of the farmer and undue pity for his wife.

Who Answered the Letters?

Answers there were bound to be to the 55,000 missives. There must be the exceptional tightwad in any business. His wife would naturally see all the faults in him, and nothing of her own too weak spirit. Then there are a few of the slarrupy, watery-mouthed women, like "Big Bawb's" wife in "The Graysons"; then there is the exception, and next comes the most formidable kind. This kind is found in the country, because she is on the increase in the cities. Naturally, in the country she catches on. There are women who can learn all the necessary requirements of good housekeeping easily and well, if they please to, but they shirk from the drudgery—as they call it—this entails upon them. They get out of it if possible by some pretext. Here and there on the farm you meet with this kind. She is, more often than not, the wife of a farmer who never refused her a household demand and who is willing to let her keep help. Often she has land in her own name, quite likely descended from a pioneer grandfather and grandmother, neither of which ever shirked a life duty, and who lived happier, saner, longer in the midst of woods, fields and hard work than had they shut themselves up between city walls. This woman did some of the answering. Her plaint is of no account.

First Easter Day

Never so sweet a hush in all Judean nights,
Never so fair a sun rose o'er Judean heights,
Never so hovering close did all of heaven lean,
As when approached the tomb the weeping Magdalene.

What marvel greets her eyes! So tear bedimmed are they!
Behold no portal barred—the stone is rolled away!
The guardian angels twain, of gentle mien and grave,
Speak of the word fulfilled of Him who died to save.

How spread the mighty truth! How all the earth divined!
What glorious promise kept the Savior of mankind!
And so the world is glad and men, rejoicing, pray,
As did his servants when came the first Easter day.

—Stanley Waterloo.

What Do Women Need?

Ever since the woes of the "forgotten" woman began to be heralded abroad, and her husband, with plenty of money to buy all the machinery he needed in his work, began to come in for strong blame because he refused her money to buy that which would make her life easier and longer, I have puzzled my mind to find what it was she lacked—what it was she did not have or could not easily get close at hand and cheaply. When stoves first came in, my old grandmother told me, the farmers, then three-fourths more of them than city folks, hastened to get them for their wives, and many of the wives at first refused to cook on them. The next big help was sewing machines. There are plenty of women who yet remember, when sewing machines came down to anything like a fair price, say $75, how quickly the farm women had their machines. Thirty years and more ago washing machines were strongly in evidence in most farm houses and stuck around for sale cheap in most of the country stores.

Must Wait for Invention

In every farm condition that I have lived I have found the farmer willing to do his part by his wife, and not forget her unless she purposely forgot herself. It is true that he must wait for invention. He could not put running water in his home—though he did get the pump very close to the house—until well drills made plenty of water possible. Gasoline engines, stoves, cream separators, etc., are all late inventions. The farmer's wife is getting her share of them.

This is not a matter to be treated lightly. The farmer, called upon to feed all the riffraff of other nations crowded and still crowding into our cities and taking work from Americans in our mills and factories, through the idiocy of Uncle Sam's weak immigration laws, has come to a place where he needs sensible national help in hard legislation and the enforcement of laws. Hysteria regarding his sturdy helpmeet's duties and lack of puerile social advantage is not going to turn a stitch in the real need of the country today. The question lies deep, and must be met with common sense.

I know country work. I know much of it is hard work, and the woman, if she be the right kind, gladly, willingly, cheerfully lays hold of it. In the great majority of cases she has her husband's sympathy, help and co-operation in all she does, and the true country woman gives her husband sympathy and resents the city view that a farmer, after all, is only a boor, and anything with only half brains can farm. The view is one of ignorance, of imbecility and arrogance, and it alone, in the greater part of the cases where the boys have left the farm, is the reason for their going.

There is no forgotten woman, but there is a long-suffering, forgotten man—the man who feeds the world, the man who who has lain awake nights, and taken years to know his business, and then must fight alone nature's inroads on his lands and crops, and pay more than his quota of tax for the land he has bent his back to acquire, to say nothing of every public improvement that goes on about him. It is the making of some things easier for him that the government might better be thinking about. Make things better for him and his wife and children share equally in his prosperity.

Homes for Farmers and Their Families

Money Wisely Spent in Making Home Comfortable Shows Results in the Boys and Girls

THE farm home, its buildings and its conveniences, its comforts and its enjoyments, have much to do in deciding the desirability of farming as an occupation by the boy and girl who are not yet fixed in their purposes in life. The old farm homestead that stands today, with practically the same old farm buildings that marked its degree of home comforts and attractions half a century ago, cannot be expected to instill spirit and enthusiasm into the boys and girls of the present time for farm life. The farm, with all its natural advantages, interests, attractions and environment in general for the boy and girl, must have with this the usual necessary and acquired modern conveniences and comforts for living respectably and in accordance with the people and the times.

There is no reason why the farm home should not be roomy and modern in all its apartments. The home on the farm should demand the best there is in the way of comforts and ease of management in living. The farm is the base of supplies. From the soil on the farm comes all the revenue entering into the business for farm maintenance and farm improvement. Therefore the greater reason that the first dividends be declared in the interest of family comforts, home improvements and the instilling of confidence and faith in the ability of the farm to provide for the family the best that this world is capable of acquiring.

Right Kind of Homes Exist

The up-to-date farm dwelling is not now a dream, nor the fancy of imagination; it is a real matter of existence. The improvement of the farm by the building of good, substantial homes is the present order of things in every well regulated community. The attachments that clung to the old, dark, cramped, poorly ventilated farm dwellings built onto and otherwise improved or extended to make more room are forced to yield to the spirit of home enterprise, to the ambition of new landmarks, rather than the preservation of the old ones.

It is the raising of the family and the affording of a comfortable, cheerful home for their development into manhood and womanhood that appeals to the farmer of today, and this cannot be neglected without serious after consideration that these boys and girls might have secured a much better start in life if the home advantages had been better. There is but one time to guard against possible wrongs and neglects, and that time is now, while conditions confront you and while opportunity is within easy reach.

Select Site Carefully

The farm home should be planned and laid out with reference to many natural advantages. It too often occurs that there are many reasons why the new house on the farm should be built on practically the same ground as the old one. Be careful in selecting the site for the new house. Be guided by the high, sightly, commanding view of the country 'round about, as well as the conveniences of the farm, the public road, etc.

Water advantages are important and should be of the very best. It is not often of special advantage to go down in a valley, hollow or under a hill in order to get a spring or flowing water for the house. It is not very expensive to bring a good spring to the house, when it would be of very great disadvantage to take the house to the spring. The age of getting down under a hill or behind a hill in selecting a building site belongs to past generations. The high, sightly ground, open to the free currents of air, the sunshine and the far-away view, helps in the cheer and good feeling of the family.

The Up-to-Date Farm Home is Not a Dream

Room for Everyone

Build the farm dwelling large, provide plenty of sleeping rooms and give them space for all the necessary furniture and accommodations usual to a well equipped bedroom. Each boy and girl of the family should have a room wholly and completely their own, furnished in detail to suit their own fancy. There should be a responsibility, independence and personality cultivated in the home to a limited extent. The realization of certain rights, ownership and possessions independent of all other persons is only human nature and should be encouraged, to the exclusion of selfishness and lack of courtesy, of course. Besides having the farm house large and roomy in all its apartments, do not leave out a thing that will add to the convenience and comfort of the family. The furnace, the laundry, the fruit cellar, the hot and cold water, the bath, all are necessities.

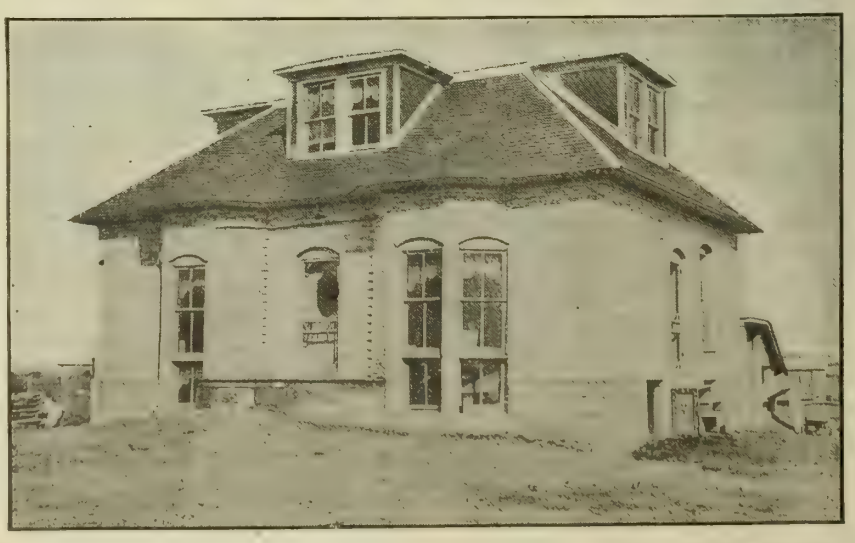
One of Nebraska's Earliest Farm Homes

May Be Done Economically

Lumber and building materials are not more expensive now than formerly, all things considered. The farmer of today is a business man and should take advantage of the wholesale and retail markets in view of cheapening his cost of materials. Every other line of industry is interested in co-operation, in buying supplies where they can be bought the cheapest, in cutting down expenses and in selling to the greatest advantage when putting their produce or wares on the market. Why should not the farmer put into practice this same system of economy in buying

(CONTINUED ON PAGE TWENTY-THREE)

Montana Homestead of the Present Day



This South Dakota home is new and entirely modern, equipped with hot and cold water and bath. The owner built it himself and installed the plumbing. He installed a two and one-half horsepower gasoline engine with which the separating, churning and washing are done. This picture was taken before the house was completed and the surroundings made attractive.

Feed and Care of Pigs at Weaning Time

This is a Very Critical Period for Both the Sow and the Litter

IT IS getting about the time of the when we are beginning to think about weaning the pigs. When should pigs be weaned, and how should they be weaned?

First, let us say that every year many good, promising pigs are stunted or given a setback in their growth by being taken from the sow too early in life.

For what purpose are pigs weaned? We suppose for several reasons. One man thinks that by early weaning he can the quicker fatten the mother and get her onto the market. Another figures that he can save some feed by not being compelled to feed the sow heavily enough to keep her in a full flow of milk. Another wants to breed the sow for another litter. All of them are, in the opinion of the owner of the sow, good and sufficient reasons for weaning the litter early. Let us look carefully into this business of early weaning and see if in most cases it pays.

Mother's Milk Best Food

You may want to wean the pigs early in order to get the sow onto the market as soon as you possibly can. One object is, or at least should be, to get the most pounds of pork for the least number of pounds of grain consumed. If the litter is weaned at, say 6 weeks of age, are you not taking these pigs from their mother when she is in about a full flow of milk and consequently giving to the pigs the very best food possible to give them, and making them do the very best possible; in other words, making the grain given to them put on the most pounds of pork? True, you may have to keep the sow on your place a little longer, and feed her a few more bushels of grain, but you are getting back in the litter much more in pounds of pork by leaving them with the sow than you will lose in the little extra grain you may feed the sow.

Don't neglect the importance of doing the best you can with your sow, to keep her in full flow of milk as long as possible. You may think that you can improve on nature and substitute something for the mother's milk that will make these pigs do better. Don't fool yourself in this way, for you will surely be fooled if you try it. The thing to do is to do the best you can by the litter in addition to what the sow is doing for them.

Have Convenient Pen in Which to Feed Pigs Away from Their Mothers

No Hog Raiser Should Try to Raise Hogs Without a Pasture

Feed Sow and Pigs Plenty

Little pigs will begin to eat at about 3 weeks of age, and as they grow their capacity for consuming different kinds of food grows amazingly. A good feeder will satisfy their appetite and encourage them to consume the limit. For this there is nothing better than shelled corn. The mother's milk will balance the ration. Give them, however, some variety—a little oats, barley; good shorts slop is fine. Give all these different rations to your sow, as well as to the pigs. In feeding the sow this heavy ration be careful not to overfeed her and get her off feed. Keep her with a keen appetite. We believe it a poor plan to economize on the feed; better do your economizing some other place than with either the sow or the litter during the suckling period.

Sometimes we have a valuable sow that is bred a little late, and we are anxious to wean this litter at an early age in order to get this sow bred at the time you want her bred for the next litter. Without doubt this is sometimes advisable in pure-bred herds, but there is a good, big chance that when you do you are injuring the litter you are weaning.

Where Weaning is Advisable

It sometimes happens that the mother's milk does not seem to agree with the pigs. We sometimes see in a herd a scrawny, runty litter following the old sow, squealing all the time, the sow looking like she was more fit for the bone pile than to be nursing a litter of pigs. At the same time, this sow may have a good appetite. If you have something like this in your herd, the sooner this litter is weaned the better for both the sow and the pigs. It does not necessarily follow that this sow is not a good suckler or that she will never raise and nurse a good litter. If she is a good individual of good pedigree, don't discard her because she failed with this one litter. Give her another trial.

How should the pigs be weaned? If we are going to wean them, let us try to do so with the least possible loss. No hog raiser of today should try to raise hogs without a pasture. If you do try to raise them in a dry lot, you will not meet with the measure of success necessary to make the venture as profitable as it should be, and the chances are there will be no profit.

Good Pasture Great Help

By all means let the sow and litter have the run of a good pasture. In this pasture have a lot or pen into which the little pigs can get and not be bothered with the old sow. In this lot or pen have your feed for the pigs. Now, if you are going to wean the litter at an age of 6 or 8 weeks, take the sow away from the litter. Keep her away twenty-four hours and then let her back that the pigs may nurse. Take her away again this time for forty-eight hours and then let the pigs nurse again. Watch her when taken away the next time to see if the pigs should again be allowed to nurse. An abrupt taking away of the litter from the sow may be the cause of ruining her udder.

Care must be taken at this time to reduce the feed on the sow. Give her a change to some food not having a tendency to produce milk and feed it in reduced quantities. If possible, cow's milk should be used to some extent at least in the ration of the pigs.

We believe the better plan would be to let the sow wean the pigs. We should so feed her that we would keep her in a full flow of milk until the pigs are 10 or 11 weeks old; then gradually reduce the feed on the sow until she would be getting nothing but alfalfa in the pasture. We would, however, have this pasture good so that she could get all the grass she would eat. In this way the sow's milk would fail and the pigs would be weaned without ever noticing the difference. Pigs weaned in this way, if properly fed, never stop growing. The pig that does not stop growing is the one that brings the good price if it is sold for breeding purposes, or, if sold on the market, brings the top price.

After the pigs are thoroughly weaned two methods are before us to be pursued in our feeding operations, depending on the purpose for which the pig is to be used. If we expect to market them, the sooner they are ready for market the better. A continuance of liberal feeding is advisable. If the litter be of March farrow, weaning time will find us with the alfalfa in full growth. We would so handle the pigs that they would make alfalfa as prominent a part of their ration as possible. It is our cheapest feed, so let us make it as large a part of our ration as possible.

Feed for Breeding Animals

If the pigs raised are to be used for breeding purposes, a continuous heavy feeding is not the best method to pursue. You are liable to get them too fat at an immature age. This kind of a pig will never make the size later on that he would make if he were not crowded so fast while young. Overfeeding an immature pig is very liable to impair his breeding qualities. Don't go to the other extreme and not feed the pig a sufficient ration to insure a good, steady, substantial growth.

Our best success with brood sows has been to keep them in a good pasture after the pigs are weaned, feeding very little, if any, grain at all, until the last of August or first of September, and then gradually getting them in a little better flesh by breeding time. This method don't make show sows out of them during the summer, but it does make brood sows out of them the next spring. It would be well to have the sows that have weaned their first litter as gilts in a separate pasture, where a little more feed may be given them than is fed to the aged sows.

Breeding the Gilt Raising Her First Litter

We believe it a good plan to not breed the gilt that has raised her first litter for a fall litter. She should be allowed to grow during the first summer after her first litter. By doing this she will make a better mature animal, and we believe be in shape to produce and raise stronger litters in the future. After she is 2 years old she will be in shape to raise you two litters each year if you want her to, and we are inclined to the belief that by raising two litters each year she is a better brood sow.

Sows bred for fall litters should be fed something besides the grass they may get in the pasture. If you have a good alfalfa pasture, an addition of corn will make you a good ration for these sows. We would so feed them that they would gain in flesh slowly from breeding time until they farrow.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
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Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
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Dairying is fast becoming an important industry in the far west. In one county in Oregon fourteen Babcock testers have recently been placed in the public schools by the school boards. In this way two purposes are served. The pupils become interested in the production and care of milk, and from 500 to 600 cows have already been tested, this, of course, working to the advantage of the milk producers of the county.

The change to green grass from the dry, cured feeds that the animals have been confined to for the last six months should be guarded and gradual. With thin and weak animals the change is often fatal, and with the stronger ones it is injurious to a greater or less extent. With such animals as milch cows and work horses it will pay to feed hay in the barnyard or feed lot at nights for ten days or two weeks after turning out on the soft grass.

If you have an idea of being an exhibitor at the county or state fair this fall, commence now to prepare. If it is in the line of crops, do not lose time in getting a good start. If in live stock, the animals to be shown must be in the very best of condition, and this cannot be acquired through the hot days of summer when the flies are a pest and annoyance. Fix up now; do not wait. The fleshy animal is the demand in the present-day show ring. Remember this.

Selling "Co-operative" Gold Bricks

Is anyone trying to start a co-operative creamery in your community? If so, do not go into it until you find out exactly who it is that is masquerading as an "investment" or "industrial" company. Or, if you really want to buy $2,500 or $3,000 worth of creamery machinery and pay $6,000 for it, go ahead and invest. Some people like to be fooled. But if you are one of those people who like to get the worth of their money, look into the matter carefully.

Last summer we ran a series of articles that has since been published in pamphlet form and distributed quite widely through Nebraska and Iowa. In these articles we described the activities of the Burnap company, then in the business of establishing so-called "co-operative" creameries which were not co-operative in reality, the main purpose of their establishment being to sell machinery at excessively high prices for the Creamery Package Manufacturing company of Omaha. This combination went out of business in the territory named soon after the publication of these articles, and we heard rumors from time to time that they were at work in eastern Missouri and southern Illinois.

Word has come to us lately that they are at work in Nebraska again under another name. We have investigated and found this to be true. Long is the trail of abandoned creameries that lies behind them, for they do not care whether conditions are such that the establishment of a creamery will be successful in a given locality or not. All they care for is to be able to sell the machinery. Then they leave the creamery to take care of itself. It generally becomes a losing proposition and discourages the dairy and creamery business in that locality for years to come.

If you have been approached of late with a proposition to invest in a co-operative creamery, find out exactly who is behind it. If it is an "investment" or "industrial" company, find out who the members of this company are. We will be glad to help you if you will write us. We will also be glad to send you the bulletin published last summer if you will send us 2 cents to pay the postage. In this bulletin the names are different, but the methods are the same, and by their fruits you may know them.

Disease in Potato Seed

Farmers should take the precaution to treat their potato seed to prevent the introduction into their land of potato scab or blackleg, two diseases often carried on potatoes.

The former is a parasitic growth which attacks the tubers only, producing a characteristic roughening of the surface which so injures the appearance of the tubers as to greatly reduce their market value. It is easily detected on badly affected tubers, but apparently smooth, healthy ones may carry the germs of the disease, and unless one knows that his seed comes from fields that are free from the disease the safest plan is to disinfect the same just before planting. The usual method is to soak the uncut tubers for two hours in a solution made by adding one pint of formaldehyde to thirty gallons of water. This material is inexpensive and may be bought of any druggist. The amount given should be enough to disinfect twenty bushels of seed. After soaking spread the tubers out; allow them to dry, and then cut and plant. It in no way injures the germination of the potato.

The latter disease — blackleg — which is controlled by the same treatment as the scab, is of bacterial origin. It causes the seed tuber to rot early, in some cases before the sprouts break through the ground, thus causing an irregular stand. It spreads over the base of the stem, stops the growth of the plant and soon causes its death.

In addition to the precaution, one should be careful when cutting his seed to reject all tubers which show any blackening of the inside flesh, as this may be an indication of disease.

Free Seed Corn Distribution

A well planned system of encouraging the improvement of corn culture is put into operation at Grant City, Mo., by the Commercial Club of that place, in which it offers each farmer ten ears of extra tested seed corn, with the understanding that ten ears of the produce of this planting be exhibited at the county corn display next winter. This free distribution has attracted many applicants who are willing to enter into the contest of producing something extra fine through the stimulus of contest and the offer of free seed. The ten ears of corn thus exhibited become the property of the club and may become the basis of future contests upon the same.

The system of distribution of seed could be profitably practiced in other counties and states to good advantage. It is comparatively inexpensive to provide such a proposition, when the results are considered, and has the incentive of competition that attracts the boy corn grower, as well as the farmer himself, to enter the contest.

Farmers in Wisconsin may apply to the state university for forms for making concrete silos. These forms are made of galvanized iron, reinforced with iron frames, and are of simple design. They are in great demand and a community may borrow a set for use all season. This is real and practical aid by the state to its farming interests.

Root Crops for Feed

In many districts of country there is considerable stress placed upon the use of root crops as a stock feed, and the growing of these crops is regarded as essential in the economical and health features of wintering the farm animals. Sugar beets, mangels, rutabagas, turnips, carrots and pumpkins are all recognized as important and valuable vegetable crops to be grown and used as feed for the farm animals. They are easily handled as field crops, may be grown in a division of the cornfield and receive practically the same care and attention in the matter of cultivation. In the first cultivation they will demand a little more care, but as soon as started they may be treated as other cultivated crops.

The growing of root crops for stock need not be confined to any special kind of animals. Every horse, cow, sheep or hog should receive an occasional feed of roots. All root crops are easily grown in this part of the country. The sugar beet is one of the most profitable in the matter of feed value and in way of crop yield. It is also an easily handled crop and is readily preserved for feed purposes when stored in the root cellar. Turnips and rutabagas are also prolific yielders and are grown with practically no expense of labor.

Where roots are to be fed in large quantities and to a large number of stock some system must be adopted in feeding. Some persons advocate the feeding of the roots whole on the ground, while others recommend cutting up the roots, slicing on a machine and feeding in troughs, with or without ground feed. Experience and your feeding demands will soon solve these questions. In some cases cooking the roots may be desirable. This will apply especially where any portion of the potato crop is to be fed.

The shrinking of the stock when taken off the pastures in the fall season can be saved by the use of roots in connection with the dry feeds—hay, straw, fodder, etc. The change from grass to cured feeds is the cause of many animals entering into a condition of decline that can be arrested only by substituting some succulent food such as the root crops named. Animals given an occasional feed of roots are seldom off their feed.

The raising of the root crops is the first and most important thing to look after. It is now time to arrange for all such vegetable crops as can be profitably handled in the interest of autumn and winter feeding. There is no question as to the value of root crops when produced and properly stored for winter use. It is now a question of arranging for the growing of the crop. The successful farmer and live stock producer provides a variety of feeds and provides plenty.

Fruit thinning is gaining in popularity each season. When once practiced the orchardist is not afraid to sacrifice more liberally, knowing full well that larger fruit brings a better price, and that overbearing is injurious to both tree and crop.

Investigate Farm Machinery

This is an age of improvement. The up-to-date farmer must read and investigate or he cannot be abreast of the times. There is no class of business or enterprise that is moving faster today in the matter of improvement than the farm, the appliances and machinery that are used to operate it economically and successfully. The progressive farmer must read, study and observe the things of interest that are being created for his advantage and for the enhancement of his financial interests.

Farm machinery, without doubt, stands prominently in the front rank of the needs of the farm. It will not do to stand back and say, "I have a cultivator"—or other piece of machinery—"that is good enough," just because it has been in use only two or three years, when great improvements in operation and perfectness of work have been supplied by later patents. Be on the lookout for the new machines. Inspect the advertising columns of your farm papers in view of seeing what there is that is new and deserving of investigation and inquiry.

You will find cultivators representing shallow cultivation and others deep cultivation. Study their principles of operation and results, and when convinced that they are better than what you have and are working with, estimate whether or not you can afford to keep on using the old machine. Remember that perfect cultivation in the cornfield is the big factor in getting the yield. These things are important and cannot be carelessly passed by.

Tuberculous Cattle

The tuberculin test for bovine tuberculosis should be conducted very carefully and by the most skillful and trustworthy operators. The necessity of having this work properly done and the tuberculin of tested or guaranteed quality is imperative, because of the possibility of mistakes that may be made. The cow owner cannot afford to have sound cows sacrificed to ignorance, carelessness and lack of quality in the material used in making tests, as has been frequently reported.

The cattle owning public seems to be favorable to corrective measures in the extermination of this disease or any disease that may prove a menace to the improvement and development of the cattle industry in any of its varied aspects. But they cannot endorse any uncertainty in treatment where sound cows are condemned to slaughter. Milch cows are too high-priced to be made subject to any lottery in the matter of their health, especially when the evidence would seem to be in their favor to all appearances of clean, healthy animals.

All forms of contagious disease among the domesticated farm and range animals should be eradicated, even at the penalty of quarantine by communities, districts or states. There is no reasonable excuse for carrying these diseases when the means of eradication and prevention have been as plainly established as in tuberculosis.

Conveniences on the Farm

The saving of time and labor on the farm means the saving of money if farm help and farm management are worth anything. This is often accomplished by the little contrivances, the conveniences that in themselves do not cost much, but in the aggregate of things attained emphasize the importance of a careful investigation of labor-saving devices, be they ever so simple. It is an evidence of intelligence, rather than otherwise, to see the wagon shed and tool house supplied with these helps.

As an illustration, what greater saving in labor can be accomplished than by the use of a set of steel wheels which can be readily adjusted to any farm wagon? The farm wagon of all uses should be the steel-wheel truck, because of its cheapness, its every-day utility and common-sense application to farm needs.

What is true of the low-down farm wagon as a labor saver is true of scores of other inventions. Whenever a labor-saving device appeals to you as of service in your work, a real labor saver, buy it and use it.

Does Every Acre Pay?

The farm should be platted or mapped so as to represent every field, lot, orchard and building on the farm, and these enclosures numbered or named, in order to charge and credit each with its expenses and crops produced. It should be the purpose of the farmer to make the farm pay and know from year to year just how the various fields and their crops are coming out as revenue producers. The pasture fields can be made to yield their account by the stock they support through the grazing season.

There are some imaginary land estimates on farms at the present time that should not be used in the farm appraisement. All expenses should be carefully figured in. There is no use saying that this cannot be done; it is already being done on hundreds of farms all over the country in every state. It is a matter of taking up the work, the adoption of a system and sticking to it until it becomes of interest.

Every acre of land on the farm should have a responsibility in the account, and its yield be brought into the reckoning at the close of the year. There are many farms that have large acreage that practically lie idle year after year, yielding nothing that could be brought into an estimate such as this system of accounting calls for. Forms for this or similar plan of farm accounts, platting and mapping of the land by enclosures, numbering or naming, can be had from your agricultural college, with instructions how to conduct the records.

Shorthorn Herd Book

Have you seen a copy of the 1913 American Shorthorn Herd Book, volume No. 81? This book contains the registry of bulls from 367,001 to 376,000, and cows from 127,001 to 138,000, representing 8,999 bulls and 10,999 cows. These register volumes are indispensible in the library of the breeder who wants to keep posted as to what is being done among the Shorthorn people.

The breeder of any kind of pure-bred stock must keep up with the procession or he will be lost sight of in this constant and persistent march of progress onward and upward in quality and fame. The Shorthorn is a leader in the history of American cattle improvement and its system of pedigree and registry is the foundation upon which the breed rests. These volumes should be secured while there is still a surplus of them on hand.

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Go and See

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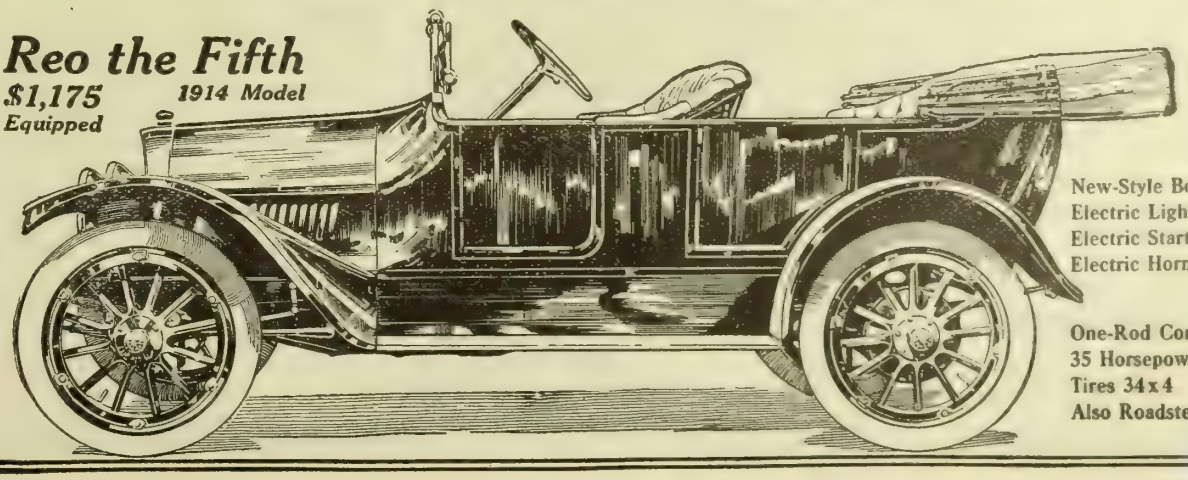

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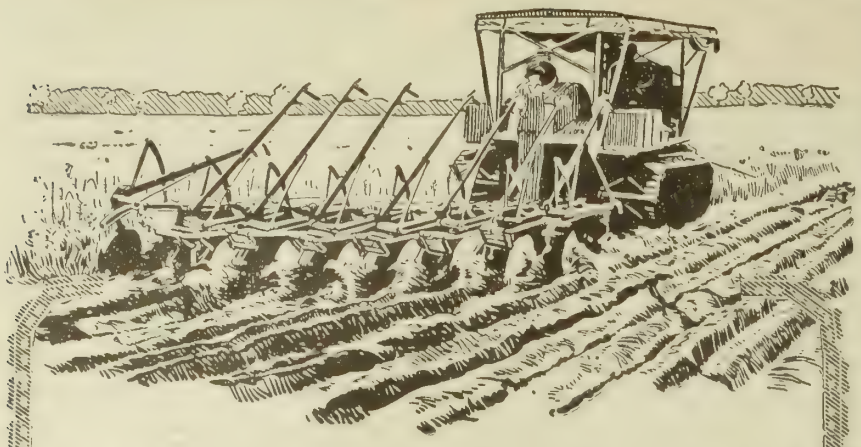

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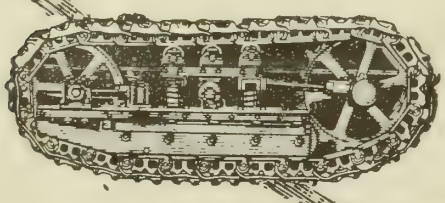

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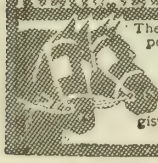

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Free land information

You can learn the facts

about any section of the country through The Twentieth Century Farmer's Free Land Information Bureau, which is maintained for the benefit of our readers. Let us know what locality you are interested in and we will be glad to tell you of its crops, climate conditions, live stock, government land, etc.—all such facts maye be had if you will simply send postage for reply and address

Land Information Bureau

Twentieth Century Farmer

Omaha, Nebraska.

Over 100,000 farm families read it.

EVERY HOG
HIS OWN DOCTOR

HOG LICE AND SKIN DISEASES QUICKLY ERADICATED through the use of the

AMERICAN HOG RUBBING POST AND VERMIN OIL

REQUIRES NO ATTENTION AFTER FILLING THE TANK.
THE HOG DOES THE WORK.
An Absolute Remedy for External Troubles.
Insures Against Cholera.
Satisfaction Guaranteed

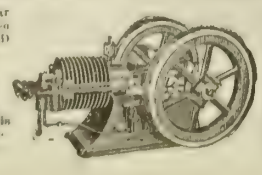
AGENTS WANTED
In Every Township.

Write for Booklet and Read Endorsements.

AMERICAN HOG POST CO.
DEPT. F. PEORIA, ILLINOIS.

Buy With Both Sides of Your Dollar

You get dollar for dollar value when you purchase THE GADE AIR COOLED GASOLINE ENGINE



No Fans or belts Hoppers or water tanks.
Bored cylinders
Get descriptive folder of this wonderful engine at once.
Gade Bros. Mfg. Co., 68 E. Iowa St., Iowa Falls.

Fighting Your Hogs' Enemies

LICE are prone to affect hogs as sparks naturally fly upward. It is not unusual to find a feeder that says, "My pigs seem to be healthy, but they do not grow as they should."

I have raised a great many hogs and have found from practical experience that many of the troubles in the hog business can be traced, directly or indirectly, to one of two parasites—the hog worm or the hog louse. The hog louse is the most common; in fact, it is present in almost every herd unless means have been taken to eradicate it. The worms of the stomach and intestines were at one time serious enemies of the hog, but this question is now practically solved by the good worm remedies on the market at the present time.

The louse multiplies so fast that where we notice one or two on the hogs today, the whole herd will be infested in ten or fifteen days. The first time I ever knew of a remedy for lice was when I was 22 years old and attended the Illinois State Fair for the first time. I went with an English cattle nd hog feeder. While there I saw a hog dip advertised, and, at the recommendation of my English friend, I bought some and took it home with me. It cost me $24, and was the best spent money I ever expended, except possibly the amount I spent for a dipping vat at the same time. I dipped my hogs, and in ten days dipped them again, and kept my feed yards disinfected with the dip. It was not a month before I could see a big improvement in my herd.

From that date to the present time I have tried out about all the hog dips that have been made. Most all of them are good. The main thing for the farmer or hog raiser to remember about them is not to let a lot of damage be done in his herd before he uses them.

However, there are now machines on the market that are a better remedy than dipping, because they are not so much work, requiring attention but once in a while. There are few farmers who are raising hogs, even as a side line, but what would benefit by having one of these posts or machines. All you have to do is to keep them filled and the hogs will do the rest. If your hogs are infested with lice—and I know they are unless you have been working with them constantly—all you need to do is to clean up their nests and thoroughly disinfect with some good dip and place a rubbing post of modern make in the hog lot and keep it filled, and the whole question of the louse is settled. As soon as these machines came on the market I secured one of each different make and placed them around among herds of hogs in which I was interested. They all work well, and I find that where these are used and the pens occasionally disinfected lice are very hard to find.

Freedom from lice allows the hogs to become strong and resist cholera. I have raised from 200 to 500 head of hogs for breeding stock every year for eighteen years, and I have never in this stretch of time had any trouble with hog cholera. This is a cheaper treatment than serum, and is likely to save you this kind of an investment.

A CORN-BELT FARMER.

Quality to Govern Price of Cream

There has in the past been more or less doubt in the minds of butter makers and others as to whether it was advisable to pay for cream according to quality, but we believe that the recent experience of many in marketing poor butter has resulted in proving the value of the paying for quality system, and we expect to see more creameries adopt this system or else eliminate the poor cream altogether.—James Sorensen, in Dairy Record.

Government Hard on Rodents

According to Dr. A. K. Fisher of the biological survey of the Department of Agriculture, more than 400,000 prairie dogs, gophe ground squirrels and mice have been killed in the government's campaign of destruction. The forage these rodents feed on would be sufficient for about 15,500 sheep or about 1,500 to 1,800 head of cattle, worth at least $150,000.

EAGER TO WORK
Health Regained by Right Food

The average healthy man or woman is usually eager to be busy at some useful task or employment.

But let dyspepsia or indigestion get hold of one, and all endeavor becomes a burden.

"A year ago, after recovering from an operation," writes a Mich. lady, "my stomach and nerves began to give me much trouble.

"At times my appetite was voracious, but when indulged, indigestion followed. Other times I had no appetite whatever. The food I took did not nourish me and I grew weaker than ever.

"I lost interest in everything and wanted to be alone. I had always had good nerves, but now the merest trifle would upset me and bring on a violent headache. Walking across the room was an effort and prescribed exercise was out of the question.

"I had seen Grape-Nuts advertised, but did not believe what I read at the time. At last, when it seemed as if I were literally starving, I began to eat Grape-Nuts.

"I had not been able to work for a year, but now, after two months on Grape-Nuts, I am eager to be at work again. My stomach gives me no trouble now; my nerves are steady as ever, and interest in life and ambition have come back with the return to health."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter?. A new one appears from time to time. They are genuine, true, and full of human interest.

Salt Supply for Farm Animals

THE salt supply on the live stock farm is one of the very important features in its successful management. There is only one safe method of providing the farm animals with salt, and that is with all they will eat under natural and unrestrained conditions. The free access to salt has never been known to injure stock, but where from any cause they have been kept away from salt and not permitted to get it as their appetites suggested, then turned to it or given access to overdose themselves, it has often proven very injurious and occasionally fatal.

There is a natural craving for salt on the part of all grazing animals, and this is increased with the new growth of vegetation in the spring; it is a requirement so urgent that cattle, horses and sheep become almost crazed at the presence of salt after being kept from it through the feeding season or receiving but a scanty allowance. All live stock owners understand the value of salt for these animals. The economical and safe feeding of salt is the feature that needs some suggestion.

It is a waste to feed any preparation of salt by throwing it down on the ground; even the rock salt is best preserved and more satisfactorily fed to stock by being placed in a shallow, strong box made of two-inch plank. It keeps cleaner, is more sanitary in all respects and serves the purpose of the stock better than to be thrown out on the open ground to be wallowed about in the dirt, dust and filth. The quality of rock salt should, if used, be carefully examined to see that there is no shale in it. Only pure rock salt can be used in safety, as the presence of shale will cause sore tongues.

The building of sheds for the salt, under which the salt box is fastened in some convenient way at a proper height from the ground, is the most satisfactory plan. Some set posts and secure the salt boxes to the posts so they cannot get broken loose and are free from the rain. It is quite important, where the barrel salt is used, to have the salt boxes under cover from rain. Where salt is kept constantly on hand a large number of stock may be supplied from one salting station, as they will come to the salt just as their appetites suggest, and in this way they do not consume one-fourth as much as when they are not so situated.

In handling farm stock, where the numbers are limited to a few head, it is quite frequently the custom with very good care takers to each day sprinkle a little salt brine over the roughage not consumed by the animals in their daily feed. It is astonishing how a slightly salted pail of water when thus used will give added feeding quality to the left-over hay or fodder. Damaged feed is often doctored up in this way and made palatable through the taste of the salt, but this practice is not recommended in except when the feed is free from injurious mould or other objectionable quality.

If the farmer or owner of live stock desires the best results in growth and development of the animals under his care, he must provide salt and plenty of it and see that it is properly given to the stock. It will pay to be systematic and careful in this. Every animal on the farm will of its own accord use some salt, and it is safe to say that what nature suggests to these dumb animals in their diet is of advantage when properly supplied.

Swine raisers sometimes neglect their herds in the matter of salt. The careful breeder and feeder never does. He has boxes in various places under shelter, where there are kept various appetizers or conditioners in which charcoal, lime, sulphur, etc., constitute, with salt, the main body of the mixture. Others feed salt alone; but salt, with some of the above ingredients, may safely be said to constitute the drug department of the well regulated hog yard. These are not fads or fancies of the hog raisers; they are old, tried and tested conditions that have produced results for years—almost generations. Salt is a necessity in keeping the hog in appetite and thrift.

Observe in the young animals their inherent appetite for salt. Their anxiety and desire is little less than a craze. Colts, calves and lambs particularly will crowd into the throng at the risk of being trampled upon when salt is thrown out in the pastures in the old-fashioned, careless, wasteful way of salting once a week, or as often as convenience suggested. It will pay big to adopt system in this one feature of animal care, and attention of supply in this is one necessity of animal health.

The milch cow demand seemingly has no limit. Besides the usual call for more milch cows to supply the increasing consumption of milk for family and hotel use, the butter factories find it more difficult in their trade to secure cream for maintaining their annual output and provide for the possibilities that each year are presented for increased production to their trade. As a result every effort to extend their business with the cow owner is being exerted.

You Pay Too Much For Tires

When You Pay More Than Goodyear Prices

Prices on Goodyear No-Rim-Cut tires have dropped 28 per cent in the past year alone.

Some other tire makers have not met these reductions. But let us see if those high prices mean better tires.

In No-Rim-Cut tires you get these four features found in no other tire in the world:

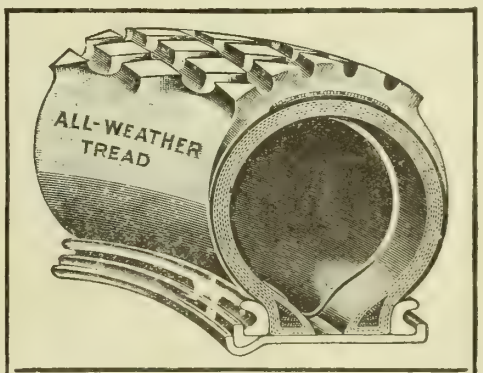
The 126 braided wires in the tire base—the only way known to make a satisfactory tire that can't rim-cut.

The "On-Air Cure." That is, each tire is final-cured on an air bag shaped like an inner tube. That is done to save the countless blow-outs due to wrinkled fabric. And it adds to our tire cost $1,500 per day.

The Rivet Fabric breaker strip, for the rights to which we paid $50,000. It lessens, by 60 per cent, the danger of loose treads.

The All-Weather Tread. A double-thick tread of very tough rubber. As smooth as a plain tread on dry roads, but a sharp anti-skid on wet.

Note that no other tire, whatever the price, offers one of these costly and tire-saving features.



GOODYEAR
AKRON, OHIO
No-Rim-Cut Tires
With All-Weather Treads or Plain

More Mileage

Will higher-cost tires give more mileage? We have had scores of experts working for years to build a tire that gives more mileage. They are in our department of research and experiment. They have made thousands of tests. And they say that No-Rim-Cut tires as made today mark the limit in tire mileage.

And note this: In late years, when most cars carried odometers for measuring tire mileage, No-Rim-Cut tires have outsold any other. In 1913 we sold eleven times as many as in 1909. And all because of mileage records on perhaps 400,000 cars.

The Real Reason

It is easy to build tires to cost less than Goodyears. It is simply impossible to build a tire worth more.

The reason for our prices lies in mammoth output—the largest in the world. It lies in efficiency which results from years of tire-making. It lies in small profits. Our profit last year averaged 6½ per cent.

Let these tires show you what they save in trouble, save in upkeep to hundreds of thousands of users.

Goodyear dealers are everywhere.

THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio

Toronto, Canada — London, England — Mexico City, Mexico

Branches and Agencies in 103 Principal Cities — DEALERS EVERYWHERE — Write Us on Anything You Want in Rubber

(1480)

This Hay Carrier Is 12 Months Ahead!

DON'T think of buying any Hay Carriers until you see the new 1914 Model HARVESTERS. They're at least one year ahead of ordinary kinds both in mechanical improvements and strength. Double the size and twice the weight of old-fashioned, everyday fork carriers. Simple and strong—practically no repair expense.

Harvester Hay Carriers

1914 Models—for Steel, Wood or Cable Track

Made in three types — sling or fork style. Eleven new and distinct improvements make them mechanically perfect. No matter where you unload your hay, the Harvester will handle it without re-roping or changing pulleys. You won't consider old-fashioned hay carriers after seeing the Harvester.

Star Goods

All Guaranteed STAR Stalls, Stanchions, Litter and Feed Carriers, Harvester Hay Tools, STAR Hoists, Cannon Ball Hangers, etc. *Write for details.*

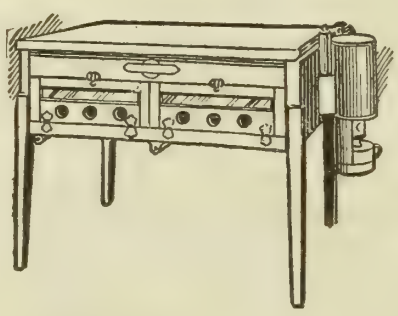
This Is Yours

This Hay Tool Book is free for the asking and is well worth having. *Write for it.*

Our big "Hay Tool Book" tells the whole story. Let us send it. *We'll include the name of a dealer in your town who will gladly show you the Harvester Line for 1914.*

HUNT, HELM, FERRIS & CO., 99 Hunt St., Harvard, Ill.

Perfection Oil for Incubators



is the best. It burns clean and evenly—no chance of smoke or soot. It makes steady burning certain. It's the incubator oil without a risk. It's clean tank wagon oil, not barrel oil.

Dealers everywhere.

STANDARD OIL COMPANY

(NEBRASKA)

OMAHA

Two or Three Battery Breakdowns Will Pay for a Wizard

Hasn't this happened to you?

At threshing time, engine goes dead from exhausted batteries. Two hours lost getting new ones from town. Sixteen men idle.

Two or three such breakdowns will pay for a Wizard Magneto that will give uninterrupted service throughout your engine's life. Its hot, sharp spark will get all the power out of the fuel. Its simple, rigid, waterproof construction insures against ignition trouble.

Insist on a Wizard when you buy an engine. Get one for the engine you own. There's one for every make and size of engine and every one's guaranteed. Ask your dealer to write us for details.

Send for Free Book

"*The Happy Engine Owner*," which explains fully about ignition and shows also how to remedy or prevent most engine troubles.

THE HERCULES ELECTRIC CO.
2146 N. Western Ave., Indianapolis, Ind

150,000 Wizard Magnetos are used on such engines as:

Alamo
Challenge
Dempster
Fairbanks Morse
Field Brundage
International Harvester
New Way
Root & Van Dervoort
Stover
Waterloo Boy
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The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Scrubs in the Pure-Bred Herd

A SUGGESTION to breeders of pure-bred stock in the direction of urging them to improve their herds by weeding out more closely their pedigreed scrubs, by the more liberal use of the knife on the males and the sending of the tail-end and inferior females to the feed lot, has the appearance of an annual sermon. Yet it is an admonition that the live stock and farm journal sees the force in emphasizing each recurring year in the breeding operations of many so-called breeders of pure-bred stock.

The general interests of the pure-bred stock business of the country should be the raising of the standard in quality of the breeds that these several breeders represent. The greatest hindrance in the improvement in live stock encountered is the scrub pure-bred. A good grade is one of the best object lessons that the pure-bred live stock industry has to present to the inquiring public. A high grade is the conclusive evidence that pure-bred sires are a necessity in the successful operation of breeding and handling live stock.

Each year there is an active campaign of agitation for reducing the number of scrub pedigreed males by castration. This campaign of reform is usually led by breeders, live stock auctioneers, farm journal editors, dealers and handlers of live stock. It is quite noticeable that conditions are bettering each year, and that quality is improving slowly; but there will never be the progress made that the times and conditions demand until the public auction of poor quality of pure-bred stock is discountenanced by the reputable breeders of the country. In fact, a reputable breeder cannot pursue a surer and quicker course to ruin than to be associated in the public disposition of the pure-bred scrub.

It is quite generally conceded that the pure-bred scrub is a ruinous proposition from the standpoint of breeding. When placed in comparison with the good high-grade, its shortcomings are exposed and there is nothing left in its defense. Besides, the animals of doubtful pedigree almost invariably come from this class of stock. A standard of individual qualification should be the governing principle in registration. Then pedigree and registry would mean something in quality, and the pure-bred scrub would find its level with the grade.

But no doubt till the end of time many pure-bred breeders will regard every animal produced on the farm as of the highest type of perfection. This estimate will be held in spite of the well known fact that not over half the animals produced in the average herd are fit to use as breeders, and that a good herd header is the very hardest animal in this world to find. There is a certain nobility about the breeding of pure-bred stock which elevates agricultural industry; but nobility of any sort degenerates into baseness when it departs from the ideals which have been held by clear thinking, progressive men.

"There is nothing ideal in a cat-hammed, pot-bellied, sharp-backed bull calf, though he have a pedigree tracing to peeled willow poles in the water holes of Mesopotamia. Such a calf is a scrub, pure and simple, and the breeder who fails to castrate him is degrading his own business and threatening with ruin the entire pure-bred stock industry."

Blue Sky Investigation

Beware of certain land agents offering to sell lands in the Rio Grande valley, at inflated prices, ranging from $175 to $300 an acre. This is the advice of Dr. G. E. Condra, director of the Nebraska Conservation and Soil Survey, Lincoln, who has in his possession numerous affidavits from duped purchasers and who is investigating the methods used by these land sharks. The investigation is being made under the laws passed by the last legislature. It is the practice to take land seekers in special cars and allow them no opportunity to get disinterested information. Every part of the sale is made with haste. Anyone wishing reliable information regarding the land in the Rio Grande valley should either go to a dealer of known repute or write to the Conservation and Soil Survey. The investigation is not being made to discourage purchasers in the Rio Grande valley or any other section of the country. Neither is it being done to bring reliable land agents into disfavor, but to furnish accurate information to Nebraska citizens.

A Sure Favorite

—saves the housewife much thankless cooking—

Post Toasties

The factory cooks them perfectly, toasts them to a delicate, golden-brown, and sends them to your table ready to eat direct from the sealed package.

Fresh, crisp, easy to serve, and

Wonderfully Appetizing

Ask any grocer—

Post Toasties

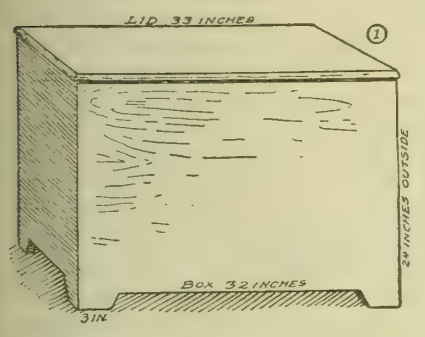
Home-Made Fireless Cooker

Any Man or Boy Can Make One at Small Cost

I HAD read a good many advantages of the fireless cooker and there came to my mind a determination to possess one. I had never seen one, but found out from the advertisements that to buy one would be out of the question, and I wanted one all the more and I wanted it at once. I talked to my husband until he became enthused and we decided to make one. I wanted it to look nice, as well as be useful, so we bought the materials as follows:

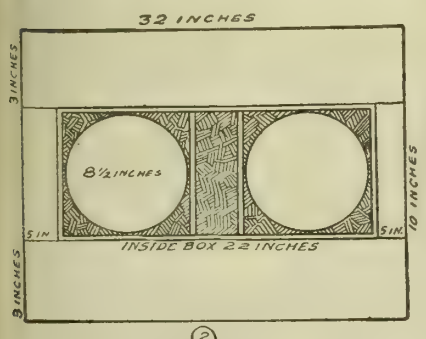
Four 12-ft. barn boards, 12 inches wide by 1 inch thick; one 8-ft. 2x2.	$1.75
One piece zinc, 18x36 inches square	.65
One pair hinges	.05
Two dozen screws, 1½ inches long	.05
Four casters	.10
One square yard asbestos	.10
Solder for soldering zinc	.10
Half pint varnish	.25
Two aluminum cooking vessels, 5 inches high by 8¼ inches in diameter, holding one gallon each	1.36
Total	$4.41

We made a box 18x32 inches square by twenty-four inches deep,

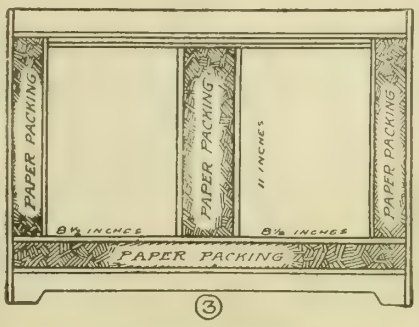


nailed to inside corner posts, twenty-one inches long, made from the 2x2. Then a bottom was nailed in seven inches from the floor. Four inches of newspaper, cut to fit and laid flat, were laid in, then another solid bottom on top of them. Then we made an inside box 22x10 inches square, with corner posts or bottom, but with two cross partitions, as shown in diagram No. 3. We cut a piece of asbestos 22x10 inches square and placed it in the middle of the bottom. On this we placed the inside box and filled it all around to the top with tightly packed paper. We filled between the partitions, too.

Next we fitted in boards even with the top of the inside box to cover the



paper and nailed securely. Then we cut two pieces each of zinc and asbestos 11x26 inches square, rolled them up to form a cylinder eleven inches long, with the zinc inside, and put one in each compartment of the inside box, and tacked at each side



where they came in contact with the wood. Then we stuffed the corners with paper. Next squares of zinc a little bigger than each side of the inside box were cut and a circle cut from them so they would cover the corners and tack to the sides of the inside box. A piece was fitted over the space in the middle also, and the seams were soldered where they joined. We put the circles of zinc in the bottom of each well. We made a lid to fit in the top of the inside box and tacked strong woolen tape twice around the edge to make it fit tightly.

Then we made the outside top. It was made one inch bigger all around (except the back edge) so it projected a little over the box. We fitted cleats to the inside, crosswise, and screwed them on from underneath. The hinges were screwed on so as not to show from the top, and the holes filled with plaster paris.

The box was then sandpapered smooth and stenciled in two tones of blue and varnished two coats. We mitered all the corners and smoothed them with a wood rasp. I made a flat excelsior cushion to fit between the lids.

This cooker cooks to perfection and is both a time and money saver. It keeps things warm from night to morning. I enjoy mine so much that I hope every woman who can will make a fireless cooker, if it be only two heavy boxes of about the right size, fitted with heavy lids, packed with papers inside and fitted with two old buckets. One-gallon syrup pails are good to cook in. Flatirons are just fine to go in the bottom. Heat them hot, put your kettle of boiling food on top, shut up tightly and let it cook. I use flatirons in mine and they are just as good as soapstones.

MRS. R. C. N.

Iowa.

Recipe Worth Your While

Apple Sauce Cake—One cup of sugar, half cup of butter; beat to a cream; two eggs, one and one-half cups of apple sauce, two cups of flour, one teaspoonful of cinnamon, one-half teaspoonful of cloves, one-fourth teaspoonful of nutmeg, one cup of chopped raisins. Bake in loaf. Cranberry sauce or pieplant may be substituted for the apple sauce, and with these it makes a fine pudding to serve with a hot sauce. There is a difference in the thickening quality of flour and it may be a little more will be needed.

Victor Exclusive Talent

The best friends you can have—who cheer you with their music and song, who unfold to you all the beauties of the compositions of the great masters, who through their superb art touch your very heart strings and become to you a wellspring of inspiration.

Write to us for the handsome Victor catalogs, showing the various styles of the Victor and Victrola ($10 to $200), giving a complete list of more than 3000 Victor Records, and containing portraits of the world's greatest artists who make records exclusively for the Victor.

Victor Talking Machine Co., Camden, N. J., U. S. A.

Berliner Gramophone Co., Montreal, Canadian Distributors

For Free Catalog of All the Styles of Victor Victrolas Send This Coupon . . .

We sell Victor Victrolas at the lowest Victor prices on small monthly payments or for cash. We carry all the Victor Records. Write us or send Coupon for catalog.

MICKEL'S NEBRASKA CYCLE CO.

15th and Harney Streets. Omaha, Neb.

Mickel's Nebraska Cycle Co.,
15th and Harney Sts., Omaha, Neb.

Send Victor Catalog to

Name.....

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Delivered TO YOU FREE
on Approval and 30 days Trial

SEND NO MONEY but **write today** for our big 1914 catalog of **"Ranger"** Bicycles, Tires and Sundries at prices *so low they will astonish you.* Also particulars of our **great new offer** to deliver you a **Ranger** Bicycle on **one month's free trial** without a cent expense to you.

BOYS you can make money taking orders for bicycles, tires, lamps, sundries, etc. from our big handsome catalog. **it's free.** It contains "combination offers" for re-fitting your old bicycle like new at very low cost. Also much useful bicycle information. Send for it.

LOW FACTORY PRICES direct to you. No one else can offer such values and such terms. You cannot afford to buy a bicycle, tires or sundries without *first learning what we can offer you.* **Write now.**

MEAD CYCLE CO., Dept. S186, CHICAGO, ILL.

Expert automobile mechanics get $100 to $150 a month, demonstrators and salesmen more. Good jobs are going begging—there are not enough experienced men to fill them—because the automobile industry is growing faster than men can be trained. Equip yourself for a good salary as expert mechanic or for entering the automobile business for yourself Ours is the largest and best equipped auto school in the west, the only school in Nebraska with its large building devoted entirely to automobile training. Complete machine shops, all accessories, many makes of autos. Individual experience in large touring cars. Write for booklet.

NATIONAL AUTO TRAINING ASS'N.
2852 North 20th Street. OMAHA. NEB

Business College

A Boyles College Scholarship, any course, for sale at a liberal discount.

Apply to or address

Twentieth Century Farmer
Omaha, Neb.

1913 RECORD *Magnificent Crops in all Western Canada*

All parts of the Provinces of **Manitoba, Saskatchewan and Alberta**, have produced wonderful yields of **Wheat, Oats, Barley and Flax.** Wheat graded from Contract to No. 1 Hard, weighed heavy and **yielded from 20 to 45 bushels** per acre; 22 bushels was about the total average. **Mixed Farming** may be considered fully as profitable an industry as grain raising. The excellent grasses full of nutrition, are the only food required either for beef or dairy purposes. In 1912, at Chicago, **Western Canada carried off the Championship for beef steer.** Good schools, markets convenient, climate excellent. For the homesteader, the man who wishes to farm extensively, or the investor, Canada offers the biggest opportunity of any place on the continent.

Apply for descriptive literature and reduced railway rates to Superintendent of Immigration, Ottawa, Canada, or to Canadian Government Agent.

W. V. Bennett, Room 4, Bee Building, Omaha, Neb.

160 ACRE FARMS IN WESTERN CANADA FREE

Pure Bred Seed Corn

Picked in September, sure growing, big yielding, Reid's Yellow Dent, Johnson County White, Learning, Improved Silvermine, and Bloody Butcher, grown by us on Sunnyside Seed Farm which we own and operate ourselves. Send today for the free corn book giving full particulars, prices, etc.

McGREER BROS., COBURG, IOWA.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

An Easter Mystery

Here's a tiny, cozy house,
White and tight from top to toe;
Not a sign of fence it has,
Not a bush or tree to hide it;
Not a window, not a door,
Just the roof and walls and floor;
Not a crack to come and go,
And no way to peep inside it.

Later comes a knocking sound,
Funny, busy "tap-a-tap."
Why, the wall is giving way,
Breaking in the very middle.
I declare, beyond a doubt,
Here is someone stepping out.
Now, put on your thinking cap
And find the answer to my riddle.

—Nannie B. Twiner, in Youth's Companion.

The Editor's Corner

Every so many times we have told you not to be discouraged just because your story did not receive a prize or even get printed. This is especially true just now. We have a big pile of stories every week, as you may see from the list of "additional stories." Now, do not think this list contains stories that are not good. Very often stories listed there are better than many that have been printed or even better than some of the prize stories. It is a question of choosing the best every week, and no matter how good the others are, we cannot use them unless we have room. The editor is always glad to see familiar names on the stories, showing that the writers are trying again and again.

This week we have an unusually even bunch of stories. It is hard to tell which are the most worthy of appearing, as there are ten or twelve at the least which we know you would enjoy reading, but that is more than we can use. When you write a good story and it is not printed, just remember that your editor is as sorry as you are that it is not possible to use it.

Spring is here and the birds are back with us again. Watch for them and see how many of them you can recognize. In the city the children are taking trips to the parks and the country just to watch the birds. You may see them without going so far. Tell your teacher about the birds you see and try to learn to recognize their songs. It makes a fine game to play on the way to and from school. HOME EDITOR.

(Prize Story)

A Race for Life

By Daniel Conn, Aged 12, Wellington, Tex.

On one occasion, as I was out walking with two of my cousins, we had a close run for our lives. I will tell you the story. We were going to a cottonwood grove, and were intending to play in the sand and climb trees. On our way there a large, long-horned steer got after us. We were about 200 yards away from the cottonwood grove. The steer was about 100 yards away from us. He raised his large, ugly head and noticed us going to the grove, and all at once he started after us on a fast run. We saw him coming after us, so we turned our heads toward the grove and ran as fast as we could. We arrived, with the steer only a few yards away, and went up the first tree we came to as fast as squirrels; then we were safe. The steer, having seen us go up the tree, stopped, looked at us a few minutes and then walked slowly away, leaving us safe in the tree.

Story Contest Rules

Book will be given for best story.

Stories must be original and over 200 words.

Write with ink, on one side of paper only.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Honorable Mention)

My Pet Pig

By Irma Preston, Aged 13, North Loup, Neb.

One morning last May papa came in and said that one of the old sows that had had fifteen pigs the morning before was dead. There were eleven little motherless pigs squealing for something to eat. Papa gave one to each of us four children and four to my aunt.

We raised all four of ours, but my aunt only raised one of hers. We fed them with a bottle. It was more fun than anything to watch them take their milk from the bottle. When they got older they would follow us all over. When we fed them they would fight for the bottle.

We sold them, and I got $15 for mine and paid papa for their corn. I had enough left to buy me some Indian Runner ducks. If you want a nice pet, get a pig.

Father and the Cat

By Zadie Adams, Fair Grove, Mo.

One summer day a pretty blue cat came to our house. As we had lots of mice, my father wouldn't let us run it off, and I didn't like cats. Every day at meal time the cat would sit on the doorstep and mew. You wouldn't dare to try to scare it off when father was around, and the cat would get in at the window. Nothing would do for father but to have the cat right at his side at meal time.

One time he bought some butter from grandma, and the cat got in one night and ate a lot of the butter up. Then father was going to kill the cat, but the cat would not let him get near, and, anyhow, my mother and I would not let him kill it, so the cat is alive today. And we laughed.

The Snow Man

By Lester Krotcher, Aged 9, Orchard, Neb.

I made a snow man. He had coal for buttons and coal for eyes. He was the queerest looking person I ever saw. I made him on a sled. No one knew it until I put him in front of mamma's bedroom window at night. When she went to bed it scared her. She said next morning it scared her most out of her wits.

I got up early the next morning and pulled it out of there, and by noon it was in the brook and flowing down the stream to find the river.

A True Story

By Iona Anderson, Aged 12, Weston, Ia.

One week ago last Saturday some friends and myself met at a lady's house to organize a society. I was appointed secretary, and my friend, Ida Thompson, treasurer. We had a fine time and stayed until about 4 o'clock. We got six members that day. Their names were Olga Thompson, Helen Anderson, Viola Larson, Ruth Scott, Ida Thompson and myself. Our society is called the Willing Workers. We had ice cream and cake to eat. We met again last Saturday to sew, crochet and tat and had a fine time. We have two more members. Their names are Georgena Peterson and Edna Anderson. We will meet every month until school is out to sew or do something useful. Then we will have a bazaar this summer. We give 10 cents to join and 5 cents afterward, and are working for the Children's Home in Lamoni, Ia. We have a nice lunch when we meet, and expect to get more members soon. I am tatting some lace now.

My Brave Dog

By Bertha Miller, Campstool, Wyo.

Once upon a time several other girls and myself went out fishing. We started about 10 o'clock and were going to eat our lunch under

Picture Contest No. 12

Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it bright and original. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than April 25. Answers to Contest No. 11 will appear in the next issue.

some trees. My dog, Duke, went with us.

One of the girls, Alice Hopkins, stayed back to pick flowers, while the rest of us went on up to the trees to get lunch ready. Duke stayed with Alice. Pretty soon we had our lunch ready and were beginning to wonder why Alice and Duke did not come. Some of the girls were just starting back to look for them, when Duke came running up to us in an excited way and then ran back again as if to ask us to follow him.

Kate Connelly went with him and found Alice with a broken leg. She had fallen into a hole, and Duke had helped her out and then ran to call us. Alice said she called to us, but we did not hear her. None of us ever forgot Duke's deed, and he was a great favorite with us all around there.

Additional Stories

Albert Behlers, no address; Walter Cording, Belvidere, Neb.; Joseph Mulcahy, Greeley, Neb.; Edna Cone, Lexington, Neb.; Mabel McCullough, Concord, Neb.; Ida Krotcher, Orchard, Neb.; Marie Coppersmith, Hyannis, Neb.; Lelia Hadley, Diller, Neb.; Helen Clapsaddle, Corwith, Ia.; Kenneth L. Cotter, Sabula, Ia.; Iona Anderson, Weston, Ia.; F. H. Krebiel, Pretty Prairie, Kan.; Anna Long, Reading, Kan.; Elston O'Dare, Independence, Kan.; Faye McBride, Rose Hill, Kan.; George Ragane, Bend, Mo.; Zadie Adams, Fair Grove, Mo.; Bertha Miller, Campstool, Wyo.; William S. Black, Marrietta, Cal.; Florence Harris, Nyssa, Ore.

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6620 — Ladies' Dressing Sacque — This sacque has three small, outward-turning tucks at each shoulder in front. The round neck is trimmed with a wide collar and the material is gathered in at the waist, leaving a peplum or skirt section below. The pattern 6620 is cut in sizes 34 to 44 inches bust measure. Medium size requires 3⅞ yards of 27-inch material.

6561—Ladies' Shirt-Waist — This plain, tailored model has a box plait at the closing, plain fronts and a small applied yoke in the back. There is also a patch pocket in front. The sleeves are the regulation shirt sleeve, ending at the wrist in the conventional cuff. The pattern 6561 is cut in sizes 34 to 44 inches bust measure. Medium size requires 3½ yards of 27-inch material.

6593—Misses' and Small Women's Dress —Ideal in its simplicity, this dress has a blouse with body and sleeves in one and with very loose armhole. It also has a side front closing and a round neck. The four-gore skirt has a panel front and back and high or regulation waistline. The pattern 6593 is cut in sizes 14 to 20 years. Medium size requires 4¼ yards of 44-inch material.

6596—Misses' Dress—For any entertainment, graduation, confirmation and the like this frock is sufficiently elaborate. It has a seamless shoulder yoke, extending low on the arm, while the front and back are full, and the surplice style of closing is used. The pattern 6596 is cut in sizes 14 to 20 years. Medium size requires 3⅞ yards of 40-inch material, with an additional yard for the ruffles.

6601—Boys' Russian Suit—A simple Russian suit, with drop shoulder and low neck, edged with a wide sailor collar. There are slash pockets, a center front closing and sleeves plain at the shoulder and tucked at the wrist. Bloomers are also provided with this suit. The pattern 6601 is cut in sizes 2, 4 and 6 years. Medium size requires 2½ yards of 36-inch material with ⅜ yard of 27-inch contrasting material.

6627—Girls' Middy Blouse—This is a late modification of a favorite garment. The blouse has the long shoulder, with plain three-quarter sleeve below it. The neck is open, with a wide sailor collar, and there is a center front closing. The pattern 6627 is cut in sizes 6, 8, 10, 12 and 14 years. Medium size requires 2⅛ yards of 36-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

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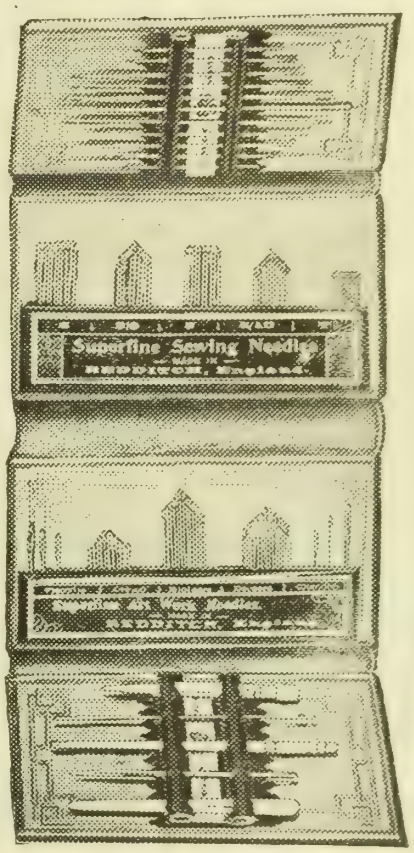

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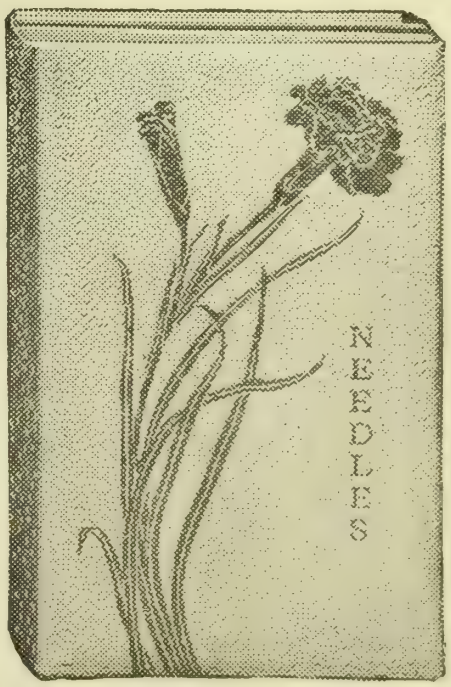

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Of Interest to Our Women Readers

A Better Day

There are tiny bells
In the woodland dells,
Tinkling clear
A message, dear,
If you could hear.

There's a rustle down
Where the leaves are brown,
Whispering near
A promise, dear,
If you could hear.

There are budding trees,
And a hint on the breeze
Of spring glory
So soon to be,
If you could see.

There's a flush of blue
On the bush by you;
A songster he,
Blithe and merrie,
If you would see.

There's a better day,
My dear, on the way,
God cares for you,
"Field lilies," too,
If you but knew.

—Marietta Chafer Prince, in Suburban Life.

Freddie's Successful Successor

"Oh, say, ma, can't I go fishing with the other fellows?" begged Freddie, as he watched his mother pour the cream into the churn.

"No, you can't," she returned sharply. "Do you think I have nothing to do this morning but churn? How those Turner boys' mother ever lets them tear around the way they do is more than I can see. I can always find plenty to keep you busy."

"They don't tear around all the time, ma," said Freddie. "They have a lot to do taking care of their chickens and things, but their mother don't make them work all the time. I don't get any time for fun. It's washing machines and churns and things to turn all the time."

"Well, goodness knows, I don't have time to do everything," said the mother, looking troubled, for she realized that Freddie had fewer liberties than the other boys and that many hours a week of monotonous labor were not good for a growing boy. "How Mrs. Turner manages I don't see, and she has lots better butter than I do, too," she added, as Freddie gave the churn a sudden jerk, a few quick whirls and then turned it slowly for a while.

"I know," said Freddie, taking an unexpected interest. "She hitches the gasoline engine onto everything. She says it makes the churn and the separator go more evenly than the boys do, and she doesn't like them to run the washing machine because they hate it so. Why don't you do that, ma?"

"The gasoline engine belongs to your father, Freddie. He uses it."

"Not all the time," said Freddie, eagerly. "He isn't using it now."

"I don't know how to work it, anyhow," objected the mother.

"But I do. Can't I do it, ma? It's on a little wheeled platform and I could bring it around here and show you in just a little while."

It took a long time to persuade mother, but today Freddie is the winner in the state boys' corn-growing contest, is taking all the care of his mother's poultry, as well as a little flock of his own, and helps both his mother and father in ways that he enjoys. The hard, monotonous labor of turning the separator, the churn, the washing machine and all the various other things that require steadiness and muscle are performed by the willing gasoline engine, which makes no objections and has plenty of time for that and the farm work, too. And "ma" wonders why she never thought of it before, and is now taking an interest in the other farm machinery and wondering if it cannot be put to work for her benefit, too.

HOME EDITOR

What Colors to Wear

Study yourself, girls, and decide with the help of older and wiser friends the colors suitable and desirable for you. Not that older people are always wiser. A very red-haired woman said to me the other day, with a shudder, "Why, my mother used to tie my hair with blue ribbons!"

I have seen the prettiest red hair ruined by ribbons. A girl, as neat as a pink and as sweet, too, had as red hair as is often seen, yet she wore pink ribbons tied thereto, or blue, or almost any color. The bows were so neat and dainty that they almost persuaded one to charity, but, some seeing the combination of colors, could hardly see the daintiness because of the dazzlement.

A mother of a red-headed girl has recently made her a simple black and white summer dress of soft stuff. "Why, she looks about the best in that of anything she ever had," the mother cried surprisedly, and it didn't cost near as much as that other dress of hers!"

It is not the cost; it is the suitability. The girl with red hair and brown eyes looks her best in a rich brown color, in black, in white and even in a navy blue, but no light or bright blue for her. She embodies brilliance in color, therefore her dressing should be in neutral shades or colors. The red-haired girl usually has a dazzling complexion and should not detract from her beauty by adding brilliance of attire to the lavish endowment of nature.

Lavender is a very fashionable color just now, but if you have blue eyes do not use it, although your complexion may stand for it. Although you wear darker shades and duller shades, never make the mistake of wearing a brighter blue than that nature has shown in your eyes. Green is a cool, comfortable color on the right person, but if you are sallow avoid green. I have seen dark-eyed girls, with light hair, who looked good in green, but green is a color to be careful about wearing.

Many girls affect black at the present day, and some girls in their youthful loveliness look lovely in the somber shade, while there are others, who are colorless themselves and need something to brighten them instead of throwing a pall about them. Don't wear black just because some other girl does, or because you think you like it. If it is becoming, it is bad enough then for a young girl to clothe herself in black, for there will be many later years in which to wear it, and many years when the colors of girlhood will be a thing of the past.

Perhaps you are one of the few who can wear almost any color. If so, do not make the mistake of wearing them all at once. Be careful about too much color and too varied a color scheme. But seek with care the colors adapted to you, and then make a careful choice as to suitability and convenience.

ROSE SEELYE MILLER.

Housekeeping Hints

Bedmaking—If you sleep in metal beds and on sanitary couches, after making up the bed in the usual manner, spread a cotton blanket or thin quilt across the foot of the bed, with the long way of the blanket crosswise of the bed and about half the width of the blanket on top of the bed. Tuck the other half of the blanket far under the mattress. This arrangement keeps the covers firmly down over the feet without adding extra weight and increases foot comfort in any kind of bed.

The Clock Shelf—Fit a piece of plain-colored wrapping paper to the shelf so that it turns down over the edges of the shelf in front and at the ends about an inch. Brown paper is best because it does not show the dust. Cut a strip of any thin white or cream-colored cloth not more than seven inches wide and long enough to make a rather full ruffle reaching entirely around the shelf. Sew a quarter-inch hem at the top in which to run a cord and an inch hem at the bottom. Cross-stitch along upper edge of bottom hem on the right side with colored thread to match the wall paper of the room. Fold down the edges of the paper and attach the ruffle to the shelf with tacks, drawing the string very tight and tacking through both ruffle and paper about four inches apart. Do not drive the tacks clear in. Brass upholstering tacks are best, as they do not rust and are more ornamental than carpet tacks.

Laundering Curtains—If before laundering curtains made of swiss or other thin material which you wish to starch, much wear and tear on your patience as well as on the curtains can be avoided by running a tape in the draw and fastening the ends so it will stay there until after the curtain is ironed. Then loosen the ends, tie one to the rod you wish to insert and pull the other end of the tape out, drawing the rod in easily. MRS. F.

Nebraska.

Vegetables During Drouth

Plant beans, tomatoes, okra and other garden seeds in the spring and cover with a layer of pulp from which the juice of sorghum cane has been squeezed out over them, then cover with dirt, and no matter how dry the weather is you will have vegetables until frost, as the pulp holds moisture, but this will not work with corn.

Don't fail to try this. Wheat straw does tolerably well, but takes more of it. MRS. W. P. H.

Potatoes in Abundance

Prepare your ground early in the spring. Sandy soil is best. Plow a deep furrow; plant your Irish potatoes and cover with sawdust, then throw a furrow of dirt from each side of the row. You will have a fine lot of potatoes. The sawdust will bleach them and make them clean and white. MRS. W. P. H.

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Feeding Cane Seed

Leghorn Fancier, Nebraska. As I consider your advice on anything pertaining to chickens of the best, I am now writing to know something about feeding cane seed in connection with cracked corn, wheat and rice to little chicks, and in what proportion. This is the seed that comes from cane fed to cattle. My incubater that I selected from one of the advertisements in The Twentieth Century Farmer is a decided success. It has hatched me the finest flock of Leghorns that this state can show.

Answer—You would want but a very small amount of cane seed in the cracked seed mixture you are making, especially for the very young, as you have an ideal grain mixture if you use but the three grains named. Of course, some small grit and charcoal and pinhead oats would make it more ideal, but, as it is, I consider it excellent. As the chicks get older put in more of the cane seed, then watch how quickly they clean it up. This is the best way of knowing what they like, and how much to mix in. Thank you for appreciation of the paper.

Information on Ducks

Subscriber, Nebraska: I am interested in Fawn Indian Runner ducks in a small way, but would like to raise as many as possible to raise from six ducks and one drake. Will you tell me where I can get information on ducks without too much expense?

Answer—There are some books out on duck culture, but most information on the raising of ducks is connected with other poultry culture, and would cost, while not a large sum, perhaps more than you would care to give, and so, for the present, will give you the name of a book you can get for the asking from the Department of Agriculture, Washington, D. C. It is the Farmers' Bulletin, No. 64, called "Ducks and Geese."

Arterial Disease

Mrs. D. K., Iowa: I am losing a good many of my hens. They seem well and their combs are red, but despite this, I find them dead on their nests or under the roosts. They are very heavy. We feed them about one half bushel of wheat and oats in the morning, the same of corn at night, with plenty of buttermilk to drink with their water. They have free range, which includes the hog and barn yards, where they pick up feed. On opening the dead I find them very fat and the liver spotted. I have about 200. Do I feed too heavy?

Answer—Without other symptoms than merely a spotted liver, I conclude that your hens are dying from bursting blood vessels in the brain—a common trouble with over-fat hens. An over-fat condition diseases the liver causing this spotted look, but the main reason for the quick death is from the weakened arteries caused by plethora, indigestion and liver inaction. For such condition the safest and best treatment is, first, reducing the supply of food—in this case the oversupply quite likely coming from what they pick up outside of feeding hours. With it give heavy doses for a couple of days of epsom salts in the drinking water, reducing to mild doses for every other day for some time after. With this in the buttermilk, give soda. The dosage can be from five grains a dose for each to more. If it is kept in the buttermilk all of the time until the death rate shuts off in this line it is all the better. This treatment is simple, but it is the best I know. It will certainly help the liver congestion just beginning and the arterial pressure.

Sick Ducks

A Beginner, Iowa: Last year I had fifty ducks hatched at about the same time. I put them in a warm house, which had been used for chickens the year before. These chickens had no disease, and before putting in the ducks I gave it a thorough disinfecting and floor scrubbing. The ducks soon began to look sick, though I could see no sign of disease. Their food did them little good, though they crowded up to their pans until they got so weak they reeled as they walked. I looked them all over for lice, but found none. I lost all. This year I dread to try raising them again.

Answer—It would be impossible for me to tell you exactly why they died without one symptom given, and yet I am going to try a guess simply because so many ducks would not have died of any disease I know of without a few at least showing signs of the trouble causing it. I believe that your ducks were eaten up with "red mites," gray mites, really, only red when full of blood. It was an old chicken house, and hid these things behind boards that held back the disinfectant. These mites came out at night and sapped out the life of the ducklings, returning to their hiding places when full. Big lice are easily located, as they stay on the fowl, but mites work at night and seldom follow the bird about in daytime. Many a flock of ducklings has been destroyed because housed with lousy hens or in a house occupied by hens. Don't do it next time, anyway.

Lamp Hovers Again

A Subscriber, Iowa: In the February 7 issue of The Twentieth Century Farmer you told of lamp hovers, but did not tell where they could be bought. I have not been able to locate one manufacturer of the same, though anxious to buy something of this kind. Now, where can I purchase a lamp hover for chicks?

Answer—The party addressing us has been answered by mail. The wonder to me is, why do not manufacturers of such necessities as a simple, cheap lamp hover advertise in farm papers? It is the farmer who is to largest extent engaged in the poultry business, and is nowadays on the lookout for all kinds of help toward its increase and care. From the number of inquiries sent this paper to that one little statement on lamp hovers, the inference must be that advertisers of the same are missing many a sale by favoring only poultry journals with their goods for sale. I might ask them, How many farmers take a poultry journal, and how few is the number that take not less than three or four farm papers?

Tells why chicks die

J. C. Reefer, the poultry expert of 1619 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

Cushion Shoes that relieve tender feet

Mayer Yerma Cushion Shoes are worn by people for comfort and relief from troubles due to sensitive feet. A soft quilted sole is built in so as to conform to the lines of the foot and absorb the jar of walking. Resists dampness—cool in summer, and warm in winter.

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Mayer Yerma Cushion Shoes are made in a large variety of styles for men and women—and are neat and dressy. Durable shoe quality is insured because they belong to the Mayer Honorbilt line. Either for relief from foot trouble or for solid comfort wear Yerma Cushion Shoes.
WARNING—Be sure and look for the Mayer name and trade mark on the sole. If your dealer cannot supply you, write to us.
We make Mayer Honorbilt Shoes in all styles for men, women and children: Drysox, the wet weather shoe and Martha Washington Comfort Shoes.
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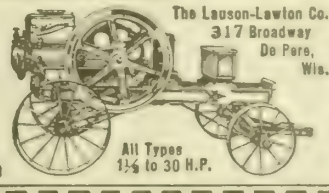
are made in fifteen different sizes, portable, semi-portable and stationary. Choose any one and it will be the soundest investment for the money you can possibly make. Through its smooth running qualities—imperviousness to temperature—low first cost—and economical fuel consumption—the "Wisconsin" has won favor everywhere sold. Write for guarantee and full details.



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Feed hopper is only 39 inches from the ground. Bale direct from windrow. Use any engine. If you have no engine, get one of the profit making Ann Arbor horse presses. Write today for "Making Money from Hay." Address

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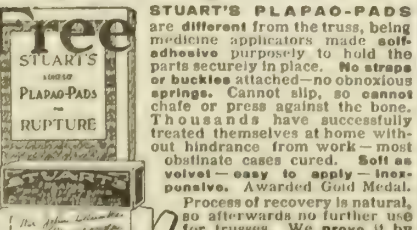

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ROOFING

represents the responsibility of the three biggest mills in the roofing industry—when it guarantees you fifteen years of service *on the roof* in *Certain-teed*. Look for this guarantee label on every roll or crate.

Your dealer can furnish *Certain-teed* Roofing in rolls and shingles—made by the General Roofing Mfg. Co., *world's largest roofing manufacturers*, East St. Louis, Ill., Marseilles, Ill., York, Pa.

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Vehicles, Wagons, Engines Direct to Consumers at Saving Prices.
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Process of recovery is natural, so afterwards no further use for trusses. We prove it by sending you Trial of Plapao absolutely free. Write today.
PLAPAO CO., Block 1199 St. Louis, Mo.

Read the small poultry and egg ads on page 26 if you want to buy eggs for hatching. Every advertiser is a reliable breeder.

A Toboggan Slide Down the Andes

By Frank G. Carpenter

LIMA, Peru.—Coasting on a gravity car from the highest mountains, over the steepest railroad of the world to the level of the sea!

Dashing out of the clouds to find clouds below you!

Now in the blizzard, where the hail and snow are so thick you cannot see a stone's throw in front, and now under the blue sky with the air clear all about you!

Hanging to precipices, flying on spider-web bridges of steel over frightful chasms, whirling about curves in the midnight darkness of winding tunnels and coming out into the light of day with a shudder as you look at the depths far below you.

This, in a nutshell, is the story of my trip from the glacial snows, three miles straight above where I am writing. It gives only a faint idea of the journey. The dangers were awfully real, and as I look back it seems a miracle that I am here today to describe them. It is a miracle. The ordinary ride of this kind, taken with a dry track and the sunlight, is so dangerous that travelers who risk it are made to sign a paper, swearing that their heirs will claim no damages if they are killed on the way. I signed such a document before I got on the car; and an hour later it seemed to me that the railroad authorities were sensible to require such protection.

High Plateau Between the Ranges of the Mountains

Where Andean Waters Divide

We started at Ticlio, at the very top of the pass, where the Andean waters divide, some running down the western slope into the Pacific, and others making their way across the continent through the Amazon, into the Atlantic. We were almost at the level of 16,000 feet. We were fully three miles above the surface of the ocean, and we were to slide down over the rails, through a winding distance of 100 miles clear to the sea. The Central railway goes to the top of the Andes without one inch of down grade. The most of the way the ascent is about four feet in 100, and you can start a car at the glaciers, and it will fly straight to the waters of the tropical ocean.

Our toboggan was the private gravity car of Mr. Feehan, the general manager of the Central railroad. It was a low platform on wheels about two feet in diameter. It had no motive power, and it was controlled only by two brakes, one on each side of the front. Upon the platform were seats wide enough for three persons, and as we took our places I sat in the middle, with my stenographer at the left and Mr. Russell of the operating department of the railway at my right. We had also a Peruvian Cholo who understood the business to act as a brakeman. We had to run upon schedule time, for the track is a single one and we had to pass trains going up and down on the way. We were to get our orders from the telegraph operators at the principal stations.

A Sudden Change

We started amid the glaciers. The sky was clear, and we could see the great masses of ice as they were imperceptibly moving down the mountain. Just above us was Mount Meiggs, over 17,000 feet high, and all around were mighty peaks kissing the clouds. The sun shone brightly. The rails were dry, and Mr. Russell said we would have no trouble controlling the car, as the only danger came from the rain or the snow, which make it difficult for the wheels to hold to the track.

This was the case at the start. We shot out of Ticlio, and flew at the rate of twenty miles an hour down the road. We had hardly started, however, before the sky changed, and the winds began to roll up the gorges. The air grew cold, and within five minutes we were in the midst of a snowstorm. A moment later the snow turned to hail. The stones were as big as marrowfat peas, and they bounced like rubber as they fell on the track. With the hail came thunder, and flashes lightning. The air was so rare that our ears fairly cracked with sound, and and the lightning made more visible the dangers about us.

Coasting Through the Storm

As we went on the rails became white and the rocks were hidden in snow. Our car was half full of hail, and the wheels were flying over slippery tracks. Then the wind increased to a blizzard, and Floeckher, who was sitting beside me, taking his notes on wet paper, notwithstanding the storm, all at once cried out that his hat had blown off. Very foolishly we stopped the toboggan, and started our Cholo conductor back up the track. At this time we had only ten minutes leeway of a train that was coming behind. We waited five minutes and the Cholo did not appear. Then Floeckler went back and found the hat on the edge of a cliff 400 feet high and about 200 yards from the toboggan. The Cholo had disappeared. We waited for him two minutes longer, and then, hearing the whistle of the down-coming train, we knew we should have to manage the toboggan ourselves. Mr. Russell took hold of one brake and Floeckher grabbed tight on the other, and we began to coast down through the storm. The cold was piercing. The winds went through our bones and the great hailstones cut our faces. At times when the clouds were the blackest we could see only a few feet at the front, but could look down the sides of the cliff to which the track hung and see the snow-clad walls far below us. Now we would go flying into a tunnel, and here were the safest of places, for the rails were dry and the brakes made the wheels grip the track. Indeed, we almost prayed for the tunnels and were glad when we dashed over a bridge through the blinding sleet into the darkness.

A Chilly Proposition

We had made eight or nine miles when we met two trains standing at one of the switchbacks on a siding. They were waiting for us, and the engineers said another train must pass coming up before we started down. At that time we were chilled to our bones. Mr. Russell's face was blue with the sleet and the cold, and Floeckher's hands were frozen holding the brake. We climbed out of our car and into the cab of one of the oil-burning engines. The heat of the boiler soon thawed our blood, and within a short time our clothes, which had been wet by the snow, had dried off.

We were still in the storm when we left the switchback. The rails were covered with sleet and we could not be sure of the tracks. At one place we passed a gang of trainmen who were working on the road, and at another time narrowly escaped a drove of llamas that was crossing the track in the storm. As they saw our toboggan the animals began to run and they went along on kangaroo jumps with their Indian drivers trotting behind.

At every hamlet along the way we had to look out for the dogs. The scurvy curs ran out and barked at the car and snapped at us as we flew by. The great danger was that a dog might get in front of the car and by being run over throw us down the sides of the mountain.

We were going too fast to watch out for slides. When it rains in the Andes this track has to be watched daily for the masses of earth and rock that fall down upon it, and for this reason a hand-car is always sent five minutes in front of the engine to flag it for slides.

Through Wonderful Scenery

By and by we passed Casapalca, and there lost the storm. The sun came out, and the sky straightway was blue with white clouds. We could now see for miles. The track dried, and we coasted along at great speed through some of the most wonderful scenery on earth. Now we would ride for miles between walls of rock that extended upwards for thousands of feet, and now hang over gorges, below which, a thousand feet down, the rushing Rimac flowed foaming. Now we would enter a tunnel high up on the side of a cliff and, looking down, see another tunnel almost directly below us. We rushed out of one tunnel into the Infernillo, a slender bridge of iron which joins two great walls of rock. On the other side of the bridge we would see the black hole pierced by the track. Above us, through the narrow slit of the rocks, was the blue sky of heaven, and below was the gorge which these people call the Little Hell. The bridge there spans a chasm which is 2,000 feet deep, and we trembled at the thought that there might be a train in the tunnel beyond.

The whole of this wonderful road seems blasted out of the sides of the mountains. Here it hangs to the cliffs, there it bores through the rocks, and again it zigzags in great Vs as it climbs. Some of the tunnels are so close together that they made me think of the road between Monte Carlo and Nice, which has been described as riding through, a flute and looking out of the holes. The only difference between that and this road up the Andes is that each of these holes gives you a moving picture show of magnificent grandeur.

Some Unique Formations

I wish I could show you some of the formations of the Andes. They surpass in their wonders the Alps and the Rockies, and I have seen nothing like them in the Himalayas. We have a little patch of 400 acres in Colorado at the foothills of the Rockies which we call the Garden of the Gods. Not far from Cerro de Pasco in the heart of the Andes, looked down upon by mountain peaks from 17,000

Lasting Tribute To The Departed

Cyclone Ornamental Entrance Arch, Gate and Fence for cemeteries are substantial and beautiful—express a proper respect for those who sleep in "The Silent City"; a permanent improvement; a dependable protection against intrusion.

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We build also Ornamental Fence and Gates for Cemetery lots; Entrance Arches for Parks, Public and Private Grounds, Country Homes, etc. They're more substantial, more attractive, less costly than wood.

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to 20,000 feet high, is a similar garden, which covers tens of thousands of acres, and with a hundred formations where the Colorado garden has but one. In the Andes there is one rock called the King, a gigantic figure as big as a house, with a crown on its top poised upon a neck not more than three feet in diameter, and so long that it carries the great head high above all its surroundings. There is another rock known as the Turtle, a gigantic block the shape of a tortoise, that is believed to uphold the world. A third looks like a great steamboat perched on a pedestal, and a fourth is a mighty tower chiseled out by the gods. In this same region is the Rock Forest, consisting of hundreds of acres of columns which stand individually out on the plain and which in the distance look like a great woods.

And then there are castles, palaces and grand fortifications. With a little imagination you can find almost any kind of architecture or the model of any great structure. I have seen a table rock which hangs over the harbor at Cape Town in South Africa. There are table rocks of marble here in the Andes which look as though they had been cut by a sculptor.

Going to Cerro de Pasco I saw rocks like those of the Giant's Causeway, although they were not of hexagonal shape, and in riding through the mountains I have seen castles of the purest white marble, which in their grandeur excel those mighty ruins, the work of man, on the Rhine. These mountains have all the colors of the Colorado canyon. Now the rock is blazing white above and a marble palace seems to have risen out of the golden rocks below, which in turn remind one of the raised marbles of the Parthenon at Athens. Here the rocks are brown, further on they are blue, red or gray. The gray is the most prominent color close to the sea. Much of the formation is limestone. Here the mountains are ragged and rough. Further on they rise into ruined cities. I saw some the color of old red sandstone. They made me think of the grand fortifications of Delhi in India. I saw others which had spires like the cathedrals of Cologne and Milan. These spires were as white as Carrara marble, and they glistened like snow under the sun. Other rocks were dome-shaped, and others extend in great waves showing the folds in the earth, forming curving walls of wonderful beauty.

Vegetation of the Andes

The vegetation of the Andes is wonderful. I have already written of the Rimac valley, which broadens out into an irrigated plain at the sea and climbs its winding way through narrow gorges, with patches of soil here and there to the top of the coastal range to a height of almost three miles. This has sugar cane, cotton and orchards at the base. Higher up are alfalfa and grass, and higher still are small grains of various kinds. Fruits can be grown all the way to the top. For the first two miles of altitude the mountains about are almost altogether a desert. Then comes a sprinkling of green, with many wild flowers. Higher still the green deepens, and, after going over the pass and reaching the high plateau which is upheld by the two mighty ranges of the Andes nearest the coast, you come into a land which seems to be a bed of green moss with tufts of grass here and there. This is the vegetation of the high plateaus, which covers millions of acres and supports vast herds of llamas and sheep.

I rode for about 100 miles over those plains, passing flock after flock of fat sheep, with tails as big around as my arm. To my eyes they seemed to have nothing to eat, but they live on the moss and the thin, fuzzy grass and grow fat. Some of the sheep are owned by rich capitalists. There is one firm which has 36,000 and another near Cerro de Pasco which owns 60,000 and more. There are also hundreds of squatters, Indians or Cholos, who have small flocks. They live in little houses about fifteen feet square, away out on the plains. Their houses are of mud or sod, with thatched roofs held down by rocks. Near them are corrals for the stock. They are fenced with stone, and each pen contains an acre or so. Some of these squatters have great flocks of llamas and others of donkeys. Now and then you see a double corral with donkeys in one pen and llamas in the other. All of the stock is herded. Every flock has its man or woman, who stands and knits or spins as she watches it. Some of the herdsmen are children, little boys and girls of 10 or 12 years of age, who knit or spin as they care for the sheep.

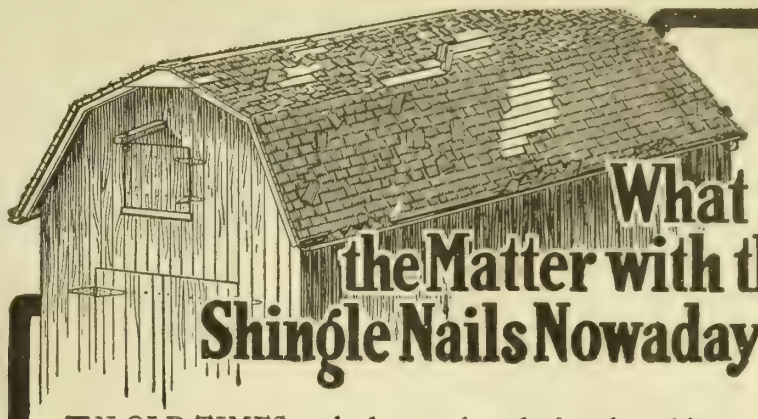
Yield Considerable Money

The great haciendas of the high Andes yield considerable money. There is one near La Foundicion, which produces tens of thousands of pounds of wool every year. It belongs to Duncan, Fox & Co., of Lima, and it is managed by a Scotchman whose name is McKenzie. The farm has 36,000 sheep, which are kept in fenced fields and handled by shepherds from Scotland. The manager is making many experiments in introducing new blood into the flocks; and he has Scotch collie dogs, which he has imported and is crossing with the native dogs of Peru to produce a breed especially fitted for sheep raising on the high Andes.

I see many cattle feeding on the plateau. They are comparatively small and not very fat. There is an Italian named Fernandini, who is experimenting in bringing in fancy stock. He has a number of large haciendas and expects to supply the meat market of the coast. This same man is said to own thousands of llamas and donkeys and to largely control the freighting about Cerro de Pasco. I understand that the government is experimenting with the grasses of the high Andes and that attempts are being made to improve them.

The climate at 12,000 feet is not cold in comparison with that of some other sheep countries. It is warm during the day and even in the coldest weather the nights do not fall below zero. The sheep and cattle can feed out of doors all the year round. The snow falls but the sun is so hot that it never lies more than an hour or so at a time. About the most dangerous features of the weather are the big thunder storms, with the accompanying lightning. The latter often strikes, killing people and sheep. As to the general features of the climate, the plateau has two seasons, dry and wet. The wet season begins in September or October, and lasts until April or May. At that time it is usually clear in the morning with rain or snow in the afternoon. The dry season, which is from May to September, is delightfully clear. The sky is always blue and the tropical sun makes the weather much like Indian summer in the Virginia mountains, which I believe is the very best weather on earth.

(Copyright, 1914, by Frank G. Carpenter.)



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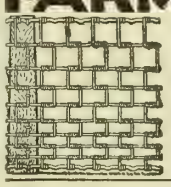

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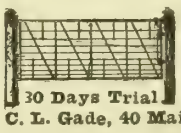

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THE Oakland is noted for its power. It is designed for hard service. One of the first things an Oakland owner finds out is that he doesn't need to worry about going through sand or mud, or up steep hills. He knows that his big powerful Oakland will pull him through, anywhere, and quickly, too.

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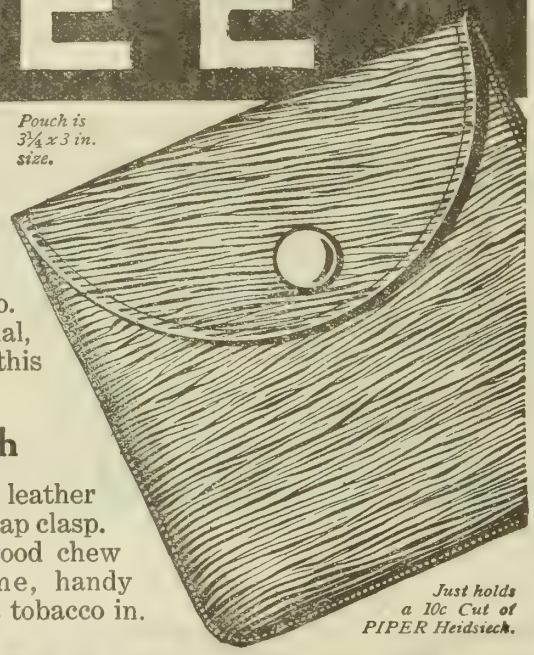

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Send 10 cents and we will send a full-size 10c cut of "PIPER" and this handsome leather pouch FREE.

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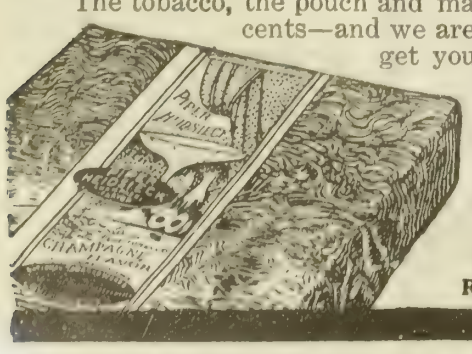

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Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Alfalfa in Rows

A. E. T., Iowa: Seeing item in your issue of March 21 where party asks about planting alfalfa in rows, will say in that western country the answer is not quite correct. The corn planter part is all O. K. I am not writing from theory, or ideas, or even suggestions, but from an experiment in South Dakota near the North Dakota line on a farm. The writer was working on that farm at the time referred to.

The first thing done is to plow not less than ten inches deep, then disk two or three times, then harrow down until you have a fine, level seed bed. Select a corner to sow, say sixteen pounds of seed in a good, clean five-bed row, pretty thickly, any time from as soon as it will do to sow it up until the 10th of August. Now then, just before frost plow this up; set your plow deep. As you plow each furrow take out all the plants with good roots. Put about fifty or more in a bunch, like sweet potato plants; put them in a box and set in the cellar, or any place where they won't freeze. Keep them moist and they will grow all winter.

As soon as it will do in the spring, plow your ground as stated in the beginning of my letter and take your corn planter and mark off the ground. The sixteen pounds of seed will cover at least five or six acres. When you get your ground marked off let two men each take a spade and sink them down full length of the blade; once will do. Then have a boy come along with the plants and another with water to pour in the hole, and two men to set out the plants. In fact, the planting is done just like sweet potatoes, but bear in mind that as soon as the plants are exposed to the open air they must be kept well moistened. When set out take a garden rake and go over them and rake all clods off and away from the crown of the plant; then cultivate the same as corn.

Put your plants about eighteen or twenty inches apart in the corn planter row, as that way gives you a chance to cover all weeds between the plants. Bear in mind in cultivating to be careful not to leave any dirt on the crown of the plant, as that will kill it. On farm referred to in South Dakota, the next spring nearly all the stools were eighteen inches across. This was set out in 1912, and in 1913 some seed was taken off this five acres, so they inform me.

Now, this may look like lots of work, and it is considerable, but the saving in seed will more than compensate. Furthermore, plants kept over winter, as stated, are stronger and more vigorous than those raised by any other plan, for, if properly cared for during the winter, they will have a tap root seven to ten inches long. Some think it would not cover the ground, but try this plan and see.

Note—We are very glad to hear of this way of planting alfalfa in rows, which is no doubt very successful under certain conditions. Our correspondent, however, wanted to plant seventy acres, and lived in western Nebraska, where the soil is quite different from that in the northern part of South Dakota. The method we described to him will be much more practicable than this one. It is the method of a man who has raised thousands of bushels of alfalfa seed and been one of the most successful growers in Nebraska. His experience in this line extends over not only one year, but several years. Many people seem to have an idea that the editor of a farm paper sits at his desk and writes answers to readers' inquiries from his imagination. We assure you that the editor of the Twentieth Century Farmer does not do this way. All inquiries are referred to men of experience in the particular line inquired about, and no methods are advised in crop or live stock work that have not been tried and proved successful. We keep in touch with the men who are doing things and know where to get information that is practicable and has been tested. You need not be afraid of getting theories from us.

Help by Year or Month

H. L. B., Nebraska: I am a constant reader of the Twentieth Century Farmer and like it fine. I noticed on March 21 that B. R. P. says all farmers are alike. Now, I don't think all farmers are alike. I find that the ones that hire by the year are better than the ones that hire for a short time. Of course, once in a while you will find one that is never satisfied with what you do, but my experience is that if you do all you can they will soon notice it. But I do think when a farmer gets a good man it is absolutely wrong for him to pay him off as soon as the harvest is over; then he is forced to work for his board or go to town and spend what he has made.

I have done much work on farms by the month, but I am going to quit it on that account. I think I can do better with my small means, because the farmers never give us a chance to lay up anything. Give us work by the year and we will stay with you.

Rural School Teachers

M. J. H., Nebraska: I have noticed quite a lot about the rural schools in Kansas and Nebraska, and, being a teacher, I would like to express my thoughts on the matter. I noticed F. H. of Nebraska gave the teachers quite a writeup in the Twentieth Century Farmer of March 7.

Let me state a few facts about the teaching profession as I find it. It may not be the same as some other teachers find it, but I think that most of the rural teachers will agree with me. Let us view teaching from a business standpoint. First, a teacher must attend normal for a month, at a cost of $25. Then there is institute week, which costs $5 at the lowest. By that time one must hunt a school, and be at expense anywhere from a day to a week. Then comes the signing of the contract for an eight or nine-month school at anywhere from $40 to $60; that is the average teacher's salary for rural districts. At $60 a month for nine months, the yearly salary of a rural teacher is $540. From that one must deduct board, amounting to $14 per month, for nine months; total, $126 board bill. Then there are books to buy, and one must also count in two months in the summer when not at normal; counting that, there is another bill of $28 to $30 to deduct from the salary. A teacher is also supposed to attend the teachers' association, at an expense of not less than $20 to $25. A teacher has also to dress a little better than a farm hand, and, figuring clothes at $75, we have a yearly salary of $540, yearly expense of $286, leaving $254 for twelve months' time, and I believe I place the expense extra low.

Let the country district give better wages and not contract with the lowest bidder to save a few dollars, and I believe the rural schools will be equal to our village and town schools. Or, better

yet, consolidate two or three districts and have a school equal to our city schools.

Gets Along with the Boss

H. A. K., South Dakota: I saw an article in the Twentieth Century Farmer of March 21 called "The Hired Man Speaks," by B. R. P. of Illinois, and, as I am a hired man myself, I thought I would write you a few lines and tell you what I think about it. I have been working on the farm for nine years now and I never had any trouble except at one place, and I worked at that place nearly two years before we had any trouble. The second spring I started there we got along good until we plowed for corn. Then I got up every morning at 5 o'clock or earlier and the boss stayed in bed until about 6 o'clock and sometimes later, and then his wife had to go and help him milk the cows, and that made breakfast late, and we did not get to the field until about 8 o'clock. I worked in the field all day until 7 o'clock and then I quit and did the chores, and the boss did not come in until dark, so it was about 9 o'clock when we got our work done. He never said anything about working later until Saturday evening, and then he said I had to stay later in the field. I did not say anything then, but the next week I quit the same as usual, and the boss worked until dark, as he had the weeks before. He did not say anything until Saturday evening, and then he told me again that I had to work later. Then I told him if he wanted me to work longer he had better get up earlier and that I would not work in the field later than 7 o'clock for any man unless it was in the rush season. He got up at about 4:30 and called me after that.

We got along good until fall, when I wanted to take a few days off to go to the fair, and he said if I laid off he would dock me $1.25 a day, and I was getting only $25 per month, so we had a few words and I quit right then. I would not have cared if it were the busy season, but our work was about all done.

Every other place I have worked I have got along fine. I am at this place now for the third season, and we have never had a bit of trouble. So I don't agree with the Illinois man that the farmers are all alike about working a hired man hard, because I think a hired man and the boss ought to work together, and I think that makes it a whole lot easier for the hired man. Wishing you and your paper much success, I will close.

Cost of Silos

E. A. K., Colorado: I have been greatly interested in the silo discussions running in your valuable paper during the last summer and fall. I have wished the matter of expense might have been made a little more definite for the average farmer, viz: what the silos would cost at the various locations. I realize this would have occasioned considerable work in getting the information, but it would be practicable and definite, which seems to be a very necessary thing for the farmer.

Note—The reason we did not give prices in detail is that they differ to such an extent for different kinds and materials and in different localities that it is not really practicable for us to do so. The writer further asks for prices on a given type of silo in his locality, which we were glad to obtain for him, and we will be glad to do this for any of our readers.

Glanders in Nebraska

D. S., Nebraska: Your comment on the inactivity of the Live Stock Sanitary Board brings to mind some thoughts on the disease known as glanders. According to the annual report of the state veterinarian, there were, from December 10, 1912, to December 31, 1913, fifty-nine horses and mules destroyed and paid for by the state as being affected with glanders. The amount paid for the animals was $4,773.69. On top of this was the expense of having the work done.

This is about as the work has been running for years. Would it not be better to have competent men devote more time to such work, see that quarantine rules are observed, return at intervals to re-test the exposed animals, etc? In time the disease could be eradicated.

These are only suggestions. If you consider the matter worthy of attention, investigate and express yourself

Note—This is exactly in line with the contention of the Twentieth Century Farmer. What we need in the field is men who are giving all their time to field work—men who can go at once to any part of the state where there is an outbreak of any of the infectious or contagious diseases of any of our farm animals and give that particular case his time and attention, using the necessary sanitary and quarantine regulations that the outbreak may be checked on that particular farm.

We would suggest that our correspondent write direct to the Live Stock Sanitary Board. If the farmers would let the board know direct that they need special men for this work they might be able to get what they should have.

Home Canning Outfits

Mrs. C. W. R., Nebraska: I would like to hear, through the Readers' Exchange, from those who have used home canning outfits as to kind used, price and success with same; also where one should write or go to obtain them.

Note—We are unable to publish names and addresses of business houses or to recommend particular makes of goods through this column. We have, however, written our correspondent, giving her prices on these canning machines and the names of firms selling them. Would be very glad to publish letters in this column from those who have used them, telling whether or not they found them satisfactory.

Should Farmers Set Prices?

W. M. R., Oklahoma: I read an article in your paper of March 14, the heading of which was "Farmer and Banker," and I will have to agree with him so far as he tells of the conditions of both banker and farmer, but he fails to offer any remedy, and I notice in the editor's comment that he thinks it would be wrong for the farmer to undertake to right a wrong with another wrong.

I have been a farmer all my life, and I claim to know a few things. In the first place, the merchant buys his goods; he knows what they cost, and he sets down the figures and the cost, together with all his expenses; then he sets a price on the goods to cover all expenses and to give himself a profit, so in this way he is dealing safely. The banker does the same thing; the grain dealer also does the same thing. Now, the point I want to make is this: Is it not just for the farmer to have some way of setting the price on his products to make himself a profit, as the other fellows do? There is only one way this seems to me possible. The farmers are so poor they cannot hold their products for a higher price. If they could, I think it would be equally fair to do so, as most all of the great wrongs have been put down by other wrongs of the same nature. For instance, Uncle Sam is smashing the trust company with something similar to a trust, but something that everybody is concerned in.

We notice that the last ten crops in the United States, according to government reports, were classed as five big crops and five small crops, but the small crops brought the farmers the most money by several million dollars. Now, doesn't it look foolish to you for the government to spend millions of dollars trying to teach the farmers better methods of farming and how to produce more

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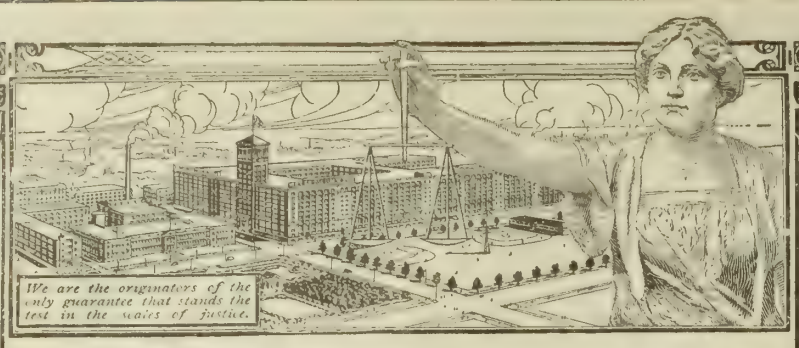

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and bigger crops if it loses the farmer money every time he produces a big crop?

Then, another thing: Everybody is bawling his head off trying to get boys to stay on the farm, when every farmer in the land knows he has got nothing to offer his son in the way of encouragement to get him to stay at home. If the boy's work is going to lose him money, why should he stay? If he raises a bigger crop, it will lose him more money. Now, if the government would take this money that they are spending to teach us how to raise more crops and would build warehouses and elevators to store this grain in—I mean the surplus grain when we have a big crop—and hold it for a short crop, and not let it go onto the market as a surplus, I believe that we could have uniform prices established, so the farmer would have some idea when he planted a crop what price he was going to get, and would not be handicapped by every other business man setting his own prices except the farmer.

I would favor the government advancing the farmer a certain per cent—say, 60 or 80 per cent on the dollar—of what his grain was worth at the time it is put into the store house. Now, this would be just as fair to the farmer as it is for the government to try to control the money, for some men's wealth consists of farm products. The law gives the monied man the rate of interest, and it would be fair for the farmer to have a right to set the price on the monied man's biscuit, and without government aid, I don't see how farmers are going to be able to set the prices, for they are dependent to some extent on the monied men, and it is just and right that they should depend on the farmer for what they eat after the farmer has had the right to set the price, and without government aid I don't see how this is going to be done.

Editor's Note—One step in advance toward the ideal held by this writer is the co-operative elevator and store house. These co-operative associations are worth looking into. It takes the government a long time to move, and until the government gets ready to help the farmers they may go a long way toward helping each other to set the prices on their own products. The farmers of any community can do, through co-operation, practically everything this writer advocates. The Farmers' Educational and Co-operative Union is marketing the cotton crop through central county and state warehouses, selling direct to manufacturers. It has done away with the huckster system, whereby the man who only had a few bales of cotton and needed the money sold to some huckster.

Hired Men Are Human

O. A. S., Nebraska: As I have been reading your good paper a couple of years, I thought I would like to express my opinion on the hired help plan. It seems to me like the fellow that has hired a man seems to think he has hired something that has no intelligence. If they would take the hired man into their confidence and plan with him and get him interested in the work he would be more contented. If a hand is treated like one of the family and not as a slave, and if he is asked his opinion on a subject now and then he feels as if the fellow he is working for has some confidence in him and he will try to deserve that confidence nine times out of ten. Of course, some will not, but the average hired man is intelligent, but forced by circumstances to sell his labor.

Now, getting a man up early and late and at the end of his time handing him a check and trying to jew him down to the last cent without showing appreciation of the fact that he helped you when you needed his help, doesn't encourage that hand to work for you again. I have worked for a number of years and know this to be true. If a man would say, "Now, John, do you think it a good idea to stack this millet today; it looks favorable and the wind is still and nice?" it seems to me he would reply, "Well, boss, it is just as you say." But if the boss says, "John, get the sorrels to the rack as quickly as you can and don't be all day; we have to put that millet all in the stack, for it may rain tomorrow." Do you think John will be cheerful about it? More than likely he will sulk all day, when a pleasant word would have won him over.

The hired man is selling his labor and he gets paid for what he does. You cannot get more work out of him by being grouchy, for if you do he calls for his time and goes when you need him most, and you have made him your enemy. No, don't lay it all on the hand, or the man who hires either, for there are some poor hands also.

Concrete Watering Tank

H. B., South Dakota—Will you give me advice concerning making a cement watering tank. Is it all right for cattle to drink out of or not? Will it hold water? To make it hold water, how shall I construct it?

Answer—You will find a concrete watering tank, properly constructed, will hold water perfectly and may be kept clean so that the water will be good for your stock much more easily than one of wood.

In mixing concrete buy a good quality of Portland cement and see that it is kept in a dry place and not exposed to damp air or set on the damp ground. Dryness of cement is absolutely essential. Use coarse, clean sand and clean gravel or crushed stone, the stones being from one inch to two and a half inches in diameter, the smaller ones being better for thin walls.

Proportions of mixture should be one part cement, two parts sand and four parts crushed stone or gravel. Mix smoothly and thoroughly on a platform or somewhere so that all foreign matter will be kept out, and use while perfectly fresh.

Locate the tank in a handy, well drained, wind-sheltered place.

For a rectangular tank five by sixteen feet make an excavation for drainage foundation sixteen inches deep, ram and tamp the ground thoroughly and evenly and fill in with large cinders, broken stone, etc.

Around the outside dig a ten-inch trench two feet six inches deep. Lay all inflow and overflow pipes (not less than one and a half inches in diameter so that the ends, fitted for connections, will be even with the finished bottom of the tank.

Build your forms and have necessary reinforcing on hand before mixing the concrete. The tank is five by sixteen feet by two and a half feet deep, with an eight-inch bottom. The sloping face allows ice to slip up the sides instead of pushing directly against them. Consequently the inside forms at the bottom are five inches shorter at each end than at the top.

Make forms strong enough to hold the weight of the concrete without bulging. Build them tight so that the concrete will not ooze through seams. Give the surface next to the concrete a coat of oil or soft soap to make it easier to remove them.

The forms are nothing more than shell boxes made from odd lengths of one-inch siding nailed to 2x4-inch studding, spaced not more than two feet apart. The sides of the forms may be made separate and put together in place, or, if there is suffi-

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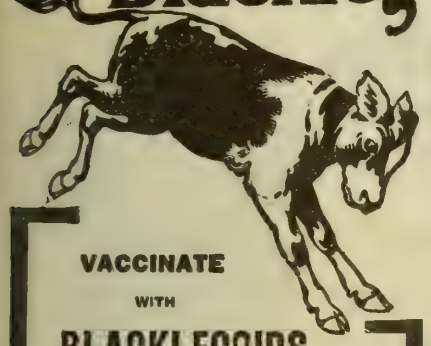

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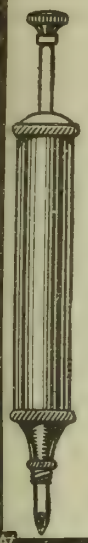

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Have you read the "Market Place" on pages 26 and 27? It's interesting, educational and profitable.

cient help, each form may be entirely completed and set up as one piece. The forms are held in position by 2x4-inch liners at top and bottom, and by sloping braces nailed to stakes driven into the ground. Cut strips of woven wire fencing for reinforcement, sufficiently long to cover the bottom and project up into the walls.

When the forms are ready mix the concrete. Beginning at one end, fill the trench, and upon the gravel foundation place a two-inch layer of concrete in width slightly greater than a width of wire. Upon this concrete lay a section of wire. Tamp in the remaining six inches of concrete and bring up the extra length of the wire so the ends will project into the future side walls. Continue laying the concrete in sections until the bottom is completed. Finish the surface with a wooden float.

Immediately set the wall forms in place and set them level by using a carpenter's level. Fill the wall space with concrete. Half way up the side and one inch from the outside lay a one-half-inch iron rod entirely around the tank. Again, two inches from the top and one inch from both inner and outer edges, lay two rods of the same size.

Make the floor of the tank slope slightly and place a drain pipe in the bottom to facilitate cleaning.

Materials Used—Crushed rock or screened gravel, seven cubic yards; sand, three and a half cubic yards; Portland cement, eleven and a half barrels.

Feeding in the Fields

A. R. W., Nebraska: The farmer should be a soil builder, a professional soil builder. To be a successful farmer he must learn by experience, observation or study how to maintain or restore the fertility of the soil. He must know that rotation of crops and raising and feeding stock are effective methods. He must determine by experience how to increase the yield of grain without additional expense. It sounds like idle and absurd talk to speak of increasing yields without increasing the expense. The most successful hog raisers that I have met do not pen their hogs until ready for market. They maintain the fertility of the soil without any extra labor.

Every farmer and stock raiser should arrange his fields so that instead of feeding hay and other roughage in yards he may haul them to a tract or field he has fenced separate. This is increasing fertility without extra expense and with less labor. There are times that inclement weather will prevent feeding in the field and it is necessary to use racks, but more often than not the stock can be fed in the fields.

It is a matter of fact that manure left in piles four or five months greatly loses its value as a plant food. That being true, the advantage of feeding in the field is even greater.

If my experience or observation will be of benefit, I am glad to express them through the columns of the Twentieth Century Farmer. It is with interest that I notice the experience of successful farmers and concede that they are beneficial and assist in operating the farm or ranch.

Note—Our correspondent says it sounds like idle talk to speak of increasing yields without increasing expense. In some articles published in this paper during the past winter on hog feeding we showed that by proper fencing of the fields an increased yield could be had by the even distribution of the manure and at the same time a saving of labor

(CONTINUED ON PAGE TWENTY-THREE)

ROOFING Per Roll 108 Sq.ft 62¢

Almost unbelievable—but true just the same! This unheard of low price for genuine wool-fibre, asphalt-saturated rubber surfaced roofing would be impossible for any other firm to quote—it's only possible with us because we have a capital of ten million dollars which enables us to buy raw materials in larger quantities and at a lower price than any one else. We save both ways—buying and manufacturing—and give our customers the benefit of this big saving. This is the strongest proof we have ever been able to offer in our more than 20 years of business history that we are the **World's Greatest Price Wreckers.**

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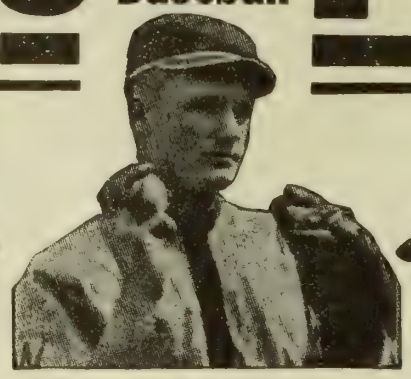

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of the Washingtonians will teach you how to acquire and maintain Speed

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"Nap" Rucker

of the Brooklyns

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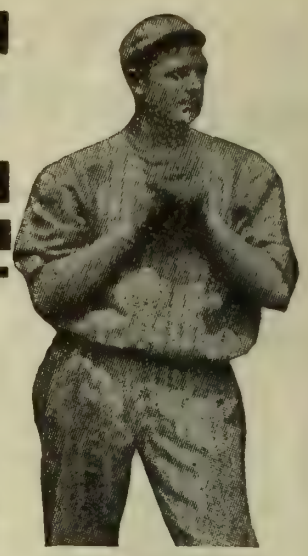


CHRISTY MATHEWSON
of the N. Y. GIANTS
will explain fully his Fadeaway Ball

BOYS We are able to offer you the most complete and fascinating course of baseball ever compiled. In this course CHRISTY MATHEWSON of the N. Y. Giants; ED. WALSH of the White Sox; WALTER JOHNSON of the Washingtons; JOE WOOD of the Boston World Champions; "NAP" RUCKER of the Brooklyns and "DOC" WHITE formerly of the Chicago Americans, will through personal and direct lessons teach you the secret of Professional Pitching.

Every boy should have this course. It will make a man of him mentally, morally and physically. Every mother should urge her son TO SECURE IT and EVERY father should insist that his son ***follow its teachings*** to the letter. We give here small portions of Doc White's lesson which deals in part with proper methods of training and living. We also give part of the introductory paragraph of Ed. Walsh's instructions.

Our First Lesson

Our first lesson will be by "DOC" WHITE, prefaced by some timely advice on physical condition—how to get it and how to keep it. No one is better qualified to give you advice on this most important matter than is "Doc" White. He is a college bred man, who by using his brains, devised a secret, self-teaching system that enabled him to blossom out over night with that rifle-shot control of the ball that has ever since been a terror to the best and surest batters. Read carefully and follow faithfully his advice on getting into condition and conserving your health, wind, sight and energy—then follow and practice his system of gaining control of the ball.

Lesson Number 1

By G. HARRIS WHITE
"DOC" WHITE

In this lesson I will talk "right off the bat" in plain, short English. Let's begin by admitting that Baseball is the Great American Game. Why? You will say—because it is the most popular—everybody plays it or is interested in it. A good reason, but here is a better one: Listen: It is the best builder of health (mental and physical), and a tremendous moral force. It is a game that will not stand for whisky, cigarettes, profanity, vulgarity, cowardice, dishonesty, anger, discourtesy and lack of respect for superiors—not to mention a long list of minor faults and frailties. Exceptional playing talent sometimes gets a man of questionable habits or character into a club, but he must "clean up" and reform from the moment he dons the uniform. Unless he does so, he is simply a "flash and a sputter" and goes back where he belongs, and is out of baseball for keeps.

To be a good ball player you must be a good man or boy physically. This is simply a matter of right living and faithful practice. Good pitchers are not often men of exceptional strength, but they are always good and fit men physically. Pitchers must have the pliable, sinewy, resilient muscles that endure, rather than the bulky masses that are capable of tremendous exertion that cannot be sustained or quickly repeated. Below I will note a few simple rules to be followed which if faithfully undertaken will bring about your physical fitness in the very shortest time in which it can be done. As many of my readers have not attained their full maturity, I will particularly keep them in mind in my advice, so that any boy or youth as well as men can easily follow it.

SHADOW PITCHING. There is a name I have carried under my vest for a long time. It made a pitcher of me and gave me that control of the ball that has turned the scale many a time against the best batters and players in the big leagues. Not every man can be a "SPEED KING," but any man who has "CONTROL" can be a successful pitcher. A slow ball and control are a far better combination than fast balls and passed balls and a few walks to first base. A base on balls is practically a hit—it gives the batsman just as good a title to "first sack" as if he had knocked the stitches out of the first ball pitched.

When I joined fast company I was a raw recruit—just a good prospect. On the first trip of the club around the circuit I was not considered worth a ticket, and was left at home with the cripples and with instructions to practice with anyone who wanted exercise. This gave me something of a jolt and time to think. It also gave me a realization that some day, in a one-sided game, the "Boss" would send me to the mound, and that my fate depended upon my showing him something when that day came. Control of the ball and how to get it was my problem, and after heavy drafts on my gray matter and much experimenting, this is how I solved it:

Some of "Doc" White's Instructions for Shadow Pitching

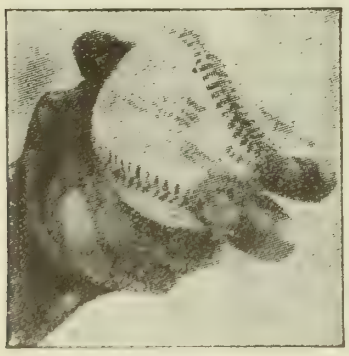
Complete details of shadow pitching are given in the complete course of instructions

Introductory to Ed. Walsh's Contributions to This Course of Lessons

By ED. WALSH

For eight long years the spitter has been my stock in trade. With its aid I have won more games in one season than any pitcher of modern times. It helped me to do my share in one American League Championship, one World's Championship and in two series of games for the Championship of Chicago. Having thoroughly mastered control of this style of twirling, I have, for many years, been able to go in and finish (and sometimes save) games for my team with little or no time devoted to "warming up," and I count this one of the very valuable features of the spit ball. The change from a fast ball, a curve or a cross fire (left-handed), is so radical that it is an easy matter to baffle the most dangerous opponents if one has control. That last word is the secret of my success.

The full instructions of Ed. Walsh are included in the course and are marvelous in the extreme.



Grip for the Curve
Note position of Fingers on Seams

IRWIN M. HOWE, Principal

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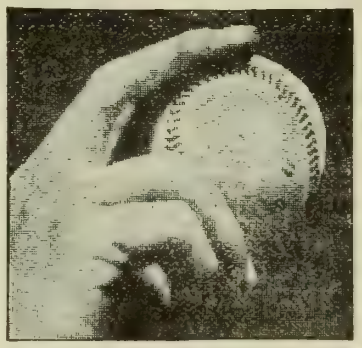
Mr. Howe is an eminent baseball writer and authority. He is the OFFICIAL STATISTICIAN of the American League, the American Association, the Western and the new Federal League. He is the author of The Players' Handbook of Baseball, and Pennant Winning Plays and Players—two works that have had a circulation of more than a million copies. He is the best qualified man in the world to put before you in plain, understandable English the direct and personal teachings of the wonderful galaxy of instructors, each the undisputed leader in his specialty, and every one A MONARCH OF SPEED and CONTROL.



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Full Details of All the Grips Given in the Complete Course of Instructions

Knuckle Ball Grip
Every Detail from Grip to Delivery Given in the Complete Course

YOU CAN PUT ONE OVER TODAY

These lessons are so plain, practical and so profusely illustrated, that by following the instructions given, ***you*** can not only develop pitching ability but by "Doc White's ***Shadow Pitching,*** can practice and learn in secret. ***You can pitch to yourself*** and at the same time get splendid practice in ***Bunt Fielding.*** You will also learn how to ***Increase Your Batting Average*** and more effectively ***Hit Any Pitcher.*** Every lesson edited by IRWIN M. HOWE, the official Statistician of the American League, the new Federal League and other organizations and an Eminent Authority on Baseball.

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Get your father, mother or big brother or some neighbor to subscribe for the Twentieth Century Farmer, or renew their subscription for one year at the regular price of $1.00, and we will send you the Pitching Course free.

Address

TWENTIETH CENTURY FARMER,
OMAHA, NEB.

Our Readers' Exchange

(CONTINUED FROM PAGE TWENTY-ONE)

could be effected by economy of expense in gathering the crop and feeding the hogs. Our correspondent is right in saying that farmers should so arrange their fields that feeding could be largely done there instead of in the yards. We have been advocating the habit of keeping the stock in the fields as much as possible.

City Versus Farm Labor

T. E. S., South Dakota: In a recent issue of your paper you invited discussion of the crying need of help upon the farms. As a part of that farm help, I wish to express my views upon the subject. I take the position that the laborers whom the farmers are so badly needing are crowding into the cities. Our farm help is mostly young, and youth is restless, and sooner or later try the city. They find shorter hours of labor and a variety of pleasures on every hand. These the farmer cannot duplicate, but he must seek to offer inducements which will recompense for their sacrifice.

Let us compare the wages of the city laborer and the farmhand. First of all, the rapid growth of American cities has provided a steady, long working season for its laborers. For the most unskilled labor the working man receives 30 cents per hour, or $2.40 per day, or $14.40 per week. Wages for skilled labor run as high as $21 per week. From this he must deduct at most $5 per week for board and room; also for washing and mending his work clothes he must spend from 25 cents to 50 cents. The unskilled laborer of the city now has $8.90 of his wages left, and his other expenses are not necessarily greater than the farmhand's.

Now, the prevailing wage for farm help is $30 per month, about $1.15 a day, or $7.90 per week, with board, room and sometimes washing thrown in. His earning capacity is just as great as the city laborer's. He has proven this by going to the city and receiving equal wages. If he does not pay as well on the farm, it is the farmer's fault, not his.

What does the city man receive for the money expended for board and room? He receives average farm meals. He secures a comfortable bed, covered with a counterpane. The walls are papered, the floors are carpeted and an attempt has been made at decoration. The windows have lace curtains. For furniture he gets a dresser with a good mirror, a wardrobe or closet, a straight chair and a rocker. Besides this, there is usually furnace heat, electric light and bath.

How about the farmhand? He is given a bed in the corner of most any sort of room. Experience has taught me that this bed is often far from comfortable. A few hooks give him crowded accomodations for his clothes. Say, did a chair ever grace the bedroom of a farmhand? As for the other things, it would kill some farmhand with laughter if I even suggested that they got these.

Still, the matter is not ended. The city roomer is sole king and lord in his own room. Things must be unmolested or the landlady loses a source of income. The farmhand has no recognized rights in his own room. His convenience and the care of his property are not considered. It is made a store room for flour, old clothes and broken-down furniture. He is compelled to share his bed with persons of all descriptions, at the will of the boss. All his rights are ignored.

I have quoted you the price known from personal experience which the city workman must pay for his washing and mending. The landlady will secure him the services of a good washerwoman. The farmhand, paying as much, is finding increased difficulty in securing like services. The farmer's wife seems to be drifting into the leisure class. Today washings are often refused, and only once have I secured mending. If the hand must take his washings off the place, the boss should pay for it, but the hand even has little freedom to deliver it. The neglect of the mending adds a useless expense for the hand.

Is it not true that, while the farmer has more freedom than anyone else, the farmhand has less, and could he not be provided with more without loss to the farmer? You might speak of the many favors to farmhands, but right is right, and favors can be paid in kind. Is it possible that the hand is the sinner alone?

I have little complaint to make against overwork and long hours. This is due to my careful selection of bosses and my efforts to give more value in work than I received in wages during reasonable working hours. Feeling so confident that I was in the right, I have never failed to drop a hint at any unfairness. I know that many hands have sufficient cause of complaint, but it would be well for the farmer to hunt some of his own faults and not be complaining all the time of the hand.

Note—This writer compares the most favorable city conditions with very unfavorable country conditions. As to the wages of the man in the city, the common laborer often works for $2 per day, and is lucky if he can get work at that price. The demand for unskilled labor is anything but steady. The offices of firms hiring unskilled labor are beseiged with men who beg for work at any price. At times it is impossible to find enough men to do the work required, when prices soar to $2.50 and $3 per day or even more. More often there are from two to twenty men for every job. During the last winter the bread lines and free lodging houses of the cities have been full of men who lived on this scant charity, being unable to find anything to do by which they could earn enough to keep themselves and their families. The charity offices in all the great cities daily listen to stories of men who have been led from the farm to the cities by just such tales of easy work and good pay and perfect freedom as this man tells. And the hardest boss a man may have on the farm is no harder than the boss of an ice cutting or paving gang, to whom the men are just machines from which labor may be extracted and who do not care how soon they may be worn out, as they are so easily replaced.

Homes for Farmers

(CONTINUED FROM PAGE FOUR)

the building materials for the farm improvements? The columns of your agricultural paper should be scanned carefully in search of building materials—lumber, hardware and such supplies as are required in the erection of the farm buildings

Every independent business farmer believes that it is his right and privilege to sell as high as he can and buy as cheaply as he can. This principle of getting back as near to the source of supply as possible will justify the effort of any ambitious economical person. It will pay any farmer to buy his lumber by the carload or join with one or more neighbors. He saves in price and gains in quality when he purchases from the wholesale trade. Why should the farmer be in possession of these advantages and not reach out and avail himself of the opportunity of using them?

There are sixteen maples in the United States, most of them being eastern species. The most valuable, not only because of the product of its sap, but also of the lumber, is sugar maple.

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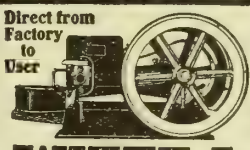

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Parties interested in farming should read Dairy Farm Co. advertisement, page 21.(—Advertisement.)

Statement of the ownership, management, circulation, etc., of the Twentieth Century Farmer, published weekly at Omaha, Neb., required by the act of August 24, 1912.

Editor, T. F. Sturgess, Omaha, Neb.

Business managers, C. C. Rosewater and N. P. Feil, Omaha, Neb.

Publisher, The Bee Publishing company, Omaha, Neb.

Owners:

The Bee Publishing company.

Stockholders:

Victor Rosewater, Omaha, Neb.; Chas. C. Rosewater, Omaha, Neb.; Leah Rosewater, Omaha, Neb.; Leah Rosewater, trustee, Omaha, Neb.; N. P. Feil, Omaha Neb.; Stella R. Feil, Omaha, Neb.; Blanche R. Newman, Omaha, Neb.; H. A. Haskell, Omaha, Neb.; F. L. Haller, Omaha, Neb.; Joseph Rosewater, Cleveland, O.; Ida Rosenwasser, Cleveland, O.; Paul Rosenwasser, Cleveland, O.; Herman B. Rosenwasser, Cleveland, O.; Alice R. Cohn, Cleveland, O.; S. Meyer Estate, New York City; Antoinette Gerber, Omaha, Neb.; Alice Meyer, Omaha, Neb.; A. L. Meyer, trustee, Omaha, Neb.; Eugene L. Geismer, Cleveland, O

Known bondholders, mortgagees and other security holders, holding 1 per cent or more of total amount of bonds, mortgages or other securities:

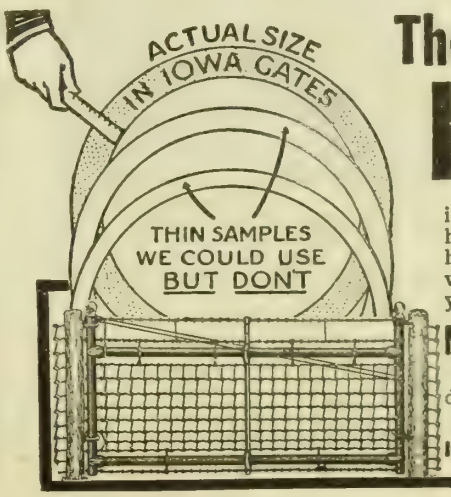
None.

N. P. FEIL,
Business Manager.

Sworn to and subscribed before me this 1st day of April, 1914.

(Seal) ROBERT HUNTER,
Notary Public.

(My commission expires December 14, 1916.)



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100 Head of good, big, rugged bulls of serviceable ages. Klaus Bros. of Bendena, Kan. are consigning a choice bunch; Jesse Engle & Son, of Sheridan, **60 Bulls 40 Females**

Mo., are putting in some of their best cattle, and twenty-eight head come from the herd of A. W. Elliot, of Reynolds, Ill. Other consigners are Binger & Son, Callaway; W. E. Stryker, of Rising City; Fooke, of Ludell, Kan.; R. P. Clark, Brayton, Ia.; Tim Neuhoffel, Central City; E. Winder, Tilden, Neb.; Guy Schwab, of Murray, Iowa, and others. For catalogue address

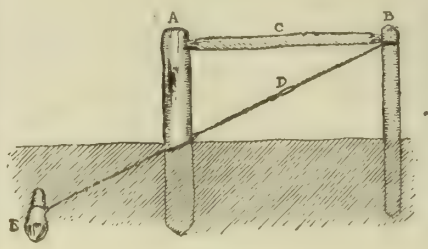
W. N. ROGERS, Sales Manager,

Col. Kraschel; Col. Zaum, Aucts. McCOOK, NEB.

How to Build Fence Corners

Thousands of Dollars Wasted in Poor Fences

DURING the coming spring and summer undoubtedly a large number of our readers will be doing more or less fence building, some repairing the old fences that have gotten out of repair, and some building entirely new ones. Each year many thousands of dollars are wasted by our farmers in poor fences. One cause of this waste is that when the wire becomes slack it is easily bent and broken down by stock and the fence to a greater or less extent destroyed. Another source of loss is the injury



by the different kinds of live stock on the farm because of their trying to get through these fences.

The principal reason for these slack wires in the fence is a poor corner. There are three chief reasons for this poor corner. First, we too often do not have a post of sufficient size; second, in setting this post we do not take the time we should; third, the post is not sufficiently braced.

The accompanying cut shows a suggestion we have for making a good corner. The post (a) is the main or corner post. This post should be of red cedar not less than eight feet long and as large around as a man's body. It should be set in the ground not less than three and one-half feet. In the operation of setting this post let us say that a good fence builder will take as much time in filling up the hole in which the post is placed as he will in digging it. In filling the hole but little dirt should be put in at one time, and it must be thoroughly tamped. Do not lose sight of the fact that a thorough tamping of the dirt around this post is one of the essential things in getting it well set. The post (b) should be set directly on the fence line about seven feet from the post (a). This post need not be quite so large as the corner post, but should be set not less than three feet in the ground and as thoroughly tamped as the other. We would also have red cedar for this post. The brace (c) should be a good, sound post not less than four inches at the small end. The posts (a) and (b) should be notched near the top and the brace (c) firmly fastened in these notches. The brace wire (d) should be an iron wire, No. 8 or 9, running from the top of the post (b) to the anchor (e). Securely fasten this wire at the top of the post (b), running a couple of strands on either side of the post (a) and securely fasten it to the anchor. The anchor (e) should be of red cedar or black locust, the post being about four feet long and about six inches in diameter. Place this anchor in the ground about four feet back of the post (a) and of sufficient depth that the wire (d) running from this anchor to the top of post (b) will strike the post (a) at about the level of the ground. Use plenty of time and care in tamping the dirt around this anchor. Take an old bolt or hammer handle and put it between the two wires (d) about half way from the ground to the top of the post (b) and twist these two wires as tightly as you can without breaking them.

This corner will take quite a little time in making, but we can assure you that if the work is properly done you will have a corner on which you can stretch forty or more rods of any woven-wire fence and scarcely move the corner at all. We have used this method of making corners for a great many years, and have never used or seen one that we consider its equal. We would be pleased to hear from any of our readers on this subject, as we consider it one of great economic importance.

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Kodak picture of my jet-black coming 3-year-old Percheron stud, from 2200-lb. imported sire and 1900-lb. imported dam. I have 9 coming 3-year-old studs, 11 coming 2-year-old studs and 6 coming 4-year-old studs. Jet blacks and rich dark grays. Big for their age, one weighs 2110 lbs., one 2160 lbs. and a yearling 1740 lbs. Registered Percherons and straight sound. You cannot get better money-makers. Foaled and grown on the farm and offered at farmer's prices. Intelligent headed colts that have had kind attention, a boy can handle them. Just east of Omaha.

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20 head of registered cows and heifers from best milking strains. Also several choice bulls, including herd bull, EXPANSION, a splendid breeding son of Good Choice. He is a bull of show-yard character. Will also sell 20 head of high grade milking Shorthorns. **J. F. McARDLE, Washington, Neb.**

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Duroc-Jersey BRED GILTS FOR SALE—With length, bone and quality. W. G. UNITT, Seward, Neb., Route No. 2.

Review of Live Stock Market

By A. C. Davenport

NOT one single ray of sunshine has been able to penetrate the thick gloom surrounding the cattle trade. For the last three weeks the market has been traveling the down-hill path, with no obstacle strong enough to stop its progress. The buying demand at all the big market centers has been more or less demoralized and the market has simply dropped down for the lack of support.

Receipts have not been large on an average at any point, the figures for the six big markets continuing to run behind the record of a year ago by 160,000 head or more. There has certainly been nothing bearish in the supply, and the only cause for the trade being in such a dull and unsatisfactory condition is that noted above, namely, the absence of a good buying support. Day after day for the last three weeks the big packers, as well as shippers, have failed to buy with customary freedom, their explanation being that the eastern demand for the product was very much below the requirements of former years. Thus steadily the market has sagged, and, so far as present indications go, the bottom has not yet been reached.

There has been no time within the last two or three years when the situation was so unpromising and when cattlemen themselves were in such a pessimistic mood. The bulls have certainly been routed, and if there are any left in the trade they must be in hiding.

There is an old saying among market men that one man's guess is as good as anothers, and when it comes to pointing out the cause for the demoralized condition of the cattle trade, it is pretty much a matter of guesswork, as no one pretends to know. The various causes assigned, such as unfavorable business conditions at the large consuming centers, reduced consumption on account of high prices, and foreign importations of beef are all being discussed by the trade but they have already been mentioned in these columns and it is hardly necessary to go over the ground again.

There is another old saying frequently heard in market circles, and that is "cover the crowd and you win," which is only another way of saying that the majority is very apt to be wrong. If that were absolutely true, one might look for a speedy advance in the market, as the crowd in the cattle trade is certainly all on the bear side, with everyone looking for still lower prices to come.

Advices indicate that the imports of Argentine beef for the second week of April will be the largest of any time since the tariff was taken off, 58,000 quarters, or an equivalent of 14,500 head of cattle, being due to arrive in New York. The anticipated arrival of such a large amount of beef undoubtedly helped to bear the market on cattle during the week just closed, and if the shipments arrive in good condition cattlemen are looking for the market on live stock to suffer a still further decline during the second and third weeks of this month when the imported beef will be going into the hands of retailers.

Receipts of live cattle during the last few days at all the big market centers have been extremely light, and there is a general feeling that if the receipts could be kept down to the starvation basis long enough the market might recover some of the lost ground, but that, as a matter of course, is a difficult thing to do, as the smaller holders seem determined to unload their cattle. Many of the big feeders are acting on the theory that to sell now would mean a loss, and as a loss can be taken any time, are figuring on holding until later in the season in hope that something may occur in the meantime to give them a better market. Whether their hopes will be realized or not remains to be seen, as previous calculations regarding the future of the market have all been upset, and no one is able to do more than venture a guess as to the final outcome.

No material change has taken place in the hog situation since a week ago. The fact is the hog trade has been almost bare of new or especially interesting features. Prices are high for this season of the year, never having been surpassed, in fact, except during the year 1913, when values were at this season very little higher than they are this year, and again in 1910, which was the highest year on record. It will be readily understood from this that the hog trade has been very satisfactory to the selling interests. The demand, both packing and shipping, has been liberal at all market points and the movement reasonably good. At the same time receipts have been considerably larger than anticipated, although for the year to date six markets show a decrease of 290,000 head, as compared with the same period last year. Eleven markets show a falling off of only 140,000 head, as compared with a year ago, but a decrease of 1,250,000 head, as compared with the same time in 1912, when the market at the beginning of April was almost a dollar per hundred lower than it is at the present time.

The bulls in the hog trade are looking forward to the time when receipts will begin to fall off and are figuring that that time cannot be long deferred . The big packers are evidently bearish in their views and may be expected to fight every attempt to advance prices. Whether they will be able to hold the market down in the event of a further shrinkage in receipts remains to be seen, with the bulls confident of higher prices regardless of how packers may feel in the matter. One thing, however, is very true of the hog trade, and that is that it is now and has been for some time back in a very healthy and satisfactory condition, which is more than can be said of any other branch of the live stock trade.

Improvement in Sheep

Sheep and lambs have been looking up of late The season for fat stock is so far advanced that the reduction in supplies held in feed lots is visible to the naked eye and needs to be fortified by no argument. At the same time the consuming demand for mutton has been good and even in the face of liberal receipts prices have been steadily advancing over what they were a month ago. Considering that receipts of sheep and lambs at the six market points show an increase for the last three months of 400,000 head as compared with a year ago, it is quite remarkable that the market should continue in as good condition as it has, when with cattle decreasing receipts are more or less demoralized.

In the natural course of events one might confidently expect that the sheep market would continue to advance as the season grows older, and country supplies grow smaller. Sheep men, while hoping that no outside influences may intervene to the detriment of the sheep trade, are nevertheless none too confident of the future, knowing full well the blight that has come upon the cattle market when conditions, so far as supply was concerned, all seemed most favorable to the selling interests .

The higher prices prevailing in the sheep markets of the country have been very welcome to the selling interests as prevailing prices taking the season as a whole have not been high enough to make the feeders any money.

Any Colts in the Ditch?

One morning lately when I went out to do the chores I found that one of the colts was missing. Their pasture was small and there seemed little chance for him to have gotten out, so the search was a simple matter. I knew at once where to go to look for him—in a short stretch of open ditch I had been planning to fill with brush. I had a sort of guilty feeling when I went to look there. The very fact that I knew so well where to look for the missing colt convinced me that I had known all along that it was dangerous to leave the ditch in that condition. I found the colt wedged into a sort of side pocket washed out by a small tributary of the larger ditch. He was still alive, and although it took an hour's hard work, with an ax in the frozen dirt, to get him out, it was as enjoyable work as I ever did. It was a sort of relief to my conscience. The experience is not an uncommon one. Not long after that I heard of a neighbor losing a colt in the same way, but with not so lucky an outcome. Possibly some reader of this paper is about to have a like experience that could be prevented by filling in such places with brush or old straw.

The occurrence reminded me of a thing that came to my notice several years ago. It was in the interim between my "leaving the farm" and "getting back to the soil." I was employed on a newspaper and one day a man came into the office and ordered in a "Lost, Strayed or Stolen" notice for one of his colts that had turned up missing. He laid special stress on the "stolen," and one could see that he believed he could make more startling disclosures if he chose. The following week he returned and paid for a second insertion of the notice, and with the air of a dangerous man remarked, "Let it run once more, and then if she doesn't show up, I'll try another way. I have believed all along that I could name the parties that took the colt, but I thought I would give them a chance to bring her back or turn her loose."

If I had been as familiar then with his neighborhood as I became later I would have had no trouble in guessing who it was that he suspected; for it chanced that he had an enemy at whose door he invariably laid every ill that befell him. I was ignorant of this, however, at that time, and, naturally enough, the next time I saw him I asked if he had located the colt. "Found her in a ditch," was his reply, which, like his manner, did not invite further inquiry; and, green as I was, I had sense enough not to ask if she was dead. It was a subject he might well be glad to drop, too, for even a newspaper man will admit that it would have served his purpose much better to hunt for the colt on his own premises while there was still a possibility of saving it, than to suspect his neighbor and rush off to town and spend money heralding his troubles.

C. R. ESTHAVEN.

Breeders' Notes

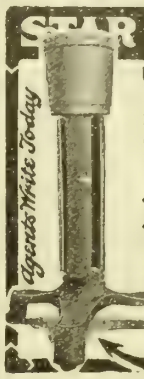
This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Herefords at South Omaha

A sale of Hereford cattle that should attract the attention of breeders and farmers in general, as well as ranchmen, will be held at South Omaha April 14 and 15, under the management of that veteran Hereford breeder W. N. Rogers of McCook, Neb. This sale will contain about forty head of females and sixty bulls. There will be bulls in this sale to meet the requirements of almost any class of buyers. There are a number of show-yard character and good enough to go to the head of any pure-bred herd, and there are a lot of big, rugged fellows, just the kind for range service. Among the consignors to this sale are some of the best known breeders of Hereford cattle in the country. Some of these are A. W. Elliott of Reynolds, Ill., who consigns twenty-six head, eighteen females and eight bulls. These cattle are a splendid, useful lot, and some of them are of excellent show character. Jesse Engle & Son of Sheridan, Mo., will also consign nine females and one bull. John Fock of Ludell, Kan., consigns four bulls. G. E. Stryker of David City, Neb., one cow and one bull. Dave Benger of Mynard, Neb., consigns six bulls, and they are good ones. Tim Neuhoefel of Central City, Neb., consigns one bull, and George Kaffenberger of Plattsmouth, Neb., seven bulls. Guy Schwab of Mur-

CONTINUED ON PAGE TWENTY-SIX

STAR HOG OILER



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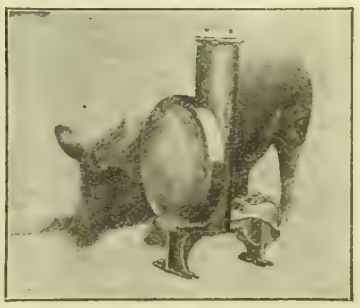

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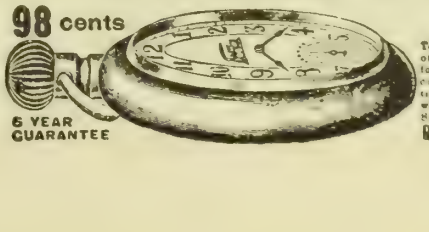

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ANCONA EGGS FOR HATCHING—$2 for 15. A. W. Bickel, Correctionville, Ia.

ANCONAS—EGGS AND BABY chicks. Circular free. E. A. Doty, Rising City, Neb. Box A.

Cornish

DARK CORNISH EGGS FROM PRIZE winners. Faith Olmsted, Lawrence, Kan. Route 1.

Ducks

EXPRESS PREPAID — WHITE EGG strain—fawn and white and white Runner eggs, $1.50 per 13, $3.50 per 50, $6.50 per 100. A. P. Vannimwegen, Pella, Ia.

INDIAN RUNNER AND BUFF ORpington duck eggs; also Light Brahmas. Circular free. Frank Healy, Bedford, Ia.

THOROUGHBRED FAWN, WHITE Indian Runner ducks; standard egg strain; eggs, $1.25, 15. Thoroughbred Buff Orpingtons, large, true color, laying strain, winter eggs; $1.25 per 15 eggs. Rhode Island Red eggs, $1, 15. G. Stewart, Henderson, Ia. Box 52.

SIX INDIAN RUNNER DRAKES and Mammoth, Pekin and Indian Runner duck eggs. $1 per setting. Amelia Williams, Benson, Neb.

Hamburgs

SILVER-SPANGLED HAMBURGS — Eggs, $1.25 per 15, postpaid; $4 per 100. Chas. Voss & Son, Hubbard, Neb.

Houdans

HOUDAN AND WHITE ROCK EGGS, $1 and $2 per setting, $5 per hundred. Geo. J. Wolcott, Box 773, Central City, Neb.

Leghorns

SINGLE-COMB WHITE LEGHORN hens, 2 years in flock, blue ribbon winners, $1.50. Eggs for setting, $1.25 per 15, $7 per 100. Ivar Johnson, Fremont, Neb.

EGGS FOR HATCHING — SINGLE-comb White Leghorns, Rhode Island Reds, White Holland turkeys and Indian Runner ducks. Chas. Cross, Sextonville, Wis.

ROSE-COMB BROWN LEGHORN and Indian Runner duck eggs. Otto Frahm, Fort Calhoun, Neb.

ROSE-COMB BROWN LEGHORN eggs; none better—$1, 15; $4, 100; chicks, 10c. Olga Hayek, Linwood, Neb.

SINGLE-COMB WHITE LEGHORN eggs, $4 per 100; Barred Rock eggs, $3.50 per 100. J. W. Seng, Normal, Neb.

SINGLE-COMB WHITE LEGHORN eggs from trap-nested, high-record layers, $1.50 per 15. F. Strahan, Linwood, Neb.

EGGS FROM PURE SINGLE-COMB White Leghorns, exclusively, $5 per 100. Len Fiechter, Lebanon, Neb.

ROSE-COMB WHITE LEGHORNS—Won 65 ribbons. Eggs, $1, 15; $4.50 per 100. Amiel Dorr, Osage City, Kan.

POULTRY—Leghorns

ROSE-COMB BROWN LEGHORNS—15 eggs, $1; 100, $4. Mrs. E. Fauquet, Wahoo, Neb.

EGGS—SINGLE-COMB WHITE LEGhorns, prize winners, great winter laying strain; $4, 100. Maude Farrell, Glenville, Neb.

SINGLE-COMB BROWN LEGHORNS—Eggs, $2 per fifty, $3.50 per hundred, from matured pullets, farm range. Mrs. Ufe Edzards, Bruning, Neb.

ROSE-COMB BROWN LEGHORNS—Eggs from high-scoring strain—15, $1; 50, $2.50; 100, $4. Mrs. A. H. Titman, Aurora, Neb.

SNGLE-COMB WHITE LEGHORN eggs, 15, 75c; 100, $3.50. Will Rockwell, Hubbard, Neb.

BUFF LEGHORNS--ENGLISH VARIety, larger than white or brown variety; lay a larger, white egg. Eggs, $1.50 per 15. Particulars, E. B. Mehl, North Irving St., Fremont, Neb.

EGGS—SINGLE-COMB WHITE LEGhorns, $1, 15; $5, 100. White Egg Poultry Farm, Loomis, Neb.

ROSE-COMB BROWN LEGHORNS—Pure-bred, farm range, excellent layers. Eggs shipped in useful, handy baskets. Safe arrival guaranteed. Fifteen, $1; 100, $5. G. C. Randall, Village View, Stella, Neb.

SINGLE-COMB WHITE LEGHORNS—Splendid layers. Stock from best eastern breeders. Eggs, $1 setting, $5 hundred. Marshall Ledlie, Holdrege, Neb.

SINGLE-COMB WHITE LEGHORNS—Young strain. Eggs, $1 setting, $6 hundred. Will Henderson, Central City, Neb.

Langshans

BLACK LANGSHAN EGGS—CIRCular. Jake Hetrick, Wahoo, Neb.

FULL-BLOOD BLACK LANGSHAN eggs for hatching. C. C. Cunningham, Kennard, Neb.

WHITE LANGSHAN EGGS—$5 FOR 100, $1 for 15. Henry Neidig, Madison, Neb.

EXTRA BIG-BONED, SCORED Black Langshans and eggs. H. Osterfoss Farm, Hedrick, Ia.

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LIGHT BRAHMA EGGS FROM PRIZE winners at $1 per 15, $2.50 per 50. Wilhelm Andreas, Beatrice, Neb.

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HIGH-CLASS BLACK MINORCA AND Buff Orpington eggs. Frank A. Agnew, South Omaha, Neb.

POULTRY—Orpingtons

SINGLE-COMB WHITE ORPINGTONS—Eggs, $1.50, 15; $1, 15; $4.50, 100. Mammoth Pekin duck eggs, $1, 11. H. A. Hamilton, Yutan, Neb.

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SINGLE-COMB BUFF ORPINGTONS—Imported stock. Send for mating list. L. B. Crew, Creighton, Neb.

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PRIZE-WINNING BUFF ORPINGTON eggs. Mrs. Cook, Eddyville, Neb.

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FOR SALE — BUFF ORPINGTON eggs, $1.50 per 15. Geo. E. Cheney, Fremont, Neb.

BUFF ORPINGTONS, INDIAN RUNner ducks. Catalogue free. Gene H. Huse, Norfolk, Neb.

WHITE ORPINGTONS, KELLERstrass and Cook strains; eggs, $1.50 per 15. Write your wants. Mrs. Walter Rowlett, Norfolk, Neb. Route 4.

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KELLER'S CRYSTAL WHITE ORpingtons, Kellerstrass strain, direct from his $30 matings. Heavy winter layers. Free range, farm-raised, $7 per hundred. J. W. Keller, Fullerton, Neb.

Plymouth Rocks

BARRED PLYMOUTH ROCK EGGS, both matings. Pens 1, 5, $5 per 15; pens 2, 3, 4, $2.50, 15· $4.50, 30; farm range, $1, 15; $5, 100. Circular free. G. W. Feuerstein, Fremont, Neb.

PARTRIDGE PLYMOUTH ROCKS, Norf strain; eggs, $1 setting; all high-scoring birds. R. P. Van Der Ploeg, S. Auburn, Neb. Route 3.

BARRED ROCK EGGS FOR HATCHing, $5 per 100, $2.75 per 50, $1.50 per 15. Fertility and safe delivery guaranteed. Fred Kroeger, Carroll, Ia.

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SINGLE-COMB REDS—AFTER APRIL first eggs from prize-winning pens, $3, 15; $5, 30. Scott Covalt, Box O, Council Bluffs, Ia.

POULTRY—Plymouth Rocks

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PARTRIDGE PLYMOUTH ROCK eggs for sale—$3 for 15 eggs. A. G. Burbank, Cordova, Neb.

BUFF ROCKS—20 PRIZES 1913. EGGS, $2.50, 30. R. Olmsted, R. 1, Lawrence, Kan.

HILLCREST BARRED ROCKS AND Indian Runner ducks. Stock and eggs for sale. D. T. Gantt, Crete, Neb.

EGGS—BARRED PLYMOUTH ROCK—Grand champion sweepstake Iowa State show. Free catalogue, showing real photos, champion winners, price of eggs. A. D. Murphy & Son, Essex, Iowa.

BARRED PLYMOUTH ROCKS EXclusively; choice, pure-brd stock; selected eggs, 100, $5; 50, $3. Safe delivery guaranteed. Adam A. Weir, Clay Center, Neb.

BEAUTIFUL GOLDEN BUFF ROCK eggs for sale. Carefully selected from farm-raised stock; 15 for $1.50 or 100 or $6. Address Mrs. J. E. Harding, O'Neill, Neb. R. 1.

PRIZE-WINNING BARRED ROCK eggs; cockerel matings, $2, 15; farm range, $1, 15; $2, 30; $3, 50; $5, 100. Mrs. Geo. W. Scnulz, Yutan, Neb.

BIG PRIZE-WINNING WHITE Rock eggs. W. W. Liebhart, Nemaha, Neb.

EGGS—FARM RANGE AND PEN—Barred Rocks. Prices, $1 to $2 per setting, $4 per hundred. Will Loebe, Stanton, Neb.

CHOICE BARRED ROCK EGGS FOR hatching. Mating list free. Arthur Gillette, South Omaha, Neb.

BUFF ROCK EGGS, $1.50 PER 15, $5 per 100. Free range. S. H. McNeely, Cedar Vale, Kan.

BARRED PLYMOUTH ROCK EGGS—Best quality stock. Davis Bros., Lincoln, Neb.

WHITE ROCK EGGS—$1.50 PER 15, $5 per 100. Mrs. Harry Butler, Bellwood, Neb.

EGGS FROM CHOICELY MATED pens—"Ringlet" Barred Rocks, "Golden" Buff Orpingtons, Silver Campines, $3 per 15, $5 for 30. Archdale Farm, Fremont, Neb.

Breeders' Notes

(CONTINUED FROM PAGE TWENTY-FIVE)

ray, Ia., consigns six bulls, these being largely of Monarch of Shadeland and Beau Donald breeding. H. Hilton consigns one bull. Klaus Bros. of Bendena, Kan., consigns six cows and two bulls; Parmalee & Pierson of Villisca, Ia., two bulls; Mr. Dowell of Bedford, Ia., three bulls, and Mr. Clark of Brayton, Ia., three bulls. Write Mr. Rogers at McCook, Neb., for catalogue and further information regarding this sale. Mr. Rogers has made a strong effort to get first-class cattle for this offering, and we think you will find he has succeeded. Kindly mention this paper when writing.

Milking Shorthorns at Auction

On April 21, at their farm, midway between Elkhorn and Washington, Neb., J. F. McArdle & Son will close out their entire herd of high-class, registered shorthorn cattle. This herd is not large, but Messrs. McArdle & Son have been building it up for several years and have a very profitable bunch of milking cattle, and the fact that they are going to disperse the herd affords buyers an opportunity that could not otherwise be had. There will be about twenty head of pure-bred cattle in the offering, as well as about twenty head of extra choice high-grade milking Shorthorns. The registered Shorthorns will consist mostly of cows with calves at foot or well along in calf, also some choice young heifers. There will be several young bulls for sale, and also their herd bull, Expansion. This bull is one that might well attract the attention of any pure-bred breeder. He is a son of Good Choice and has proven himself a very desirable breeder in this herd. He is a bull of exceptional merit, having plenty of scale, well balanced, good quarters, well covered and down close to the ground. Anyone wanting a first-class bull will do well to get a line on this fellow. All the females going in this offering that are old enough are broken to the pail and are guaranteed to be right in every way. Write Messrs. McArdle & Son at Washington, Neb., and arrange to attend this sale. Parties from a distance will be met at either Washington, on the Chicago & Northwestern railroad, or Elkhorn, on the main line of the Union Pacific, twenty miles west of Omaha. Kindly mention the Twentieth Century Farmer when writing.

Rogers' Great Sale

One of the very best sales of Hereford cattle held at South Omaha in recent years was the dispersion sale of W. N. Rogers & Son of McCook, Neb., on March 25. This sale brought out a large crowd of the very best breeders of the country, and the cattle offered were certainly of a character and quality that repaid them for their coming. This sale represented the culmination of the efforts of W. N. Rogers in the breeding of Hereford cattle. We keenly regret that Mr. Rogers has decided to discontinue his breeding business, for he has always been a booster and has probably done as much as any other man in the west, if not more, toward the upbuilding of this great breed of cattle. The cattle he drove into the ring at South Omaha in this sale were the best tribute to his ability as a breeder, and the manner in which they were taken hold of by the best breeders in the country was evidence of how his efforts were appreciated. The average on the sale of fifty-six head of cattle was $268. The top on bulls was $700, paid by R. P. Clark of Brayton, Ia., for the herd bull, Beau of Shadeland 31st. Top female was lot 41 in the catalogue, Monarch's Maid 41st, a daughter of Monarch of Shadeland 3d, with a calf at foot by Beau Donald 133d. L. J. Rebbe, Fremont, Neb., was the purchaser, at $450. Colonels Kraschel and Branson did the selling in a very effective manner. We give below a list of sales, together with the names of purchasers:

BULLS.

Lot No.	Price.
1—George Harrah, Newton, Ia.	$165
21—L. J. Rebbe, Fremont, Neb.	190
24—John Groman, Bloomfield, Neb.	140
31—R. P. Clark, Brayton, Ia.	700
34—Henry Grohman, Bloomfield, Neb.	150
36—Peter Eckman, Bloomfield, Neb.	190
37—T. A. Tarpy, West Side, Ia.	235
39—Thos. Mortimer, Madison, Neb.	140
40—Thos. Mortimer, Madison, Neb.	205
47—W. H. Simon, Minden, Ia.	275

COWS.

2—W. C. Scamp, Rockport, Mo.	215
3—J. W. Coder, Elwood, Neb.	245
4—H. & H. Kerr, Brady, Neb.	170
5—S. Waddington, Anselmo, Neb.	355
6—Thompson Bros., West Point, Neb.	340
7—J. W. Coder	445
8—G. C. Doling, Surprise, Neb.	265
9—J. H. Schultz, Pierce, Neb.	395
10—J. W. Coder	355
11—L. P. Stone, Lexington, Neb.	270
12—J. C. Osborn, Meadow Grove, Neb.	285
13—C. Oldfather, Brady Island, Neb.	260
14—W. C. Scamp	190
15—William Hahn, Octavia, Neb.	355
16—Neeley Bros., Lake View, Ia.	325
17—Thomas Mortimer	380
18—J. C. Osborn	175
19—H. & H. Kerr	265
20—Ben Broughton, Lake View, Ia.	155
22—Ben Broughton, Lake View, Ia.	145
23—S. Waddington	225
25—Thompson Bros.	410
26—Neeley Bros.	275
27—S. Waddington	235
29—Ben Broughton	135
30—Peter Eckman	150
32—S. Waddington	175
33—William Hahn	355
35—Peter Eckman	165
38—W. C. Scamp	195
41—L. J. Rebbe	450
42—R. G. Waldron, Rochester, Minn.	335
43—C. E. Oldfather	240
44—Peter Eckman	135
45—William Hahn	355
46—J. C. Osborn	320
48—Ben Broughton	165
49—Neeley Bros.	310
50—H. E. Tiarks, Council Bluffs	180
51—Ben Broughton	213
52—Bates & Hancock, Manilla, Ia.	335
53—L. J. Rebbe	210
54—H. E. Tiarks	275
56—S. Waddington	310
57—Jake Benger, Mynard, Neb.	225

Summary—Nine bulls brought $2,705, an average of $300; forty-seven females brought $12,290, an average of $262. Fifty-six head brought $14,995, an average of $268.

POULTRY—Plymouth Rocks

A FEW GOOD RINGLET COCKERels for sale. Eggs, both cockerel and pullet matings. Satisfaction guaranteed. D. N. Emig, Fremont, Neb.

WHITE ROCK EGGS, EXTRA LARGE stock, $1.25 per 15, $5 per 100. Write for mating list. A. L. Selden, Rising City, Neb.

JOHN CROFTON, THE BUFF ROCK man, Dorchester, Neb., sells 100 eggs for $5.

Rhode Island Reds

ROSE-COMB RHODE ISLAND RED eggs, $1 per 15, $5 per 100. A. L. McPherson, Craig, Neb.

ROSE-COMB RED EGGS FROM EXhibition and utility stock. Free catalogue. George Ainsworth, Fremont, Neb.

SINGLE-COMB RHODE ISLAND RED eggs from Reds that are red. J. W. DeVore, Valley, Neb.

L. A. WHITTEN—ROSE-COMB Rhode Island Reds, state winners. Eggs and day-old chicks for sale. Prices in reach of all. Send for mating list. Fairmont, Neb.

ROSE-COMB RHODE ISLAND RED eggs and good incubator cheap. Claude Musselman, Lyons, Neb.

SINGLE-COMB REDS—THIS ADVERtisement will be accepted for $1 on $5 order of eggs from my Single-Comb Reds—$2 and $4 per 15. A. L. Hepp, Greeley, Neb.

ROSE-COMB RED EGGS FROM GOOD stock, $3.50 per 100. Glen Wilson, Blair, Neb

ROSE-COMB RHODE ISLAND RED eggs. Stock from Rhode Island and Massachusetts. Eggs, $3 per 15; utility, $1 per 15. Mrs. O. Dougherty, Norwich, Iowa.

ROSE-COMB REDS—LARGE, DARK red; heavy layers. Mating list free. C. E. Datesman, Council Bluffs, Ia.

SINGLE-COMB RHODE ISLAND RED eggs from pure-bred stock—$1 per 15, $5 per 100. Mrs. Chas. Kellett, Waterloo, Neb

SINGLE-COMB RED EGGS—15, 75c; 100, $4. Dan Kane, Wisner, Neb.

Turkeys

PRIZE-WINNING STOCK — WHITE Holland turkey eggs, $2.50 for 10; White Plymouth Rock eggs, $2 per 15. First pen, first cockerel, first pullet at largest shows. Rose or single comb; Rhode Island Red eggs, $5 per hundred. Order from this ad. Gail Sutherland, Madrid, Iowa.

Wyandottes

BEST STRAIN GOLDEN AND WHITE Wyandottes. Eggs in season. Write for prices. Wm. Schreiner, Exeter, Neb.

ROSE-COMB WHITE WYANDOTTES —Baby chicks and eggs for sale. Will Jansen, Exeter, Neb.

WHITE WYANDOTTES EXCLUsively. Eggs for hatching, $4 per 100; special matings, $1, $2 and $3 per 15. Exhibition pullets, $2 each. Paul Siert, Secretary Blair Poultry Association, Blair, Neb.

WHITE WYANDOTTE EGGS FOR hatching, $4 per 100. Mrs. John McIntyre, Wayne, Neb.

DOLLAR EGGS—SILVER WYANdottes, Buff Orpingtons, White Rocks, Reds; range birds; two farms; 15, $1. Richard Vickers, Edgar, Neb.

WHITE WYANDOTTE EGGS FOR hatching. Best blood in America. Won highest honors Nebraska State Poultry show 1914. Send for mating list. Oscar L. Bock, Council Bluffs, Iowa.

WHITE WYANDOTTE EGGS FROM prize-winning, vigorous stock; $1.50 per setting. Excellent layers. Circular free. R. Petty, Martland, Neb.

EXHIBITION WHITE WYANDOTTES —Eggs, $2 for 15, $3.50 for 30. Fertility guaranteed. L. Brown, Fairmont, Neb.

SILVER-LACED WYANDOTTE EGGS —15, $1.50; 100, $6. Rouen and Muscovy duck eggs; 13, $1.50. Fred Kucera, Clarkson, Neb.

WHITE WYANDOTTES AND SINgle-comb Reds; eggs, 75c per setting. Amos D. Birky, Bancroft, Neb.

PEERLESS WHITE WYANDOTTES—Winners at Nebraska State Poultry show 1914 and at Fairbury. Eggs for hatching. Prices reasonable. Write for mating list. Mrs. M. L. Burbridge, Fairbury, Neb.

WHITE WYANDOTTE EGGS—15 FOR dollar, $4 per 100. J. C. Schmucker, Swanton, Neb.

POULTRY—Wyandottes

WHITE WYANDOTTE EGGS, $1 PER 15. Good layers, Stock from best breeders in the eastern states. C. A. Johnson, Loomis, Neb.

THOROUGHBRED WHITE WYANdottes. Eggs for hatching, $1.50 per 15. B. Carl Petersen, Avoca, Ia.

IMPERIAL WHITE WYANDOTTES direct from Sherman Bowden; 15 eggs, $2; 30, $3.50. M. Mogensen, Fullerton, Neb.

SILVER-LACED WYANDOTTES—English breed; no better layers of large eggs. Fine, large birds. Only one pen. Fair dealing to all. Satisfaction guaranteed. Eggs, $2 per 15. W. H. Mead, 404 East 10th St., Fremont, Neb.

BUFF WYANDOTTE EGGS FOR SETting. Mrs. Chas. Hough, Weston, Ia.

EXPRESS PREPAID ON OUR HIGHquality White Wyandotte and Indian Runner duck eggs. Cedar Lawn Poultry and Stock Farm, Fairfield, Neb.

Baby Chicks

BABY CHICKS—TEN VARIETIES—Annual incubator capacity, 100,000. Eggs for hatching from vigorous, farm-ranged birds. Write your wants. Maplewood Farm, Exeter, Neb.

Miscellaneous Poultry

EGGS! EGGS! FROM THOROUGHbred turkeys, geese, Pekin, Rouen, Muscovy and Runner ducks, pearl and white guineas, Bantams, Rhode Island Reds, Houdans, Games, White and Brown Leghorns, Hambergs, White and Buff Orpingtons, White and Silver-Laced Wyandottes, Buff, White, Barred Plymouth Rocks, Cochins, Langshans. Hen eggs, 15 for $1. Also dogs, rabbits, fancy pigeons. Free circular. D. L. Bruen, Platte Center, Neb.

EGGS! EGGS! EGGS! Thirty-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Iowa.

55 BREEDS PURE-BRED CHICKENS, ducks, geese, turkeys, collie dogs. Catalogue free. Belgrade Poultry Farm, Mankato, Minn.

ROTTEN EGGS—WE SELL NICE, fresh eggs from 26 varieties of chickens. Catalogue free. Aye Bros., Box 3, Blair, Neb.

43 VARIETIES CHICKENS, BANtams, guineas, Bronze, White Holland, Bourbon Red turkeys, Toulouse, Embden, African geese, Pekin, Indian Runner, Muscovy ducks. Catalogue 2c. Theodore Franz, Mankato, Minn. Box 102.

EGGS FOR HATCHING—ALL VARIeties of Plymouth Rocks, Wyandottes, Rhode Island Reds, Orpingtons, Leghorns, Hamburgs, Brahmas, Langshans, Minorcas, Campines and Bantams; also ducks, geese and turkeys. Write for catalogue No. 11. Logan Valley Poultry Farm, Wayne, Neb.

EGGS — BARRED, WHITE, BUFF Rocks, Buff Orpingtons, Rhode Island Reds, White, Brown Leghorns, Black Langshans, Toulouse geese. Mrs. Frank Davis, Holbrook, Neb.

WYANDOTTES, LEGHORNS, ROCKS, Reds, Orpingtons, water fowls. Free catalogue. C. W. Brehm, Harvard, Neb.

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FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

SHETLAND STALLIONS, JET black, high-class fellows; two spotted ones. Frank Healy, Bedford, Ia.

DOGS

COLLIES—SEND FOR LIST. W. R. Watson, Box 501, Oakland, Ia.

MISCELLANEOUS

FOR SALE—COTTONWOOD TREES, $3 per thousand. James Casseli, Fremont, Neb

FREE FOR SIX MONTHS—MY SPEcial offer to introduce my magazine, "Investing for Profit." It is worth $10 a copy to anyone who has been getting poorer while the rich richer. It demonstrates the real earning power of money and shows how anyone, no matter how poor, can acquire riches. Investing for profit is the only progressive financial journal published. It shows how $100 grows to $2,200. Write now and I'll send it six months free. H. L. Barber, 472, 28 W. Jackson Blvd., Chicago

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

MISCELLANEOUS

IDEAS WANTED — MANUFACTURers are writing for patents procured through me. Three books, with list 200 inventions wanted, sent free. Advice free. I get patent or no fee. R. B. Owen, 75 Owen Bldg., Washington, D. C.

IDAHO RED CEDAR SPLIT POSTS, direct from producer to consumer, 4½c to 9c each, here; delivered prices carlots on application. Farmers' Co-operative Co., Ltd. A. R. Derr, Mgr., Clarks Fork, Idaho.

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

FARM LOANS WANTED — QUICK sales, exchanges, large property list. Write John L. Maurer, Omaha, Neb.

HELP WANTED

WANTED—A MAN TO SOLICIT SUBscriptions for The Twentieth Century Farmer; salary, $42 a week. Address Circulation Manager, The Twentieth Century Farmer, Omaha, Neb.

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

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SALESMEN FOR HIGH-CLASS TObacco factory; experience unnecessary; good pay and promotion for steady workers. Complete instructions sent you. Piedmont Tobacco Co., Box Y-27, Danville, Va.

LANDS—Arkansas

80-ACRE RICH, CREEK-BOTTOM farm; 40 cultivation, balance timbered; $25 acre. Sessions Co., Winthrop, Ark.

California

OWNER HAVING 96 ACRES IN SACramento valley, California; good soil, under cultivation; fine location, and priced right. Will exchange for good Nebraska ranch, east of Lexington. Will assume reasonable amount. Name price and all particulars in first letter, or no answer. Address California, care Twentieth Century Farmer, Omaha, Neb.

SACRAMENTO VALLEY LAND, near city, at farm prices, on easy terms. W. T. Smith Co., 815 City National Bank, Omaha.

Kansas

WE OWN 13,600 ACRES IN FERTILE Pawnee valley, smooth as a floor; best alfalfa and wheat land on earth; five sets of improvements; shallow water; will sell eighty acres or more. Frizell & Ely, Larned, Kan.

Minnesota

NORTHERN MINNESOTA—THE greatest natural cattle section; no drouths; alfalfa, clover, corn and potatoes are principal crops. Prairie or timber. Free information. We have no land for sale. Write W. R. Mackenzie, 904 Palace Bldg., Minneapolis, Minn.

MONEY IN MINNESOTA LANDS—Send for my list—600-acre bargain, 450 plow, 100 meadow, 50 pasture; elegant buildings; near city—$60 acre, worth $80. Write your wants. W. C. Murphy, Foley, Minn.

FOR SALE—500 IMPROVED FARMS—Orchards, fruit, corn and grain. Write for list. Morehart Atchison, Mankato, Minn.

100 CHOICE FARMS IN THE GARden spot of southern Minnesota, where corn is king. Price, $60 per acre and up. Prices advancing rapidly. Come now. Free list. The Paffrath-Schmit Company, Springfield, Minn

GOVERNMENT FARMS FREE—OUR official 112-page book, "Vacant Government Lands," describes every acre in every county in U. S. How secured free; 1914 diagrams and tables. All about irrigated farms. Price, 25 cents, postpaid. Webb Publishing Co., Dept. 36, St. Paul, Minn.

LANDS—Minnesota

ALL OR ANY PART OF 5,000 ACRES, absolutely the pick of northern Minnesota lands. Good black loam, with clay subsoil. No swamps and fine timber. Ideal tract for colonization; every acre selected. With the tremendous immigration in these lands they are bound to double in price per acre in a short time. Don't answer unless you mean business. Price and terms right. Charles Murray, Leamington Hotel, Minneapolis, Minn.

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TEN ACRES OF PRUNE AND ENGlish walnut trees, on electric line, 40 miles to Portland and one mile to town of 3,000 people; perfect climate. Ideal spot for man retiring from hard work or business. Write Dudley Archer & Co., 405 Northwestern Bank Bldg., Portland, Oregon.

FARMERS, ATTENTION — WE ARE making up a party for April 7 to inspect our land in Ontario, Oregon. Come with us and see the finest land in eastern Oregon. We are offering exceptionally easy terms for men with $600 or more. This will make first payment on 40 acres. Write us for information and rates. Oregon & Western Colonization Co., 536 Paxton Bldg., Omaha, Neb.

Wisconsin

160 ACRES WASHBURN COUNTY Wisconsin; 50 acres under cultivation, balance used for pasture; can all be put under cultivation; five miles from good railroad town; good road; telephone and R. F. D.; fair set buildings. This land will produce good crops of corn, alfalfa, clover, oats, etc. Price, $1,000 cash, balance long time, 6 per cent interest. Schwab Bros., 1028 Plymouth Bldg., Minneapolis, Minn.

RICH WISCONSIN LAND, CHEAP—Greatest stock and dairy country in America. Prices low, terms easy. Send for special bargain list and map. Faast Land Co., Box 103, Conrath, Wis.

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Wyoming

CHOICE FARM LAND, $15 to $30 PER acre. First crop will pay for land. What have you to exchange for western land? W. T. Sloan, Real Estate Exchange, Pine Bluffs, Wyo.

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SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

AM IN TOUCH WITH EASTERN buyers for farms and ranches. Send details with legal description and best cash price in first letter, allowing 2 per cent commission. Thomas Campbell, 530-32 State Bank Bldg., Omaha, Neb

Miscellaneous.

FACTS ABOUT THE SOUTHEAST—Farm lands average less than $17 per acre. Beef, pork, dairying and poultry make big profits. Large returns from alfalfa, cotton, corn, truck, fruits and nuts. Good local and nearby markets. Ample rain, mild winters, enjoyable summers. Industrial openings everywhere. The "Southern Field" magazine and state booklets free. M. V. Richards, Land and Ind. Agt., Southern Ry., Room 94, Washington, D. C.

SEEDS

DUNLAP STRAWBERRY PLANTS—60 cents 100, $4.50 per 1,000, prepaid anywhere. W. C. Hebdon, Blair, Neb.

I GUARANTEE 95 PER CENT GERmination on my seed corn. Paul Rohwer, Waterloo, Neb.

ALFALFA SEED—DAWES COUNTY dry land seed. Samples and prices free Schwabe Bros., Chadron, Neb.

ALFALFA SEED AND HONEY DIrect from farmer. Price and sample, write W. L. Eavey, Brady, Neb.

I AM IN THE MARKET FOR CLOver, timothy, alfalfa, cane and millet seed. Send samples. I have 1912 crop seed corn grown in Washington county, Nebraska. Werter DeVaughn, 1914 Harney St., Omaha, Neb.

RED CLOVER SEED, TIMOTHY, farm direct to you. Strictly choice seed. Write for sample and price. P. O. Harrier, Valley, Neb

REID'S YELLOW DENT AND EARLY Yellow Rose seed corn, $2 per bushel in ear. Glen Wilson, Blair, Neb.

Hog Cholera and Its Treatment

SERIES OF ARTICLES

BEGINS NEXT WEEK

THE swine industry is one of the greatest industries in the corn belt—if not the greatest. The matter uppermost in the minds of hog growers at the present time is hog cholera. Until recently hog cholera has been a disease that science was unable to combat. The government has spent thousands upon thousands of dollars experimenting with cures for this scourge.

THE TWENTIETH CENTURY FARMER believes that knowledge of results obtained from treatments for this disease is of vital importance to hog growers. To best obtain this knowledge for the use of our readers, we secured the services of a practical hog man—a man who has been for twenty-five years a breeder and raiser of hogs. This investigation has taken him into Iowa, Missouri, Nebraska, Kansas and Texas. Careful inquiry has been made from all classes of men engaged in the work—state veterinarians, college veterinarians, veterinarians practicing in the field, farmers who have had the disease in their herds and have had actual experience in combatting it, and manufacturers of serum, both state and commercial.

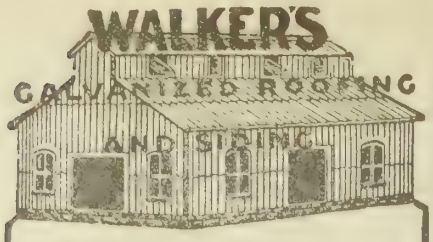
THIS FIRST-HAND INFORMATION has now been compiled and will be given our readers in a series of articles which will begin in the next issue. We know the information we have gathered in this way will be of material benefit to hog raisers.

WE invite you, after a careful reading of these articles, to write us your experience and opinions, whether in accordance with what we have written or not.

TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, April 18, 1914 | Number 697



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Finest on earth for general mixed farming—irrigated and non-irrigated lands. Located on or near railway. The famous Canadian West has magnificent soil, good climate, churches, public schools, good markets, good hotels, unexcelled transportation—and 20 years to pay. Time is precious. Write today.

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FOR SALE—Town lots in all growing towns. Ask for information on industrial and business openings.

DAIRY FARM CO.

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$2,000 for 160 acres—cattle furnished on credit to success-

[illegible] well on Omaha—

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[illegible] for sure money in farming—desiring to change this

[illegible] will

ing record—Ill., Iowa, Neb. farmers are making

Disabled Owner Must Sell. 284 Acres Equipped, $3,500

[illegible] broad,

[illegible] close to lake on state road to market town; 7-

[illegible] 2 pigs, hens, hay in barn, tools and furniture

[illegible] full details and location, page 1, "Strout's Spring

[illegible] E.

[illegible] Union

[illegible] HOME. Don't [illegible] Land

[illegible] rich,

[illegible] Terms

[illegible] Purchaser must own

[illegible] For complete details call on or

[illegible] Valley Land Co., Fargo, N. D.

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E. Z. Russell is With Us

WE ARE glad to be able to announce to our readers that E. Z. Russell, for the last twenty-five years a breeder of pure-bred hogs in Nebraska, has accepted an associate editorship with the Twentieth Century Farmer. Some months ago Mr. Russell's health made it impossible for him longer to continue in the hog business on a large scale, so he sold his herd and farm. Since that time he has been writing for us on this and associated subjects, and during the last three months he has been engaged in making an extensive investigation for this paper of hog cholera, which is the topic now uppermost in the minds of the corn-belt farmers. We have more inquiries regarding hogs than on any other one branch of the farming business. Every farmer seems to be interested in hogs to a greater or less extent. Mr. Russell is well known in Nebraska and the surrounding states, and we feel sure that his association with us will prove of value to our readers. Mr. Russell is not only an experienced hog breeder, but he is a practical and successful farmer.

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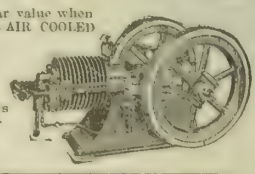

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A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Hog Cholera---Prevention and Treatment

I—What Cholera Has Done and What We Must Do

AT THE present time one of the great questions before the American people is the high cost of living. In connection with this we believe that no one thing is of more importance than that of the control and eradication of hog cholera. As was announced in last week's issue of this paper, we believe this question to be one of the greatest importance to the general public, as well as to the farmer and breeder who is engaged in producing these animals.

That our readers may have the best information obtainable on this subject, careful inquiry by this paper has been made from the best authorities on the subject in several states. This inquiry, however, was not confined to the state and government authorities dealing directly with the subject. Inquiry was made from veterinarians practicing in the field, from farmers who vaccinated their own hogs and farmers who operated on considerable numbers of hogs in their locality. We have also talked with numbers of farmers who had sick hogs during the past year that were treated with both the serum alone and the simultaneous methods, some of these men meeting with splendid success and others the opposite. Inspection has been made of state serum plants and serum plants owned by private individuals and firms. The method of manufacture of the product by these various plants has been given careful attention. A study has been made of what should be done by the farmer and breeder and the practitioners in the field as to the best methods to be followed in the treatment of hog cholera, and what should be done by government and state authorities to best protect the hog owner, that he may know, when he buys the product, that he is buying what he wants and needs and that the article he is buying is as represented.

A Few Figures and Facts

The results of these investigations will be given in this article and the ones to follow in subsequent issues of this paper with the hope that our readers may be benefited to some extent at least by these investigations.

A few facts and figures along this line may be of interest to show, to some extent at least, the importance of the eradication of this terrible disease. The figures given are, of course, estimates, but they are gotten by the best means available from the different sources. The Agricultural Department shows that during the year ending March 31, 1913, the loss in the United States was about $60,000,000. Of this loss $32,000,000, or a little more than half, was in the Missouri valley states, including Illinois and Minnesota.

The extension department of the Iowa Agricultural College has made an estimate that in Iowa during the year 1913, 2,827,907 hogs were lost, valued at $28,279,070. They also figure that there was a loss of $4,940,986 sustained from the fact that hogs were marketed at an immature age, due to fear of cholera, and that there was a loss to cattle feeders, due to the shortage in hogs, of $500,000, making a total loss in that state for that year of $33,720,056.

Is Cholera a Good Thing?

These figures are sufficient to show to some extent at least the necessity of every effort being made by both state and government officials to control and eradicate, if possible, hog cholera.

We have often heard it said that if hog cholera could be wiped out it would soon be unprofitable to raise them, for the reason that so many of them would be produced by the disease being eliminated that they would be practically worthless. Don't let this disturb you or stop you in the least from a determination to go on and raise more and better hogs.

Let us show you what the government has to say regarding this matter. A record of all the states for twenty-seven years shows that the average loss from disease in hogs in the entire United States has been 7.4 per cent. It is estimated that 90 per cent of the loss of all hogs from disease is caused by hog cholera, or 6.6 per cent of the entire average loss for this number of years. It can readily be seen that an addition to the number of hogs now raised of 6.6 per cent would not materially decrease the price.

The fact in this connection is that we are far short in the number of meat food producing animals in the United States as compared to ten or twelve years ago. The government census for 1910 showed that during the last ten years our population had increased 21 per cent. During that same period our production of cattle had decreased 8 per cent, our production of hogs 6 per cent and our sheep 14 per cent. Note that our population was increasing while our production of meat food animals was decreasing. The best figures obtainable by the government up to January 1, 1914, show a still greater per cent of decrease.

We quote these figures just to show that it is going to take a good many years of diligent work, with diseases of all animals reduced to a minimum, to get anywhere near a normal production of animals as compared to population.

What Shall We Do?

What is to be done to stop this terrible loss, that we may get back to a normal production of our meat food animals, and how are we to do it?

To answer these questions with some degree of intelligence is one of the things that prompted the Twentieth Century Farmer to make the investigations it has. The question concerns us all. Much has been said and written on the subject of hog cholera, its control and eradication. Generally these articles have dealt with conditions as they now exist, and suggest the thing to be desired, but have not dealt with what must be done and what we must do to accomplish the end.

It will be our effort to say what we think is best to be done, and the necessary thing to do to bring about the desired result. Our investigations have been made with the single idea of getting at the exact truth. In beginning these investigations we had no bias or prejudice for or against any plan or method. We had no axe to grind. The time and money spent by this paper in this work was for the sole purpose of finding out just what we thought was best and of giving these conclusions to our readers with the hope that they might be benefited.

We have classified this work in three classes, arranged according to their importance:

First—Co-operation, education and organization of the farmers.

Second—The enactment of the proper sanitary and quarantine rules and regulations and their enforcement.

Third—The manufacture of serum and virus, its testing and application.

In the articles to follow we will take up and discuss the general treatment of hog cholera, following the above classification. What we may have to say will be our conclusions as to what we think is best to do for the farmer in the general combating of the disease.

We court a careful reading of these articles and invite comment pro and con at any time.

If We Understood

If we knew the cares and trials,
Knew the efforts of all in vain,
And the bitter disappointment,
Understood the loss and gain—
Would the grim eternal roughness
Seem, I wonder, just the same?
Should we help where now we hinder?
Should we pity where we blame?

Ah! we judge each other harshly,
Knowing not life's hidden force;
Knowing not the fount of action
Is less turbid at its source;
Seeing not amid the evil,
All the golden grains of good;
And we'd love each other better
If we only understood.

Could we judge all deeds by motives,
See the good and bad within,
Often we would love the sinner
All the while we loathe the sin.
Could we know the powers working
To overthrow integrity,
We should judge each other's errors
With more patient charity.

—Rudyard Kipling.

Note—This is the first of an exhaustive series of articles, which are based on careful investigations, and which will take up the subject of hog cholera in all its phases. In the next issue we will treat of methods by which we may hope to secure the co-operation of all parties concerned and interested in the eradication of this disease.

Some Experiments with Deep Plowing

Sufficient Motive Power Will Unearth a New Farm that Lies Under the Old One

No Expedient for Increased Yields is Cheaper than Deeper Plowing

By H. A. Crafts

IN SEASON I see farmers plowing on every hand. They plow broadly and diligently, yet their returns are not always of a satisfactory nature. How can they best increase their yields? One of the first thing is to plow deeper.

Here in California I see land being plowed year after year, but only to a depth varying from three and one-half to five inches. The aggregate area of plowed land in California is very large, and some farmers seem to be striving all the time to increase their acreage rather than to improve their original acreage. They appear to forget the fact that right underneath their old farms lie brand new farms. In fact, in many sections of the country there are as many new farms down there as there may be increased inches that may be added by deeper plowing.

A Spanish Don, not long since, purchased of a California concern a big farm tractor and a set of gang plows and took them to his big estate in old Castile. This was done under the patronage of no less a person than King Alfonso himself, and the experiment was watched with much interest by the court of Spain.

This was the first modern farm machinery that had ever been introduced into that ancient monarchy, and the advent of the California plows and tractor created a great sensation. Large crowds gathered in the fields of the Don to witness the operation of this wonder from the new world.

For centuries the land had been turned over from year to year with no more efficient instrument than the antiquated wooden plow of the native farmers. Of course, the plowing had been very shallow, because that was the way plowing had always been done.

The expert who was sent over from America to instruct the Don how to operate his new machinery set the gang plows very deep, and then, turning on the full power of the tractor, started in and literally tore up the earth, to the great wonderment of the spectators.

But the real surprise did not come until harvest time, when the Don was gratified to see an increase of fully 50 per cent in his yield of grain.

Here in California experiments carried on by the experiment station at the college farm at Davis give additional proof of the efficiency of deeper plowing. The average yield of wheat in the state for the last five or six years has been only about fourteen bushels to the acre, and efforts are being put forth to inaugurate such improvements as will make a better showing in the cereal line. It is almost a general practice in California to plow grain land very shallow—from three to four inches in depth.

Forty trials of deep versus shallow plowing were made at Davis during a period of three years and the average of the forty experiments showed the following results:

	Wheat, Bushels.	Barley, Bushels.	Effect on Succeeding Crop of Barley.
Deep plowing	29.78	75.98	25.36
Shallow plowing	21.67	69.30	17.32
Gain	8.11	6.68	8.04
Percentage increase	37.40	9.70	46.50
Increased money value	$7.78	$3.34	$4.02

Now, the principal advantages gained by deep plowing are, first, large quantities of virgin soil are added to the old; second, a better conservation of moisture is obtained; third, there is an improved chance for crops to root deeper; and, fourth, there is an improvement in the tilth of the soil.

No expedient for increased yields is cheaper and more easily employed than that of deeper plowing. All that is necessary is an increase in the motive power employed.

Deep Tilling Machines Set at Sixteen Inches. Plowing at This Depth is Almost Impossible with Horses

Plowing, Harrowing and Disking All at Once

Troubles of the Farmer and the Hired Man

THE labor problem is the one really menacing cloud hanging over agricultural conditions, and it must be met or the difficulties of every farmer in securing competent and dependable help will be lost sight of in a general demoralization of the farm labor market.

The farmer no longer sows, reaps nor feeds "by guess and by God;" neither can he trust his work to the main strength and awkwardness of "roughnecks." Men of brains, training and education are demanded, yet he has very poor picking in getting this kind of labor from the army of farm labor that drifts about the country. He must look to this unskilled labor for the care of high-bred stock, the operation of expensive machinery, the scientific cultivation of crops and the handling of many other branches of the work upon which he has often spent years of time and hundreds of dollars to bring to some degree of efficiency.

As long as this condition prevails the man who attempts anything beyond a one-man capacity is continually handicapped. He must either suffer loss at the hands of poor workmen or forego the necessary and remunerative extensions. Not a few give up in despair and leave the farm. And as bad as this sort of labor is, it cannot even be depended upon to stay on the job. Many a farmer thinks his life would be a peaceful one if he were not continually bugbeared by the problem of getting help of any kind. That is the way the problem appears to the average farmer.

On the other hand, the farm laborer, whatever is expected of him, and no matter what his capabilities may be, is not given even the same consideration which unskilled labor receives in other lines. The poorest of them ask, and usually receive, the "going wages," and the best get but little more.

A young man from the city or a foreign country cannot possibly, be he ever so apt and willing, make a dependable, all-round farm-

hand in less than two years. Yet in the same time his brother, with no more brains or education, may have made an excellent start as a painter, plumber or lineman, with shorter hours and better pay. In other words, length of apprenticeship and service, so important in fixing the compensation in other lines, seem to be almost ignored in the case of the farmhand.

Whether the farmer is responsible for this "dead level" in wages, or whether it is merely the perversity of circumstances, it is hardly just to the farmhand, and a reliable, intelligent and efficient service cannot be built up on such a disregard of gradation of wages, hours of work and permanency of employment. Industrial conditions are always prosperous and peaceful for both employer and employe, according as these modern requirements of work have been recognized. Nor is there anything in the nature of the farmer's dependence upon labor that will exempt him permanently from the consequences of disregarding them.

The very nature of farm work prevents any such scheme of wages and hours as that which prevails for wage earners elsewhere. But it is high time we began to work out some sort of an improvement; until we do we must endure to a large extent the culls of the labor supply, forced out of the race in other trades where merit is better rewarded. We can hardly expect that the beauties of country life and the farmer's wholesome table of pure milk and fresh fruit are going to hold the ambitious young man from seeking these other employments.

I have never been a heavy employer of farm labor. My farm does not admit of it. For that reason my experience perhaps does not warrant my positive opinions, and maybe what I have done on a small scale would not be practical on a large scale. But I know the little changes I have made have worked for me, for I don't have one-half the trouble with hands which my neighbors experience.

For one thing, I pay not the "going wages," but entirely according to the man. Since I never can get any help for less than the "going wages," it means that on the whole I must pay more than most farmers.

I have hesitated to say this, for I can hear a chorus of farmers protesting that wages are much too high, and that if they have to pay more they may as well let the land grow up to weeds. In itself, I don't take much stock in such a general argument, because every advance of wages in other lines has always been obtained in one way or another against just such protests. It is so like that other argument we always hear in labor troubles—"nothing to arbitrate." The average employer, whether farmer or manufacturer, likes to pay wages about as much as he likes to pay taxes—he never can really afford an increase. When it comes to taking the farmer's word in such a case, I don't believe he is any more truthful than other employers. In general, too, he is probably not any more altruistic in treatment of his employes than the rest of his followmen.

The situation is such that it is up to the farmer to pay more, not for the "roughneck" that drifts into his yard Monday morning and asks for a job, but for the man who at the end of a month or a season has shown some degree of intelligence and competence.

I'm not posing as a philanthropist in the matter of employing farmhands, nor do I run my farm on a greater margin of profit than the average farmer; but when a good man has been with me a month I invariably increase his wages from $1 to $5 per month. Sometimes he is hardly what you would call a competent workman, but there is no better way to get the best that is in him. I always act on the principle, too, that if a man is worth keeping at all the second year, he is worth a few dollars more. What is a dollar or two more a month compared to the risk of getting a poor hand? Even if you get one as good or even better, he cannot be as efficient and dependable as the one who has had a year to learn your methods and policy of farm management.

.. I have discovered that nothing makes a bigger hit with a farmhand than regular and reasonable hours of work. What is reasonable depends much upon the particular locality but one should set the hours for beginning and quitting and stick to them. Such limitations cannot well apply to anything but work in the field. Then during the busy season when it is frequently necessary to work extra hours in the field I have of late made a practice of giving the man credit either in the form of extra money or a day off. Such consideration of your men doesn't cost as much as one would think, and it will go a long way toward solving the problem.

To sum up, five of my immediate neighbors, as near as can be ascertained, have paid on an average of $29.60 per month in the last three years for their so-called permanent help. In that same time the increases and overtime which I have allowed has brought my average up to $32.85, a difference of $3.25. But I have never had any trouble with help, and they have.

D. DICKINSON.

Kafir, Milo and Other Grain Sorghum Crops

Care in Choosing Seed Will Result in Even Stand and Better Harvests

By A. C. Hartenbower

THE average farmer in the southwest considers the grain sorghum crops as sure. In this he is correct. Few are the years in which these crops are total failures. Drouths devastate most other crops, but the grain sorghums manage to hold their own and produce good yields; they stand still in their development in dry weather, but when the first moisture supplies come in the late summer they continue in their growth to maturity.

This fact leads many farmers to give but little attention to the kind of seed they use in their production. If the grain sorghums are profitable crops even under adverse conditions, and give remunerative yields when no attention is given to using pure seed, what would they return if care were used in this respect? No definite answer can be given to this question, but attention can be called to the fact that the use of pure seed has greatly increased the production per acre and the value of the other commonly cultivated farm crops. We might take corn as an example. Certainly all will agree that the use of pure seed has brought a marked increase in the production and the value of this crop. That a duplication would be made in the case of kafir, milo and the other grain sorghum crops is certainly evident.

Hard to Get Good Seed

Ever since the grain sorghums have been grown in the southwest little or no attempt has been made to keep them pure. They have not been grown in separate fields, and in many cases the grain of the different types has been mixed together, either in threshing or intentionally after threshing. While most of the intentional and unintentional mixtures have been used for feed, yet they have often been sold for seed, and consequently it is very seldom that one sees a field of kafir or of yellow milo, for example, that is even relatively pure. The average field is very irregular in height and badly mixed with the sweet sorghums or with broom corn. It is not uncommon to find a field that contains a mixture.

While it is evident that such conditions are very undesirable, yet it is well to mention a few specific reasons why such mixtures should be avoided and why pure seed is desirable. Aside from the pure seed question alone, the unevenness of maturity, which results from the planting of such mixed seed and the unevenness of the height of plants, constitute the most serious objections. Grain of these sorghums when put on the market should be evenly matured and relatively pure in order to command the highest market price. If the seed sown is badly mixed, the crop will not mature evenly, and consequently the value of the crop will be much reduced when placed upon the market. One of the most serious objections to feterita as a grain sorghum crop for the market at the present time is that it is unevenly matured. While this is not due entirely to mixed seed, yet a great deal of the feterita seed offered for sale is mixed with some of the other grain sorghums.

Make Harvesting Easier

Harvesting is an item of considerable importance in growing the grain sorghum crops. This is especially true when these crops are grown for seed or grain production. It is evident that the cost of harvesting will be materially reduced if the height of the plants is even. Perhaps the greatest reason why machine harvesting is so difficult in the grain sorghums is that they are badly mixed, and this results in a very uneven height. Several makes of harvesters have been put upon the market for heading the grain sorghums in the field. The chief objections to these machines are that they either cut off too much of the stalks or leave whole heads or parts of heads in the field. If the plants were regular in height this objection would be overcome and the cost of harvesting would be materially reduced.

Good Seed to Start With

Before commencing the improvement of seed on the farm it is important that the farmer first procure a start of seed that has previously received considerable improvement and has been kept pure. If this has been done the farmer will be able to save much time which would otherwise be required if he tried to improve a badly mixed, inferior type. It will pay to start with the best seed obtainable, regardless of the price. In procuring a start of seed the reputation of the grower should be learned if possible and also the methods that he has used and the type or ideal that he has had in mind for improving the crop.

Good seed of the grain sorghum crops can be obtained either threshed or in the head. Where the grower is known to be responsible, and if on test the seed germinates well, but little risk is incurred in procuring threshed seed. Under ordinary conditions, however, a knowledge of the type and purity of the heads can be obtained and individual judgment can be used in selecting from the lot received only those heads desired. Such seed is also more likely to be of high germinating power, because threshed grain is very difficult to keep from heating. If a great deal of care is not used in storing and drying, the germinating power will be seriously affected. The fact that poor stands of kafir and milo have been almost universal throughout the grain sorghum belt is undoubtedly due to a great extent to the use of seed that has been allowed to heat and then not tested for germination before planting.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

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According to a bulletin from the national bureau of animal industry, about 125 dairies are engaged in producing certified milk, and the daily production is nearly 25,000 gallons, an increase of 300 per cent in five years. The chief demand is for infants and sick people.

"Nothing is doing the oil business more harm than the widespread advertising of worthless stock," announces the government. This was written in regard to the advertising of certain Wyoming and Colorado oil lands, which advertisements were so worded as to convey the impression that the lands had been favorably reported on by a government survey. However, this statement of Uncle Sam's applies equally well to live stock, seed, machinery or any other product.

Advertising a scrub stallion as a pure-bred will not be possible longer in Kansas under the present law and with the enforcement this law is receiving. The new state live stock registry board has found that this was being done in over 2,000 cases, oftentimes the stallion owners themselves being innocent parties and really supposing that they were owners of pedigreed animals. On one pedigree the sire claimed for the stallion was imported a year after the animal was born. Proper enforcement of a good stallion law protects both stallion and mare owners.

Farm Papers as School Text Books

Agriculture is now taught in many of the city and rural schools. This being a new subject, text books are few and untried. Then, too, agriculture is a big subject. It covers more branches and methods than any other subject under the sun. The text books can only treat it in a broad and general way. The teachers cannot supplement the text books by their own knowledge, for the excellent reason that they have no knowledge of the subject themselves, or at the best only a very limited knowledge. Agriculture is the livest and most interesting subject in the schools of the city, town and country where it is taught, even under these adverse conditions.

What may be done to give the teachers assistance in the problems that are constantly arising? How may they find the answers to the questions the children are constantly asking them? How may they learn what to do in the emergencies that are continually arising where they are fortunate enough to have experimental plots in which to try out the theories they learn from the books? These questions have been answered in a large part by the farm papers. The teachers throughout the country are turning to these papers to help them solve their great problem. Many are the calls from the teacher of agriculture which the farm paper answers. By choosing well, the teacher may have on hand two or three of the best agricultural papers covering the territory in which he teaches, and from these may be derived information on timely topics. From these the teacher and pupils may find what practical farmers have done when confronted with the same conditions they are experiencing, and what the result has been. Teachers are taking advantage more and more of this privilege, and there are now few schools in which agriculture is taught where there are not two or three good farm papers on file for reference. These papers are in constant use, and their value in this field cannot be overestimated.

Waters Hard to Corral

It seems that President H. J. Waters of the Kansas Agricultural college is in demand all over the agricultural world. President Waters has a lot of strong endorsers over the western half of the United States for any position demanding a knowledge of agriculture. He is a born leader, and no amount of little stumbling blocks that may be placed in his way will interfere with his progress as an agricultural educator and promoter. He has already become an international character.

President Waters has had repeated invitations to visit foreign lands and deliver lectures on agriculture before universities. He has recently been granted a leave of absence of five months to make an inspection of the bureaus of education and agriculture in the Philippine islands. The request for this portion of his trip came from the Philippine government through the United States Department of War. He intends, after completing his work in the Philippines, to continue his tour of agricultural investigations around the world. He has planned a visit to Java, supposed to be one of the best organized tropical agricultural districts of the world. The conditions in India will be studied, also agricultural Egypt and the Holy Land.

This trip will not only be one of observation and investigation of what is being done, but one of suggestion for the bettering of conditions as he finds them. Especially will this apply to the educational system in practice in the Philippines. Some of these islands are not yet organized, and suggestions on local organization will be of great value from the standpoint of agricultural production. The developing of these islands is of great moment at this time, and no doubt will receive the close attention of President Waters in his tour of inspection. The university at Manila will be given special attention with a view to advising and directing its future course.

The Kansas Agricultural college will realize great benefits from this agricultural inspection tour they are so freely extending to President Waters. He will return to them greatly broadened in knowledge from his observation of what other countries are doing and capable of doing.

"The Boy and His Job"

The annual commencement exercises of the Nebraska School of Agriculture take place at the University Temple, Lincoln, Friday evening, April 24. A good program has been arranged for these exercises.

We wish to speak in particular about one speaker on this program. He is without doubt known by reputation to most of our readers, and probably personally known to a large number of them. Joseph E. Wing, one of the well known editorial writers of the Breeders' Gazette, will address this class on the subject, "The Boy and His Job."

We know of no one who is better able to handle this subject than Mr. Wing. He has given practically his whole lifetime to the study of farm work and has made a particular study of the farm boy. Mr. Wing has traveled widely in both this country and many countries of Europe, studying farm conditions and farm methods.

We bespeak for the farmers of our state a liberal attendance at these exercises. Go down and visit the agricultural school and state farm and hear Mr. Wing speak. You will be well repaid for your time and trouble.

Whitewash on the Farm

This is the time of year for the annual cost of whitewash. The old-time idea among the good, old eastern farmers, especially that sect known as "Quakers," was to freshen and brighten up everything about the farm buildings, trees and fences with a good, heavy coat of whitewash. This rejuvenating tendency of the farmer so harmonized with the spirit of springtime in taking on renewed vigor and life that all the world seemed keyed to renewed effort. This time-honored custom of decoration, of brightening up, should be encouraged, and as much beauty and pleasure obtained from it as in past years.

Whitewash is the cheapest decorative material in existence when one estimates its advantages in the freshening up of the appearances of the buildings, fences, etc., it is used upon. The use of whitewash indicates neatness, industry and thrift on the farm. Buildings too rough-surfaced for paint can be whitewashed to give them an appearance of some value. Fence posts and trees are improved by a coat or two of whitewash. The practice of whitewashing the trunks of the trees in the orchards is advocated by some orchardists and tree growers as both an improvement in appearance and an advantage in protecting from insect pests about the bark.

The matter of preparing the whitewash is simple so far as the plain whitewash is concerned; but if the lasting qualities are to be considered, and this is an important thing, then there must be some ingredients added to the water and lime calculated to give the preparation adhesive properties. The following formula may be used with a reasonable assurance that it will last. It is called the lasting whitewash, and from its ingredients it will be observed that it merits recognition at once as being well compounded with qualities combining durability and adhesive tendencies, both very essential qualities in a whitewash.

Ingredients and Preparation — Slake a half bushel of fresh lump lime with boiling water and cover to prevent evaporation. Strain so as to take out all lumps of the unslaked lime (a piece of wire window screen fastened over a small, bottomless box answers nicely), add one peck of salt that has been dissolved in warm water, three pounds of rice flour, made into a smooth, boiled paste, eight ounces of Spanish whiting, one pound of glue dissolved in five gallons of hot water. Mix well, put over the fire and stir until it reaches the boiling point. The whitewash is now ready to apply, but if too thick to spread well with the brush add more boiling water until you have it of the right consistency; no danger in adding hot water. If not convenient to use the rice flour, then make a thin paste from wheat flour, cooking it the same as in making gruel or starch. This will answer, though the rice is regarded the best in durability. Stir this mixture until perfectly smooth and apply hot or at least warm. If it is not as white as desired, add a little bluing, same as used in washing clothes.

Rural Arithmetic

A Kansas educator has produced what he calls "a rural arithmetic," designed especially for use in country schools attended by boys and girls from the farm. It teaches arithmetic in terms of good farming and good citizenship. Its examples and problems have to do particularly with the things of the farm. For instance, it deals with land, horses, cows, swine, poultry, eggs, crops of all sorts, with rural credits, good roads and in fact everything that directly or indirectly goes to make up the atmosphere and life of the farmer.

The intended and probable effect is to magnify the importance of these aspects of life in the minds of the farmer's children, to fascinate them with the farm, to deepen and broaden their interests in the farm and finally to make them want to be farmers. It is, in other words, a very adroit method of fostering the "back-to-the-farm" idea, having the excellent quality of being a remedy instead instead of a cure.

Whether or not it will work as planned, no one yet knows. We do know, however, that the rural education that centers the child's thoughts and fancies so largely in city life to the disparagement of the farm does not cultivate a love for the farm in the children or make them more eager to stay with it. The new idea is based on a very logical theory and is so simple that it certainly appeals to the common sense of the common person.

Why Neglect Other Stock?

We notice in the 1913 year book of the Nebraska State Board of Agriculture a list of all premiums won in the cattle division of the 1912 fair, giving class, premium won, amount, exhibitor's name, name of animal and record number of the animal. We do not find any of this information regarding horses, swine or sheep. Why publish this valuable information about cattle only? Are not the other live stock interests of the state worthy of this publicity? If this information is of value to the general public and to the exhibitor of cattle, we believe it equally as valuable to the public to give the horse, swine and sheep owner the benefit of this publicity. This is information that is very often valuable to live stock men. If the State Board of Agriculture would publish these awards each year as they have for the cattle division for 1912 we believe their year book will be much more sought for by our live stock men and farmers. We believe it would be better to publish this information for all live stock classes.

Shipment of 75,000,000 lady bugs into California! What for? To eat the aphids that prey on the melon, hop, bean and grain crops of the state. More than 50,000,000 of these insects have been imported heretofore and have proved such effective enemies of the aphids that the demand for them is larger than the available supply. California children will not be allowed to sing, "Lady bug, Lady bug, fly away home," any more for fear the bug may do so.

Early Premium Lists

The premium list has already been issued by the Central Nebraska Agricultural association for the fair to be held at Grand Island September 29 to October 2. This is an example that other fairs, both county and state, would do well to follow, giving exhibitors time to plan their exhibits and to work throughout the season toward producing and finishing their products in the best possible manner.

The children have a prominent place in this premium list. A number of premiums are offered for school work, especially for the rural schools. Besides this, there are horse, cattle, hog, sheep and corn-judging contests for boys under 18 years of age.

We are sorry to note that the baby show is to be the old-fashioned, useless kind, based on mere beauty. The baby show of the present day has been taken out of the class of public entertainment and placed on a solid footing of value to the baby, its parents and even the spectators. We hope the time will come when the baby show will either be entirely omitted from the fair or else made as much a subject of scientific interest as the agricultural and live stock departments.

The Old Cow

There is considerable difference of opinion among cattle owners and handlers at what age the cow passes into the classification designated, "the old cow." Some persons speak of a cow as an old cow when she is 8 or 10 years old; others do not regard her dangerously old at 12 years, and yet others will entertain you with stories of the best cow they ever owned, milked up to her full capacity at 15 years old and was a good feeder at this age, ate all kinds of rough feed, etc.

When is the cow too old to keep on the farm or in the breeding herd profitably? This is a question that deserves close study and can only be intelligently answered by a judge of cattle and by acquaintance with the old cow. There is no rule of age by which a cow may be judged to determine the end of her period of usefulness. Some cows remain strong and vigorous up to 15 years old, and even longer, while others are old cows and rapidly on the decline at 10 years of age.

It is a well established fact among breeders that after a cow has raised two or three calves her value as a breeder may be pretty accurately determined, and she has also arrived at the age of best service as a calf producer. The heifer is not the best mother, usually, but improves in maternal qualities as she approaches maturity. It is, therefore, very uncertain in results to turn the heifer off because she does not with her first calf equal the old cow in her produce. It is also bad management to turn the old cow off because she is old, when she has proven a valuable breeder of excellent calves.

The old cow, even among the grade cattle, is often worth more to retain as a producer of calves than to exchange for the uncertainty of a young animal. Excellence in breeding is what is desired in the breeding herd. If you have this in the old cow, be sure you have something to take her place in this very desirable quality before you dispose of her on account of old age. Judge closely, judge accurately, judge well on the value of the old reliable breeding cow, remembering that good cows are scarce, and that it is much easier to get rid of a good cow than to buy one.

From 10 to 25 per cent of the cream is left in the milk after skimming, says the dairy department of the Nebraska College of Agriculture. At the prevailing price of cream, butter-fat makes pretty expensive hog feed. A separator removes practically all the cream from the milk.

Sooner or Later

drugging, even in its milder forms, clouds and mars the fairest complexion.

Coffee drinking isn't considered drugging by most people, but physicians know that the average cup of coffee contains from 2 to 3 grains each of the drugs "caffeine" and "tannin," that affect stomach, liver and kidneys, disturb circulation and work havoc with natural nerves and a healthy skin.

Every woman who values a clear complexion, soon finds that a change from coffee to

POSTUM

makes rapidly for personal comfort and wholesome beauty.

Postum is a pure-food drink, made of prime wheat and a small percent of molasses. It tastes much like high-grade Java, but is absolutely free from caffeine, tannin, or any other drug or harmful ingredient.

Postum comes in two forms:

Regular Postum—well boiled, yields a delightful flavour. 15c and 25c packages.

Instant Postum—a soluble powder. A teaspoonful stirred in a cup of hot water dissolves instantly. A delicious beverage. 30c and 50c tins. The cost per cup of both kinds is about the same.

"There's a Reason" for POSTUM

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My Ten-Year-Old Boy Turns with Ease the

BEATRICE
Cream Separator

Says Farmer Onswon

I've been up one side and down the other of this cream separator question for 20 years, and I'm for the Beatrice Cream Separator every time.

The Beatrice is the one high-grade separator that is sold at a reasonable price.

We all have some respect for our pocketbooks. None of us farmers want to pay out $100 to $125 when we can get the same thing for $65 to $85.

Well, that's the cream separator situation. The Beatrice sells at $85 for the largest size machine, 1000 lbs. capacity. Other high grade separators sell for $110 and upwards for less capacity.

The Beatrice gives you—

Clean skimming, easy cleaning, easy running, convenience, long life, big capacity. It skims cold milk as well as warm milk.

Compare other machines with the Beatrice; you'll agree with me that you pay more for them than the Beatrice price, but you do not get as good a machine for your money.

Take my advice and investigate the Beatrice. Write to nearest office below for free catalog and name of local dealer near you.

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100 pounds makes 100 gallons of Perfect Milk Substitute.

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Raising Sheep on the Farm

DOES it pay to raise sheep on the farm? is the usual way the question is put by the inquirer. This depends upon the way the sheep are handled. There is no special pay in raising any kind of stock on the farm unless it is well and properly done. Some farmers make hog raising pay; others make cattle raising pay; others still make horse raising pay. It depends upon the interest the farmer takes in the stock. If he likes any particular line of stock he will study their needs and demands, and try to provide these conditions for their welfare, and as a result they pay. It is just the same with sheep.

Sheep will pay a good profit on the farm if properly provided for and looked after. Sheep need a little more attention than most other kinds of live stock. This is not just in line with many advisors in this western country. You are often told: "Get a little flock of sheep; turn them loose on your farm and they will make their living on the weeds and waste that grow on the farm; they will clean up the volunteer growth of one kind or another that the farm contains—weeds, briars, brush, refuse and undesirable vegetation generally." They are often spoken of as scavengers for the farm that turn to good account all that is worthless for crop or unfit for other kinds of grazing animals.

There is a great deal credited to the sheep that is not true. In the first place, there is not an animal living that is a better judge of good, palatable vegetation, and there is not an animal, when turned loose on the farm, that can find the quality of herbage or feed quicker than the sheep. The sheep is so often spoken of in its connection with the cleaning up of the waste places of weeds and undesirable growths that one might form an idea that the sheep was so peculiarly constituted that it preferred this to clover, wheat, oats, corn or other green herbage. Do not be deceived in this relation. If you do not want your best and richest crops to receive the first attention of the sheep, you must fence them in or fence the sheep out. The sheep, if left to its own free will, you may depend upon it, will get the best crops on the farm first, then take up the refuse.

The sheep, to be made profitable, must first be fenced in an enclosure—a roomy pasture is preferable, where it has plenty of range. At such seasons as it can be liberated it may be given the range of the cornfield, the stubble fields and other parts of the farm to engage in its scavenger work of cleaning up the fence rows, weed patches, feed lots, etc. The sheep is a good close-cropper in the autumn season when it can get around to the waste places that have been producing a summer's crop of volunteer grass and weeds.

The little farm flock on the farm that is pretty generally fenced with woven-wire, hog-tight fence can be made very serviceable in taking up such grass and weed growths as are of no value otherwise and which damage the neatness of appearance of any farm if neglected. The little farm flock may be made quite profitable from the business point of wool and mutton production.

It is not an unreasonable estimate to establish a flock that will yield an increase of 125 per cent of lambs and that will produce a fleece of ten pounds average weight. The lambs can be fed out for the mutton market at ten or twelve months' growth and a fleece taken off them before sold, and altogether make the farm flock a very profitable investment. This kind of an enterprise need not occupy all the farm or demand all the time of one person.

The little farm flock, well managed, has been the means of converting many farmers to the exclusive sheep-growing and wool-producing industry. The profit of the little farm flock, when properly provided for and properly handled, can scarcely be carried out to the full capacity of the farm on the same ratio. The little flock gets the advantage of the cleanup of waste feeds, which amounts to considerable. This would not exist if the farm were stocked up to full capacity the year around.

That the farm flock industry is on the eve of a more liberal representation on the western farm, there is not the least doubt. The small farmer is going to engage in such lines of live stock breeding as will be most easily handled and at the same time yield the largest revenue for the money, labor and feed invested. This is unmistakably the little farm flock of mutton sheep.

The dog **nuisance** is holding thousands of farmers back now all over the western states where there has not been some reasonable protective legislation against the dog. Most states have stringent dog laws, which place a tax on all dogs kept. This tax provides a fund that reimburses the sheep owner for all damage sustained from the sheep-killing dog. All states should provide this protection and thus encourage the filling up of the farms with the small flocks.

Farmstead Building Plans

A few ready-made plans for farm buildings may be had at cost from the agricultural engineering department of the Nebraska University farm, Lincoln. The blueprints are part of a unit approved for a farmstead. If the farmer will furnish a general idea of the sort of building he expects to construct, the department will send him the stock design. No special plans will be drawn, but if advice is wanted, rough pencil sketches will be made free. Barn plans, consisting of ten or twelve blueprints, will be furnished for $3. Other prints can be obtained from 25 cents to $4.

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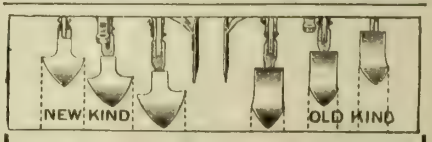

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CHAS. BURMEISTER, Sutherland, Ia.

Bloat or Hoven in Live Stock

THIS is the beginning of the green grass season when cattle and sheep are subject to bloat from eating clover, alfalfa and other green herbage. Bloat is an ailment that requires prompt treatment. It comes quickly and kills quickly, and if a remedy is to be applied it must be applied quickly. Every farmer and stock owner should be familiar with some prompt and reliable treatment for the common ailments and diseases to which the farm animals are subject so as not to be helpless in applying a remedy in any case of emergency.

There are a number of remedies used to relieve the bloated animal. Every cow doctor has a treatment, and quite often it does not act as promptly as the disease and the cow dies. If all cattle owners would stop and think just one moment when they read this article, they need never lose an animal with bloat that they find alive if they have a few minutes to place the remedy. It is simple, possibly too much so to meet the endorsement of those who think the services of the cow doctor should be had.

When an animal is discovered with bloat, at once insert, well back in the mouth and over the tongue, a round stick as large as your wrist or forearm and long enough to project at either side of the mouth so that to each end of this stick may be fastened a string, which must be securely tied over the back of the head or horns, so that the stick will be held back in the mouth firmly and cannot be removed with the tongue. This will keep the animal's mouth wide open, an involuntary discharge of the gas will commence at once, and the cow will be relieved in a few minutes. This is the safe way, the easy way, the quick way, with no danger whatever. You can relieve your cow in half the time it would take to run to some neighbor to ask him what to do, and then possibly he could not help you. The smearing of the stick with a little pine tar, axle grease or something distasteful to the animal is recommended, as it causes an effort to dislodge the stick, resulting in the working of the jaws and throat that stimulates the secretion of saliva and swallowing, thus opening the esophagus and permitting the escape of the gas.

It is a good plan to have several round sticks, with strings tied to each end, in readiness, so that in case an animal needs attention it can be given at once. A piece of a fork handle will do, but a larger round stick is a better size for the full-grown cow. Some persons are not satisfied with one good remedy, but want two or three at hand to apply, so that in case the first administered does not work like magic the others can be employed in turn as fast as they can be administered. When the average horse has the colic he is given all the remedies that are suggested by all who chance to see the poor brute in his misery, until he is relieved or dies from overdosing.

A half pint of kerosene oil mixed with an equal quantity of water is said to be a remedy used by some cattle owners. This is to be repeated in fifteen minutes unless relief is had sooner. The trocar is quite frequently resorted to in severe cases needing immediate relief, and, in the hands of an experienced operator, is generally successful. It will pay any cattle owner to provide himself with this instrument and have an experienced operator teach him how to use it, as there is danger of the operation proving fatal when the instrument is not properly applied.

Big Money in Well Mated Teams

THERE is big money made in getting well mated teams together into what is termed by horse owners and handlers "matched teams." This is a feature in the horse handling business that always has and always will merit attention by the horse fancier. The tendency in prices for the better kind of horses is upward, and this is the direct result of a shortage of good horses to supply the demand. The horse cannot be sidetracked by any amount of power appliances. There is and will continue to be a general demand for the good horse. The horse as a beast of burden is a necessity, because of his convenience, ease of operation and application to all manner of traffic and trade, which needs cheap, quick transfer, and may be operated by unskilled, cheap labor.

The tendency among horse breeders and horse owners is to produce and own better horses, more serviceable horses and more attractive teams. The team of today is in a measure an advertisement of the business. The shrewd business man or farmer sees this, and as a consequence of this belief buys better and more attractive teams. One of the surest methods of advertising is the securing of a closely mated or matched team. A fine team of draft horses harnessed to a big wagon is always observed by the passerby. The lettering on the wagon and harness soon becomes familiar in the neighborhood, and the team is known by sight as far as it can be seen.

The admiration for the fancy matched team of driving horses has not all passed with the coming of the automobile. There is still a lingering hope that there will remain a place for these spirited animals outside of the race track. It is hard for the old-time horse fancier to realize that this period through which he is passing is more than a dream. It is true that the driving team instills a little more of the real horse spirit and pride into the lover of horses than can any inanimate object or device, because of the more animated exhibition of horse character. There is a touch, a feeling of sympathy, between man and horse that no machine can ever supply or supplant.

As time moves on the greater will be the demand for matched teams, and the higher proportionately will be the price they will command. The mating of teams is not a work that any horse handler can take up and make a complete success. A pair of horses may be the same color and size and yet not be matched. There are so many fine points involved in the matching of horses that it takes an expert to succeed in getting a pair together that would stand the test at a horse show or fair as being a well matched team. The matching of horses in disposition and action is the most difficult. The size and color, of course, are important features, but amount to little if not accompanied with the other qualities that make them agreeable and easily handled. A team of horses should move alike, have the same step, same carriage, manner of expression, be tempered alike, and have an inclination to be companionable and agreeable with each other.

A matched team means a team of high price, a team of value; the degree of this, of course, depending on the excellence of the horses. Matched teams have sold at high prices almost from the beginning of mating up such teams, and will continue to sell above the unmated horses. The price of such teams depends on two things—first, the quality of the horses, and, second, the close matching or mating. It will pay any horse handler to keep an eye open for well mated horses, either driving horses or draft horses. There is a demand for them wherever there is a demand for a good team, and at high prices.

An eastern Ohio county, noted for its fancy driving teams and the breeding of both pacing and trotting horses, for many years offered large cash prizes at its county fair for the best fancy driving team. This contest included in its qualifications the best mated team, size, color and general uniformity considered, with style, speed and all that goes to make up the most desirable driving team. Strange to say, a team composed of a white horse and black one took the prize for three consecutive years. Their matching was almost perfect, with the one exception—color.

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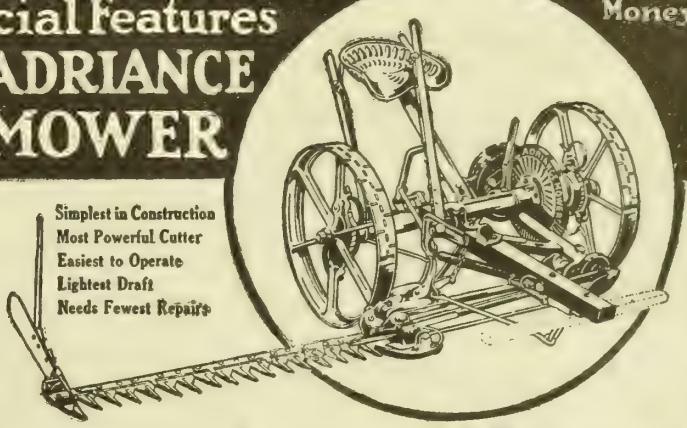

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E. V. Link.
Shepherdstown, W. Va.

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Harrison Philbrick.
Rich Hill, Mo.

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Haying season is short and every hour is worth gold dollars. If your mower is old or not wholly reliable, don't trust it and have it "lay down" right in the midst of the busy haying season.

The one mower that gives faultless service, every hour of the day, year after year, is the **Adriance.**

No other mower is so simple in construction; no other mower is so well made—no other mower has the record of so many years of hard service with so little expense for repairs.

Flexible Cutter Bar—The **Adriance** Cutter Bar follows uneven land. The coupling frame hinges are in exact line and swing like a door—no binding. The bar can be folded over the tongue when not in use.

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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

A Spring Song

Old Mother Earth woke up from her sleep,
And found she was cold and bare;
The winter was over, the spring was near,
And she had not a dress to wear.
"Alas!" she sighed, with great dismay,
"Oh, where shall I get my clothes?
There's not a place to buy a suit,
And a dressmaker no one knows."

"I'll make you a dress," said the springing grass,
Just looking above the ground,
"A dress of green of the loveliest sheen,
To cover you all around."
"And we," said the dandelions gay,
"Will dot it with yellow bright."
"I'll make it a fringe," said forget-me-not,
"Of blue, very soft and light."

"We'll embroider the front," said the violets,
"With a lovely purple hue;"
"And we," said the roses, "will make you a crown
Of red, jeweled over with dew."
"And we'll be your gems," said a voice from the shade,
Where the ladies' ear-drops live—
"Orange is the color for any queen
And the best we have to give."
Old Mother Earth was thankful and glad,
As she put on her dress so gay;
And that is the reason, my little ones,
She is looking so lovely today."

Rose and Harry Help Mother

"Well, children, what have you been doing this week?" said Uncle Jack when greetings were over and he had settled down for a visit with Rose and Harry.

"Helping mother put the furs and things away so the moths can't get them," said Rose.

"And, Uncle Jack," said Harry, "mother says moths are little worms. I thought they were like butterflies. The codling moth is."

"Of course it is—some of the time," said Uncle Jack. "The codling moth is a worm some of the time and a sort of butterfly some of the time, and so is the clothes moth. The grown-up moth—adult, the scientists call it—is a tiny grayish brown-winged creature that flies about the house in summer. It likes to fly at night and loves dark places."

"O, I know," said Rose, "those big moth millers that bump into our lights on summer evenings."

"Not at all," said Uncle Jack. "Our clothes moth is much smaller than that, and very quiet, and stays away from the lights. It lays its eggs in woolens, furs or feathers and then dies. The eggs hatch out into the tiniest little worms, less than half an inch long. These little worms have strong, sharp jaws, with which they cut the fibers of the goods into little pieces and weave them together with a fine silken web which they spin, and make them into little cases for themselves. In these they hide, with just their heads sticking out, and eat and eat your winter clothes until they get as fat as they can. When they want to travel about they go on their sixteen little feet and drag their cases behind them. To make the traveling easier, they use their sharp jaws to cut wide paths through the nap of the goods."

"What do they do when they get as fat as they can?" asked Harry.

"They go to sleep," said Uncle Jack. "They sleep and sleep, and when they wake up it is spring again, and they crawl out of their cases and find that four little tan wings have grown and they have been turned into what Harry calls butterflies. So they spread their wings and fly, and if your mother has not put the winter clothes away they will lay eggs in them, and next winter when you want to wear the clothes they will be all full of little holes."

"Why does mother put moth balls with them?" asked Rose.

"Because moths don't like the smell of them and won't lay their eggs where they are."

"Well, I don't like the smell, either," said Rose, wrinkling her little pug nose.

"Neither do Shep and Don," said Harry. "It makes them sneeze."

"I don't really like it myself," said Uncle Jack, "but I'd rather have it than holes in my coat."

HOME EDITOR.

(Prize Story.)

When the River Overflowed

By Jessie Mae States, Aged 10, Selma, Ia.

When it rains a lot the river sometimes gets too full and overflows, and often it will rise up in the night when people are not looking for it. They awake in the morning and find that their downstairs is full of water and they do not know what to do. The people that are living on the high lands come in boats and help to save them. Sometimes people do not think there is any danger and will stay in the houses until it is too late.

I knew a family living near the river, and during a flood the people sent them word that the river was rising, but before they knew it the water was up in their yard. Then as it grew higher they went to the hay loft. After a while they got frightened because the water was still rising, and the man got on a horse and thought he could swim to land and get help for his wife and children, but the horse got drowned and the man hung to a post in the yard.

The wife and children were still up in the loft, where they could see all that was going on. They had a little dog with them and tied a rope to its neck, and then the man called the dog to swim to him, thinking that he could get the rope and then his wife and children could pull him in. But the water was too swift, and the dog was drowned before it reached him. The man hung to the post so long he became worn out and couldn't hang on any longer and he was drowned.

This is a true story.

(Honorable Mention.)

Squirrel Hunting

By Carl Bichel, Aged 14, Wakefield, Neb.

One evening when Mr. Burns came home from the field he said to his son, Harold:

"Harold, the squirrels are eating up my corn which I have just planted. I will give you 3 cents for each squirel that you kill."

Harold had six traps, and the next morning he started out early to set them. He was careful in which holes he set the traps. He could generally see whether there were any squirrels living in the holes or not. Sometimes he could tell by the tracks in the dirt around the holes and sometimes there would be a kernel or two of corn lying near the hole.

Harold looked at his traps every noon and evening and took his 22-caliber rifle along. He wrote down in a little book how many squirrels he caught each day. At the end of two months he did not catch any more squirrels, so he took his traps home. He then added up and found that he had killed ninety squirrels. He told his father, who was surprised that Harold had caught so many, and he paid him $2.70.

Additional Stories

Dora Gohler, Mitchell, Neb.; Bernice Carder, Royal, Neb.; Emma Diris, Schuyler, Neb.; Esther Kruse, Boelus, Neb.; Hobert Nutter, Endicott, Neb.; Hazel Westland, Lincoln, Neb.; Rose Kinish, Florence, Neb.; Vaden O. Stickley, Guide Rock, Neb.; Myrtle Wolery, Whiting, Ia.; Laura Peterson, Chariton, Ia.; Russell Halbert, Red Oak, Ia.; Pearl Stely, Robinson, Kan.; Vernon Dinwiddie, Marysville, Kan.; Lydia Wilson, Rolla, N. D.; Jennie Johnson, Thurman, Colo.; Harvey Green, Warren, Wyo.; Philip Polk, Hawthorne, Nev.; Donald McLeod, Hawthorne, Nev.; Wilford Harris, Ogden, Utah.

Picture Contest No. 12

Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it bright and original. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than April 25.

Of Interest to Our Women Readers

Mother of Five

She mothered five!
Night after night she watched a little bed,
Night after night she cooled a fevered head,
Day after day she guarded little feet,
Taught little minds the dangers of the street;
Taught little lips to utter simple prayers,
Whispered of strength that some day would be theirs,
And trained them all to use it as they should.
She gave her babies to the nation's good.

She mothered five!
She gave her beauty; from her cheeks let fade
The rose's blushes; to her mother trade
She saw the wrinkles furrowing her brow,
Yet smiling, said, "My boy grows stronger now."
When pleasures called she turned away and said:
"I dare not leave my babies to be fed
By 'strangers' hands; besides, they are so small
I must be near to answer when they call."

She mothered five!
Night after night they sat about her knee
And heard her tell of what some day would be.
From her they learned that in the world outside
Are cruelty and vice and selfishness and pride;
From her they learned the wrongs they ought to shun,
What things to love, what work must still be done.
She led them through the labyrinth of youth
And brought five men and women up to Truth.

She mothered five!
Her name may be unknown save to the few.
Of her the outside world but little knew.
But somewhere five are treading Virtue's ways,
Serving the world and brightening its days.
Somewhere are five, who, tempted, stand upright
Clinging to honor, keeping her memory bright.
Somewhere this mother toils and is alive
No more as one, but in the breasts of five.
—Edgar A. Guest in Detroit Free Press.

Luck and Management

"Oh, say, Martha, I just stopped to tell you I'd decided to take your advice and hold that shipment of cattle a while," said Mr. Bowerman, sticking his head in at the living room door one afternoon as his wife and her neighbor were sitting there with their sewing.

"I'm glad you did, John," she said smiling. "I don't believe you will regret it."

"No, on thinking it over I'm sure you are right—as usual," he added with a smile as he closed the door.

"Do you give your husband advice on business?" asked the neighbor in amazement when he had gone.

"Why, yes," answered Mrs. Bowerman. "We always talk over all the business of the farm and household together. John takes my advice—if he thinks it is good—and I take his when it sounds reasonable."

"I don't see how you do it," said the neighbor. "I never know a thing about my husband's business. If I ever asked him about the stock or the crops he would put me off with a joke. He never would take it seriously, because I don't have time to know anything about it."

"It is all in the way you start," said Mrs. Bowerman. "When I was a girl I was always interested in the farm work as well as the housework, and when we were married and had to start out with pretty small means John and I always planned together just how to divide the little money we had. I was interested and understood when he explained what was necessary on the farm, and in turn made him understand what I needed in the house, and together we decided which was most important."

"Oh, well," said the neighbor, "it was not so hard for you, anyhow. You have always been so lucky that you could afford both the things he needed and the things you needed. I wish we had been half as lucky."

Mrs. Bowerman smiled to herself as she remembered the long evenings she and John had spent going over pros and cons and deciding just where each little they could scrape together would do the most good. She knew that the "luck" John's friends and neighbors envied him was the result of hard work and much thought, both on his part and on hers, and that the fact that the hard days were over was due to good team work.

"Yes," she said, "we have been very lucky. I wish we could give others the secret of our good luck."

HOME EDITOR.

Housecleaning Transformed

We are going to begin cleaning house next week and are going to turn the old-fashioned, ever-to-be dreaded cleaning time into one of social pleasure and amusement. Mary Jane and I are going to take one whole day—or two, if need be—and clean the pantry from the top shelf to the bottom; that is, we are going to clean the shelves, the woodwork, floor and windows. The papering may be done later. Then we are going to bake cakes, pies, doughnuts, cookies, bread, buns and a jar of beans. We'll buy a big, thick beef roast and dress and roast three or four fat hens. These edibles will pretty well fill the pantry shelves. Pickles will be prepared and added to the list, also cheese, crackers and fruit.

Then two of the girls and I will begin on the rooms upstairs. We will ask the menfolks to kindly aid us in carrying the heavy furniture, mattresses and such things as we cannot manage. There are three rooms to clean. After every article is removed from the rooms we will begin by sweeping the walls with clean, new brooms. Next will come the cleaning of the casings, mop boards and floors. These rooms do not need any new paper, so the windows will be considered next. After the sashes are cleaned the windows are removed and thoroughly cleaned and replaced again.

Now we hear Mary Jane calling from below:

"There's a pot of chocolate boiling hot and a plate of cookies waiting for you on the dining table."

And it doesn't take very long to descend to the dining room and partake of these tempting viands, at the same time resting our tired feet and quieting our nerves. Mary Jane's kind face is wreathed in smiles as she watches our enjoyment. The men are ocasionally dropping in from their work of straightening up and getting ready for the spring work, and they usually sit up and enjoy the lunch as much as we. They inquire after how we feel and want to know if there's anything for them to do now, and we inform them that the carpets and rugs are to be beaten at their leisure.

When we are rested and refreshed we turn next to the parlor bed room. Small rugs are on the floor, and when the bed is out and the furniture removed we all take a hand in the cleaning and are through by the time Mary Jane calls dinner. It isn't a hard task for Mary Jane to get us a good dinner, as nearly everything is prepared and the house is almost in its natural order.

The men are glad and ever ready to help, for we have undertaken this cleaning before the rush of spring work is on them, thereby saving the expense of hiring much done. In a couple of days' time, providing there is no painting or papering to be done, the housecleaning is at an end. There has been plenty to eat through it all—no very tired people, no angry words or faint stomachs; most things are in their accustomed places and the men by your side ready to give you immediate help. Try this plan, sisters, and see how well it works.

INA E. HEATH.

Iowa.

New Furniture Out of Old

There are few homes that do not contain articles of furniture that are well made and are truly artistic, but their surface is marred from long use and their finish does not harmonize with other and newer pieces. But they can be changed with little outlay of money if the work is done at home, so the labor does not count, and may be made as handsome as if done at some repair shop.

It takes some courage to make a trial when no one has "blazed the way," but I can assure the timid ones that success is theirs if they will benefit by the experience herewith given, which gave our home a "new" sideboard, roll-top desk and library table, not to mention several chairs which did not receive quite as complete renovating as the first mentioned articles, because they did not need it.

The first step was to remove the varnish or other coating and get down to the wood. This was done with a ready-prepared "Paint and Varnish Remover" bought at the paint store. The directions said to apply the preparation to the surface and leave a few minutes for the finish to soften, then scrape it off with a putty knife, but I found some old coarse denim rags did much better service, cleaning a larger surface and doing it more effectively at each stroke, so time was saved by their use. As soon as they became sticky they were discarded and by and by they were fine to burn.

The pieces all had mostly plain surfaces, but where there were any grooves or carving they were cleaned with orange sticks, such as are used for cleaning finger nails; this did not mar or scratch the wood. Further directions on the can containing the remover said that when the finish was all taken off to wash the surface with benzine, but I used gasoline, and it did the work all right, and was cheaper. When dry I went over the whole piece with No. 1 sandpaper, which made the wood as smooth as glass.

The three big pieces were all golden oak, bought when this shade was so popular, and did not match the rest of our furniture that had been bought later, so the next step was to stain it with a preparation procured from the aforesaid paint store. I learned by the color card, studied there, that we wanted antique oak and two coats were applied before the right shade was secured, and as soon as dry the last coat of stain was followed with the final finish, a proprietary article waranted to not give the objectionable gloss of varnish. All the preparations mentioned can be bought from anyone who handles painters' supplies.

A bruise on the top of the table was removed by putting a wet cloth on it and holding a hot flatiron so

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it touched the table, but the weight of the iron did not rest on it.

An armchair and three rockers, the finish of which had been literally cooked by use in hot weather, came out like new by removing the old varnish and putting on the same finish as on the larger pieces. The chairs did not need to be stained, as they were already the right shade. New knobs and all other trimmings needed were bought, all of solid brass, so they would last as long as the furniture would last, and before putting them on I gave them a coat of brass lacquer, and now after a year's use they do not need polishing. When the lacquer finally wears off from handling I will take off all the trimmings, scour them with prepared cleaner the same as I treat other brass ornaments, and give them another coat of lacquer and they will be like new again. Brass, like other metals, will not tarnish if protected from the air, and lots of scouring is saved if lacquer is applied; all the cleaning needed then is to dust with a soft rag that will not scratch the finish.

I want to show that the work here described has a money value far in excess of the cash outlay for the preparations used and for the trimmings. The entire outlay for the sideboard, the first article operated on, was about $5, while a solicitor for a firm doing this kind of work estimated the value of complete renovation, such as I gave it, at $15. As the work was done at add times, not interfering with other duties, it was money saved and money earned.

CENA S. CORNMAN.

Salmon Sandwiches

Cut thin slices of brown bread; do not butter them. Use one cup of flaked salmon, one tablespoonful of mayonnaise; season with salt and red pepper. Spread this mixture on the bread and add very thin slices of pickled cucumber pickles.

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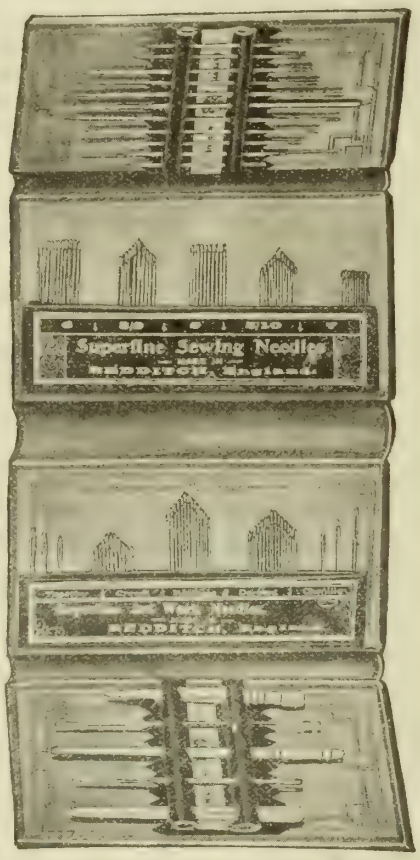

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Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6602—Ladies' Waist—This waist shows us again the narrow shoulder yoke produced by extending the upper edges of the back. The fronts are full and are gathered at the top. The sleeves are plain and full length or shorter. The neck may be finished with a frill or with the large collar provided in the pattern. The pattern 6602 is cut in sizes 34 to 44 inches bust measure. Medium size requires 1¾ yards of 40-inch material.

6625—Ladies' Dress—Cheviot, serge, silk, charmeuse, etc., are appropriate materials for this dress. The dress has a plain blouse, with an ornamental line of closing, a low neck and a fancy collar. The sleeve is straight and plain. To this is joined a four-gore skirt, with high or regulation waistline and a center-front closing. The pattern 6625 is cut in sizes 34 to 44 inches bust measure. Medium size requires 4⅛ yards of 36-inch material.

6555—Ladies' Waist—This waist is in one single piece. It is shirred at the shoulders and has a very loose arm fitting, with a sleeve that may be either long or short. The closing is in front, the neck a little open and finished with a Medici frill. The pattern 6555 is cut in sizes 34 to 44 inches bust measure. Medium size requires two yards of 44-inch material.

6581—Child's Dress—This practical little frock has a diagonal closing in front, with a handsome collar and revers outlining the edges of the opening. The blouse is full at the belt and the sleeves are in the new bishop shape, long or short, as preferred. The pattern 6581 is cut in sizes 2, 4 and 6 years. Medium size requires 2¾ yards of 36-inch material.

6597—Child's Dress—This ideal dress for play or school use is of sacque cut, held in by a belt at the waistline. It is cut square at the neck, has a side-front closing and bishop sleeves, which may be short or long. It also has bloomers, which are not too full and which may take the place of all other underwear. The pattern 6597 is cut in sizes 2, 4, 6 and 8 years. Medium size requires 1⅞ yards of 44-inch material and an additional yard the same width for the bloomers.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

THE straw under the hen with chicks should be changed frequently for cleanliness sake, but oftener if each morning you find a chick or two dead under her. These quite likely died of a disease that others may take.

* * *

To save the brooder floor, some place paper under the chaff, some an old square of cloth, others old oilcloth. The chicks pick the paper to pieces and often swallow it, the cloth they tear and roll up, but the oilcloth they let alone. It saves much scrubbing of the floor by having several pieces of it.

* * *

Chicks will not suffer from a lately scrubbed floor if there be plenty of chaff over it. In fact, after a few days the floor, which soon dries, is good for their feet, and after a week old it is safest to let them some of the time run out on a cool or damp floor. From 2 to 4 weeks' old is when the brooder lameness often gets them, but it never does if they can take occasional trips over a damp ground or floor.

* * *

To give young ducks or goslings extremely cold water to drink has been known to throw them into fits, and these usually result in death, especially for the ducks. Give them water that has been warmed by the sun or on the stove. Each require drinking water from the first, though not food so soon. A chick can live very well without water until it is 3 or 4 days old, and turkeys can do without drinking as long, if not longer.

* * *

There are custom hatching houses that run machines for hatching eggs that will carry over 16,000 eggs. Some of these will hatch the eggs you send them for hatching on the fairest plan one ever before heard of. First, they pay no money, but if they do they are sent to you C. O. D. The charge is 4½ cents per chick, plus the express. In large plants of this kind nothing less than seventy-five eggs in one bunch is accepted for hatching. The chicks come cheaper if eggs come in large numbers from one person. Custom hatching is proving a decided success.

* * *

The out-of-door brooders are not a clear success when set out very early to the influence of frost and sweep of wind, unless set in sheltered places. While they are shut up they are all right, but they are usually too small to keep growing chicks confined in long at a time, and if the door is opened to let them out into an outdoor enclosure, the heat is lowered in the brooder. The better plan during bad weather is to place them in a shed or room somewhere. After all, they are the most satisfactory of all brooders. The fireless may raise strong chicks, but only on a small scale for each brooder, as large numbers put in these will inevitably pile up and crowd, smothering several each night. In a fire brooder they seldom bunch up to do any harm unless you have the glass doors uncovered. Before these, if you do not get out early to them, they crowd and climb, often killing the strongest of their number by standing on them and refusing to get off. The better plan is to cover the glass at night, especially if it be a glass in the top lid.

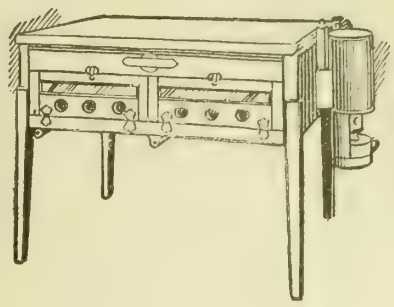
The Brooder Chicks

"White diarrhea catches my brooder chicks more than it does my hen-hatched" is the common complaint. The one who makes the complaint usually attributes the cause of death and weakness to something the incubator does to the chicken. The truth is, if the incubator be a good one, and climatic conditions or surroundings all right, the incubator is not to blame, and if the chicks go into the brooder weak and some afflicted with the white diarrhea, either yourself or the hens are at fault—maybe both, for I have found that if this disease is present in the incubator-hatched it is present in the hen-hatched. If you found the genuine disease in your incubator-hatched and brooder-kept, then you were at fault that you did not, before again filling the incubator, clear it of any germs left by the late diseased in it.

Unless you have a badly afflicted lot of hens there must really be but a few chicks that go into the brooder afflicted, and if the whole flock put in die with it, then it is your own fault, not the brooder's. As well leave one baby or two, dying with genuine cholera infantum, in a roomful of other babies as one cholera-stricken chick with a lot of well ones, for soon it must be an extremely healthy chick that would not finally take the disease. Not every chick that dies in the brooder, any more than under the hen, dies of the white diarrhea, but it is well to look on the case of the weak and droopy chick with suspicion and get it away from the well. The writer has had the disease in numbers of chicks, and in few. In either case, the one chief remedy was quarantine by killing off every sick-looking chick without delay, immediately changing the chaff under them, scalding out feed and drinking fountains. Those dying soon after hatching were hatched with it, and those showing it after seven days have taken it from the first, quite likely. If there are but few afflicted, then the epidemic will soon be quelled. If there are many hatched with it, then one must keep on constant guard for it, giving every chick close scrutiny morning, noon and night. The same care must be given the hen-hatched and hen-brooded also, especially after the weather gets warm.

With the extra care, the writer, of late years, puts in a dish of certain germicide medicines that, with other care, nips in the bud incipient cases that would be bad ones soon. These medicines are, as far as fact can tell you, of little force against lack of quarantine and cleanliness, but with it they are strong helps.

Perfection Oil for Incubators



is the best. It burns clean and evenly—no chance of smoke or soot. It makes steady burning certain. It's the incubator oil without a risk. It's clean tank wagon oil, not barrel oil.

Dealers everywhere.

STANDARD OIL COMPANY
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Largest Barred Plymouth Rocks

Winning again last year at **Great Coliseum Show, Chicago,** December, 1913, with three entries, 2d pullet, 3d pullet-mating pen. At **Illinois State Show,** January, 1914, with entry of 13 birds, 11 were winners; also best colored female, best shaped female and **Champion.**

My strain is second to none in size and color of barring. I have furnished 87 of the winning birds this winter at some of the largest shows in the United States and Canada. For the season of 1914 I have the grandest breeding pens I have ever had and can furnish eggs in any quantity. Write for catalogue of the largest exclusive Barred Rock farm in the Mid-West. Eggs for hatching $3 for 15, $8 for 45, $15 for 100.

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Box 504, Kenney, Illinois

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and other bowel troubles be prevented? Write **CHICKLIFE REMEDY CO., Clay Center, Kansas.**

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Tells why chicks die

J. C. Reefer, the poultry expert of 1619 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

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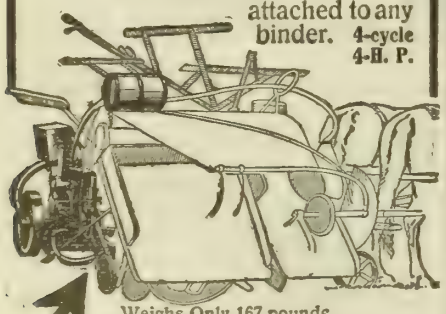

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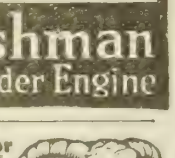

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Queer Features of the Capital of Peru

By Frank G. Carpenter

LIMA, Peru, April 8.—Climb with me to the rocky top of San Cristobal mountain and take a look over the city of Lima. We are on the edge of the Rimac valley, within eight miles of the Pacific ocean and about 1,000 feet highest up in the air. Sitting on this bleak desert hill, the sea seems a wide streak of silver, beyond which are mountainous islands bordering the coast. Right in front of us, on the edge of the water, is the port of Callao with its mole reaching out into the ocean, and opposite it are the islands of San Lorenzo which are to be joined to the mainland to form one of the finest harbors on the eastern Pacific. At our backs, lost in the clouds, lie the high peaks of the westermost range of the Andes; and right under us, so near that we could throw a stone on to its roofs, is the great low city of Lima, spread out on the plain. That winding stream which runs through it is the Rimac. It springs forth from the glaciers of the high Andes, and gives life to the irrigated valleys below. It alone makes Lima possible; and it waters the orchards and vineyards and great fields of grain which form the emerald setting for the yellow city, between us and the sea.

Lima's Chief Business Street

The City of Kings

Now let us take our glasses and look more closely at the Peruvian capital. It was originally named the city of kings, and it was laid out by Pizarro only forty-three years after Columbus discovered America. There was a great city there 100 years before the ground on which Chicago and Cincinnati now stand had been trodden by the feet of white men. The city is one of the oldest of the hemisphere. It was born long before New York or Boston. It was the capitol of all South America when the United States was subject to England, and today it is the quaintest and most interesting town upon the two continents.

Look at it as it lies there below us. The roofs are all flat and the houses are mostly of one and two stories. There is a vast expanse of low buildings, with a great cathedral and magnificent churches rising here and there out of the whole. The cathedral is almost in the center, with its great green plaza in front. That church was laid out by Pizarro before John Smith landed at Jamestown, and its original cost was more than $500,000. It has been thrown down again and again by earthquakes; and altogether it was ninety years in its building. It contains the bones of Pizarro, which we shall see later on.

As we look over Lima we can see other churches and convents whose spires extend high over the roofs. The city has seventy churches in all, and nearly every one will pay visiting. The church and convent of San Francisco is said to have cost $15,000,000; and the altar of Santa Rosa, the patron saint of Lima, had in it, when at its best, 1,500 pounds of gold and silver and jewels, which embraced 1,400 diamonds, 1,200 emeralds, 120 fine pearls and 600 rubies.

If you look closely you can see beyond the cathedral the Plaza de Armas, where stands the building which is now the Peruvian senate. It was once the seat of the inquisition, and on the space in front of it hundreds were executed and many were burned to death, the victims of the autos de fe.

From Sacred to Secular District

Now let us turn from the sacred to the secular parts of the town. There is one just below us. It is the great round Plaza de Toros, the immense building where fights are held every Sunday, and where the Limenos come by the thousands to see their favorite matadors butcher the bulls. Some of them are quite as bloodthirsty as the Romans when they looked at the gladiators in the ampitheater at Rome. Only last Sunday, for instance, the bulls were not considered as fierce as they should be, and the crowd hissed the fighters and drive them out of the ring. They even began to tear up the seats, and set fire to the building, and the soldiers had to rush in and put down the mob.

The building is on this side of the Rimac. The main part of the city is over the river, and there we can see the palace of the exposition, which contains the museum, the government palace near the cathedral, the great university, the oldest in the new world, and the vast numbers of low yellow houses which are the stores and the homes.

But let us go down from the mountains, and make our ways over the Rimac and wander about through the streets. There is no city in Europe that compares with Lima in quaintness, and but few in historic interest. The streets are narrow and they cross each other at right angles. There are many great piazas or squares, which have fountains and gardens; and, extending from these, run narrow thoroughfares walled with low buildings. The buildings are all close to the street, and in the residence section the ground floor windows are covered with great iron bars. Where the houses consist of two or three stories, there are balconies that extend out above the street, and some of these are so wonderfully carved that they make you think of the harem quarters in Cairo, or those of old Spain. In the busiest parts of the city, most of the people live over the stores, and, stretching from one end of the street to the other are long lines of these balconies, each house having its own peculiar architecture. The main business streets are not more than thirty feet wide. They are so narrow that the single street car is close to the sidewalk, and one must be careful lest he lose a leg as he walks through the streets.

Stores Different from Ours

The stores are far different from ours. Only the newest of them have plate glass windows, and there are no fancy fronts with gorgeous window displays, which may be looked at Sundays and evenings. The most of the stores have no windows at all. They are shut off from the street by great doors that are taken away during business hours. The shops are separated by thin walls, and going along them is like walking through a museum or an oriental bazar. The sidewalks are narrow and the goods are displayed close to the streets. Many of the dry good stores hang fancy patterns of cloth from the ceiling, and the larger establishments will have piles of goods put on the floors and stacked up near the street. Notions of all kinds are hung from strings stretched across from wall to wall high up, and all sorts of queer ways of display are contrived. The light of the stores comes in through the doors or from the roofs. Many of the business establishments are large, with stocks of fine goods. The prices are high. The best from all over the world is brought here for sale, and the city, while not a rich one, has thousands of well-to-do people.

The chief shopping hours are from 1 to 6 o'clock in the afternoon. At that time the streets are crowded with women and men, and the crowd is as thick as that between the Treasury and the patent office on F street in Washington at about the same time. Moreover, it looks much the same. No one is in a hurry. The people saunter along or stop and chat with their friends. Nearly every one is well dressed, and nearly every man, old and young carries a cane. The Limenos are very polite. The men bow and lift their hats when they meet, and they tip their hats and bow again as they pass. There are many well dressed women, wearing the fashionable outlandish styles of today, and there are also many who are clad in the dead black that the lady of Lima of the past always wore when she went out to walk. Such women do not wear bonnets, but they wrap fine shawls of black goods about the head, pinning them back so that the face alone shows. This background adds to their beauty, and the costume is far better than the monstrosities our women now wear. It saves the buying of new hats and bonnets, and it is easy to put on or take off.

Lima a Godly City

And this brings me to the crowd which one sees here on Sunday. Lima is a godly city, although we have a Methodist bishop in my hotel who says it is the most bigoted on earth. It is altogether Catholic, and that not of the modern Catholicism of America and Europe, but somewhat the same as it was in the days of Pizarro. There are priests and nuns everywhere and great monasteries and convents galore. The most of the people are rigid church goers and Sunday morning the streets are filled with families on their way to masses, which are celebrated at the cathedral and churches. Every one is dressed for the occasion and almost all the women are clad in black. None of them wears hat or bonnet and none goes to church merely for the sake of showing their clothes. The usual headdress is the cloth shawl covering the hair and neck so that the face only shows out. Some wear mantillas or shawls of lace over the head and not a few are now beginning to wear dresses other than black. I am told that women would not be permitted to enter a church in a bonnet and that those who do so are tapped with a long stick by the sexton and told to take their hats off. In the churches the men sit by themselves on one side and the women have their seats on the other, making you think of a collection of nuns who are dead to the world.

I am told it is different when church is over. The people then put on their gay clothes. Some go to the bull fights and others have evening parties and dances. I would say that the costumes at church are far more seemly than those of our

country, where one looks over a tropical garden of flowers and birds-of-paradise feathers in a vain attempt to reach the eye of the preacher.

No Business on the Sabbath

The Sunday sights of the streets are also more seemly. There is no business done in Lima on the Sabbath. The stores are closed and you walk between blank walls or great doors fastened with padlocks. Every store has its windows of boards, and there is not a sign of goods of any kind to be seen. Sometimes there is a grating at the top of the door for ventilation and sometimes a round hole has been made at the height of one's face so that those within might look out; but there is no business carried on anywhere. This is also the case in the evenings on week days. The ordinary business hours are from 9 to 6; and at night there is no walking along and looking into the store windows. Indeed, after dark the streets are almost deserted, except near the moving picture shows, which have recently captured Lima by storm.

And just here I would say that there is a great liberal movement going on in this country. The people are demanding liberty of religious thought and worship. New laws have been passed by the national congress, and it is now possible for any person to establish any kind of a church where he pleases. Until now the Protestant missionaries have not been permitted to push their religion into the interior, but the new laws provide for full religious freedom throughout the country.

This movement is at its beginning in Peru, but it has been going on throughout South America for several years past. Ecuador, which was once very intolerant, has established complete religious freedom. Paraguay has done the same, and Urugay is about to adopt a new constitution in which a section shall be inserted providing that there shall be no union of the church and state. Similar demonstrations are going on in Chile, and there a general demand is expressed that from now on religious and secular institutions shall stand alone.

Cathedral of Pizarro

But before I leave the churches I want to take you into the cathedral of Pizarro. It faces the Plaza Major, with its palm trees and its beautiful fountains. It is in the heart of the city and its towers can be seen almost anywhere over the Rimac valley. The building is said to be the finest church edifice on the South American continent with the single exception of the cathedral at Mexico City. The interior is very impressive and it makes one respect the Catholic religion when he remembers that Catholics have worshiped for more than 300 years on that spot. The high altar is a fine example of massive silver construction and the stalls of the sanctuary are extraordinary specimens of Indian carving, when Indian carving was still in its prime.

On the walls are fine paintings by Murillo and other great masters and the chapels are of exceeding beauty. I was especially impressed by that of Pizarro. The little verger of the cathedral took me into it, and under the altar he showed me the coffin in which Pizarro's bones lie. The coffin is of white marble with glass sides and top, so made that one could see plainly the remains lying within. The verger lighted a candle and waved it up and down over the glass. As he did so I could see all that is now left of the great Spaniard who first explored and conquered the west coast of South America. It consisted of a skeleton lying upon a red velvet cushion embroidered with gold. The skeleton is black as mahogany and it looks as though it were varnished. The skull lies on a pillow, the neck being fastened to it by wires through the ears. The jaw is a trifle drooping, the nose is prominent and the great eyeless sockets looked up at me as I gazed down through the glass top of the casket. As I looked more closely the whole seemed merely a shell. The skin has begun to peel from the shins and there are little wormholes in the bones. I am told that in times past patches of skin have been cut off and given to relic hunters, but as far as I can see the most of the corpse is intact, though decidedly leathery and the worse for wear. From the outside of the coffin I have copied these words:

Captain General Don Francisco Pizarro, Fundador de Lima en 18 de Enero de 1535. Muerto en 26 de Junio de 1541." As I left gave the verger a dollar, and Carl snapped a photograph of him as he showed me the door.

City Built in a Desert

Lima is a city built in a desert. Its irrigated tracts are scattered through fifteen small valleys, and they consist altogether of about 70,000 acres of cultivated fields and woodlands. They are divided into 176 estates, many of the holdings being large. Practically the whole support of the city comes from this valley, and from the trade with Peru.

The conditions about Lima are such that it never rains. There is not a waterproof nor a pair of overshoes in the whole town, and umbrellas are used only to keep out the sun. The streets have no gutters, and the roofs have no chimneys. All of the cooking is done over charcoal, the fumes of which get out as they can. The town has practically no backways and only on the outskirts are there gardens. The most of the buildings run around courts or patios upon which the chief rooms face. The larger houses are fine and they cover a great deal of ground, a single one often having twenty or more rooms, surrounding several large courts, in some of which play fountains amid tropical trees.

Many of the older buildings are beautiful and exceedingly comfortable. Some of them are largely constructed of sun-dried brick, or of plaster spread over a framework of wood, lathed with bamboo canes. The roofs are of this nature. The outer walls of such buildings are covered with stucco and the city has a very substantial appearance, whereas much of it, as I said in a former letter, is a combination of mud and fishing poles.

Of late they are putting up many fine structures of reinforced concrete; and along the Avenue of the Exposition, for instance, are residences that would be considered fine anywhere in the world. Lima has altogether now about 150,000 inhabitants. It is steadily growing, and when the canal is completed its population and business will greatly increase. It will be one of the chief tourist resorts of South America, and if it can only have some better hotels it will be the most delightful resort along the west coast.

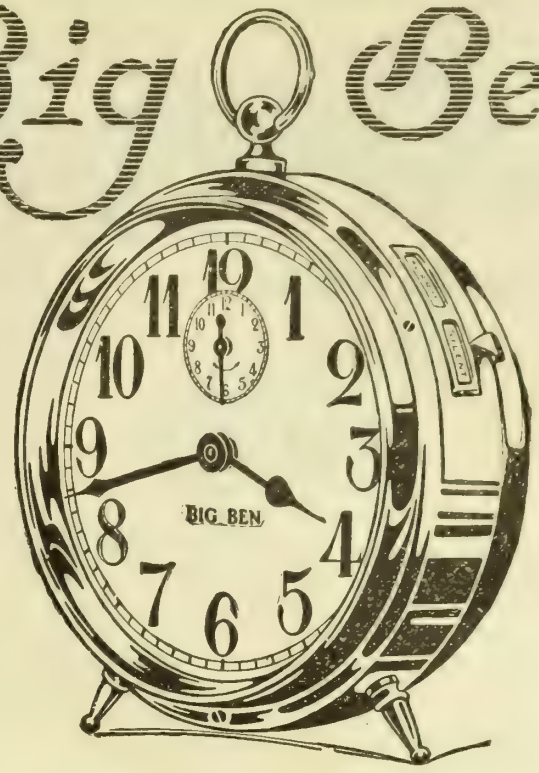
Hotel Accommodations Limited

As it is now the hotel accommodations are limited. There are two or three large establishments which have rooms and board. You may take your accommodations on the American or European plan, and the rates are just about as high as those of the states. You will have chambermen instead of chambermaids, and your meals will consist of desayuno, almuerzo and dinners. Desayuno means the cup of black coffee and two little rolls which you eat for your breakfast. This the boy will bring to you in your chamber, and you may have it in bed if you choose. Almuerzo comes at 12 o'clock, when there is a fairly good table d'hote meal, and at 6 or 7 there is a table d'hote dinner. At both of these latter meals the dishes are Spanish, and they are recorded on a menu which most tourists need a dictionary to read. I am stopping at the Maury, which vies with the Grand as the best hotel in Peru. It is a great two-story structure with wide balconies extending over the street. I have a room facing the street, for which they ask $4 gold per day without board. Back of this is a little, dark sitting room. There are no private bathrooms to speak of, and altogether the hotel might be improved in a number of ways. (Copyright, 1914, by Frank G. Carpenter.)

Poisonous Plants on Forest Ranges

The Department of Agriculture is trying to eliminate the danger to cattle from poisonous plants on national forest ranges. Of these plants, larkspur, loco weed, death camas and water hemlock are the most poisonous. Larkspur does the most harm, because it is so widely distributed and is particularly bad for cattle. Ordinarily horses will not eat larkspur and sheep can eat it without apparent injury.

Big Ben



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You'll see him in the parlor on the mantelpiece—7 inches tall, sturdy, handsome, triple nickel-plated, ticking quietly and *'tending to his knitting.*

In the bed rooms in the morning you'll hear him calling different people different ways—in "that" room, with one straight "hurry-up" five-minute ring, and in "that other room," with ten short "reminder" calls lasting ten minutes. Tell him how you like your call—he'll accommodate you.

Call on Big Ben at your jeweler's. His price is $2.50. Let him show you what he does. If your jeweler hasn't Big Ben, a money order for $2.50 addressed to his makers—*Westclox, La Salle, Illinois*—will bring him to you anywhere in the States prepaid by parcel post.

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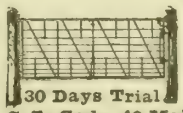

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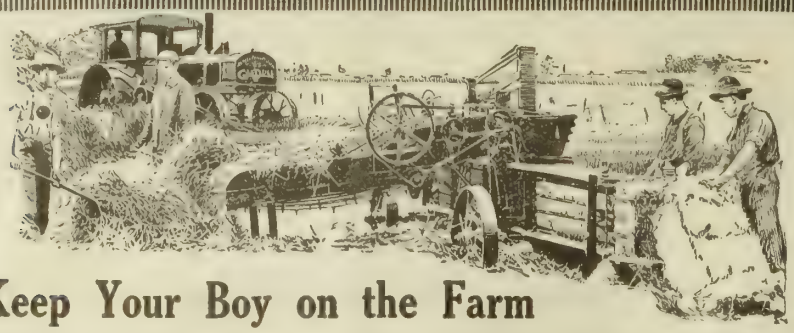

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lightens the labor and does the work in better fashion and at less cost. And, when you are rushed, the GasPull can be worked twenty-four hours a day. The GasPull will save up to a dollar an acre on every acre you plow.

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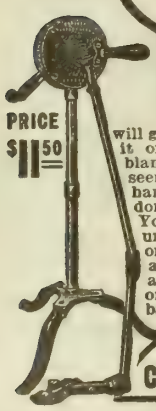

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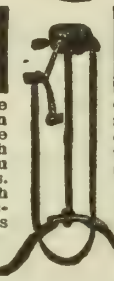
will get you longer, better and more wool and take it off quickly and smoothly in one unbroken blanket. To shear with the Stewart Machine seems like play to those who have labored with hand shears in the old, hard, sweaty way. You don't have the same swollen aching wrists. You don't scar and disfigure your sheep with uneven shearing and spoil the wool with second cuts as you used to do. The Stewart saves all that and easily and quickly gets you more and better wool. **Get one from your dealer,** or send us $2.00 and we will ship C. O. D. for balance. Money back if not pleased.



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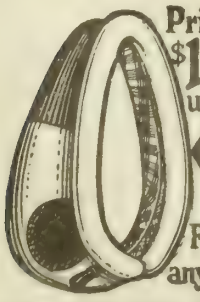

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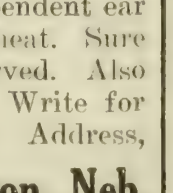

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Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Cost of Grain Crops

J. F. D., Florence, Neb.: If possible, please tell me about what is the labor cost of producing some of the main grain crops in our state under ordinary farm conditions? Also how much worth of fertility do such crops take from the soil?

Answer—Below are the averages called for in your inquiry:

CORN.

Average 344 replies from farmers, 1909-1910:

Labor cost per acre	$6.06
Labor cost per bu. at 40 bu. per a. (Average for farmers replying.)	.15
Labor cost per bu. at 30 bu. per a. (Average for the state.)	.20

WHEAT.

Average 289 replies from farmers, 1909-1910:

Labor cost per acre	$5.412
Labor cost per bu. at 22.2 bu. per a. (Average for farmers replying.)	.244
Labor cost per bu. at 15.7 bu. per a. (Average for state, 1910-1912.)	.345

OATS.

Average 269 replies from farmers, 1909-1910:

Labor cost per acre	$4.68
Labor cost per bu. at 35 bu. per a. (Average for farmers' replying.)	.134
Labor cost per bu. at 25 bu. per a. (A fair average for the state.)	.19

The values of fertility removed from soil are computed upon the basis of nitrogen in sodium nitrate at 15 cents a pound, phosphorus in ground raw phosphate at 3 cents a pound, and potassium in kainit at 6 cents a pound. Computations made from data given by Hopkins in "Soil Fertility and Permanent Agriculture":

CORN.

Grain, 40 bu. per acre	$ 6.66
Corn stover, two tons	7.00
Corn crop	$13.66

WHEAT.

Grain, 22.2 bu. per acre	$5.23
Wheat straw, 1½ tons	3.94
Wheat crop	$9.17

OATS.

Grain, 35 bu. per acre	$3.92
Oat straw, 1½ tons	4.69
Oat crop	$8.61

Landlord or Tenant?

S. T. S., Iowa: Your comment on my article in the Farmer of March 28 seems to ask the question, "Do renters make more than landlords for the amount of capital invested and the amount of work done?" Let me submit a few figures that I think are conservative. Let us take a small farm, for convenience; say one that has just forty acres of $150 corn land on it, with no other source of revenue. We will say the place is improved to a moderate extent. Now, it will rent for two-fifths of all the corn delivered to market. The land will produce fifty bushels of corn to the acre on an average of one year to another, and this will sell at 50 cents per bushel. This would bring the renter $600 and the landlord $400. The total cost for the work to the renter is about $7 per acre—$280. That will give him $3.50 to $4 per day for a man and team for every day he works in this cornfield. This, counting $20 for seed and repairs for this field of corn, makes the total cost to the renter $300. He is at liberty nine months of the year to work at something else or do nothing, for $600 will keep the average farmer a year. Besides this $600 he gets the stalk field, worth $20, and has a house and barn furnished for a year free, worth $10 per month to him—$120. Besides, he can raise chickens and pigs and a calf or two, have his cows and a good garden patch, all with no taxes.

The landlord has $6,000 invested; taxes, upkeep and insurance will average $100 per year easily, and under the favorable conditions above mentioned he will get $400 rent; that is, $10 per acre cash rent. Any renter would turn up his nose in disgust if he were asked $10 per acre cash rent. However, the landlord only realizes $300 after his expenses for the year are paid. How much interest is he getting under these very favorable conditions? Just 5 per cent. This is not so bad.

But the question is, "Who has made the most money in the operation?" The renter can easily figure that he has received $500, besides being paid well for all the work he has done. So it is plain to see that the renter—in this case at least, and this is no exception—is getting a good deal the best of the deal. He could well afford to give half of all the corn delivered at the market and then would make considerably more than the landlord for his work and investment. Why a renter should expect to pile up vast sums and then work from one-third to one-fourth of his time, I do not understand. If he was working at anything else he would have to put in twelve months of the year to make the same money.

Note—We do not believe that the best interests of the country or the individual are served by renting, either from the standpoint of the landlord or tenant. The ideal farming community would consist of farms occupied by the owners.

Ulcerated Udder

A. G., Nebraska: Am writing you to receive some information about one of my milch cows. About a year ago her bag broke out with ulcerated sores and has been sore ever since. It heals up in one place and immediately breaks out in another. She is now fresh again, after having been dry for three months, and has some trouble with her bag. She is a very good milch cow, giving about twenty-six quarts of milk per day. I am feeding her corn, shorts and alfalfa, with plenty of pure well water to drink.

Answer—Would suggest giving this cow, in feed twice a day, a teaspoonful of iodide of potash. Give this for about two weeks. If there does not seem to be any improvement, change to one ounce twice a day, in feed, of Fowler's solution of arsenic. This also should be fed about two weeks.

Many Questions

F. J. T., Wyoming: I have a few questions I would like you to answer at an early time. The first one is, By what method or how can you tell a gander from a goose? I have the gray Toulouse geese. Second, How much does a Babcock milk tester cost, and where could I buy one that would do for a small dairy herd of eight or ten cows? Third, I have a flock of about 100 large Barred Plymouth Rock hens which run at large on the farm. What and how much of each would be the proper ration for these birds now? Fourth, At what nursery could I get strawberry plants that would be most suitable for this climate? Notice that we are in the northern part of Wyoming, twenty-five miles from the Big Horn mountains, in a rich, irrigated valley. What species of plants would do the best? Our old bed began ripening about July 4.

Now, I should like to suggest that

there is too much blame laid on the farmer's wife for poor butter and eggs. Of course, I know that some make poor butter, but the groceryman takes your butter and perhaps leaves it on the counter a day or two and then shoves it into a damp store cellar or dirty refrigerator with strong butter, and in a few days this will ruin the best of butter. The same is true with eggs that are counted out in a box and held a week or a month until they are shipped to a city, where they are retailed out, perhaps six weeks from the time they are laid. Is it any wonder they are spots and rots? And it isn't the farmer's fault at all. Thanking you for favors conferred.

Answer—First, where goose and gander are marked exactly alike, as in the Toulouse, we look for ganders in the birds of heaviest, tallest build, thickest and coarsest voices. When alarmed they will place themselves in front of the flock ready to fight. It is not always an easy task to tell them apart, as in the young the geese are often as large as the ganders.

Second, a Babcock tester costs all the way from $9 to $14, depending on the size. The six-bottle size costs $9 and the twelve-bottle size $14. We caused a catalogue of dairy and creamery supplies to be sent to this correspondent.

Third, for a flock of 100 hens a fair feed would be one and three-fourths gallons of wheat and oats mixed for the morning meal and two gallons of shelled corn at night. On range in summer farmers usually feed but twice a day, although with this ration dry bran may be kept handy in troughs all the time. This is the amount for 100 hens, unless they are stealing grain from the stock, in which case nobody could tell how much they might overfeed.

Fourth, we would advise you to write your experiment station at Laramie as to strawberry plants. It makes a business of testing various varieties of grain, fruits and vegetables to determine which are most suited to the soil and climate of the state and will gladly give you this advice free of charge.

In regard to the remarks on farm butter, we agree with you thoroughly, and if you have been reading the Twentieth Century Farmer carefully you will note that we brought out these facts in our page three article in the issue of March 14.

Too Much Gaiety

M. E. G., Nebraska: In reply to letter of C. D. of Iowa in issue of March 28, will say this man is somewhat off the track, just as most men are. In the first place, he says he has been working ever since he was old enough. Well, I don't know how old this man is, but if he had only worked out five years at the present wages, and saved his money, he could have been in business for himself. It looks to me as if this man is just like lots of other men—he just wants a good place to board and draw top wages and then just take life easy and spend his money as fast as he can draw it and let the "boss," as he calls the farmer, do the work himself.

The term "boss" is a very poor one, from my viewpoint. When we hire a man here he tells you when he comes on your place what he will do and what he won't do. He wants the use of the best horses and harness; he won't milk cows; he won't use walking tools; he won't work later than 6 p. m.. And Mr. C. D. says the boss will send him out on stormy days to split wood, while he sits by the fire and bakes his shins. Well, Mr. Hired Man, that is what we hire help for and pay the price you ask—to help us with our work, whatever it may be. When the farmer does go to his neighbor's house on a stormy day it is not always to loaf. He takes such days to discuss the various farm methods that may be better than those in use at the present time. The farmer has a whole lot more mental work to do concerning his farm work and the successful raising of his cattle, hogs and various other things than the hired man has any idea of. The right time to buy, the right time to sell, the kind of stock to raise, when to and how to get the right kinds of seed, and where and how to plant them, and a hundred other things occupy his mind instead of, as this man thinks, cussing the hired men.

In turn, the hired man just waits for the boss to tell him how to do a thing, and if there is any cussing the hired man does it and says the boss thinks the hired man never gets tired. It is a fact that around here the hired men go out as many as seven nights in a week and get back in the small hours of the morning. Of course, they are tired the next day, but as soon as evening comes off they go again. This is the kind of man that demands riding tools. I have seen this kind of man plow—or his horses did it, rather—around a thirty-acre field sound asleep on the plow. A good thing he had good horses or he would have plowed himself under.

I was a hired man myself for seven years, and I did more work without riding tools, a manure spreader and the like, and at $200 per year, than the men want to do today for twice the money and with all the modern tools. And this man says the only place the boss is equal with the hired man is that the boss can't have a "red" to take into the world to come, even if he worked all his life. I think if the hired man, at his present wages, can't save up some money he is a mighty poor stick. I got $200 a year and saved up $1,000 in seven years, and I dressed well and had a good time, too; but I did not think I could go to every show, circus, picnic, celebration or dance within a radius of twenty miles and do my boss justice. That is the way most of the hired men are now. If you give an order and have it done just the opposite from the way you order it, you have to keep your mouth shut about it or you will hear this: "If I don't suit you, give me my time."

Advertising Stave Silos

J. R. F., Missouri: In literature received from a concrete company they state that your publication declines to accept advertisements of wood stave silos. Is that statement a fact? And, if so, why? I have a wood stave silo that is giving satisfaction. Would you please send me your bulletin No. 6 in regard to investigations of silos?

Answer—This company was in error in stating that we do not accept the advertisements of any wood stave silo companies. We do, however, refuse to carry the advertisements of silos constructed under what is called the "Harder patent," the reason for which is clear after reading our silo bulletin.

Nebraska's Favorite Breed

J. M. M., Nebraska: Will you please tell me what breed of hogs is the most plentiful in Nebraska.

Answer—For many years the Duroc-Jersey has been the most popular breed of hog in Nebraska. Of late years, since the introduction of the big type, the Poland-China has been growing in popularity. We believe, however, that there are many more Duroc-Jerseys in the state and base our belief on the fact that the Durocs exhibited at the state fairs have far outnumbered the hogs of any other breed, and in some years there have been more Durocs than

DE LAVAL
CREAM SEPARATORS
are the cheapest as well as the best

LOOK AHEAD!

DON'T TRY TO SAVE $10.00 TODAY IF IT MEANS a loss of 25 cents a day for all the years a cream separator may last you.

THAT'S JUST WHAT YOU WILL DO IF YOU BUY a cheap or inferior separator simply because its first price is a little less than that of the De Laval.

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WHAT HE WANTS IS A MACHINE to perform a certain service, and he must be sure of the machine doing the work for which it is intended as thoroughly and with as little effort and care as possible on his part.

THOUSANDS OF BABCOCK AND other tests have proved that the De Laval skims closer than any other cream separator under any conditions and particularly under the harder conditions always experienced at times.

JUST THINK WHAT A loss of as little as 10 cents worth of cream at each skimming means to you in a year—twice a day for 365 days—over $70.00, and with as many as ten cows the cream losses alone from an inferior separator usually amount to more than this.

CREAMERYMEN, WHO ARE DEPENDENT ON THEIR SEPARATORS for business success, have long since found out the difference between De Laval and other separators, with the result that De Laval factory separators are almost universally used the world over today.

DE LAVAL SEPARATORS ARE IDENTICAL IN ALL SIZES, for one cow or a thousand, and the differences between separators are just the same with the smallest machine and the largest. They mean as much relatively to the little as the big user.

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AND THERE IS THE INDISPUTABLE FACT THAT A DE LAVAL machine lasts from ten to twenty years as against an average of from two to five years in the case of other separators, or five times the average life of competitive machines.

THESE ARE THE REASONS WHY DE LAVAL SEPARATORS are cheapest as well as best, why thousands of other machnes are yearly being replaced with De Lavals and why their use is rapidly becoming as universal on the farm as in the creamery.

IT SHOULD BE REMEMBERED, MOREOVER, THAT IF FIRST cost is a serious consideration a De Laval Separator may be bought on such liberal terms that it will actually save and pay for itself, as many thousands of them have done.

These are all facts every De Laval local agent is glad of the opportunity to prove to any prospective buyer. If you don't know the nearest De Laval agent simply write the nearest main office, as below.

The De Laval Separator Co.

165 BROADWAY, NEW YORK 29 E. MADISON ST., CHICAGO

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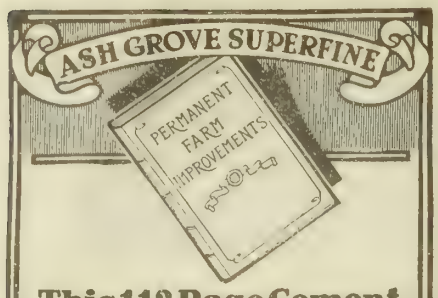
The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.



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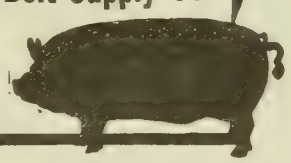

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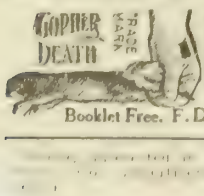

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hogs of all other breeds taken together.

Work in Colorado

D. J. D., Colorado. Have read a great deal on the hired help problem, and as I have had experience I want to have something to say. Half of the present-day farmers use no system in their work. I have noticed that some farmers that get up at 4 o'clock in the morning and work till 10 o'clock at night do not get as much done as those that go to work at 7 and quit at 5 at night.

Another thing is that the farmer furnishes the hired man with the poorest team, or the meanest team, and the worst implements he has, and then expects him to get a day's work done.

One thing I despise is a bunk house and sleeping with dirty men that are lower than dogs, and I am no long-faced Christian at that. I also object to having sick calves put in the bunk room and dogs allowed there, and to making my own bed and not having time to air it as it should be aired.

I have seen farmers that would let the live stock have their own way, such as unruly horses and cattle, and the hired man is supposed to put up with it. I am not cruel, but I do give the stock to understand that I am boss when I am around.

If farmers managed right, Saturday should be a half-day to go to town, or anything the hired man wants to do.

There are good men and there are bad, and to my mind they should not be paid the same. And there are times when a hired man should have more pay than at others; for instance, threshing and other heavy work.

I do love the farm, but no more for me until I can have one of my own. And I will not put up with any more nonsense. And I have been beaten out of $75 in wages so far. No more for me. And yet these people boost for Colorado. I am going back to Nebraska as soon as I am able.

Hired Man's Experiences

B. R. P., Illinois: In reply to all farmers being alike, as I stated in the issue of March 21, will say I was mistaken. H. C. M. says he has hired hands and treated them better than himself or his family, and then has had them quit him right when he needed them most. Now, I want to say this farmer is a prince. I really think he is too good, for no man ought to treat a hired hand better than he does his wife.

He says hired men as a rule are the most independent of all men, telling the farmer what they will do and what they won't. I have only worked for two farmers—two years for one and three years for the other. When I went to hire to the first one he asked me a number of questions, which I answered, and he said, "Well, come on; I will try you." "Thank you, sir," I said, and then I wanted to know what he would pay for my services, and he said: "Well, as my neighbors are paying $30 per month, I suppose I will have to pay that, too."

The farmer I worked for next came up to me one day when I was at work and said: "Have you hired for another year?" "No, sir," was my reply. Then he said he would hire me and could furnish me steady work for a year. He kept his word, and did find steady work. That was the way I hired to both men, so you see I had no say as to the price and never told them I would not do anything. I did not stay as long as they wanted me to, but I stayed as long as I had hired to stay. I guess I was a little easy, but I did not ask my neighbors any questions, so did not know the rules of others.

How Adjust Separator?

T. H., California: Which is best, to have your separator screw so as to give you cream that will test 31 to 40 per cent or 40 to 55 per cent, and why?

Answer—This depends somewhat upon the purpose for which you are using your cream. Creameries prefer to receive cream testing between 30 and 40 per cent. Higher than that you get a pretty rich, thick cream, which is not so easily worked. Would not advise you to set your separator above 42 ever, as in doing so much of the butter-fat goes into the skim milk.

Piano Agents and Free Trade

A. R. W., Nebraska: A few days ago two agents, representing one of the largest piano houses in Omaha, called at our farm. In showing them the hospitality of the ranch they seemed to appreciate the kindness, and admired the Angus cattle and Poland-China swine. They mentioned the fact that we had a large crib of corn of fine quality and advised us what a prosperous class of people farmers are. Incidentally they told us the business object of their visit, but before driving away in their car (we cannot afford one) they argued warmly for free trade. They boasted of representing the largest house in Omaha, but failed to mention the fact that New Zealand and other foreign countries are shipping butter to Omaha under free trade. They advised us they could give us a "rakeoff" on a second-hand piano (not a new one). We are wondering where the tiller of the soil comes in—and, of course, we did not buy one of their pianos.

Breeders' Notes

Red Polls, Percherons and Durocs

Under date of April 3, George W. Schwab of Clay Center, Neb., proprietor of Pleasant View Stock Farm, writes us as follows: "I am pleased to report the sale of the 2,000-pound stallion Sansonnet this day for $1,500 to Tom Merryman of Huntley, Neb. The bred sows and gilts are still going out in crates and the inquiries coming as fast as ever. Since I wrote you the other day I have sold into Missouri two of the best gilts I had, at $75 each, and a number of others to Colorado. Our business by mail was never better. The gilts that went to Missouri went to a man that in the last four years has bought of us nine bred sows and gilts, four herd boars and four Red Polled cattle, and has two more under consideration. We still have a strong bunch of sows and gilts bred for April and May, and are breeding right along; prices from $35 to $75 each. We have several good Percherons to be sold under guarantee, and some strong, husky Red Polled bulls ready for immediate service. We never were in better shape to fill orders than at the present time, and all stock sold is giving satisfaction. I am more than ever convinced that it pays to breed good live stock."

Holstein Cattle for Sale

Get in touch with Dr. B. B. Davis, room 200 Bee biulding, Omaha, Neb., if you want something that is strictly of high character in the line of Holstein females or a choice young bull. Dr. Davis is proprietor of Friesland Farm Holsteins, located near Omaha, and conceded to be one of the very best herds of Holstein cattle in the west, or in America for that matter. Anything that he has to offer for sale is absolutely dependable, for nothing but the very best is sent out from this herd for breeding purposes. If you are looking for the right kind of cattle, and by that we mean the good ones, and we all know it pays to raise the good ones, write Dr. Davis as to what he has to sell, mentioning the Twentieth Century Farmer.

Red Polled Cattle for Sale

If you are in the market for anything in the line of Red Polled cattle, get in touch with W. F. Schwab, proprietor of Falstaff herd at Clay Center, Neb. This is one of the oldest herds of Red Polled cattle in the west, and the show record made by it is equaled by few other herds in the country. It posseses animals with a large amount of scale and bone, together with strong milking qualities. If you are looking for the kind of cattle that will go out and make good for you, the same as they have been making good for Mr. Schwab, here is an opportunity. We feel safe in making this claim, because we know the conditions under which these cattle are grown and cared for. They are not pampered, but are grown and developed right out in the open, and cannot help but make good. Get in touch with Mr. Schwab if you want anything in his line, mentioning the Twentieth Century Farmer.

TO CONSUMER

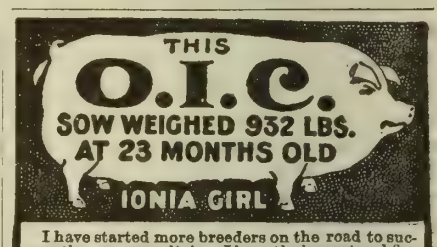
8 to 20-foot Power and Pumping Mills

Steel or Wood Wheel

Our reply will interest you

Leach Windmill Co., Joliet, Ill.

O. I. C. HOGS



I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." C. S. BENJAMIN" RFD79 Portland, Mich.

JACKS AND JENNETS

JACKS AND JENNETS

Black Mammoth Jacks and Jennets for sale. Weighing from 700 to 1200 pounds, two to six years old; price, $200 to $1,000. Also thirty head registered Shorthorn cattle—mostly cows and heifers ready to calve. O. J. MAY, Bennett, Neb.

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Review of Live Stock Market

By A. C. Davenport

CATTLE improved a little last week, but the gain was not large, and was apparently due entirely to the small size of receipts at leading market points. There was certainly no improvement in the consuming demand for the product. No one, however, was anticipating any improvement along that line during holy week, and no one was disappointed.

There is a good deal of talk at market centers regarding the so-called reduced purchasing power of consumers due to industrial inactivity. High retail prices of beef are also given as one of the causes for the meager demand for beef from the large centers of population. Argentina talk was renewed at Missouri river markets by the arrival of small sample lots of beef at Omaha and other western points. This beef was sampled by many cattlemen, and, while their reports as to the quality of the meat when prepared for the table differed considerably, it was generally admitted that it could be served at the average hotel or restaurant without anyone knowing the difference; being grass beef, it could not be expected to equal in flavor the best western corn-fed beef.

As noted before in these columns, cattlemen made up their minds at the beginning that there was nothing to fear from Argentina and they are not ready to admit anything that might look like a change of opinion. On the other hand, the packers are booming the Argentine product and they are generally describing the imported beef as very much like western range beef and good enough to take the place of the lower grades of corn-fed beef. From the standpoint of practical results it makes little difference as to who is right regarding the quality of the beef, as the fact remains that the packers are using it as a most effective club with which to pound the market.

Packers Object to High Prices

Packers have been very much opposed to the advance in cattle prices that has taken place during the last two or three years. It will be readily understood why they take the position they do when it is remembered that the high price of cattle has forced them to advance the price of the product, and that higher prices for meat always means reduced consumption. Higher prices also mean reduced profits, as it has been impossible to maintain as wide a margin between cost of live cattle and selling price of the product on a high market as was possible a few years ago when cattle values were very much lower. With a reduced volume of business and a reduced margin of profit, it is not surprising that the packers should make use of any chance circumstance thrown in their way to pound the market down. There can be no doubt that they will continue to bear the market in every way possible, and if they are to have their way the future of the trade may be regarded as anything but encouraging to the selling interests.

Cattlemen are by no means prepared as yet to concede to the packers the absolute control of the situation. They are still relying upon the small supply of cattle in the country to maintain prices. They are also relying upon government and other reports as to the comparatively moderate amount of beef in Argentina available for export to this country. They anticipate that the price will advance in Argentina to a point that will make it impossible to sell it in this country at a price low enough to hurt American cattle. They believe that the supply of Argentine beef will prove too small for the packers to maintain for any great length of time an effective fight against high prices.

It is pointed out by the bulls in the trade that the packers in their recent big raid on the market were aided greatly by the fact that it was the Lenten season, when consumption of beef is always reduced. They were also assisted to no small extent by the talk of industrial dullness prevailing in some sections. The coming of spring and the starting up of building operations and other activities common to the summer season is looked forward to by the bulls as a possible means of putting idle men to work, thus strengthening the consuming demand for meat products.

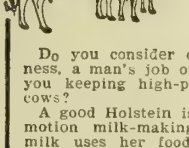
One thing is very apparent, and that is that there will be a fight to the finish on the part of the bears, not only to break the cattle market, but to hold it down. In the meantime cattle growers will be on the anxious seat and there will be more or less uncertainty as to the future of the trade.

Good Demand for Hogs

The hog trade continues in a very satisfactory condition. Prices have fluctuated within a narrow range and without any marked change in either direction. The demand at all points is reasonably good and the trade as a whole in a good, healthy condition. While prices are still a little lower than a year ago at this time, they are very high for the month of March. Sellers have no fault to find with the hog market, and the bulls feel that results have justified the confidence that they felt in the future of the trade during the fall and early winter.

Sheep and lambs have shown a little strength of late, much to the satisfaction of the selling interests. As noted before in these columns, current prices, taking the season as a whole, have not been high enough to make the feeders any money, although the trade has been during the greater part of the time in a good, healthy condition. The strength recently shown is a big help to those who held their stock until late. As to whether there will be any further advances in the market, is a difficult question to answer. The unsatisfactory condition of the beef trade would have a tendency to hold down prices on sheep and lambs, and packers have indicated unmistakably that they are opposed to any great advance on sheep and lambs. Under existing conditions they may be expected to act on the bear side and to resist any further upward movement in values as far as they may be able to do so.

HOLSTEIN CATTLE



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Why not keep this kind?

Send for FREE Illustrated Descriptive Booklets.

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FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

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Duroc - Jersey BRED GILTS FOR SALE—With length, bone and quality.
W. G. UNITT, Seward, Neb., Route No. 2.

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You are losing money every day because you can't turn the handle of your separator by "guess-work" and get the right speed. When you turn too slowly, 20% to 50% of the good butter fat goes off through the milk spout. When you turn too fast, the little particles of butter fat are smashed, and this spoils the quality of your butter.

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is an instrument that goes on the crankshaft of your separator. It has a speed dial on which are big, easily seen figures that show exactly how fast you are turning the crank handle. If your separator is marked to be turned "60 revolutions per minute," just keep turning at the right speed to keep the figure "60" on the Stewart dial opposite the arrow—That's all there is to it.

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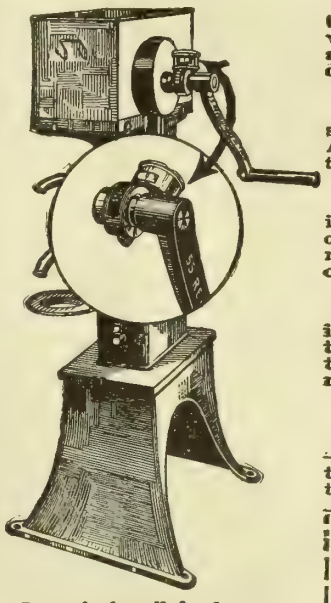
Actual tests at Purdue Experiment Station proved that one dairyman with 20 cows lost $524.10 in one year because he guessed at the speed he was turning his separator crank. He was losing one-half of the butter-fat with every separation, because he turned too slow.

Another dairyman who owns 8 cows writes us that he lost $18.50 in one month by "guessing" at his speed.



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Remember this: the Stewart Speed Indicator will fit your separator, no matter what kind it is or when it was made. All you have to do is to tell us the make of your separator, the year it was made, and its number.

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HORSES AND MULES HORSES AND MULES

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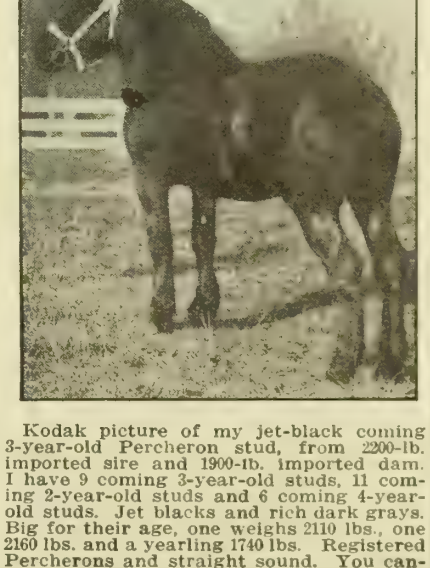
Is the jack metropolis of the world. All nations buy jacks here. The majority of the best mules in the United States are the result of the past twenty years' improvement, inaugurated and carried on here. Write for catalogue. Come to me when you need stock. I will make it worth your while.

W. L. DE CLOW,
Stallion and Jack Importing Farm, Cedar Rapids, Ia.



Kodak picture of my jet-black coming 3-year-old Percheron stud, from 2200-lb. imported sire and 1900-lb. imported dam. I have 9 coming 3-year-old studs, 11 coming 2-year-old studs and 6 coming 4-year-old studs. Jet blacks and rich dark grays. Big for their age, one weighs 2110 lbs., one 2160 lbs. and a yearling 1740 lbs. Registered Percherons and straight sound. You cannot get better money-makers. Foaled and grown on the farm and offered at farmer's prices. Intelligent headed colts that have had kind attention, a boy can handle them. Just east of Omaha.

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Route 7. Charlton, Iowa.

JACKS and JENNETS

To close them out, we will sell the remainder of our big black Jacks and Jennets at a great reduction. Don't want to carry them over. Come to Rea, Mo., 23 miles north of St. Joseph, on Great Western R. R.

G. M. SCOTT, Rea, Mo.

RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call

W. F. SCHWAB, Clay Center, Nebraska.

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25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed

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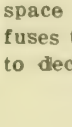

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POULTRY—Anconas

ANCONA EGGS FOR HATCHING—$2 for 15. A. W. Bickel, Correctionville, Ia.

ANCONAS—EGGS AND BABY chicks. Circular free. E. A. Doty, Rising City, Neb. Box A.

Ducks

INDIAN RUNNER AND BUFF ORpington duck eggs; also Light Brahmas. Circular free. Frank Healy, Bedford, Ia.

ENGLISH PENCILED INDIAN RUNner duck eggs, $1 per 12 eggs. Genuine prize winners, beautiful birds, 240-egg strain. Pure-bred Buff Leghorn chicken eggs $1 per 15 eggs. Also best Plymouth Rocks. Order from Mrs. Harry Watkins, Mountain Home, Idaho.

FAWN AND WHITE INDIAN RUNner duck eggs $1 per 12. Heavy laying strain. E. Dooley, Selma, Ia.

Hamburgs

SILVER-SPANGLED HAMBURGS—Eggs, $1.25 per 15, postpaid; $4 per 100. Chas. Voss & Son, Hubbard, Neb.

Houdans

HOUDAN AND WHITE ROCK EGGS, $1 and $2 per setting, $5 per hundred. Geo. J. Wolcott, Box 773, Central City, Neb.

Leghorns

SINGLE-COMB WHITE LEGHORN hens, 2 years in flock, blue ribbon winners, $1.50. Eggs for setting, $1.25 per 15, $7 per 100. Ivar Johnson, Fremont, Neb.

EGGS FOR HATCHING—SINGLE-comb White Leghorns, Rhode Island Reds. White Holland turkeys and Indian Runner ducks. Chas. Cross, Sextonville, Wis.

ROSE-COMB BROWN LEGHORN eggs; none better—$1, 15; $4, 100; chicks, 10c. Olga Hayek, Linwood, Neb.

SINGLE-COMB WHITE LEGHORN eggs from trap-nested, high-record layers, $1.50 per 15. F. Strahan, Linwood, Neb.

EGGS FROM PURE SINGLE-COMB White Leghorns, exclusively, $5 per 100. Len Fiechter, Lebanon, Neb.

ROSE-COMB WHITE LEGHORNS—Won 65 ribbons. Eggs, $1, 15; $4.50 per 100. Amiel Dorr, Osage City, Kan.

FOR SALE—THOROUGHBRED EGGS—Rose-Comb White Leghorns, $5 and $6 per 100; Rose-Comb Brown Leghorns, $4 and $5 per 100. Great layers. C. & K. Lee, Box C, Hastings, Neb.

SINGLE-COMB BROWN LEGHORN Eggs—$4, 100; $2.50, 50; $1, 15; from 200 2-year-old hens, mated with cockerels scoring 93¾. Edward Dooley, Selma, Ia.

SINGLE-COMB WHITE LEGHORNS—Splendid layers. Stock from best eastern breeders. Eggs, $1 setting, $5 hundred. Marshall Ledlie, Holdrege, Neb.

SINGLE-COMB WHITE LEGHORNS—To make room for young stock, I am forced to sell 15 hens, one cockerel; sacrifice price, $12. F. Strahan, Linwood, Neb.

SNGLE-COMB WHITE LEGHORN eggs, 15, 75c; 100, $3.50. Will Rockwell, Hubbard, Neb.

BUFF LEGHORNS—ENGLISH VARIety, larger than white or brown variety; lay a larger, white egg. Eggs, $1.50 per 15. Particulars, E. B. Mehl, North Irving St., Fremont, Neb.

EGGS—SINGLE-COMB WHITE LEGhorns, $1, 15; $5, 100. White Egg Poultry Farm, Loomis, Neb.

ROSE-COMB BROWN LEGHORNS—Pure-bred, farm range, excellent layers. Eggs shipped in metal, handy baskets. Safe arrival guaranteed. Fifteen, $1; 100, $5. G. C. Randall, Village View, Stella, Neb.

POULTRY—Leghorns

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ROSE-COMB BROWN LEGHORNS—15 eggs, $1; 100, $4. Mrs. E. Fauquet, Wahoo, Neb.

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BLACK LANGSHAN EGGS—CIRCular. Jake Hetrick, Wahoo, Neb.

FULL-BLOOD BLACK LANGSHAN eggs for hatching. C. C. Cunningham, Kennard, Neb.

EXTRA BIG-BONED, SCORED Black Langshans and eggs. H. Osterfoss Farm, Hedrick, Ia.

Minorcas

HIGH-CLASS BLACK MINORCA AND Buff Orpington eggs. Frank A. Agnew, South Omaha, Neb.

SINGLE-COMB WHITE MINORCA eggs. Prices reasonable. B. Hann, Grand Island, Neb.

Orpingtons

EGGS FOR HATCHING—SINGLE-comb Buff Orpingtons, Toulouse geese, Indian Runner ducks. Mating list free. Peter Brehm, Harvard, Neb.

PRIZE-WINNING BUFF ORPINGTON eggs. Mrs. Cook, Eddyville, Neb.

ORPINGTONS, BUFF OR WHITE—Eggs, cockerels. List free. Frank Lewis, Gibbon, Neb.

FOR SALE—BUFF ORPINGTON eggs, $1.50 per 15. Geo. E. Cheney, Fremont, Neb.

BUFF ORPINGTON EGGS—15, $1. Rose-comb White, single-comb Black Minorcas; eggs, 15, $2; 45, $5. Mrs. H. Brennig, Humphrey, Neb.

BUFF ORPINGTONS, INDIAN RUNner ducks. Catalogue free. Gene H. Huse, Norfolk, Neb.

WHITE ORPINGTONS, KELLERstrass and Cook strains; eggs, $1.50 per 15. Write your wants. Mrs. Walter Rowlett, Norfolk, Neb. Route 4.

EGGS FROM KELLERSTRASS strains—Crystal White Orpingtons, scoring 90 to 94 points, guaranteed fertile, $1.50 per 15, $8 per 100. L. H. Klinge, Grand Island, Neb.

EGGS FOR HATCHING FROM THOROughbred White Orpingtons, $1.50 per 15. Wm. Langbehn, Avoca, Ia.

ORPINGTONS—BUFF OR WHITE—Eggs, cockerels. List free. Frank Lewis, Gibbon, Neb.

SINGLE-COMB BUFF ORPINGTONS, Cook strain. Eggs, $2 per 15. George A. Agnew, Central City, Neb.

KELLER'S CRYSTAL WHITE ORpingtons, Kellerstrass strain, direct from his $30 matings. Heavy winter layers. Free range, farm-raised, $7 per hundred. J. W. Keller, Fullerton, Neb.

Plymouth Rocks

BARRED PLYMOUTH ROCK EGGS, both matings. Pens 1, 5, $5 per 15; pens 2, 3, 4, $2.50, 15; $4.50, 30; farm range, $1, 15; $5, 100. Circular free. G. W. Feuerstein, Fremont, Neb.

THOMPSON'S STRAIN BARRED Rocks—Vigorous birds, nicely barred, yellow beaks and shanks. Great layers. Eggs from pens, 85c to $1, 15; utility, $2, 50. H. H. Unruh, Hillsboro, Kan.

FISHEL STRAIN WHITE ROCK eggs, $1.50 for 15, $5 per 100. J. L. Young, Rolfe, Iowa.

POULTRY—Plymouth Rocks

WHITE ROCKS—LARGE, GREAT laying strain; eggs, 15, $1; 100, $4. Geo. Clauson, Mead, Neb.

BARRED ROCK EGGS, 5c APIECE. None shipped over three days old. Miss Voorhees, Sweetwater, Neb.

BARRED ROCK EGGS—$1, 15; $5, 100; specially mated pen, $2.15. F. G. Selden, Rising City, Neb.

PRIZE-WINNING BARRED ROCK eggs; cockerel matings, $2, 15; farm range, $1, 15; $2, 30; $3, 50; $5, 100. Mrs. Geo. W. Schulz, Yutan, Neb.

HILLCREST BARRED ROCKS AND Indian Runner ducks. Stock and eggs for sale. D. T. Gantt, Crete, Neb.

BARRED ROCK EGGS FOR HATCHing, $5 per 100, $2.75 per 50, $1.50 per 15. Fertility and safe delivery guaranteed. Fred Kroeger, Carroll, Ia.

BARRED ROCK EGGS—Fine pen, $1 per setting; range flock, $3.50 per 100. B. F. Johnson, Fairfield, Neb.

RINGLET BARRED ROCK EGGS from fine pen and range flock. Jos. V. Beran, Verdigre, Neb.

WHITE PLYMOUTH ROCK EGGS—$1 per setting, $5 per 100. G. W. Hollenbeck, Craig, Neb.

BARRED PLYMOUTH ROCK EGGS from greatest prize winners of Nebraska. J. W. DeVore, Valley, Neb.

PARTRIDGE PLYMOUTH ROCK eggs for sale—$3 for 15 eggs. A. G. Burbank, Cordova, Neb.

BUFF ROCKS—20 PRIZES 1913. EGGS, $2.50, 30. R. Olmsted, R. 1, Lawrence, Kan.

EGGS—BARRED PLYMOUTH ROCK—Grand champion sweepstake Iowa State show. Free catalogue, showing real photos, champion winners, price of eggs. A. D. Murphy & Son, Essex, Iowa.

BARRED PLYMOUTH ROCKS EXclusively; choice, pure-brd stock; selected eggs, 100, $5; 50, $3. Safe delivery guaranteed. Adam A. Weir, Clay Center, Neb.

WHITE ROCK EGGS, EXTRA LARGE stock, $1.25 per 15, $5 per 100. Write for mating list. A. L. Selden, Rising City, Neb.

BEAUTIFUL GOLDEN BUFF ROCK eggs for sale. Carefully selected from farm-raised stock; 15 for $1.50 or 100 or $6. Address Mrs. J. E. Harding, O'Neill, Neb. R. 1.

HILLCREST BARRED ROCKS AND Indian Runner ducks. Stock and eggs for sale. D. T. Gantt, Crete, Neb.

BIG PRIZE-WINNING WHITE Rock eggs. W. W. Liebhart, Nemaha, Neb.

CHOICE BARRED ROCK EGGS FOR hatching. Mating list free. Arthur Gillette, South Omaha, Neb.

BUFF ROCK EGGS, $1.50 PER 15, $5 per 100. Free range. S. H. McNeely, Cedar Vale, Kan.

BARRED PLYMOUTH ROCK EGGS—Best quality stock. Davis Bros., Lincoln, Neb.

WHITE PLYMOUTH ROCK EGGS for hatching, thoroughbreds. F. S. Hossle, Red Oak, Ia.

WHITE ROCK EGGS—EXTRA GOOD laying strain. George Hellbusch, Belgrade, Neb.

BARRED PLYMOUTH ROCK EGGS—30, $2; 50, $3; 100, $5; postpaid. Margaret Powers, Palmer, Neb. Route 2.

POULTRY—Plymouth Rocks

BARRED ROCK EGGS—PEN BIRDS, Bradley strain, 15, $3; 30, $5; free range, 15, $1; $5 per hundred; guaranteed 90 per cent fertile. Mrs. Owen Kaveney, Central City, Neb.

WHITE ROCK EGGS—$1.50 PER 15, $5 per 100. Mrs. Harry Butler, Bellwood, Neb.

Rhode Island Reds

ROSE-COMB RED EGGS FROM EXhibition and utility stock. Free catalogue. George Ainsworth, Fremont, Neb.

SINGLE-COMB RHODE ISLAND RED eggs from Reds that are red. J. W. DeVore, Valley, Neb.

L. A. WHITTEN—ROSE-COMB Rhode Island Reds, state winners. Eggs and day-old chicks for sale. Prices in reach of all. Send for mating list. Fairmont, Neb.

SINGLE-COMB REDS—AFTER APRIL first eggs from prize-winning pens, $3, 15; $5, 30. Scott Covalt, Box O, Council Bluffs, Ia.

ROSE-COMB RHODE ISLAND RED eggs. Stock from Rhode Island and Massachusetts. Eggs, $3 per 15; utility, $1 per 15. Mrs. O. Dougherty, Norwich, Iowa.

ROSE-COMB REDS—LARGE, DARK red; heavy layers. Mating list free. C. E. Datesman, Council Bluffs, Ia.

SINGLE-COMB RHODE ISLAND RED eggs from pure-bred stock—$1 per 15, $5 per 100. Mrs. Chas. Kellett, Waterloo, Neb

EGGS FOR HATCHING FROM SINgle-comb Rhode Island Reds, $1, fifteen; $5, hundred. Mrs N. Brodahl, Box 3, Wahoo, Neb.

SINGLE-COMB RED EGGS—15, 75c; 100, $4. Dan Kane, Wisner, Neb.

ROSE-COMB RHODE ISLAND RED eggs, $4 per 100, $1 per 15; from large, vigorous, farm-raised birds. Mrs. J. N. Ankeny, York, Neb.

SINGLE-COMB RHODE ISLAND RED eggs, $1 per 15 eggs, $5 per 100. Delmer McCann, Arlington, Neb.

SINGLE-COMB REDS—LAYERS, beauties, 7 years breeding from the best strains; choice pen, per setting, $1.50; range stock, $1; $3.50 per 100. Mrs. F. Loucks, Fullerton, Neb.

SINGLE-COMB RHODE ISLAND RED eggs from prize-winning strains; $1 per 15, $4 per 100. R. A. Hooks, Blair, Neb.

SINGLE-COMB REDS—EGGS, 10 AND 20 cents each. Fulmer, Columbus, Neb.

Turkeys

TURKEY EGGS—WHITE HOLLAND, $2 per 10. A. J. Menefee, Adair, Ia.

Wyandottes

BEST STRAIN GOLDEN AND WHITE Wyandottes. Eggs in season. Write for prices. Wm. Schreiner, Exeter, Neb.

ROSE-COMB WHITE WYANDOTTES—Baby chicks and eggs for sale. Will Jansen, Exeter, Neb.

WHITE WYANDOTTES EXCLUsively. Eggs for hatching, $4 per 100; special matings, $1, $2 and $3 per 15. Exhibition pullets, $2 each. Paul Siert, Secretary Blair Poultry Association, Blair, Neb.

WHITE WYANDOTTE EGGS FOR hatching. Best blood in America. Won highest honors Nebraska State Poultry show 1914. Send for mating list. Oscar L. Bock, Council Bluffs, Iowa.

EXHIBITION WHITE WYANDOTTES—Eggs, $2 for 15, $3.50 for 30. Fertility guaranteed. L. Brown, Fairmont, Neb.

SILVER-LACED WYANDOTTE EGGS—15, $1.50; 100, $6. Rouen and Muscovy duck eggs; 13, $1.50. Fred Kucera, Clarkson, Neb.

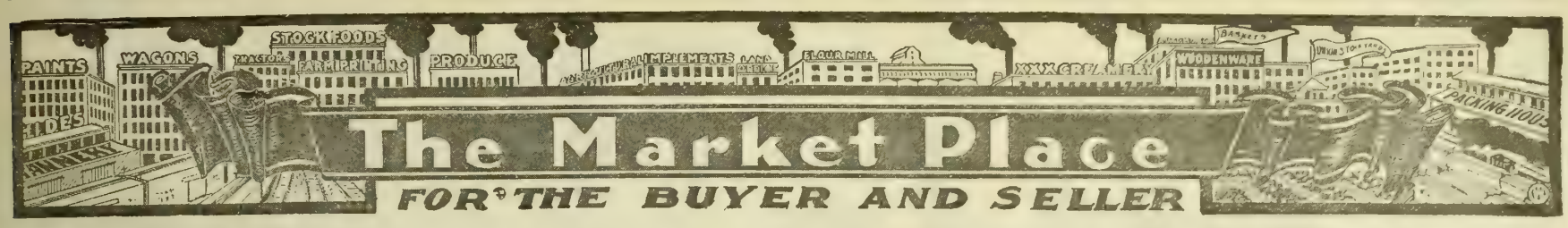
Breeders' Notes

Jacks, Jennets and Shorthorns

Mr. O. J. May of Bennett, Neb., is starting an advertisement in this issue of the Twentieth Century Farmer, in which he is offering for sale some mammoth black jacks and jennets and also some choice Shorthorn cattle. These jacks and jennets range in weight from 900 to 1,100 pounds and are from 2 to 6 years old. They are being priced from $200 to $1,000. Mr. May says that he would consider a big draft stallion or some western land, clear of encumbrance, as part payment on a jack. These jacks and jennets are absolutely right in every way, and we feel that anyone wanting anything in that line will do well to write Mr. May regarding them. He has about thirty head of registered Shorthorn cattle that he is offering for sale. These are mostly cows and heifers, and all are well along in calf. Here is an exceptional opportunity for some man to get a good bunch of cattle at reasonable prices. Mr. May informs us that if necessary purchaser may have one year's time on these cattle if he is given good security. Write Mr. May for further particulars regarding what he has to offer for sale. Kindly mention the Twentieth Century Farmer when writing.

Mammoth Jacks and Jennets

G. M. Scott, the veteran breeder of mammoth jacks and jennets at Rea, Mo., is offering some especially good mammoth jacks and jennets for sale at this time. Mr. Scott has spent a lifetime in the breeding of jacks and jennets and we question whether there is another man in the business who has a more thorough knowledge of the business than has Mr. Scott. He has an ideal breeding farm, with every facility for the carrying on of a successful business. It is like attending a stock show to visit this breeding plant and go through the barns and see the magnificent lineup of big-boned jacks and jennets that Mr. Scott is producing. Get in touch with him as to just exactly what he has to sell, mentioning the Twentieth Century Farmer. One thing you can depend upon, and that is when Mr. Scott represents an animal to be right he means exactly what he says, and you can rest assured that you are going to get your money's worth.



POULTRY—Wyandottes

WHITE WYANDOTTE EGGS FOR hatching, $4 per 100. Mrs. John McIntyre, Wayne, Neb.

WHITE WYANDOTTES AND SINgle-comb Reds; eggs, 75c per setting. Amos D. Birky, Bancroft, Neb.

PEERLESS WHITE WYANDOTTES—Winners at Nebraska State Poultry show 1914 and at Fairbury. Eggs for hatching. Prices reasonable. Write for mating list. Mrs. M. L. Burbridge, Fairbury, Neb.

WHITE WYANDOTTE EGGS—15 FOR dollar, $4 per 100. J. C. Schmucker, Swanton. Neb.

IMPERIAL WHITE WYANDOTTES direct from Sherman Bowden; 15 eggs, $2; 30, $3.50. M. Mogensen, Fullerton, Neb.

SILVER-LACED WYANDOTTES—English breed; no better layers of large eggs. Fine, large birds. Only one pen. Fair dealing to all. Satisfaction guaranteed. Eggs, $2 per 15. W. H. Mead, 404 East 10th St., Fremont, Neb.

BUFF WYANDOTTE EGGS FOR SETting. Mrs. Chas. Hough, Weston, Ia.

EXPRESS PREPAID ON OUR HIGHquality White Wyandotte and Indian Runner duck eggs. Cedar Lawn Poultry and Stock Farm, Fairfield, Neb.

WHITE WYANDOTTE EGGS, $1 PER 15. Good layers, Stock from best breeders in the eastern states. C. A. Johnson, Loomis, Neb.

THOROUGHBRED WHITE WYANdottes. Eggs for hatching, $1.50 per 15. B. Carl Petersen, Avoca, Ia.

Baby Chicks

BABY CHICKS—TEN VARIETIES—Annual incubator capacity, 100,000. Eggs for hatching from vigorous, farm-ranged birds. Write your wants. Maplewood Farm, Exeter, Neb.

FOR SALE—THOROUGHBRED BABY chicks, Houdans, White and Brown Leghorns, Reds and other leading varieties, 15c up. C. & K. Lee, Box C, Hastings, Neb.

Miscellaneous Poultry

EGGS! EGGS! FROM THOROUGHbred turkeys, geese, Pekin, Rouen, Muscovy and Runner ducks, pearl and white guineas, Bantams, Rhode Island Reds, Houdans, Games, White and Brown Leghorns, Hambergs, White and Buff Orpingtons, White and Silver-Laced Wyandottes, Buff, White, Barred Plymouth Rocks, Cochins, Langshans. Hen eggs, 15 for $1. Also dogs, rabbits, fancy pigeons. Free circular. D. L. Bruen, Platte Center, Neb.

EGGS! EGGS! EGGS! Thirty-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Iowa.

55 BREEDS PURE-BRED CHICKENS, ducks, geese, turkeys, collie dogs. Catalogue free. Belgrade Poultry Farm, Mankato, Minn.

ROTTEN EGGS—WE SELL NICE, fresh eggs from 26 varieties of chickens. Catalogue free. Aye Bros., Box 3, Blair, Neb.

43 VARIETIES CHICKENS, BANtams, guineas, Bronze. White Holland, Bourbon Red turkeys, Toulouse, Embden, African geese, Pekin, Indian Runner, Muscovy ducks. Catalogue 2c. Theodore Franz, Mankato, Minn. Box 102.

EGGS FOR HATCHING—ALL VARIeties of Plymouth Rocks. Wyandottes, Rhode Island Reds, Orpingtons, Leghorns, Hamburgs, Brahmas, Langshans, Minorcas, Campines and Bantams; also ducks, geese and turkeys. Write for catalogue No. 11. Logan Valley Poultry Farm, Wayne, Neb.

EGGS — BARRED, WHITE, BUFF Rocks, Buff Orpingtons, Rhode Island Reds, White, Brown Leghorns, Black Langshans, Toulouse geese. Mrs. Frank Davis, Holbrook, Neb.

WYANDOTTES, LEGHORNS, ROCKS, Reds, Orpingtons, water fowls. Free catalogue. C. W. Brehm, Harvard, Neb.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

SHETLAND STALLIONS, JET black, high-class fellows; two spotted ones. Frank Healy, Bedford, Ia.

DOGS

COLLIES—SEND FOR LIST. W. R. Watson, Box 501, Oakland, Ia.

FOR SALE — PEDIGREE SCOTCH Collie female, sable and white, $10. Geo. E. Cheney, Fremont, Neb.

MISCELLANEOUS

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

FREE FOR SIX MONTHS—MY SPEcial offer to introduce my magazine, "Investing for Profit." It is worth $10 a copy to anyone who has been getting poorer while the rich richer. It demonstrates the real earning power of money and shows how anyone, no matter how poor, can acquire riches. Investing for profit is the only progressive financial journal published. It shows how $100 grows to $2,200. Write now and I'll send it six months free. H. L. Barber, 472, 28 W. Jackson Blvd., Chicago.

IDAHO RED CEDAR SPLIT POSTS, direct from producer to consumer, 4½c to 9c each, here; delivered prices carlots on application. Farmers' Co-operative Co., Ltd. A. R. Derr, Mgr., Clarks Fork, Idaho.

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

FARM LOANS WANTED — QUICK sales, exchanges, large property list. Write John L. Maurer, Omaha, Neb.

RESTAURANT FOR SALE—MAKING $1,500 per year profit. Will sell for $3,000; on account sickness, reason. Hupp & Baker, Woodbine, Ia.

FENCE POSTS AND LUMBER DIrect to consumer. C. J. Coleman, Sand Point, Idaho.

HELP WANTED

WANTED — RESPONSIBLE PARTY to take charge of our business in each county handling sale of Automatic Combination Tool, a combined wire fence stretcher, post puller, lifting jack, etc. Lifts or pulls 3 tons, weighs 24 pounds. Sells readily to farmers, shops, contractors, etc. No experience necessary. Descriptive catalogue, prices and terms free upon request. Harrah Mfg Co., Drawer O., Bloomfield, Ind.

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

WANTED—A MAN TO SOLICIT SUBscriptions for The Twentieth Century Farmer; salary, $42 a week. Address Circulation Manager, The Twentieth Century Farmer, Omaha, Neb.

$65 TO $150 MONTH PAID MEN AND women in U. S. government positions. Life Jobs. Thousands of appointments coming during 1914. Common education sufficient. "Pull" unnecessary. Write today for free list of positions now available. Franklin Institute, Dept. F-94, Rochester, N. Y.

THE AUTOMOBILE BUSINESS PAYS $25 to $50 weekly. We teach you how. Write for our free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

YOUNG MAN, WOULD YOU ACCEPT and wear a fine tailor-made suit just for showing it to your friends? Or a Slip-on rain coat free? Could you use $5 a day for a little spare time? Perhaps we can offer you a steady job. Write at once and get beautiful samples, styles and this wonderful offer. Banner Tailoring Co., Dept. 731, Chicago.

SALESMEN FOR HIGH-CLASS TObacco factory; experience unnecessary; good pay and promotion for steady workers. Complete instructions sent you. Piedmont Tobacco Co., Box Y-27, Danville, Va.

LANDS—Arkansas

80-ACRE RICH, CREEK-BOTTOM farm; 40 cultivation, balance timbered; $25 acre. Sessions Co., Winthrop, Ark.

California

WE HAVE FOR SALE IN CENTRAL and Northern California well improved grain ranches from 160 up to 20,000 acres, $15 to $50 per acre. Well equipped stock ranches from 1,000 to 100,000 acres, $6 to $35 per acre. Our auto at your service if you are interested. Address Maguire & Nelson, 378 Willcox Bldg., Los Angeles, Cal.

LANDS—California

SACRAMENTO VALLEY LAND, near city, at farm prices, on easy terms. W. T. Smith Co., 815 City National Bank, Omaha.

Colorado

TWO UNUSUAL OPPORTUNITIES—On account of aged stockman, without children, wishing to retire from successful business, two excellent stock ranches, one about 2,000 acres and the other 3,000 acres, both well improved, will be sold at $10 per acre. Splendid opportunity to start young men in successful business. The Imperial Securities Co., 611 Kittredge Bldg., Denver, Colo.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

AM IN TOUCH WITH EASTERN buyers for farms and ranches. Send details with legal description and best cash price in first letter, allowing 2 per cent commission. Thomas Campbell, 530-32 State Bank Bldg., Omaha, Neb.

CASH FOR YOUR FARM OR BUSIness. I bring buyers and sellers together. Write me. Established 1881. Frank P. Cleveland, 1315 Adams Express Building, Chicago, Ill.

FARMS WANTED—We have direct buyers. Don't pay commissions. Write, describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

Kansas

WE OWN 13,600 ACRES IN FERTILE Pawnee valley, smooth as a floor; best alfalfa and wheat land on earth; five sets of improvements; shallow water; will sell eighty acres or more. Frizell & Ely, Larned, Kan.

Minnesota

NORTHERN MINNESOTA—THE greatest natural cattle section; no drouths; alfalfa, clover, corn and potatoes are principal crops. Prairie or timber. Free information. We have no land for sale. Write W. R. Mackenzie, 904 Palace Bldg., Minneapolis, Minn.

GOVERNMENT FARMS FREE—OUR official 112-page book, "Vacant Government Lands," describes every acre in every county in U. S. How secured free. 1914 diagrams and tables. All about irrigated farms. Price, 25 cents, postpaid. Webb Publishing Co., Dept. 36, St. Paul, Minn.

200 FARMS IN THE FAMOUS PARK region and Red River Valley district, Otter Tail and Wilkin counties. Level or rolling prairie land. Timber land. Any size farm you want from $30 to $80 per acre. Easy terms. Otter Tail county has never had a crop failure; 50,000 acres of corn last year, making from 30 to 70 bushels per acre. Natural clover and alfalfa country. Write for free booklet and lists. Park Region Land and Loan Co., Fergus Falls, Minn.

TEN ACRES OF PRUNE AND ENGlish walnut trees, on electric line, 40 miles to Portland and one mile to town of 3,000 people; perfect climate. Ideal spot for man retiring from hard work or business. Write Dudley Archer & Co., 405 Northwestern Bank Bldg., Portland, Oregon.

North Dakota

NORTH DAKOTA, LAMOURE county, champion corn county of the state. Rich lands, yet low in price. We are owners. Tracts any size to suit. Easy terms. Catalogue of improved and unimproved prairie lands sent free. Special snaps for early buyers. Write Sheils & Weaver, Drawer F, Edgeley, North Dakota.

NORTH DAKOTA LANDS DIRECT—We have listed with us to sell several hundred thousand acres of choice North Dakota lands. In order to obtain settlers along our 1,200 miles of track in North Dakota we will sell these lands at cost. Prices are about one-fifth those asked in Iowa or Illinois, and agricultural possibilities are just as great. Roads, schools, churches, railroads all established. For literature and full particulars write J. S. Murphy, Minneapolis, St. Paul & Sault Ste. Marie Railway Co. (Soo Line), Minneapolis, Minn.

Oregon

OREGON STATE PUBLICATIONS Free—Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions; they will have painstaking answers. We have nothing to sell. Address Room 65, Portland Commercial Club, Portland, Ore.

LANDS—Oregon

GET A NEW FARM HOME IN eastern Oregon, close to Ontario, the heart of greatest growth. Six railroads converge there. The Snake river gives abundance of water for light, power and irrigation at very small cost. Every other section has a farmer on it making a great record in growing crops. So you can know just what you are buying by the production they show. Terms, one-tenth down and balance in nine equal, annual payments. Lands are cleared and leveled, so you can commence farming soon as you are there. A remarkably liberal offer is made. Get our illustrated folder and learn all the facts. It's free. Oregon & Western Land Co., 526 Paxton Block, Omaha, Neb.

Wisconsin

UPPER WISCONSIN—BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

Wyoming.

CHOICE FARM LAND, $15 to $30 PER acre. First crop will pay for land. What have you to exchange for western land? W. T. Sloan, Real Estate Exchange, Pine Bluffs, Wyo.

HOMESTEAD—320 ACRES RICH VIRgin soil in Converse county, Wyoming; near thriving towns and schools. Locating fee reasonable. Correspondence invited. Winslow, Douglas, Wyo.

GOVERNMENT LAND—GET 320 acres. We locate you free, buy your crop, stock your land. Particulars free. Wyoming Range, Janet, Wyo.

Miscellaneous.

INVESTIGATE THIS — EXCELLENT land in Minnesota, North Dakota, Montana, Idaho, Washington and Oregon—adjacent to the Northern Pacific railway—the best developed sections of the northwest. Obtainable at low prices. State land on long payments, and deeded land on crop-payment plan; good climate; good schools. No isolated pioneering. Send for literature, saying what state most interests you. L. J. Bricker, Gen. Immig. Agt., 377 Northern Pacific Ry., St. Paul, Minn.

GOVERNMENT LAND SCRIP—FOR Sale, soldiers' additional land scrip in 40, 80 and 120-acre assignments. Can be located on vacant government land. No residence or cultivation required. Address Fred D. Mason, Security Mutual Life Bldg., Lincoln, Neb.

MEN OF AMBITION PROSPER IN the southeast. Small capital, with energy, will accomplish results. Dairy, stock, fruit or poultry will make you independent. Land sells from $15 an acre up. Growing season from 7 to 10 months' duration. Modern schools, good highways and churches. The "Southern Field" magazine and farm lists on request. M. V. Richards, Land and Ind. Agt., Southern Ry., Room 94, Washington, D. C.

SEEDS

DUNLAP STRAWBERRY PLANTS—60 cents 100, $4.50 per 1,000, prepaid anywhere. W. C. Hebdon, Blair, Neb.

ALFALFA SEED, $5.50; TIMOTHY, $1.50. Farms for rent and sale. J. Mulhall, Sioux City, Iowa.

REID'S YELLOW DENT SEED CORN—Grows on rich, loose, bottom land; also Early Reliance; matures in 90 to 100 days. W. B. Hoff, Mondamin, Ia.

I GUARANTEE 95 PER CENT GERmination on my seed corn. Paul Rohwer, Waterloo, Neb.

ALFALFA SEED—DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

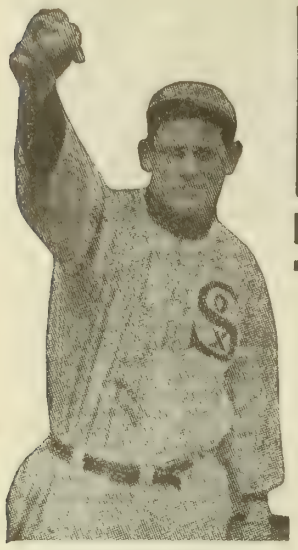
ALFALFA SEED AND MONEY DIrect from farmer. Price and sample, write W. L. Eavey, Brady, Neb.

I AM IN THE MARKET FOR CLOver, timothy, alfalfa, cane and millet seed. Send samples. I have 1912 crop seed corn grown in Washington county, Nebraska. Werter DeVaughn, 1914 Harney St., Omaha, Neb.

PURE-BRED YELLOW SEED CORN, $2.50. P. Clausen, 506 28th St., East Omaha, Neb.

RED CLOVER SEED FROM MY farm direct to you. Strictly choice seed. Write for sample and price. P. O. Harrier, Valley, Neb.

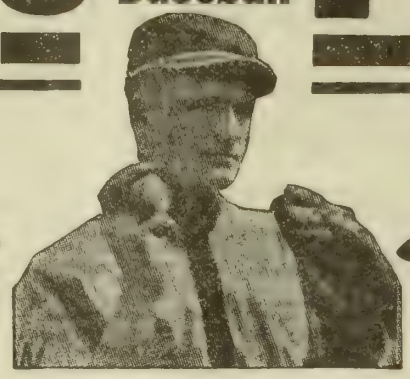
Boys Learn Scientific Baseball FREE



ED. WALSH
of the Chicago WHITE SOX
will teach you the detail of his Spit Ball

Joe Wood
of the BOSTON World Champions
will teach you his great secret of breaking over his world famous Smoke Ball.

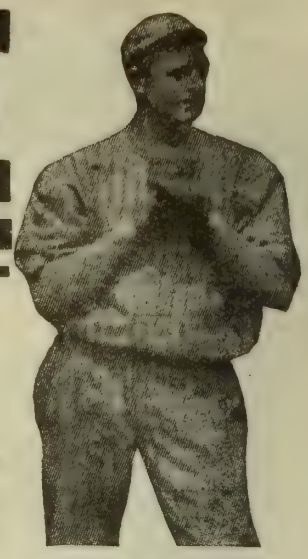
JOE WOOD



WALTER JOHNSON
of the Washingtonians will teach you how to acquire and maintain Speed

NAP RUCKER

"Nap" Rucker
of the Brooklyns
will teach you the mastery of his famous Knuckler.



CHRISTY MATHEWSON
of the N. Y. GIANTS
will explain fully his Fadeaway Ball

BOYS We are able to offer you the most complete and fascinating course of baseball ever compiled. In this course CHRISTY MATHEWSON of the N. Y. Giants; ED. WALSH of the White Sox; WALTER JOHNSON of the Washingtons; JOE WOOD of the Boston World Champions; "NAP" RUCKER of the Brooklyns and "DOC" WHITE formerly of the Chicago Americans, will through personal and direct lessons teach you the secret of Professional Pitching.

Every boy should have this course. It will make a man of him mentally, morally and physically. Every mother should urge her son TO SECURE IT and EVERY father should insist that his son ***follow its teachings*** to the letter. We give here small portions of Doc White's lesson which deals in part with proper methods of training and living. We also give part of the introductory paragraph of Ed. Walsh's instructions.

Our First Lesson

Our first lesson will be by "DOC" WHITE, prefaced by some timely advice on physical condition—how to get it and how to keep it. No one is better qualified to give you advice on this most important matter than is "Doc" White. He is a college bred man, who by using his brains, devised a secret, self-teaching system that enabled him to blossom out over night with that rifle-shot control of the ball that has ever since been a terror to the best and surest batters. Read carefully and follow faithfully his advice on getting into condition and conserving your health, wind, sight and energy—then follow and practice his system of gaining control of the ball.

Lesson Number 1

By G. HARRIS WHITE
"DOC" WHITE

In this lesson I will talk "right off the bat" in plain, short English. Let's begin by admitting that Baseball is the Great American Game. Why? You will say—because it is the most popular—everybody plays it or is interested in it. A good reason, but here is a better one: Listen: It is the best builder of health (mental and physical), and a tremendous moral force. It is a game that will not stand for whisky, cigarettes, profanity, vulgarity, cowardice, dishonesty, anger, discourtesy and lack of respect for superiors—not to mention a long list of minor faults and frailties. Exceptional playing talent sometimes gets a man of questionable habits or character into a club, but he must "clean up" and reform from the moment he dons the uniform. Unless he does so, he is simply a "flash and a sputter" and goes back where he belongs, and is out of baseball for keeps.

To be a good ball player you must be a good man or boy physically. This is simply a matter of right living and faithful practice. Good pitchers are not often men of exceptional strength, but they are always good and fit men physically. Pitchers must have the pliable, sinewy, resilient muscles that endure, rather than the bulky masses that are capable of tremendous exertion that cannot be sustained or quickly repeated. Below I will note a few simple rules to be followed which if faithfully undertaken will bring about your physical fitness in the very shortest time in which it can be done. As many of my readers have not attained their full maturity, I will particularly keep them in mind in my advice, so that any boy or youth as well as men can easily follow it.

SHADOW PITCHING. There is a name I have carried under my vest for a long time. It made a pitcher of me and gave me that control of the ball that has turned the scale many a time against the best batters and players in the big leagues. Not every man can be a "SPEED KING," but any man who has "CONTROL" can be a successful pitcher. A slow ball and control are a far better combination than fast balls and passed balls and a few walks to first base. A base on balls is practically a hit—it gives the batsman just as good a title to "first sack" as if he had knocked the stitches out of the first ball pitched.

When I joined fast company I was a raw recruit—just a good prospect. On the first trip of the club around the circuit I was not considered worth a ticket, and was left at home with the cripples and with instructions to practice with anyone who wanted exercise. This gave me something of a jolt and time to think. It also gave me a realization that some day, in a one-sided game, the "Boss" would send me to the mound, and that my fate depended upon my showing him something when that day came. Control of the ball and how to get it was my problem, and after heavy drafts on my gray matter and much experimenting, this is how I solved it:

Complete details of shadow pitching are given in the complete course of instructions

Some of "Doc" White's Instructions for Shadow Pitching

Introductory to Ed. Walsh's Contributions to This Course of Lessons

By ED. WALSH

For eight long years the spitter has been my stock in trade. With its aid I have won more games in one season than any pitcher of modern times. It helped me to do my share in one American League Championship, one World's Championship and in two series of games for the Championship of Chicago. Having thoroughly mastered control of this style of twirling, I have, for many years, been able to go in and finish (and sometimes save) games for my team with little or no time devoted to "warming up," and I count this one of the very valuable features of the spit ball. The change from a fast ball, a curve or a cross fire (left-handed), is so radical that it is an easy matter to baffle the most dangerous opponents if one has control. That last word is the secret of my success.

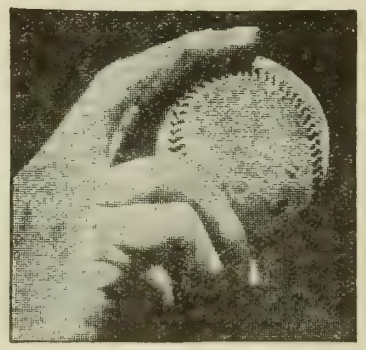
The full instructions of Ed. Walsh are included in the course and are marvelous in the extreme.

Grip for the Curve
Note position of Fingers on Seams

IRWIN M. HOWE, Principal

Irwin M. Howe

Mr. Howe is an eminent baseball writer and authority. He is the OFFICIAL STATISTICIAN of the American League, the American Association, the Western and the new Federal League. He is the author of The Players' Handbook of Baseball, and Pennant Winning Plays and Players—two works that have had a circulation of more than a million copies. He is the best qualified man in the world to put before you in plain, understandable English the direct and personal teachings of the wonderful galaxy of instructors, each the undisputed leader in his specialty, and every one A MONARCH OF SPEED and CONTROL.



The Fadeaway Grip
Full Details of All the Grips Given in the Complete Course of Instructions

Knuckle Ball Grip
Every Detail from Grip to Delivery Given in the Complete Course

YOU CAN PUT ONE OVER TODAY

These lessons are so plain, practical and so profusely illustrated, that by following the instructions given, ***you*** can not only develop pitching ability but by "Doc White's ***Shadow Pitching***, can practice and learn in secret. ***You can pitch to yourself*** and at the same time get splendid practice in ***Bunt Fielding***. You will also learn how to ***Increase Your Batting Average*** and more effectively ***Hit Any Pitcher***. Every lesson edited by IRWIN M. HOWE, the official Statistician of the American League, the new Federal League and other organizations and an Eminent Authority on Baseball.

Well Worth $100 to Any Man or Boy Whether or Not He Ever Expects to Become a Big Ball Player

Given Free To You

NOW is the Time to Get This Course and BEGIN Following Its Instructions If You Wish to SURPRISE YOUR FRIENDS With Your Skill, Strength and Speed In Pitching and with your Improved Batting Average.

This COMPLETE COURSE May Also Be Purchased From Us at the REGULAR PRICE OF $1.00. Mail Orders Promptly Filled. Remit By Post Office or Express Money Order

Do It Now Boys!

Get your father, mother or big brother or some neighbor to subscribe for the Twentieth Century Farmer, or renew their subscription for one year at the regular price of $1.00, and we will send you the Pitching Course free.

Address
TWENTIETH CENTURY FARMER,
OMAHA, NEB.

Why Should I Smoke Tuxedo?

GEO. CURRY

Geo. Curry, ex-Governor and ex-Congressman from New Mexico, says:

"Tuxedo appeals to me strongly on account of its cool, mild, pleasant flavor. Therein lies its superiority to all other tobaccos."

Geo Curry

TUXEDO is the logical smoke for *millionaires* because it is impossible to buy a *better* tobacco.

Tuxedo is the logical smoke for the economical man because there are forty pipefuls in a ten-cent tin—making the *average cost per pipeful only one-fourth of a cent!*

To buy cheaper tobacco means to get less pleasure out of smoking, because it is impossible to *make* a tobacco as good as Tuxedo at less than the Tuxedo *price!*

JAMES WILLIAM PATTISON

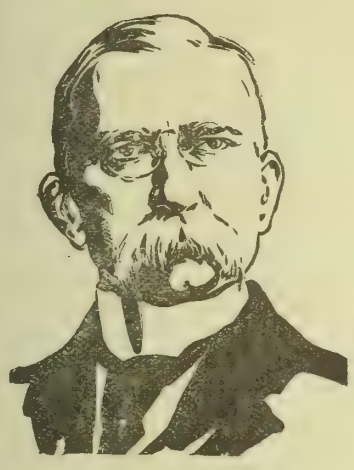
James William Pattison, artist, leader of municipal art, and now editor of the Fine Arts Journal, Chicago, says:

"A pipe, a book and an open fire. These are three deights I can recommend to any man. But be sure the pipe is filled with mild, fragrant Tuxedo if you wish to enjoy the three in the highest sense."

James William Pattison

Tuxedo

The Perfect Pipe Tobacco



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L. S. Brown, General Agent of the Southern Ralway at Washington, says:

"Tuxedo has gained and maintained a high reputation for superiority. Its coolness, mildness and genuine soothing qualities are unrivalled."

L. S. Brown

Tuxedo is made of only the finest, choicest selected leaves of perfectly aged Burley tobacco. It is made by the *original* Tuxedo process which takes all the *un*pleasantness *out* of tobacco, and leaves all the pleasantness *in!*

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"My own experience leads me to believe that every desirable quality is present in Tuxedo Tobacco. It is the best smoke I ever had."

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YOU CAN BUY TUXEDO EVERYWHERE

Famous green tin with gold lettering, curved to fit the pocket **10c**

Convenient pouch, *inner-lined* with moisture-proof paper . . . **5c**

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Henry Stuckart, City Treasurer of Chicago, says:

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Henry Stuckart

Illustrations are about one-half size of real packages.

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Irvin S. Cobb, well-known humorist and short-story writer, author of "Back Home," "Anatomy," etc., says:

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Overland $950

Completely Equipped
With electric starter and generator—$1075.
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WHEN bright little Miss Spring comes cheerfully bobbing into your midst and gruff Mr. Winter goes grumbling and sliding out of sight—when old mother earth is thawing out and inviting you and yours to stay and play out in the open — when every single road coming and going from your farm is automatically cleared by nature and opened up for a big spring business — when the days get longer and the sun gets warmer—when the welcome robins and tiny buds appear and the slush, snow and ice disappears—that's the time to get your new Overland and open her up to your heart's content. And you need it more than you probably realize.

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That's what an Overland can do for you and yours!

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Do you realize how much automobile you get in an Overland for $950? Do you realize that it is a great big five-passenger touring car? That it has the power to take you wherever you want to go and that it is built to last for years and years and years.

A Big, Beautiful, Powerful Car

Don't confuse the Overland with those small dinky cars. Because our price is so exceedingly low people often class us with those small affairs. Our price is low because we manufacture cars on such a gigantic scale that we can make them more economically than anyone else in the business. This year we will produce 50,000 cars. Think of it! And that's the reason our price is 30% under anything on the market.

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Then the Overland is right up-to-date in every respect. The body is finished in rich Brewster green—trimmed in highly polished nickel plate and aluminum. It has a graceful cowl dash. There are electric lights throughout—even under the dash. The motor is powerful, speedy, smooth and quiet. The wheel base is long and the tires are large. It is remarkably economical on oil and gasoline.

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The 1914 Overland is beyond question the greatest automobile buy in the world. It has all the improvements, refinements, features and finish of a high priced car, yet costs but $950—which is 30% less than any other similar car made.

It is up to you. Spring is here. There are months and months of perfect automobile weather ahead of you and $950 put into an Overland will bring you a greater return on your money than you can get from any other form of investment.

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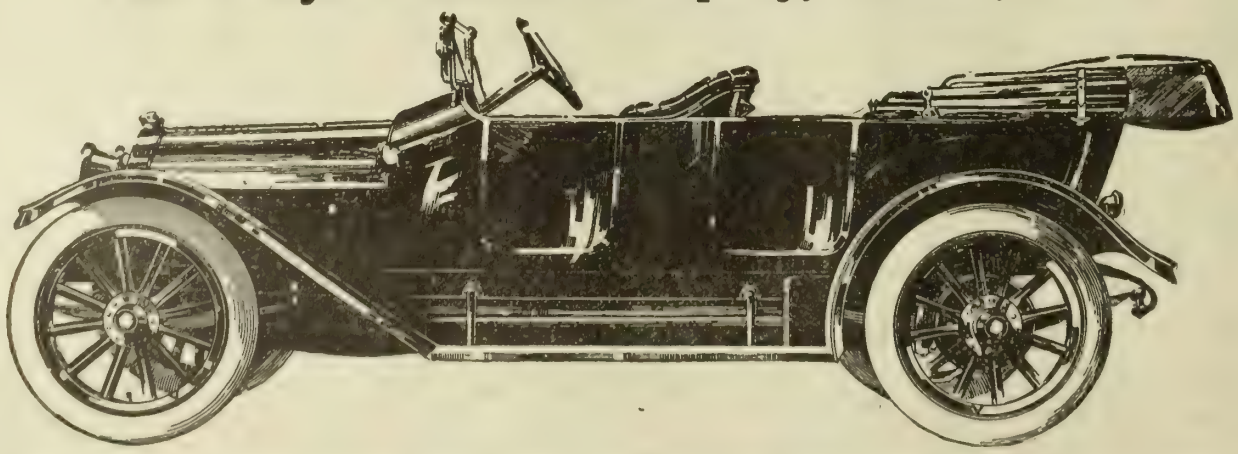

Manufacturers of the famous Overland Delivery Wagons, Garford and Willys-Utility Trucks. Full information on request.

TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, April 25, 1914 | Number 698

Bright and Breezy

Quite True

Willie—Paw, where do jailbirds come from?

Paw—They are raised by larks, bats and swallows, my son.

Looked Like It

Jane and John were auto riding, and Jane asked to run the car. Her gallant reluctantly acquiesced, and his fears soon materialized, for this is what she said:

"Oh, Johnny, take it quick! Here comes a ditch!"

Unlike Some Others

"Why do they say, 'As smart as a steel trap'?" asked the talkative boarder. "I never could see anything particularly intellectual about a steel trap."

"A steel trap is called smart," explained the elderly person, in his sweetest voice, "because it knows exactly the right time to shut up."

Perfectly Willing

"I can't call you by your first name," said the new mistress, "for it is the same as mine—Alice—and might be confusing to my husband. Do you mind if we call you by your last name? And what is it, please?"

"Oh, no, indeed, ma'am," replied the new maid: "I'm quite used to it. It is Darling."

Slim Diet

A minister reported to one of his church officials that he was unable to support his family on a salary of $300 a year. The official exclaimed: "Money, money! I thought you were not preaching for money, but the good of souls."

"I am not preaching for money," replied the devoted minister, "but my children cannot eat souls, and besides, if they could, I am afraid it would take many of the size of yours to make a square meal."

Unnecessary Disturbance

During the hearing of a law case a man began to move about in the back of the court room, pushing back chairs and disturbing things generally.

"Young man," the judge said at length, looking at him sternly, "you are making a great deal of noise."

"Your honor," was the reply, "the fact is that I have lost my overcoat and I am looking about to find it."

"Well, sir," said the judge, "people often lose whole suits here without making half as much disturbance."—Youth's Companion.

Lost Labor

An elderly suburbanite, who prides himself upon his methodical habits, was showing to an over-night guest a particularly handsome chiming clock. It was 10:30 o'clock and the host proceeded to wind up the timepiece.

"For thirty-five years," said he, "I have never missed a night winding up this clock at 10:30 o'clock."

The guest, who happened to be a jeweler, examined the clock closely and a quizzical smile overspread his face.

"What's funny?" inquired the host cholder.

"Why," said the visitor, "I was trying to figure out how much time you have wasted. This is an eight-day clock!"

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Can You Afford a Manure Spreader?

OR CAN you afford not to own a manure spreader? Have you settled this to your own satisfaction? There is no question as to the value of manure as a fertilizer for fields and orchards. It cannot be put on by hand in as effective a manner and with as little labor as it can with a spreader. On the other hand, when you consider the cost of a manure spreader, interest on the money invested, depreciation and repairs, is it worth while to tie so much money up in one? This will depend altogether upon your conditions. Some men buy every new farm machine they hear of; it is a fad with them. Some believe it economical to go without machines and do all the work by hand. Still others figure just exactly what saving in time and labor a machine will effect, consider carefully the necessary expenditure for purchase and upkeep, and they never buy a machine unless they see where they can effect a saving, and never fail to buy a machine when they see they really need it. The manure spreader is becoming more and more common on the farms of the middle west and the southwest. We are going to have an excellent article in our next issue discussing its value and cost and suggesting a basis for figuring its efficiency under given conditions.

You are also interested in barns and other buildings for the housing of live stock and the storing of grain. We have something to say on the arrangement of these buildings and their economical construction. Then, also, the third article on hog cholera will appear in this next issue. You will find much to interest you next week

Prattle of the Yougsters

Terse

One predicts a future for the schoolboy who wrote the following terse narrative about Elijah:

There was a man named Elijah. He had some bears and he lived in a cave. Some boys tormented him. He said: 'If you keep on throwing stones at me, I'll turn the bears on you and they'll eat you up.' And they did and he did and the bears did."—American Boy.

Two of a Kind

A high school instructor said angrily to a pupil:

"You ought to be ashamed of yourself! Why, when George Washington was your age he was a surveyor."

"Yes," said the youth, "and when he was your age, sir, he was president of the United States."

Should Be Appropriate

Little Florence climbed upon her father's lap, on her birthday, and put her arms around his neck. Father always called her "Toodles," and until now she had answered to the name. But now she looked at him in surprise. "Why, I'm 3 now! I should think you'd call me 'Treedles,' " she said.—Judge.

Our Feathered Friends

Rose Pastor Phelps-Stokes, during a recent visit to Philadelphia, told at a charity society a country-week story.

"Under an old apple tree," she said, "I gathered a half dozen little country-weekers about me one August afternoon, and, holding up a book, I said

" 'Now, children, I'm going to read to you. This is the book; it is called "Our Feathered Friends." Who are our feathered friends; does anyone know?'

"The urchins on the grass regarded one another doubtfully; then a little chap piped in a shrill key:

" 'Angels?' "

Cause for Woe

A little girl had sent back her plate for chicken two or three times and had been helped bountifully to all the other rich things that go to make a good dinner. Finally she was observed looking rather disconsolately at her unfinished plate of pudding.

"What's the matter, Dora?" asked Uncle John. "You look mournful."

"That's just the matter," said Dora; "I am mor'n full."

Then she wondered why everybody laughed.

Learning Young

Little Mary was set to watch a flock of chickens. The hens kept together very well, but the rooster was inclined to wander inquisitively toward another flock of chickens next door.

After a while she thought she had him cured of his wandering habit and took up her doll a moment. But when she lifted her head there were the hens together in the corner and there was the rooster struting toward the next yard.

"Come back here to your family!" cried Mary. But the rooster heeded not. Mary looked at him a moment, disgustedly; then she said in a bitter voice: "That's just like you men!"

TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Hog Cholera---Prevention and Treatment

II--Co-operation is Absolutely Necessary, and to Get This Politics Must Be Eliminated

BEFORE we can begin to combat hog cholera successfully we must have the hearty co-operation of the different interests involved. We must have the close co-operation of the hog raiser, the authority making the live stock sanitary rules and quarantine regulations, those having to do with the educational part of combating the disease from the agricultural college, the manufacturers and sellers of both serum and virus, the government officials in the different states in which the government is carrying on its work, and the veterinarians doing the work in the field.

First let us look into what the states are doing, how they are doing it, what they should do, and how they should do it. Our investigations have revealed one condition at least that exists in different states, which in itself is detrimental to effective work. We have found that to some extent there is a conflict of authority between the state veterinarian and the veterinarian in charge of the work at the agricultural college. We have also found that there is a wide difference of opinion between these officials in some cases, one official recommending the following of one line of work and the other another line. How can this be remedied, and how can we get the co-operation we should have, and for efficient work must have, between these two departments?

Get Boards Out of Politics

A good many of our states have awakened to the importance of having live stock sanitary boards or commissions to deal with all live stock sanitary matters. Some of these boards are well organized and doing very efficient work, while others are mere figureheads. What every state should and must have is a real live stock sanitary board, composed of men of known ability and integrity, serving for no pay except their actual expenses; they must be on this board for no political reason. When such a board or a state official dealing with sanitary and quarantine rules and regulations gets and holds his position through political pull and influence, just that minute is his efficiency to a certain extent curtailed.

In most of our states at the present time the state veterinarian is an appointee of the governor. You can't mix politics and sanitation and have sanitation win out as it should, for the simple reason that politics is the power behind the throne. The chances are that the state veterinarian is appointed more for his political influence in assisting his chief to a re-election than for his ability and efficiency as a veterinarian. A good efficient sanitary official is almost sure to come in contact with some large live stock owner with a good amount of political influence. When a state veterinarian holds his position by political influence, and a case of this kind happens, who suffers, politics or the people?

Let us here suggest a plan for the appointment of the live stock sanitary board. It should consist of five members, four of which to be appointed by the governor and confirmed by the state senate. One of such appointees should be a hog raiser, one a cattle raiser, one a horse raiser, all actively engaged in their particular lines. One member of this board should be a veterinary practitioner, a graduate of some regular veterinary college, and must have had at least three years' actual practice in the state. The first two should be appointed for a term of four years and the other two for a term of two years, and thereafter two should be appointed each two years during the session of the legislature for a term of four years. The other member of this board should be the chief veterinarian at the agricultural college. We believe that this plan would divorce the board from politics as far as possible.

The live stock sanitary board thus formed should appoint the state veterinarian and he must be under the direct supervision of the board. All sanitary and quarantine rules and regulations should be made by the board. Let us right here suggest that the board carefully consider all rules and regulations before passing them and see that they are enforced. Don't make a long list of rules and regulations with no intention of having them recognized as amounting to something. The live stock sanitary board in any of the corn-belt states can be, if it will, one of the most valuable boards in such state; but in order to be of value it must let the people know that it is here for business and not for play.

Regulations for the manufacture and sale of all anti-hog cholera serum and virus within the state should be made by this board. In later issues of this paper we will say what we think these regulations should be.

Get Good State Veterinarian

We would give the matter of the appointment of a state veterinarian especial consideration. Before the appointment is made a thorough investigation of the man should be made. Get a man you think will co-operate with all the other interests involved in combating all animal diseases. He should not be appointed for one or two or three years, but should hold his office as long as his services are satisfactory. We would amend the law where necessary so that this man could receive a salary commensurate with his ability, and we would have a man with ability enough to command a good salary.

This official must be a man with backbone and tact. To be efficient he must be trained along this particular line. The right kind of a man in the office of state veterinarian will become more efficient each year. Don't get the mistaken idea that this is a small job and that most any veterinarian can successfully fill the position. Even extensive veterinary practice does not fit a man for state control work. He must grow with the work—hence our plan of not having a definite term of office for the state veterinarian. Get the best man you can, and, if he measures up, keep him.

Local boards of health should lend their hearty co-operation in this work. They can be of great assistance to the live stock sanitary board in the enforcement of our sanitary rules, at the same time looking after the work particularly pertaining to their duties.

One of the most important lines of co-operation should be between the government and state authorities in the formation of rules and regulations for the manufacture and sale of serum and virus. We regard this of the greatest importance. A standardizing of serum and virus must be had before the most effective work can be done. To let the work be done as it should be, these authorities should have uniform rules and regulations for the different plants, the manner in which the product shall be made and tested, and the regulations under which it can be sold and shipped. In future issues of this paper we shall take this matter up in detail.

Hog Owner Important Factor

After the live stock sanitary board has been formed, has selected its state veterinarian and other assistants, and prescribed such sanitary and quarantine rules and regulations as it deems best, the farmers and hog owners must heartily co-operate with these officials in carrying into effect the necessary rules and regulations. The one big factor in the fight for the control and eradication of hog cholera is the farmer and hog owner himself. He can't by any means do this alone, but can be of the greatest assistance to the authorities.

We can rest assured that we will have the hearty co-operation of the government in this work insofar as the funds will permit. Congress but recently granted an appropriation of $600,000 for this work, so we can look for much more extensive work from this source.

The common carriers and public stock yards people must also co-operate with our officials in putting into effect such rules as the live stock sanitary boards may deem proper. The veterinary practitioners can be of inestimable value by heartily co-operating in the work and in assisting to enforce the rules and regulations of these boards.

The legislature must also lend its hearty co-operation. It should recognize the great importance of the work to be done and not be niggardly in its appropriations. The live stock sanitary board must have funds with which to operate or it can't be successful.

Education is bound to be of the greatest assistance in the fight against hog cholera. Necessarily, we must have the co-operation of the agricultural college, not only in its veterinary department, but in other departments as well, particularly that of the farm extension department.

Students at the agricultural colleges of our

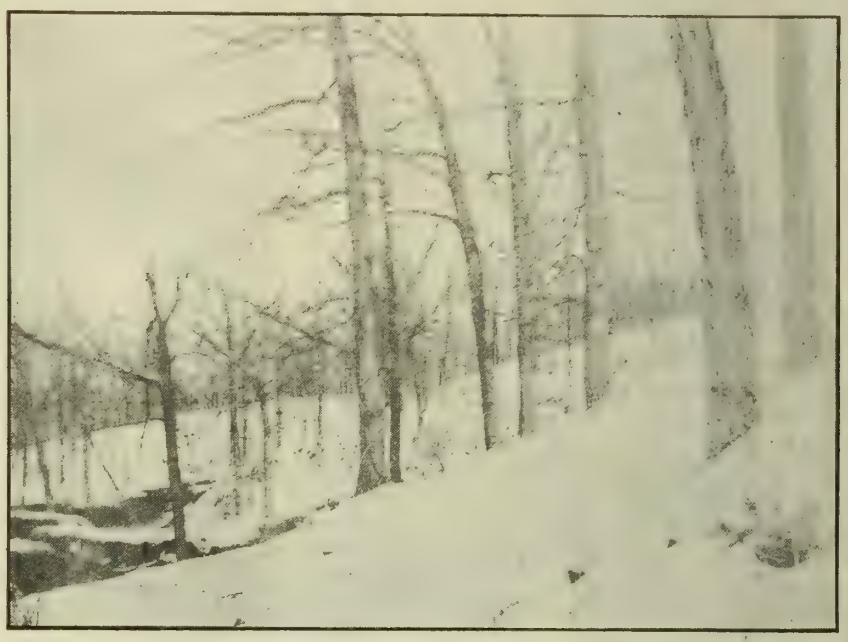
CONTINUED ON PAGE TWENTY (2)

Year Around in Iowa Fields and Groves

When Proud-Pied April, Dressed in All His Trim,
Hath Put a Spirit of Youth in Everything

Now Comes the Glory of the Summer Months,
With Light and Heat Refulgent

Behold, Congenial Autumn Comes,
The Sabbath of the Year



See How the Diamond Glances Play
In Ceaseless Blaze from Tree and Field

Barnyard Manure in Semi-Arid Country

Is Valuable in Conserving Moisture, or the Reverse, According to Methods of Applying

By A. C. Hartenbower

MANY farmers who have used barnyard manure in the semi-arid section of the United States, especially where dry farming is practiced, have been disappointed in the results which they have received. Oftentimes, instead of tending to overcome drouth, it has made the effects of drouth more strongly felt; thus they have charged their failure to produce crops to the manure rather than to their methods of using it under their moisture conditions. Farmer after farmer has been discouraged and has quit using manure because his first experience with it was not satisfactory.

Barnyard manure has its place in those sections, and, if applied properly, adds materially to the power of the soil there to retain moisture. It becomes, therefore, a valuable adjunct to the man who wishes to "beat" drouth. As is well known, many soils in the semi-arid section of the United States are lacking in decaying vegetable matter—many of them are so lacking in that essential element that they are eroded by the wind. Thousands of acres are eroded to such an extent that they are termed "blowy" soils.

Keeps Soil from Blowing

Barnyard manure, when applied to such soils by proper methods, increases the effective water-holding power and tends to prevent erosion to a marked extent. Its effects there are the same as in the more eastern sections, where barnyard manure is so highly prized for increasing the crop-producing power of the soil.

The crop grower who has failed in the use of barnyard manure in the semi-arid section has in most cases failed because he has made a too heavy application of manure at one time. Moisture under his soil and climatic conditions are the limiting elements to crop production. By the application of a large quantity of manure, or by plowing under a large quantity of any other kind of vegetable matter, such as crop residues, the moisture stored in the soil is used up in the decaying of the manure. Many times such large applications have been made that the moisture supply was unable to bring about decay and much of the layer remained as a barrier against the upward passage of the moisture contained in the deeper soil layers and subsoil. By using up the entire supply of moisture in that part of the soil where the plant roots of crop must make its development, the crop that followed in the field necessarily suffered.

Must Not Apply Too Much

More than this, in order to produce a profit-making crop in that section, moisture must be stored in the deeper soil layers and subsoil during the fall and winter previous to the planting of the crop. If this moisture is all used in bringing about the decay of an extremely heavy layer of barnyard manure or of crop residues, crop failure is inevitable. If all of the layer of manure or crop residue were to decay during the winter before the crop was to be grown, the farmer would have a much better show of producing a crop, because there would be left no barrier in the soil which would prevent the upward passage of the little moisture that might remain in the soil. Where a layer of any dry material is left, the crop not only has to exist on the moisture which falls during its development, but also this material, having exhausted

the moisture below in its effort to decay, uses much of the moisture from above.

So, then, barnyard manure must be used with care under the conditions found there. The most successful farmers have learned to apply it in limited amounts. They have found that it is much better to apply small quantities often than to endeavor to make a large application at one time. Twenty tons of manure to the acre, if applied at one time, would cause failure. Five to eight tons of manure to the acre may mean success by bringing about a much better water-holding power and by preventing the erosison of the soil by the heavy spring winds.

Another thing that they have found out is that it is better to apply manure as a top dressing after plowing than to plow the manure under. They have also learned that manure is applied most profitably to wheat fields or to alfalfa fields. Some successful users of barnyard manure who are growing corn or kafir have found that they can apply manure as top dressings to these crops after the first cultivation.

They have also proved, in the sections under consideration, that barnyard manure should be applied as fast as it is produced on the farm. Delay in applying the manure produced results in marked losses from leaching and fermentation—more than one-half of the value of the manure can be lost in six months. Where the farmer owns a manure spreader, or even where he practices hand spreading, it is not impossible to keep the manure applied to the field as fast as it is produced.

There are thousands of tons of barnyard manure that have been allowed to go to waste in that section that should have been applied to the fields. Many farmers seem to forget the value that manure has, not only upon the chemical condition of their fields, but also upon the physical conditions. Since it has been determined that the use of barnyard manure, even under semi-arid sections, is profitable, why permit that essential product to go to waste?

Fall Pigs for Breeding Purposes or Pork

Whether or Not it Pays to Raise Them Depends on Methods Used

THE time is about here for the farmer and breeder to begin breeding such sows as he may want for fall litters. The question, "Are fall pigs profitable?" is a debatable one. Many things must be taken into consideration by the farmer or breeder in answering this question in a satisfactory manner.

First, let us look at the question from the standpoint of the breeder. Te begin with, the man who wants to raise fall pigs, be he a breeder raising pigs with the purpose of selling them for breeding purposes, or a general farmer figuring on selling his pigs on the market for pork purposes, must have good, comfortable buildings in which he can house these pigs during the winter months. Plenty of the right kind of bedding is absolutely necessary.

Should Be Good Market

Breeders who have been raising fall pigs in the past have found several conditions confronting them when they came to dispose of this stock which they did not know about before they tried selling them. There may be a good demand some years in both their own locality and outside for fall boars, and probably the next year these pigs would go begging with practically no demand or at prices much below what they really should be.

In our opinion there should be a better general demand for these pigs each year than there now is. We believe in the general use of more mature animals for breeding purposes. Fall boars that have been well grown when used the following year make good, vigorous breeding animals, and we believe, generally speaking, pigs of more vitality and vigor will be produced from sires of this kind than from more immature pigs.

As Breeding Animals

Experience has taught us, however, that a bunch of fall boars on the place are about the hardest thing to handle one can have around. The breeder who keeps them is entitled to a better price than he gets for spring pigs, though he is often compelled to take less. Our advice to the breeder is to raise such number of fall pigs as he can properly care for, and keep to sell for breeding purposes none but the very best of the males, and if he has none of the very best kind, market all of them.

Fall sows are a different proposition. Generally speaking, these sows, well grown, find ready sale the following year as bred sows; quality being equal, they generally sell better than spring gilts, and make good brood sows. The more general use of these sows would tend to build up the vitality of our herds.

For Pork Purposes Only

What about the man who is raising these pigs for pork purposes only? First, if he expects to raise fall pigs, he should arrange to have them farrowed not later than the first of October. Fall pigs should have as good growth as possible before cold weather sets in. We must bear in mind the fact that the fall pig does not have any green alfalfa on which he may feed after being weaned. He does not have the opportunity the spring pig does to make up for lost time if he happens to get a poor start. It is important that he be farrowed at the right season that he may be strong and vigorous when winter catches him.

It is not best that fall pigs be farrowed while the weather is hot. Nothing bothers young pigs and retards their growth more than flies. July is about the worst month in the year for pigs to be farrowed. In this month the heat, dust and flies all work against them.

When to Market

There are two general methods in handling fall pigs to be sold for market purposes, either of which can be used in a profitable way. Fall pigs may be fed to be marketed in the spring or early summer at a weight of 200 to 250 pounds. If this method is used they must be fed a good, full, balanced ration. A shorts slop, with alfalfa hay or leaves, is about the best and cheapest to balance the corn ration. If you have good buildings in which to house these pigs, bed them well, never letting the bedding get wet or foul, and feed them carefully and regularly, you should be able to market them in May or June at a good profit.

The other way to handle the fall pig is to keep him on the place until he is about 14 or 15 months old. This will not appeal to many of our hog raisers, because they don't want to keep the hogs so long, running the risk of disease. We will outline the method, however, and will say that we have followed it successfully.

Maturing Pigs on Place

Have your pigs at weaning time in the condition we have outlined above. During the winter feed them a growing ration instead of a fattening one, using more protein feed and less corn than would be used in getting them ready to sell in May or June. Don't feed too lightly; keep them growing nicely. Good housing and plenty of bedding are absolute essentials.

In the spring when the alfalfa gets a good start put these pigs in the alfalfa pasture and give them nothing but a sufficient corn ration to keep them growing nicely. This won't take much corn. Don't neglect providing plenty of pure water all the time. These pigs can be carried on this pasture all summer if we have a good growing season. They won't look pretty, but they will grow a good frame and be in fine condition to take on flesh rapidly when they are placed on full feed.

In handling pigs in this way a small patch of ninety-day corn is valuable to be used to start them on in the fall. A short, full feed on corn and alfalfa will soon make these pigs ready for market. You can easily get them to market before cold weather. Don't try to raise more fall pigs than you can care for in good shape. If you try to keep too many the venture will be unprofitable, but a few well cared for should show a nice profit.

First Cultivation of the Corn Crop

CORN planting time is with us. Some time ago this paper urged upon our readers the importance of disking and harrowing their fields in which they will plant corn. Some of our readers no doubt have not been able to give these fields this necessary cultivation prior to planting.

We have seen fields planted to corn in which the weeds were just nicely starting. The planter was followed by the harrow, which acted more as a cultivator to the weeds than as a destroyer. If a rainy spell had followed this planting, lasting a couple of weeks, as we have seen it do, this corn crop would be materially damaged beyond redemption.

A plan we have tried and seen tried with much success is to follow the planter with the cultivator, giving it a deep cultivation. This is one of the most important, if not the most important, of any cultivation you can give your corn crop.

When cultivating after the planter use your best four-shoveled cultivator, have the shovels sharp and set practically straight; the shovels should be set to plow up or cover up all the ground. If you do this, you will kill all the weeds that are sprouted. Use a good, strong team and plow deep. Don't be afraid of tearing up the ground. After this cultivation harrow crosswise of the field. If you will do this you won't be worrying if you have a few days of rainy weather just at the time you should be cultivating the first time. Your field will be clean and the corn will get a good start, ahead of the weeds.

A few years ago we recommended this plan to an acquaintance who had a field of corn on rich bottom land. He followed the plan and that fall we drove along that bottom with him for about ten miles. He had by half the best field of corn along the road, and the only one clear of weeds. That spring, just at cultivating time, came a rainy spell. We all know what happened—the weeds beat the corn growing.

A drive through the country in the fall will generally show the farmer who gave his corn

CONTINUED

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
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"There is no hope of free Canadian wheat," seriously remarks an exchange. Isn't that too bad?

Montana claims to have the highest paying creamery in the world. It is located in the Bitter Root valley, where so many apples come from, and is co-operative. Their average price for butter-fat in the last three years is 34½ cents per pound. The 425 patrons must furnish a good grade of cream, for the butter from this creamery holds an enviable record for prizes won.

One of the many co-operative creameries in Minnesota has recently voted to divide the clean and dirty cream as it comes in, making the two kinds into butter separately. The men who supply the clean cream will then be paid their share of the extra price the clean butter brings. Two stockholders are reported to have voted against this plan. We wonder what grade of cream they are supplying.

Information coming from all directions where winter wheat is raised indicates a good crop outlook up to April 15. The passing of this crop through the winter months with practically no complaint of damage incident to freezing and the storms of winter is a very unusual condition, and places the prospect of a big yield on the best possible basis at the beginning of the spring growth.

Complaints of Implement Exhibitors

The Implement Trade Journal and the daily press have made mention of the fact that many of the implement exhibitors at the Nebraska State Fair are very much dissatisfied with their treatment at the hands of the State Fair Board. The daily papers say the implement dealers feel that the State Fair Board does not protect them from exorbitant charges made by the transfer companies doing the draying into and out of the grounds. They also claim there is a "gentlemen's agreement" between the tent companies to hold them up.

The Implement Trade Journal says: "The board has exhibited a tendency to ignore the reasonable requests of the machinery exhibitor." We take it that the Trade Journal refers to the free admissions for exhibitors. The daily press said the implement dealers were not satisfied with the method of the State Fair Board regarding the admission proposition.

The Twentieth Century Farmer can speak with knowledge on two of these complaints; on the other we cannot. The complaint about which we cannot speak is the free admission. We do know, however, that the matter of free admissions for exhibitors to the fair is a serious one. We also know that it has been the policy of the board to be liberal along this line, and we are inclined to the belief that the implement exhibitors have been as liberally dealt with as have exhibitors in other departments.

On the tent question, let us say we believe the State Fair Board has done all it could do to protect the exhibitor. It gives the privilege on the grounds to some tent company to rent tents, cots, etc., to exhibitors and others. Before this privilege is granted prices to be charged by such company are submitted to the board, and the privilege is granted to the company or firm making the lowest rates. The State Fair Board does not bar anyone from renting a tent from any other person or firm. It allows, however, but one outfit the privilege on the grounds. This appeals to us as being fair and just, and we cannot see what more the board could do to protect its exhibitors.

The dray question is one that has been given much attention by the State Fair Board. Licenses are granted to dray firms and persons. These licenses granted show rates to be charged, which are pasted on each wagon holding a license. As far as the State Fair Board is concerned, these rates are adhered to. We personally know of instances where the board has made draymen refund an overcharge and revoked the license of such draymen.

The dray wagon is an absolute necessity to a state fair. We know the charges they make look high. Perhaps they are high. We also know the State Fair Board has tried in different ways to get better rates for its exhibitors. It would undoubtedly be pleased to consider practical suggestions for the betterment of dray conditions.

The Trade Journal takes the position that the implement display far outclasses any other line of exhibits on the grounds. A close observation during the state fair of the crowds looking at the live stock and agricultural exhibits might make these people think the fair visitors are interested in many exhibits. It takes all kinds of exhibits to make a state fair.

This paper hopes the implement men will look at this matter in a just light, remembering exhibitors in other lines are subject to the same dray and tent charges that they are.

Growing Seed Grains

The growing of grain for seed is a commendable feature of farm industry for any good, careful, systematic farmer to introduce and practice in connection with his other farm duties. There has never been a more opportune time for taking up this work. In the first place, this is a good thing to do as a matter of economy and protection for one's own crop interests. In the next place, the multiplicity of opportunities for putting good corn or other seed on exhibition, so it will become an educational force and tend to better agriculture, makes the growing of exhibition farm seeds very desirable.

There should be more local or neighborhood seed growers—men who have the taste and ambition to produce the best. It will pay the careless farmer, or the farmer of some specialty, whose time is taken up in some other line of work, to buy his seed from his careful, painstaking neighbor who has time and inclination to attend to this seed business. It is just as important to have these specialists of grain growing in a neighborhood as it is to have breeders of pure-bred horses, cattle, hogs or sheep.

It may be of interest to a farmer who wishes to keep farm books to know that the Department of Agriculture at Washington has issued a bulletin on this subject. A very simple system is outlined whereby the profits and losses may be estimated. It is based on the methods employed by fifty-three farmers in the state of New York for three years and under varying conditions. Ask for bulletin No. 572.

Dehorning Cattle

With the feeding of steers or cows in the feed lot the demand for taking off the horns is urgent. One need only observe the use made of its horns by one viciously inclined animal in a feed lot to be convinced that there is not so much cruelty in taking off the horns as in permitting them to be worn by any cow beast. As soon as an animal observes that its defenseless associates are submissive to the one wearing horns, the horn-armed brute commences to assert its authority and becomes a nuisance. The quiet among a lot of polled or dehorned cattle is a satisfaction to any feeder or owner.

The calf dehorning process with caustics and the various preparations is all right in the hands of a very careful operator. It is better to apply twice than to put enough on to cause the oozing of the watery discharge to run down and injure the eyesight, which it often does in the application of some of the dehorning preparations. These treatments should be used while the horn germ is yet loose under the skin.

The clipper in the hands of most operators will do a better job than the saw. The greatest danger is in not cutting down close to the head. One should cut just close enough to leave a little ring of hair at the base of the horn when off. Cutting off the horn, leaving an inch or more at the base, is always followed by slow healing, resulting in just the opposite effect from what the operator desires as to being humane in not going a little closer.

The bleeding after dehorning is usually not of much consequence, and those that bleed most freely heal the soonest. In case of excessive bleeding it may be necessary to apply something to check the flow of blood. There is nothing better for this than dry clay. Put a handful on the wound and hold it there until the blood causes it to become like a paste and cement over the wound, repeating if necessary until it stops bleeding. Some resort to searing with a red-hot iron—a fire shovel is convenient. Occasionally an animal will weaken from loss of blood, but very seldom is there a fatality from dehorning. The clay paste will be washed off by rain or will be rubbed off by the animal as the wound heals.

In case an animal shows much uneasiness within a few days or a week, put it in the stanchion and open up the wound. A deposit of pus will likely be found, especially if it is an old animal and the horn was not closely taken off. This should be syringed out with creoline and warm water—one teaspoonful of creoline to one part of water. One or two applications are usually sufficient.

It is dangerous to dehorn in warm weather, owing to the green fly depositing its eggs, which in a very short time develop the maggot, and causes serious results if neglected.

The states of largest horse population stand in the following order, having above 1,000,000 horses each: Iowa, 1,568,000; Illinois, 1,482,000; Texas, 1,181,000; Kansas, 1,099,000; Missouri, 1,084,000; Nebraska, $1,027,000.

Scientists on Meat Supply

The American Society of Animal Production, consisting of representatives from the animal husbandry departments of the state agricultural colleges of Ohio, Iowa, Pennsylvania, Kansas and Minnesota, held a meeting at the Union Stock Yards at Chicago recently, where plans were formed for a thorough investigation of the most economic methods of beef production, its marketing, etc., the investigation of the influences resulting in the decline of beef supply and what course can be pursued to bring about the most rapid increase in cattle population. In short, the investigations will be to discover the most feasible plan to reduce cost of production. Increased production of meat animals in districts where the available feed resources are greatly in excess of present production, etc., will also be urged.

This association is largely made up of specialists in animal husbandry representing all the large meat-producing states.

The feasibility of profitably growing beef cattle from the calf to the matured beef animal on the high-priced lands of the middle west will be one of the features that will be demonstrated, or at least attempted, in the work of the college and experiment station. To have force and weight with the average cattle feeder this must be a farmer demonstration proposition. A number of farmers should be used to carry out these tests. It must result in a scientific feeding and developing proposition, under good care and conditions, both of breeding and feeding. It is a good idea to present to the public now, and it will be a valuable lesson for the public if it is solved in a plain, straight-forward example that can be duplicated readily by the farmer feeder.

Kafir in the Southwest

In some parts of the territory covered by the Twentieth Century Farmer, particularly the southwest, very serious losses have been sustained by the farmers in being compelled to sell off large numbers of their breeding cattle and hogs. This is not a loss to these farmers alone. All suffer to a greater or less extent with them on account of the decrease in the number of farm animals available for meat.

This selling off of the breeding stock was largely due to the partial or complete faliure of the corn crop in that section. It always takes much more time to replace this stock on our farms than many of us think. When conditions occur such as those with which we have been confronted last year, and in some localities for many years, the farmer and breeder is not blessed with a surplus of money with which he may buy breeding stock. He must necessarily go slow and again grow his breeding stock.

What can our farmers do to prevent this selling off of these animals needed so badly on the farms? Years of experience of some of our southwestern farmers, and experiments covering years of careful study by the different experiment stations, have demonstrated that most any of the kafirs can be grown quite successfully when corn fails entirely.

The Kansas station has carried on a series of very extended experiments in the feeding of kafir and milo to hogs covering a period of ten years. These experiments cover many different methods of feeding and feeds used. In conclusion, it has this to say: "Kafir and milo are good feeds for fattening hogs. These grains, however, should not be fed alone, but supplemented with feeds rich in protein, such as soy beans, shorts and tankage or meat meal, if best results are to be obtained."

We urge upon our readers to give this matter some attention. Plant some of these feeds this year and guard against a possible failure of the corn crop. These kafirs are useful in many ways. They make good silage. This paper will later give its readers some facts about the value of the kafirs in the silo. You could well afford to plant a few acres of kafir, if you never made use of it, to be sure you would not be compelled to sell any of your breeding stock. Don't worry, however, but that you will put these feeds to good use if you have them.

The American Poultry Association recognizes fifty-six distinct breeds of fowls in this country.

Increased Alfalfa Acreage

There seems to be an inclination to increase the acreage of alfalfa in every state where this crop has been tested, particularly in Kansas and Nebraska, the leading states in the growing of alfalfa. The commercial demand for alfalfa has been greater than the supply in many of the hay markets. This has been especially true in the Omaha hay market, where alfalfa hay was hard to get during the winter just past. Prices were high for any quality, and for the best grades $15 to $16 per ton was the prevailing wholesale price. The feed markets of all the cities have a dairy cow demand for alfalfa that has not been satisfied, and the dairymen have been obliged to substitute prairie hay part of the time, which is not satisfactory.

Secretary of Topeka Fair

The fair at Topeka, Kan., is not out of commission, as some reports indicated. It is not dead, but very much alive, and has elected G. E. Clark, president of the American Galloway Breeders' Association, as its secretary. This is a good recommendation for the fair and the fair association. Mr. Clark is a thorough stockman, familiar with the machinery and operation of the agricultural fair, from the standpoint of exhibitor and fair manager. His experience with live stock shows places him in a position to organize his work with system and an assurance of meeting the demands of fair exhibitors with the least possible friction, a thing which some assumed fair managers are not constituted or trained to do.

Mr. Clark is the owner and proprietor of Silver Lake ranch, which comprises 2,000 acres west of Topeka, where he keeps one of the best herds of Galloway cattle in the country. If the balance of Topeka's fair board are chosen with the same good judgment that has been displayed in securing Mr. Clark for secretary, success will surely crown their efforts, and Topeka will report one of the best fairs in the western circuit for 1914.

The very mild winter season that has been experienced throughout the Missouri valley country has been the means of stimulating increased activity among the farmers. Reports indicate a tendency to increased acreage of all the spring crops, and a rush to accomplish this is now reported from all directions. The belief that this is to be a year of great agricultural advantages has prompted a desire to share in the bounteous crops.

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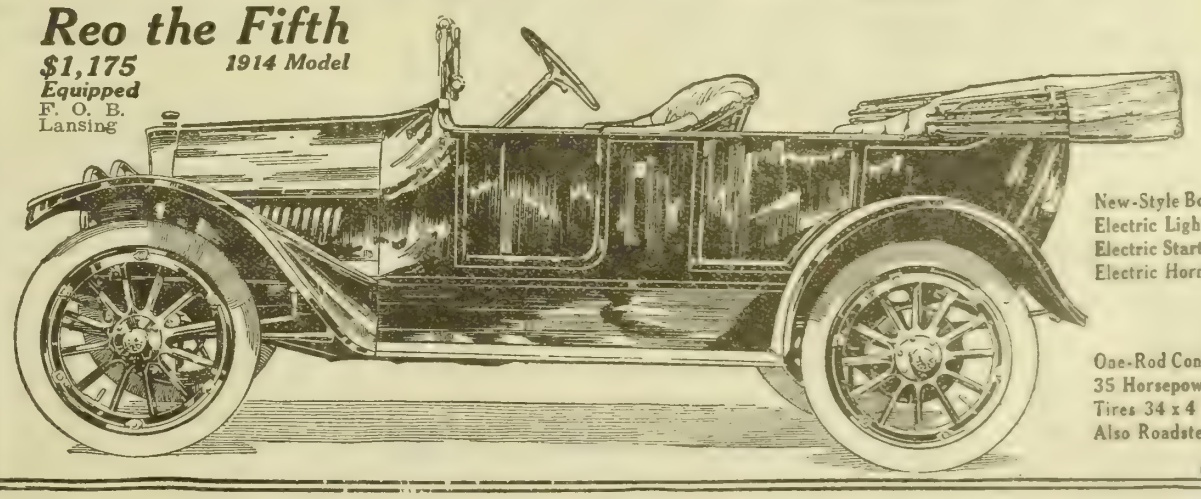

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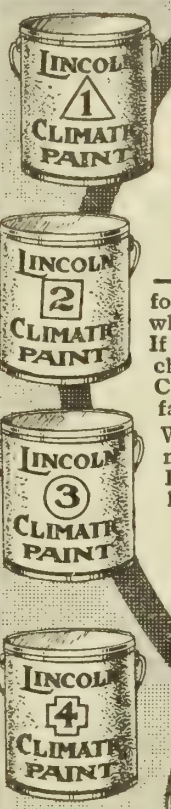

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Explanation of Map

Symbol	Formula	Humidity	Climate
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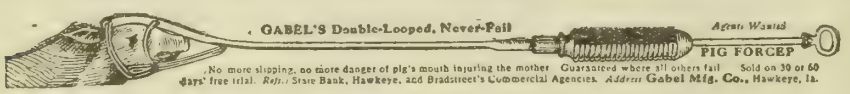
Square	No. 2	65 to 75	Medium
Circle	No 3	50 to 60	Dry
Cross	No. 4	Under 50	Very Dry



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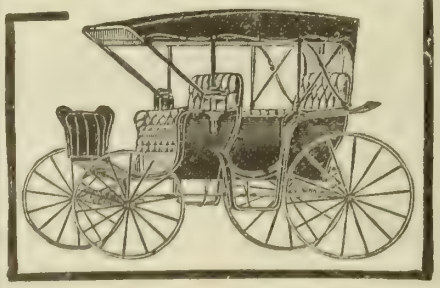
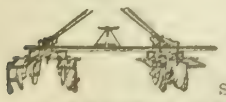


Flying Swede Machinery



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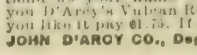

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Careful Use of Spray Essential

Of No Avail Unless Properly Manipulated

HIT or miss methods should have no place in the work of spraying fruit trees. Spraying solutions that are carelessly mixed or applied may do great injury to the trees, or they may fail to harm the pest which is being combated.

"No matter what material is being used, it must be coated evenly over the surface of the leaves and fruit to afford protection," says D. E. Lewis, assistant in horticulture at the Kansas Agricultural College. "If a great amount of sediment is deposited on one part of the tree and a small quantity on another, the results are not uniform, and in some cases may cause a loss instead of protection.

"To prevent this undesirable condition, all of the spraying solution used must be of a definite, known strength, and it must be so well agitated that every portion of water sprayed on the plant contains the same amount of protective material as every other portion. If sediment is found in the sprayer after all the solution has been sprayed out, it is evident that the agitator is not keeping the solution well stirred, and that the results of the work will not be satisfactory."

A machine that works perfectly is not all that is required for success. When it is remembered that only the fruit or other portion of the tree touched by the spray is protected, it will be evident that absolute thoroughness is necessary. Telling how to apply spray, Mr. Lewis says:

"To leave a maximum amount of spraying material on the part sprayed the nozzle used must give a fine mist, and be carefully handled by the operator at its best spraying distance from the fruit. An examination of the leaves and fruit after the water has had time to evaporate, following the spraying application, is the best way of telling if the work is being done right.

"Well sprayed parts show an even, continuous coating, and should not show the collection of spraying material on the lower edge of the leaf. The petal-fall application is intended to fill the calyx cups full of poison, and must be directed down from above and in from the sides to accomplish this purpose. A strong pressure and coarser mist of spray is desirable, as by its use the work can proceed more rapidly and the spray is forced well into the calyx cup. Pressure of 200 pounds is sufficient."

The Friend type of nozzle has given good satisfaction at the Kansas Agricultural College. A disk containing a large aperture is used for the petalfall spray, while one containing a smaller opening is used at other times. Both disks come with the nozzles.

Two spray solutions or mixtures are used in the orchard, according to the weather conditions and the pest to be controlled. They are Bordeaux mixture and poison and lime-sulphur and poison.

Texas Cattle Seem Scarce

There is not the usual demand for the big cattle pastures of Kansas that have been a source of special industry in furnishing summer feed for the Texas cattle that are brought north on their way to market during the early grazing season and finished out for the beef market. The complaint is that there are not half enough cattle to fill these pastures that were formerly contracted to more than their capacity long before this time in the year. That the cattle are not in Texas to satisfy this usual demand is the only explanation assigned. Lease contracts are offered at reduced rates, but no takers are found for fully one-half the pastures that were heretofore full.

Taboo Barbed Wire on Forests

Forest officers in Washington and Oregon plan to discontinue the use of barbed wire on their forests. This will affect their own pastures and public drift fences. They say barbed wire has no advantage over smooth wire; that it injures stock, and that it is more likely to be borne down by soft snow. Stockmen on the Ochoco forest, in Oregon, recently constructed drift fences of smooth wire, though with some misgivings. Now they say they will never use barbed wire again.

NEW LIFE
Found in Change to Right Food

After one suffers for months from acid dyspepsia, sour stomach, and then finds the remedy is in getting the right kind of food, it is something to speak about.

A N. Y. lady and her young son had such an experience, and she wants others to know how to get relief. She writes:

"For about fifteen months my little boy and myself had suffered with sour stomach. We were unable to retain much of anything we ate.

"After suffering in this way for so long I decided to consult a specialist in stomach diseases. Instead of prescribing drugs, he put us both on Grape-Nuts, and we began to improve immediately.

"It was the key to a new life. I found we had been eating too much heavy food which we could not digest. In a few weeks after commencing Grape-Nuts I was able to do my housework. I wake in the morning with a clear head and feel rested and have no sour stomach. My boy sleeps well and wakes with a laugh.

"We have regained our lost weight and continue to eat Grape-Nuts for both the morning and evening meals. We are well and happy, and owe it to Grape-Nuts."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Tver read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Value of Good Milch Cows

HOW many farmers and cow owners have a correct realization or appreciation of a good milch cow? The importance of quality in the milch cow cannot be carelessly overlooked by any cow owner who depends upon the milk product to help pay the expense of keeping the cow and handling the milk. In seasons when feeds are cheap the question never comes up with the farmer and average cow owner whether the cow is a profitable animal or not, especially if she has produced a good calf. It is presumed that she is paying her way, of course, and no accurate tests are made as to her yield of milk or butter.

It is a fact that very few farmers know anything positively about their cows in the matter of production. They know that some cows produce more milk than others, that some cows continue in milk flow much longer than others; but as to actual statistical evidence of what each cow is capable of doing they have never tested them. The usual method of handling the milch cow on the farm is to milk the entire lot of cows and keep no separate account of yields. This is where the farm dairy or even the owner of a few cows may labor under great disadvantage in keeping a cow that is not profitable.

Among the dairymen and farmers who are devoting some attention to milk production there has been great evidence of reform in the last few years in the matter of milch cow quality. There has been more or less attention given to getting cows of quality and quantity, and culling out the light and poor-quality milkers. This is a matter of business, pure and simple; but the farmer who is not specially interested in the sale of milk or butter is not yet aroused to a full sense of the importance of the milk yield.

The present high prices of all kinds of feed are causing cow owners everywhere to figure how they can lessen the expense of carrying these cows from one year to another at a profit. The best of cattle judgment has decided that the cow not employed in raising her calf should be paying part of her board by the production of milk to go into some form of commercial product. Thus we see the beef cattle breeders are taking great pride in the claim that their breed can be of service as milk producers as well as raising the big beef calves.

In the towns and cities where the milch cow costs for every mouthful of feed she eats—hay at $10 to $15 per ton, bran $24 to $28 per ton, with all other varieties of feed at proportionate prices—she must be a good milker in both quantity and quality or she will return an expense rather than a profit to her owner. The cow that has a habit of drying up, or "going dry," as the expression is generally used, for a period of three or four months before coming in fresh is certainly not a profitable animal to retain in the dairy or to depend upon for the family cow. There are too many of these short-time milkers to make dairying and the family cow business highly profitable.

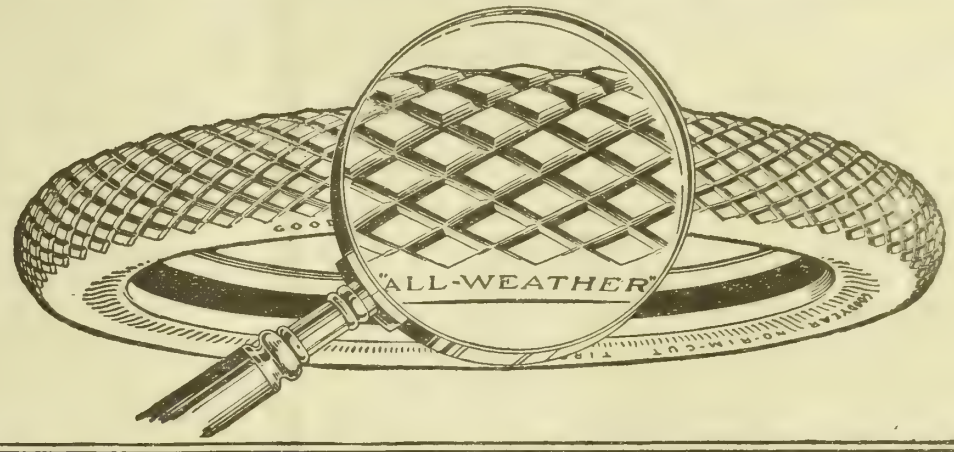
We will venture the assertion that the larger per cent of all the cows now used on the farms for milk purposes are not paying the actual cost of good care and attention at the present prices of feeds, and that if the feed they are consuming had to be bought and paid for out of the farm earnings they would not stay long in the milk herd. The good cow is among the minority, but her numbers may be increased by careful culling and a more rigid scale of requirements by the cow owners. The best of everything should be the ambition of the farmer. This should not be confined to the milch cow alone, but to all things pertaining to the farm. The milch cow on the farm should be made one of the surest and largest sources of revenue on the farm at the prevailing prices for milk and butter-fat.

Ancient Get-Rich-Quick Schemes

About the year 1720 a great many Englishmen invested millions of money in companies which were organized for such objects as "wrecks to be fished for on the Irish coast," "for making oil from sunflower seeds," "for importing a number of large jackasses from Spain," "for a wheel of perpetual motion," and, most extraordinary of all, "for an undertaking which shall in due time be revealed." The promoter of this last company received more than a thousand subscriptions during the morning on which the offering was made and disappeared the same afternoon with more than 2,000 guineas.

The Englishmen who parted with their money for such ludicrous enterprises were not, unfortunately, the last of their kind.—The World's Work.

Dairying is rapidly becoming a science. It is being studied more extensively than almost any other line of farming.



What Ruins Your Tires?

Note How We Combat It in No-Rim-Cut Tires

Is it rim-cutting? That does ruin almost one in three of the old-type tires. It is the chief cause of tire expense.

But we make that impossible in No-Rim-Cut tires by a method which we control.

Is it blow-outs? No-Rim-Cut tires are final-cured on air bags, under actual road conditions. Thus we save the countless blow-outs due to wrinkled fabric.

This extra process—used by no other maker—costs us $450,000 yearly. But it saves our tire users millions of dollars in blow-outs.

Is it loose treads? We paid $50,000 for control of a process which lessens this danger by 60 per cent.

Is it tread wear? Then use Goodyear All-Weather treads. Double-thick treads made of very tough rubber. Made flat, so they run like smooth treads on dry roads, yet they offer wet roads a resistless grip. These treads are immensely enduring.

Needless Waste

Any tire cost you suffer for lack of these features is a needless waste. No-Rim-Cut tires offer all these protections. No other tire in the world offers one of them.

That's why these tires rule Tiredom. Last year our sales were $33,000,000. We sold 11 times as many tires as in 1909. And this year's sales show the largest increase in our history.

Men have bought, in the past two years alone, more than two million Goodyear tires. They bought them because countless mileage comparisons have proved them the greatest tires.

Lower Prices

Prices on No-Rim-Cut tires, in the past year alone, have dropped 28 per cent. Now they far undersell some others. But that is due to our mammoth output, to our efficiency, and to our modest profits. Last year our profit averaged 6½ per cent.

At Goodyear prices you can get the best tires men can build. And you get four costly, tire-saving features found in no other tire.

Give these tires a chance to prove themselves this summer.

Goodyear dealers are everywhere.

GOODYEAR
AKRON, OHIO
No-Rim-Cut Tires
With All-Weather Treads or Plain

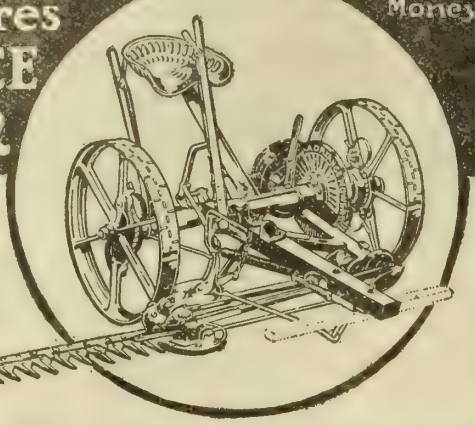
THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO

Toronto, Canada — Branches and Agencies in 103 Principal Cities
London, England — DEALERS EVERYWHERE
Mexico City, Mexico — Write Us on Anything You Want in Rubber

(1481)

Examine the many Special Features of the ADRIANCE MOWER

Saves Time Horses and Money



Simplest in Construction
Most Powerful Cutter
Easiest to Operate
Lightest Draft
Needs Fewest Repairs

"Simplest—Easiest Managed —Most Durable"

The Verdict of the User—Read These Letters

I have an Adriance Mower that has been run for 30 years. It cut 25 acres the past season and is still in good shape. It runs easy and cuts grass no matter how heavy.
E. V. Link.
Shepherdstown, W. Va.

I have used the Adriance Mower made at Poughkeepsie, N. Y. for the last 19 years and consider the No. 8 Adriance, the simplest, easiest managed and most durable machine I have ever seen, and I have used several makes.
Harrison Philbrick.
Rich Hill, Mo.

The Adriance Mower Will Save You Money

Haying season is short and every hour is worth gold dollars. If your mower is old or not wholly reliable, don't trust it and have it "lay down" right in the midst of the busy haying season.

The one mower that gives faultless service, every hour of the day, year after year, is the **Adriance.**

No other mower is so simple in construction; no other mower is so well made—no other mower has the record of so many years of hard service with so little expense for repairs.

Flexible Cutter Bar—The **Adriance** Cutter Bar follows uneven land. The coupling frame hinges are in exact line and swing like a door—no binding. The bar can be folded over the tongue when not in use.

Knife Starts Instantly—The clutch is on the high speed shaft—thus starting the knife instantly and avoiding clogging.

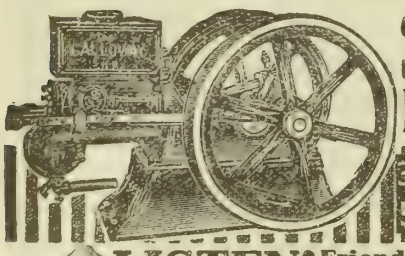
Visible Driving Pawls—In plain sight where you can always see them work. No danger of spoiling a whole wheel as with the enclosed kind.

Automatic Spring Draft—Prevents the driver, team and mower from being injured when striking an obstruction.

Runs Easy—Roller Bearings on the main axle, and the level crank shaft with bronze composition bearings make the **Adriance** run easy and last long.

Complete machines and full stocks of repairs carried by our Branch Houses in all principal cities and dealers everywhere. Any Flying Dutchman Dealer can show you the **Adriance**—ask him. Write us for FREE BOOKLET on Flying Dutchman Hay Tools.

MOLINE PLOW CO.
Dept. 17 MOLINE, ILL.



SAVE $50 to $300
Buy Direct from Factory
30 Days FREE Trial $25000 Bond
5 Year Guarantee On Materials

LISTEN! Friends and Neighbors—While I Tell You About the Greatest Engine in the World.

The Galloway is a better engine at a lower price than you can get anywhere else in the world. Simple in construction. No confusing levers. No unnecessary parts. It eats up work. Fifty thousand farmers, contractors and others bought Galloway engines on trial the same as you can and kept my engine because they couldn't afford to be without it. I'll send you my engine on 30 days' free trial. Put it right at the hardest work on your farm up to capacity. If my Galloway engine doesn't do the work, send it back to me and get your money back.

Write Me. Get My Catalog, Prices and Special Offer

Learn why Galloway engines are used in United States and 30 foreign countries. My free book **proves** I save you $50 to $300. Immense output, careful material buying and direct selling do it. Automatic machinery trebles output without increasing cost. I'm saving two to three million dollars for other farmers, contractors, etc., in the United States. I can save you money on your engine or other farm machinery. I give you a lower price than you can get anywhere and top notch quality that has never been equalled.

Prices Lower Than Ever

Galloway engines high grade, 4-cycle, water-cooled, head turned cylinders, battery ignition, hit-and-miss governor. 5 H. P. engine has 5 1-2 inch bore, 10 inch stroke. Price to you $99.50. Other engine bargains in **30 days' free** trial with **5 year guarantee** backed by $25,000 bond.

Free Service Department

My engine experts will answer any questions relating to ignition, carburetor adjustment, timing or any other engine point. The simple Galloway will run without your knowing these points but by knowing them you can get 25% to 50% more work out of it.

Free Engine Book

Describes and illustrates every Galloway engine. Everything from 1 3-4 H. P. pumping engine to our 15 H. P. heavy duty portable engine. Lowest prices.

My 5 H. P. Engine $99.50

I Save You Money

Free Proposition You can get a gasoline engine, cream separator, manure spreader or any other Galloway article, partly or entirely without cost to you in the end. No agency scheme. Write for engine book and details of plan. Address

WM. GALLOWAY, President
William Galloway Co. 265 GALLOWAY STA. Waterloo, Iowa

Future Outlook for Hog Prices

Market Will Remain High Until Corn is Plentiful

THE present condition of the hog market and the natural demand that must follow for hog products does not give much encouragement to the dealer or consumer that pork will sell for less than present prices for some time to come. The fact that hogs have maintained a steady high level, with no evidence of a permanent decline, and the additional evidence that there is a shortage of feed in the country to make fat hogs, even under the encouragement of the present high prices of live hogs, argues that the pork eater must pay for his bacon or change to other high-priced meats.

It matters not whether there are many or few swine in the country; if they are not in marketable condition and there is not cheap feed to fatten them, they do not enter into the element of supply, and the prices move steadily on to a higher level. The one important factor entering into the present high price of hogs is the scarcity of feed to fatten them.

The general shortage of the corn crop over a very large area of the big hog-producing country of the central west is, more than all other influences, responsible for the present high price of hogs. Of course, the prevalence of disease among the herds of swine had much to do with decreasing numbers and has contributed perceptibly to a higher price tendency.

The corn crop of the United States for the year 1913 was the lowest in yield, with one exception, that has been recorded since 1904. Thus it is readily seen that our present feed shortage, with our greatly increased demands for corn for feeding, for manufacturing and for other purposes, has placed a price on corn that to many feeders of hogs seems prohibitive. A low price on corn and feedstuffs encourages the feeder of cattle and hogs to engage in feeding, even if meat prices are low; while high-priced feeds scare the majority of feeders out of the business, even in the face of high-priced meats and an advancing market.

The feeding of cattle and hogs is not the plain, money-making proposition that the consumer of meats estimates it to be. It is largely speculative, since there enter into it stock cattle and hogs, corn, hay and other feedstuffs, all of which have a market price and a demand in the open markets. The management and expense in combining these products into a more concentrated article of merchandise involves risks and hazards that introduce the element of speculation into the business. Thus the feeder of cattle and hogs has not the sure thing that his business is so frequently credited with.

When will prices of meats be lower? This is a question that the consumer is anxious to have answered. The present feed supply being a governing factor in the matter of fat cattle and hogs for the immediate trade, indicates that no considerable surplus of fat animals is possible until another crop of corn is raised. Grass-fat cattle, of course, will intervene for a period of possibly four months—August to November. This will answer the question of lower-priced meat insofar as beef may be influenced in the fall run of grass cattle, but with pork the maturity of a corn crop is all that gives any assurance of solving this feature of the meat market for lower prices.

The low condition of the feed supply of the country is exerting a nervous influence upon general trade conditions that otherwise would not exist. The influence of a big corn crop for 1914 is demanded in order to relieve the high pressure that is now felt in the meat prices. No other influence can exert a permanent change, and even one full crop cannot supply the demand that will follow for this cereal when so pronounced a shortage exists and when it so generally enters into consumption, in food and feed production and in manufacturing and mechanical uses. Prices for the corn crop of 1914, no matter how large the yield may be, will stand above the average of the last ten years.

The warning sent out by the Missouri State Board of Agriculture and others aroused increased interest in "tested" instead of "guessed it" seed for 1914. More seed corn has been actually tested in a practical way this spring than ever before—proof that scientific agriculture is becoming popular because it is profitable.

Smiles

Usually show up with **Post Toasties**

And why not, when the famous "toasties" flavor begins operations!

There's a deal of skill required in cooking and toasting these thin bits of corn so that every one of the millions of crinkly flakes has the delicious Toasties taste that invites one to call for more.

Post Toasties come in sealed packages — fresh, crisp and appetizing—

Ready to eat with cream or good milk, and a sprinkling of sugar if you like.

Post Toasties

—sold by Grocers.

The General says:-

Every building on your farm will be a better, more valuable building if you give it a *Certain-teed* roof! The label on

Certain-teed

ROOFING

guarantees 15 years' service. No "test" for toughness, pliability or anything else can give you *advance* knowledge of how long a roof will last,

Roofs don't wear out—they *dry* out. Let the three biggest mills in the world guarantee the roofing you buy.

Your dealer can furnish *Certain-teed* Roofing in rolls and shingles—made by the General Roofing Mfg. Co., *world's largest roofing manufacturers*, East St. Louis, Ill., Marseilles, Ill., York, Pa.

CARPENTER PAPER CO., - Omaha, Distributors Certain-teed Roofing.

Harvey Bolster Springs
RACINE

prevent damage to eggs, garden truck, fruits or live stock on road to market. Make any wagon a spring wagon. Soon save cost—produce brings bigger prices—wagon lasts longer—horses benefited. Thousands in use. "My wagon rides like auto" says one user.

MADE LIKE FINEST AUTO SPRINGS

Same principle—same care—same high-quality steel in Harvey Bolster Springs as in finest automobile springs. In resiliency, durability and appearance they cannot possibly be excelled. The Standard Springs of America since 1889. Get a pair at your dealers. If not at dealer's write us. Insist on Harvey's. 40 sizes-fit any wagon-sustain any load to 10,000 lbs. Catalog and fistful of proof free.
HARVEY SPRING CO., 762 17th Street, Racine, Wis.

Cyclone Sanitary Fence makes a permanent improvement that tends to neat, sanitary conditions. Built different from any other—heavy, closely-woven fabric that's weather proof.

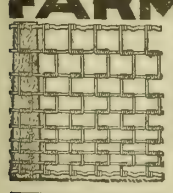
Cyclone Victor Farm Gate is sturdy, simple and durable. Easily, quickly and firmly set at any position desired, at either end. Locks itself; stock can't open it. Frame of heavy, high-carbon tubular steel; fabric large wire heavily galvanized; strong malleable iron fittings. Unequalled in other respects.

GUARANTEED TO THE LIMIT

Get our Free Illustrated Catalog giving many designs.

CYCLONE FFNCE CO.
Dept. 98
Waukegan, Ill.

FARM FENCE



11½ cts. a rod for a 26 in. high fence; 17 1-4c. a rod for 47 inch high stock fence: 28 1-2c a rod for a 50-inch heavy poultry fence. Sold direct to the farmer on **30 Days Free Trial.** Special barb wire, 80 rod spool, $1.40. Catalog free.
INTERLOCKING FENCE CO.
BOX 10 MORTON, ILLINOIS.

BROWN FENCE

Direct from factory, freight prepaid. Over 150 styles for every purpose, all *Double galvanized*. 13c per rod up. New Bargain Catalog and Sample to test, ALL FREE. Mail postal NOW, to
THE BROWN FENCE & WIRE CO.
Dept. 69 Cleveland, Ohio

Fur Sheep vs. Wool Sheep

A KANSAS farmer has proved that Persian lamb, astrakhan and krimmer furs, of which the United States imports $14,000,000 worth annually from Asia, can be grown just as well in this country. On a 1,900-acre fur farm near Cottonwood Falls, Kan., L. M. Crawford is getting these furs by crossing Karakule sheep from Bokhara, Central Asia, with Lincoln and Cotswold ewes. He has the larger part of the only Karakule herd ever brought to the United States. Pelts from the lambs when only a few days old have been sold by Crawford on New York markets at $3 to $10 apiece. The pelts are valuable even if the lambs are born dead or die soon after birth.

So successful has the enterprise been since it was started three years ago, with 1,100 white ewes and thirty-four pure-bred Karakules, that the Kansas Agricultural College, which has been co-operating in the work, has decided to send its expert in charge of the breeding—Dr. R. K. Nabours—to Bokhara this spring to study fur farming there. Dr. Nabours has been assigned the task of learning the fur industry of one continent so that he may be able to help in its introduction on another. He expects to be gone four months.

Nearly 600 lustrous black lambs bearing valuable furs had arrived on the Kansas fur farm April 1. One hundred and fifty of these were from half-blood Karakule-Lincoln rams on Lincoln and Cotswold ewes. The pelts of these lambs were not distinguishable from those of pure-bred Karakules on Lincolns and Cotswolds. This fact, and the further fact that only five of the 150 were white and three spotted, are considered the most important results of the test, inasmuch as it proves that a half-blood Karakule ram, which can be bought for $150, will bring lambs with pelts almost as valuable as a pure-bred Karakule, which sells for $1,000 to $1,200.

Aside from its fur-bearing characteristic the Karakule sheep have excellent mutton qualities, as the Kansas test has proved. Crossed on American breeds this strain causes a remarkable increase in weight and seems absolutely to breed out the woolly or musk-like flavor of the native sheep. Both of these facts are vouched for by Armour & Co., Fort Worth, Tex., which has handled some of this mutton. The Karakule also is a very hardy sheep. In fact, its many desirable qualities proved since its importation to America have convinced the Kansas college experts of the advisability of its wide introduction on this continent. The tests on the Crawford farm are being made to that end.

HARLAN D. SMITH.

Roadside signs, each containing a single catchy sentence in large type, are proving effective in warning against fires on western forests. They give the essentials and tell the importance of protection against forest fires.

The Profits That You Can Make Baling Hay

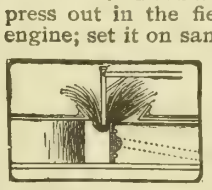
HANDLING HAY FOR PROFIT is simple and easy work with an Ann Arbor Press on the job. Bale alfalfa, vetch, peavines, all grasses, with the least expense for time, labor and power. Many Ann Arbor press owners have written us that they are making more money baling hay than they ever did threshing grain. This just shows what you can do with an Ann Arbor Press. Bale your own hay and then make good profits baling for others.

Good profits are easy with an Ann Arbor Press. It's the *fastest* baler in the world. That fact has been proved by competitive tests. Fair tests have also proved that it has the best record for low upkeep cost. Write us—learn how easily you can make good profits with an

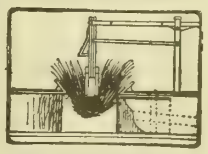
Ann Arbor
"THE BALER FOR BUSINESS"

The Press *Designed* to Bale Alfalfa Without Crushing Stems and Leaves

Here's the press that's especially adapted for Western baling. The extra large feed opening, the slowly descending feeder head, the spring cushioned feeder arm, the automatic block dropper—all are features that mean *high quality* work with least *expense* of time, power and labor. Feed hopper is only 39 inches from the ground. Take the press out in the field and bale direct from the windrows. Use any engine; set it on same platform with the baler. If you have no engine or can not get one ask about our two man horse press with its low step-over and positive self-feeder without springs. All Ann Arbor presses are built to give *efficient, reliable* and *profitable* service. Just what you need for baling alfalfa, vetch, cowpeas, etc. They have *outbaled* every hay press with which they have been tested. They have cut the *cost of baling* wherever they have been used. They offer you *good, practical* reasons why you can earn the *most profits* with the *least expense.* Write us—let us send you a valuable booklet on this subject—"Making Money from Hay." Address



Ordinary Feed Opening



The Largest Actual Feed Opening of Any Baler Ever Made

Ann Arbor Machine Company
48 Broadway
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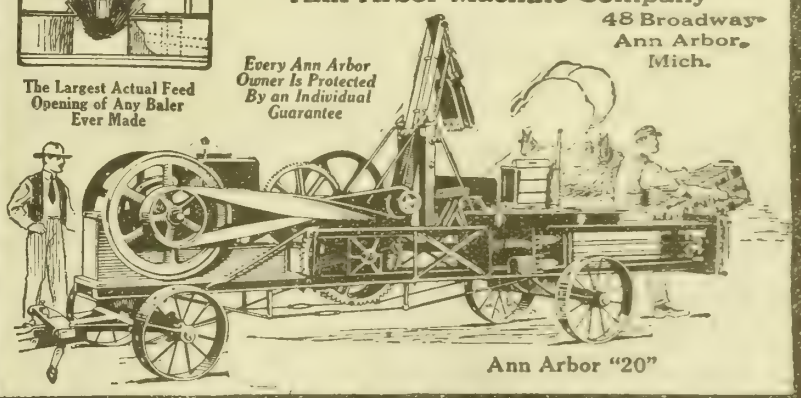
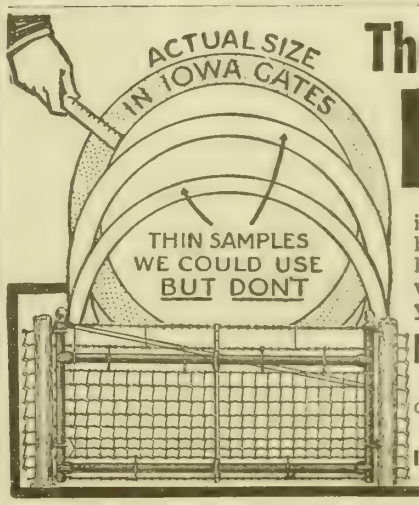
Every Ann Arbor Owner Is Protected By an Individual Guarantee



Ann Arbor "20"



The Secret Strength In Iowa Gates

is the thick wall of the tubing made of high carbon spring steel. When a bull hits your gate, it can't be too strong. A weaker gate than the Iowa will not turn your stock.

Measure the Wall of the Tubing

Do not be deceived by the outside diameter; it may be the same.

Ask Your Dealer for Iowa Gates.

IOWA GATE CO., 21st St., Cedar Falls, Iowa

Delivered TO YOU FREE
on Approval and 30 days Trial

SEND NO MONEY but **write today** for our big 1914 catalog of ***"Ranger"*** Bicycles, Tires and Sundries at prices *so low they will astonish you.* Also particulars of our **great new offer** to deliver you a ***Ranger*** Bicycle on **one month's free trial** without a cent expense to you.

BOYS you can make money taking orders for bicycles, tires, lamps, sundries, etc. from our big handsome catalog. **It's free.** It contains "combination offers" for re-fitting your old bicycle like new at very low cost. Also much useful bicycle information. Send for it.

LOW FACTORY PRICES direct to you. No one else can offer such values and such terms. You cannot afford to buy a bicycle, tires or sundries without *first learning what we can offer you.* **Write now.**

MEAD CYCLE CO., Dept. S186, CHICAGO, ILL.

Expert automobile mechanics get $100 to $150 a month, demonstrators and salesmen more. Good jobs are going begging—there are not enough experienced men to fill them—because the automobile industry is growing faster than men can be trained. Equip yourself for a good salary as expert mechanic or for entering the automobile business for yourself. Ours is the largest and best equipped auto school in the west, the only school in Nebraska with its large building devoted entirely to automobile training. Complete machine shops, all accessories, many makes of autos. Individual experience in large touring cars. Write for booklet.

NATIONAL AUTO TRAINING ASS'N.
2832 North 20th Street. OMAHA. NEB

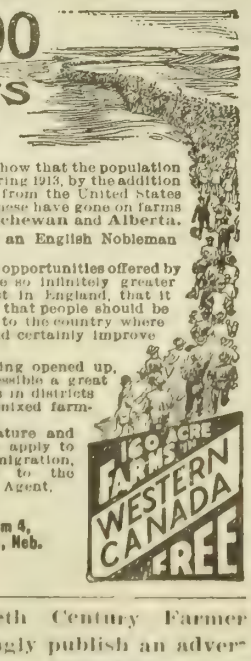
Business College

A Boyles College Scholarship, any course, for sale at a liberal discount.

Apply to or address

Twentieth Century Farmer
Omaha, Neb.

400,000 Settlers a Year



Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in **Manitoba, Saskatchewan and Alberta.**

Lord William Percy, an English Nobleman says:

"The possibilities and opportunities offered by the Canadian West are so infinitely greater than those which exist in England, that it seems absurd to think that people should be impeded from coming to the country where they can most easily and certainly improve their position."

New districts are being opened up, which will make accessible a great number of homesteads in districts especially adapted to mixed farming and grain raising.

For illustrated literature and reduced railway rates, apply to Superintendent of Immigration, Ottawa, Canada, or to the Canadian Government Agent.

W. V. Bennett, Room 4, Bee Building, Omaha, Neb.

160 ACRE FARMS IN WESTERN CANADA FREE

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

The Weather

The weather is the strangest thing!
A warm rain comes in early spring,
And dandelions are by my door—
They were not there the day before!
I put my rubber boots on then
To wade the little brook! And when
The summer days come, if I wish,
I sit beside the brook and fish!
A long branch of a beech tree dips
Into the brook. Its leaves are ships
When autumn comes! They sail away—
They are a battle fleet—I play!
In winter I can hardly wait
On that same brook to slide and skate!
—Mattie Lee Hausgen, in Happyland.

The Editor's Corner

Are you girls and boys joining the corn and tomato and garden clubs this year? A good many of you have already done so and the rest of you will probably wish you had later, when one of your neighbors tells you what fun it is or wins a substantial prize. The boys and girls all over the country did wonderful work with their crops last year, in spite of the dry weather that prevailed over practically the whole country.

Of the corn club boys, Walker Lee Dunson of Alexander City, Ala., not only leads the country, but has broken the record for corn production. Walker raised 232.7 bushels on a single acre, at a cost of only 19.9 cents per bushel. This exceeds the previous record of 228.75 bushels, at a cost of 42 cents per bushel, held by Jerry Moore of South Carolina. The second corn club boy this year is J. Jones Polk of Prentiss, Miss., with 214.9 bushels, raised at a cost of 21.4 cents per bushel, and the third was J. Ray Cameron, Kinston, N. C., with 190.4 bushels, raised at a cost of 33.25 per bushel.

Of the girls the leader in canning and tomato work is Miss Clyde Sullivan of Ousley, Ga., who put up 2,464 cans out of a yield of 5,354 pounds of tomatoes. The second place will probably go to Miss Lizzie Kelley of Union, S. C., with a yield of 4,375 pounds of tomatoes, and third place apparently will go to Miss Lucy F. Bale, Augusta, N. J., who raised 3,980 pounds of tomatoes. Agnes Fridell of Cedar Falls, Ia., with 3,403 pounds, is another girl who had high yields for her tomato patch.

Even if one does not win a prize, the time is not lost, for the corn or tomatoes will sell at a good price—more than enough to pay for the time and labor put on them.

HOME EDITOR.

(Prize Story)

Kitty's and Roy's Easter

By Lois Dunn, Aged 12, Delta, Ia.

It was the day before Easter, and mother had bought Kitty and Roy some egg coloring for Easter eggs. Mother had gone over to see Mrs. Gray, who was sick, leaving the children to color the eggs to suit their fancy.

"Oh, my!" exclaimed Roy, "I am tired of this old habit of coloring Easter eggs. Let's color some real, live chickens."

Of course, Kitty was in favor of the plan, so an old hen and her chicks were captured and the painting began. One chicken was painted bright red, another bright green, and yet another purple, while a great many were spotted. When turned loose the whole flock resembled a rainbow.

The children's mother was greatly displeased, but she had to laugh at the queer sight. But the children spent Easter trying to get the colors off the old hen and the chickens. One chicken was rubbed so hard in the process that it was lame for several days, but the others got off without serious injury.

This is a Real Nebraska Cowboy

Story Contest Rules

Book will be given for best story.

Stories must be original and over 200 words.

Write with ink, on one side of paper only.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Honor Story.)

Story of a Kitty Cat

By Bertha E. Hayes, Fayetteville, Ark.

Once upon a time there lived in Catland a very little blue cat, possessed of a very big curiosity. She wondered why fire burned her paws and why trees grew up instead of down. She bothered her Grandma with questions and she bothered her Mamma with questions, until at last one evening after she went to bed her Mamma came into Grandma's room to know what to do about the little cat, whose name – Dotty Doodle.

Now Grandma was a very wise old cat, and she put on her spectacles and thought awhile. "I know a plan," she presently said, "if you want to do it."

"I am willing to do almost anything," Mamma declared. So she and Grandma got their heads together and planned a remedy for Dotty's curiosity.

The next morning Dotty Doodle awakened and sprang into her Mamma's arms. "Is Dotty Doodle up?" called Grandma from the next room. "Tell her to come upstairs and help me to piece quilts when she is through her breakfast."

So when Dotty Doodle was through breakfast she went upstairs where Grandma was and began to piece quilts, when her attention was distracted by a queer blue box which she was certain she had not seen before. "What is in that blue box, Grandma?" she asked.

"My child," replied the old tabby cat, "I don't know, and you must never, never open it."

Dotty was so curious she could hardly work and was very glad when her Mamma rang the dinner bell. As she and Grandma went down to dinner she saw on the stairs a buzzing little machine.

"What makes it buzz?" she said to Grandma.

"I don't know," said Grandma, "and you must not go near it."

At dinner Dotty saw on the table a bright red can.

"Oh, Mamma," she cried, "what can it be?"

"I cannot tell," Mamma answered. "Don't ever open it."

Dotty asked about a million questions about these funny things she had seen, but no one would tell her anything about them.

That afternoon Grandma and Mamma went visiting and left small Dotty by her own self. The first thing she did was to mount the stairs, two steps at a time, and open the box, and in it was—nothing! Dotty was very much ashamed and started downstairs again, when she noticed the queer machine. She could not resist the temptation and went up to the machine and put her paw in it to see what made it buzz. The machine grabbed her and pinched her tail and slapped her face. At last it let her go. She cried until her little face was all streaked with tears.

Then she sat down on the stairs and was good for a while, but she got to thinking about the red can in the kitchen. The more she thought about it, the more she wanted to know what it contained. Finally, she went downstairs and opened it, and puff! Up into her face came a lot of brown powder which set her to sneezing so hard she could hardly stand up.

Just then she heard her Mamma and Grandma coming and she was so ashamed that she hid, and her Mamma and Grandma never would have found her had she not sneezed. They kissed her and petted her and told her they forgave her. Dotty never knew that her Mamma and Grandma had planned this, but she was never curious again.

Additional Stories

Lydia Stangeland, Albion, Neb.; Lester Nelson, Waterbury, Neb.; Floyd E. Leavitt, Bethany, Neb.; Margie Bates, Plattsmouth, Neb.; Herman Frericks, Coleridge, Neb.; Paul Kruger, Fort Calhoun, Neb.; Ronald Foot, Oakland, Neb.; Bernice Bottum, Benedict, Neb.; Fred Schultz, Ponca, Neb.; Beatrice Bollen, Orchard, Neb.; Percy Neidig, Madison, Neb.; Alice Havens, Ewing, Neb.; Guy E. Hart, Oakland, Ia.; Fenton Resler, Chanute, Kan.; Margaret L. Beals, Sanguache, Colo.; Minnie Perry, Avalo, Colo.; Auren Ambrose, Yuma, Colo.; John T. Fuller, Lost Cabin, Wyo.; Frieda Stangohr, Winifred, S. D.; Beatrice Renshaw, Armour, S. D.; John Weibe, Bingham Lake, Minn.; Imogene Crosby, Deming, N. M.

Of Interest to Our Women Readers

A Song to the Rain

The clouds are over the sun today,
But we'll sing a song of cheer;
The rain is falling on field and lawn,
But we're glad because it is here.

We know that the clouds hold the promise
Of supply for the dry earth's need,
And the raindrops will carry the message
Down to each root and seed.

So we'll sing when the clouds are above us,
And rejoice as the raindrops fall,
Because the Father, with loving care,
Is sending the rain for us all.

—E. T.

Our Home Chat

What are the great problems confronting the farm woman of the present day? The systematizing of the work in the home so that it may be done with as great efficiency and as little labor as possible; the securing of competent help; bringing up the children to take an interest in the home life and the things on the farm; helping to make the rural schools satisfactory, and providing for the mental, moral and physical needs of her family. Some believe the question of equal suffrage is also an important problem. These questions have been discussed and rediscussed until there is no phase of any of them which has not been considered.

Last January, at a meeting of an Ohio grange, a farmer's wife—Mrs. J. C. Indoe—read a paper in which she treated all these subjects in a most illuminating manner. We are reproducing her entire paper on this page, and wish that all our readers would read every word of it. Seldom do we see the problems of our every-day life discussed in such a clear, sane, happy manner. And, after you have read it, we would be very glad to hear from you as to your opinion on these subjects or on any one of them. Remember, this page belongs to the women readers of the Twentieth Century Farmer, and you are cordially invited to write, asking questions or expressing your opinion on any of the problems that confront you and your neighbors.

HOME EDITOR.

The One Woman

Much has been said and written concerning the life of drudgery of the farmer's wife, of its isolation from society, its dreary monotony and its days of wearisome toil. In fact, we are told in a recent article by Samuel H. Adams that up to fifteen years ago our asylums were full of farm women, and, although the number has been much lessened by the help of rural delivery, the telephone, the automobile, the phonograph, etc., the asylum still draws from our farm homes.

Whether or not the work of the farmer's wife may be called drudgery depends very much upon the attitude of mind in which the work is done. I believe that almost any work may become drudgery if done by one who has no taste or love for the work which he is obliged to do. However, there is no denying the fact that in every farm home there is a tremendous amount of hard toil which someone must do, and when, as in the majority of cases, there is only the one woman on the farm, the amount of work which she accomplishes in a year is little short of a miracle. She washes, irons, churns, bakes and cooks for swarms of hired men. She sweeps, dusts, mops and scrubs to keep her house in perfect order; in the meantime she cares for her children. Usually she makes her own and her children's clothing and is often her own milliner. Besides this, she keeps the wardrobe of her family and the hired men carefully mended. In short, she does skilfully and well the work of about three women.

To most farm women this long list of work is very familiar, for the majority of us are the one woman on the farm. We all know just how much careful planning it takes to accomplish all this, and, too, just how very weary we become at times, for it is an amount of work which would make our city sisters gasp with horror just to think of. True, we find little time for leisure or recreation, but we are saving the bills of a washerwoman, scrubwoman, dressmaker and milliner, and are we not thereby helping to reduce the high cost of living in quite as noble and self-sacrificing a way as are the society women at Washington who have quit eating eggs? I truly believe we are, and are doing it much more effectually. It seems to be just a matter of difference in opinion as to what constitutes saving. Some women seem to begrudge every cent they pay out for food, but when it comes to clothing, dressmakers' bills, help for doing housework, etc., no amount of money seems to be too much. To most of us their method seems almost laughable, but our way is often far too pathetic to be laughable. We are saving food, time, money; in fact, almost everything but the most valuable thing of all—namely, our health and strength; and when those are gone, no matter how much money we may have saved and what beautiful homes we may have acquired, there will be no satisfaction either for ourselves or our loved ones.

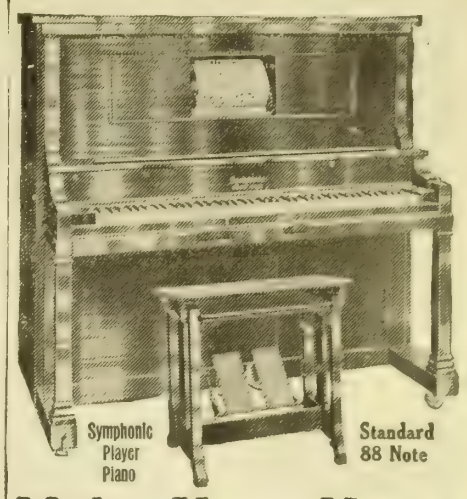
"But," someone says, "what is to be done? Many of us know we are overworking, and we are not all doing so to be saving, for we would be glad to hire help, but getting help in the house is almost out of the question. Few foreign girls will come into the country to work, and our own country girls are flocking to the cities to work in stores and factories, or if they stay in the country at all they seem to want to do almost anything but housework." These facts are all too true. The problem of the foreign girls we cannot help, but when it comes to our own country girls I am afraid that in a measure we mothers are to blame. Are we teaching them not only to do housework, but to love and respect it, or are we too busy to teach them at all? We read much nowadays about how to keep the boy on the farm, and while this is a very important question, that of keeping the girl there is of equal importance, and, I think, when we have learned how to keep our girls with us the problem of the boy is more than half solved. We are not going to interest our girls in housework by allowing them to think that they have no time for anything but school and music, for as much as we may love music, if daughter hasn't time for both housework and music, she had far better let the music go.

Much fault has been found lately with our public school system all over the country, in that the work done is not practical enough. One educator says that our girls should be taught cooking and housekeeping in the high school in place of some of the studies which she now has. Perhaps some changes might be successfully made in our high school work, but for the most part I believe that the work which is being done by our boys and girls in the public schools is the foundation work which is needed for the disciplining of their minds for whatever occupation they may take up in after years, and we mothers must of necessity send them away from us when mere babes to secure this mental discipline. But when we become so busy we are obliged to hand over to our public school the work of training our girls in cooking and housekeeping, we are giving up one of the most beautiful and sacred privileges that a mother can have, and no teacher, no matter how devoted she may be to her work, can ever teach them real homemaking; that is a mother's work which she has no right to shift upon the shoulders of another. In no other way can we mothers give our girls the love for farm and home life than by giving them a share of the work which is to be done there, and in no better way than by work shared together can we secure that confidence and real "chumminess" which should exist between mother and daughter. No matter what sacrifices we may make in the training of our daughters, let us remember that these sacrifices are more than compensated for not only in the help and comfort we have in keeping them with us, but far better than all is the thought that we have perhaps kept them from the temptations and pitfalls of city life.

Now, some women on the farm are not fortunate enough to have daughters to train for their assistance, and even those who have must needs be careful that these daughters do not overwork; therefore, every farmer's wife should have, so far as her means will allow, all the labor-saving devices possible. See that the kitchen is convenient, the water supply handy; then, as fast as circumstances will permit, purchase some of the many splendid labor savers which are on the market today. "But," someone says, "labor-saving devices are expensive; we can't afford them." Well, I suppose most of us, when we are sick and broken down, can afford to pay our doctor bills.

Personally, I haven't anything against doctors; a good doctor is a very necessary person to have in a community, and, of course, he must make a living; but if I had $75 or $100 to spend I would far rather spend it on devices for saving my health and strength than to wait until my health was gone, then pay it to a doctor to help me regain it, even

(CONTINUED ON PAGE NINETEEN)



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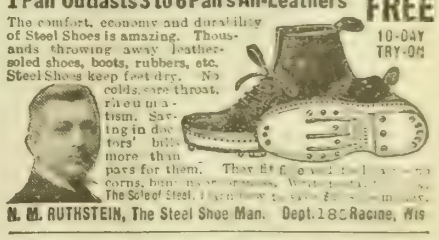

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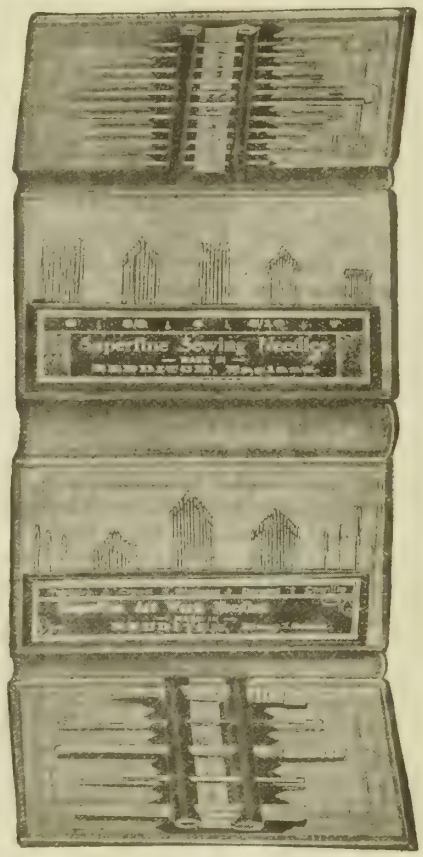

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Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Descrition of Patterns

6608—Ladies' Shirt-Waist—Quite a novelty, this blouse has front and back in one piece, joined at the under-arm seam. The closing is in front and there is a wide, handsome collar at the open neck. The sleeve where it joins the shoulder seam is plain, but forms a small puff at the wrist. The pattern 6608 is cut in sizes 34 to 44 inches bust measure. Medium size requires 1¾ yards of 40-inch material.

6621—Ladies' Dress—In this smart costume we have a full guimpe or underbody attached to a two-piece skirt, which is trimmed with two small ruffles and which may have the raised or regulation waistline. The blouse is in the form of an eton or bolero, with open front, very loose under the arm, drop shoulder and plain sleeve and with a peplum in the back only. The pattern 6608 is cut in sizes 34 to 44 inches bust measure. Medium size requires 5½ yards of 36-inch material for the dress and 1⅜ yards of 36-inch for the guimpe, also ½ yard of 27-inch contrasting material to trim.

6567—Ladies' Waist—Serge, messaline or crepe de chine can be used for this waist, with the collar and cuffs of contrasting material. The waist can be made with either the long or short sleeves. The peplum can be used or omitted. If used it can be made in either the long or short length and with either the square or round outline. The pattern 6567 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2⅞ yards of 36-inch material and ⅞ yard of 27-inch contrasting goods.

6574—Girls' Dress—This dressy frock gives us a plain blouse, with front closing and sleeves inserted in the regulation manner. It is quite full at the lower portion where the skirt is attached. This may be gathered or plaited, as preferred. The pattern 6574 is cut in sizes 4, 6, 8, 10, 12 and 14 years. Medium size requires for the dress without the bolero 2⅝ yards of 40-inch material; the bolero requires ⅞ yard of 36-inch material.

6578—Girls' Dress—A simple frock which is suitable for school or home wear is here shown. It has a plain blouse, made with drop shoulder, in which is inserted a plain sleeve, full length or shorter. The two-piece skirt also closes at the side of the front and is built on seam lines. The pattern 6578 is cut in sizes 4, 6, 8, 10, 12 and 14 years. Medium size requires 2½ yards of 36-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

THE period of greatest danger from baccillary white diarrhea lies within the first forty-eight hours—that is, infection begins to show from that time to from four to six days. If the chicks go over a week without its showing up, the flock is comparatively safe from any infection they brought with them from the shell. If it enter the brood it must be brought in from some infection outside.

But if one chick with it is left in with the brood new cases may keep appearing until all the flock are dead of it. This is always the case where little or nothing is done to save the chicks strong enough to resist it for a time.

The disease is known by the sleepy, drooping condition of the bird and by its general appearance. It seems to shorten up in body and sink far in under the rectum. If the chick takes it when but a few hours' or days' old, and has eaten little or nothing, the discharge is white, watery and sticky, but if it has started well and eaten well before taking the disease from another chick, the discharge may be brown in color more often than white. Sometimes these last cases get well, but the chicks seldom amount to anything. A summary of this disease is as follows: Original source of infection is from the ovary of the mother hen. The organism is in the yelk. Chicks produced from these eggs have the disease when hatched.

The disease spreads from these to other chicks through the infected food, the water or by the normal chicks eating over the droppings. Infection would not take place from chick to chick if it were not for the sick chick drinking and eating with the well. This is why the disease an be stopped by the instant removal of each droopy chick and a thorough cleaning out of its droppings. Especially is this more easily done for the well if the disease does not show up in the infected until after third of fourth day.

The feeding of fresh buttermilk to the exposed was fully tried on certain farms where it appeared last year, and with other due caution the results of the lactic acid treatment gave good results in large numbers of healthy, fast-growing chicks.

Don't buy eggs from yards where this disease was known to have been last year, as the same old infected hens may still be there. Such hens often live to be old. They seem healthy, but, as luck has it, where investigation has been made and tab kept on them do not lay many eggs after their first year.

There have been found certain degrees of infection in this white diarrhea bacillus. Some carry malignant infection, some so light that not many of the chicks infected die with it. The infection passes from hen to hen by means of the nest litter.

Brooder Coops

Any old box turned down in the poultry yard is often made to do for a brooder. Old boxes that let in rain, old barrels going to pieces, improvised coops of old boards with merely a hole for an entrance and no provision for ventilation, are too often used. Such coops are merely chick killers. Coops for chicks must be made roomy enough for the confined hen to move about without danger of stepping on the chicks and crushing a large per cent to death. Each coop is best made if made large enough to allow a row of slats on one side from front to back, leaving room on the other side free from the feet of the hen. From this, through the front slats, the chicks can run outside, or best at first into the wire run with which each coop should be supplied, especially for the rainy or chilly days. Chicks will stand any amount of cold if chance is given to run into the warm hover of the mother's breast when the chill nips at their tender toes. This is best accomplished by keeping the hen in the coop until it gets strong and lusty.

Coops should be made wind-proof and water-proof on all sides, which also means top and bottom. Rubber roofing is cheap material if kept painted to roof the coops with. Ventilation is best given above the door, the ventilator covered with screen wire and protected from rain. Roomy and dry is the idea.

Poultry Facts in Brief

While you may wash hen eggs and yet expect a good hatch, it is nearly fatal to the germ of a duck egg to wash away the oily substance that seems necessary to its proper hatching. This oil prevents evaporation from the egg and too much air going in to harden and toughen the shell against breaking under the bill of the duckling.

***

Cover the eggs you are saving for brooding purpose. The covering, which should be of thick cloth, will retard evaporation from the eggs. Eggs too much exposed to air dry out rapidly, and an egg dried out means a poor hatching egg.

***

In making up breeding pens mate from six to ten hens with one male bird. Different advice as to color and even shape must be given for judicious mating in the several breeds, but general advice is mate the younger males with the older hens and the pullets with the older males for vigorous chicks.

***

Many Indian Runner duck keepers declare they cannot see why this duck is so highly extolled as the Leghorn of the duck family, for it lays no more for them than any other kind of duck. If you inquire closely into the matter you will find they do not feed their ducks half enough, depending on them to find their own living. The Indian Runner merely responds to good feeding and lays heavily the summer and fall through. Other breeds will not respond to this extent.

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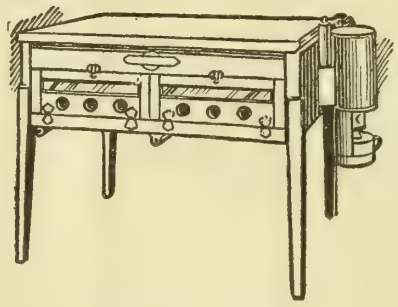

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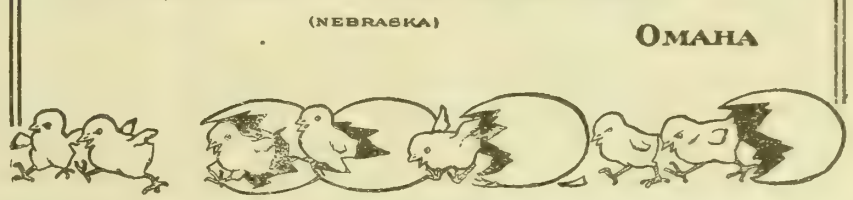
(NEBRASKA) OMAHA



300 LICE Or More on One Hen

is by no means uncommon. No one would expect to fatten a steer with that number of "ticks" sucking his blood, but many expect the old hen to go ahead shelling out eggs while lice and mites are sapping her very life. We have counted over 2000 dead lice under a row of ten hens, on a roost board painted the night before with Lee's Lice Killer. This great killer does double duty—contact kills mites, lice, bedbugs, etc. about the roosts; the vapor kills lice on the chickens sitting over it. Put up only in airtight cans.

For sale at over 10,000 towns.
Three sizes—35 cts., 60 cts., $1.00. Poultry Book free.
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LIGHTNING RODS
9c PER FOOT
Best Quality Copper—Extra Heavy Cable
System guaranteed satisfactory or your money back. Just write a postal for our Proposition and FREE Catalog which makes everything plain.
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By the Bushel or Carload
Our corn will do well any place where corn grows. Leading Varieties, also Field, garden and flower seeds. Catalogue and samples Free.
AYE BROTHERS,
BLAIR, NEBRASKA.
Seed Corn Center of the World.

SELLING EGGS BY CO-OPERATION

EGGS from select pure-bred stock: B. Rocks, W. Rocks, B. Orpingtons, W. Orpingtons, S. C. W. Leghorns, S. C. Brown Leghorns, W. Wyandottes, S. L. Wyandottes, Light Brahmas, Blk. Langshans and R. C. R. I. Reds. Eggs fresh, fertile, from farms where only one breed is kept. Sent prepaid by parcel post to any address in U. S., 15 eggs for $1, or 100 for $6.
Your check with exchange accepted.
Norfolk Breeders' Co-Operative Assn., Norfolk, Neb

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Free

STUART'S PLAPAO-PADS are different from the truss, being medicine applicators made self-adhesive purposely to hold the parts securely in place. No straps or buckles attached—no obnoxious springs. Cannot slip, so cannot chafe or press against the bone. Thousands have successfully treated themselves at home without hindrance from work—most obstinate cases cured. Soft as velvet—easy to apply—inexpensive. Awarded Gold Medal.
Process of recovery is natural, so afterwards no further use for trusses. We prove it by sending you Trial of Plapao absolutely free. Write today.
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J. C. Reefer, the poultry expert of 1619 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

Twentieth Century Farmer will not knowingly accept for publication any advertisement that is meant to deceive or mislead its readers in any way. Kindly inform us of any advertiser who does not do as he advertises.

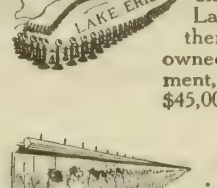
Unseen Forces Behind Your Telephone

THE telephone instrument is a common sight, but it affords no idea of the magnitude of the mechanical equipment by which it is made effective.

To give you some conception of the great number of persons and the enormous quantity of materials required to maintain an always-efficient service, various comparisons are here presented.

The cost of these materials unassembled is only 45% of the cost of constructing the telephone plant.

Poles
enough to build a stockade around California—12,480,000 of them, worth in the lumber yard about $40,000,000.

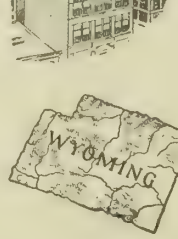


Telephones
enough to string around Lake Erie—8,000,000 of them, 5,000,000 Bell-owned, which, with equipment, cost at the factory $45,000,000.

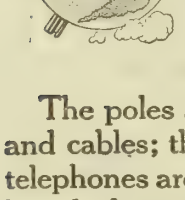
Wire
to coil around the earth 621 times—15,460,000 miles of it, worth about $100,000,000, including 260,000 tons of copper, worth $88,000,000.

Switchboards
in a line would extend thirty-six miles—55,000 of them, which cost, unassembled, $90,000,000.

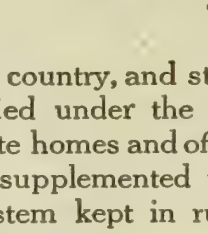
Lead and Tin
to load 6,600 coal cars—being 659,960,000 pounds, worth more than $37,000,000.



Buildings
sufficient to house a city of 150,000—more than a thousand buildings, which, unfurnished, and without land, cost $44,000,000.



Conduits
to go five times through the earth from pole to pole—225,778,000 feet, worth in the warehouse $9,000,000.



People
equal in numbers to the entire population of Wyoming—150,000 Bell System employes, not including those of connecting companies.

The poles are set all over this country, and strung with wires and cables; the conduits are buried under the great cities; the telephones are installed in separate homes and offices; the switchboards housed, connected and supplemented with other machinery, and the whole Bell System kept in running order so that each subscriber may talk at any time, anywhere.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES
One Policy *One System* *Universal Service*

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You lose $1.00 on every six sheep you shear in the old way. The Stewart gets a length and quality of wool that brings the highest price. Extra profits soon pay for it. The Stewart has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of the latest improved Stewart pattern. Its price complete, including 4 combs and 4 cutters of the celebrated Stewart quality is $11.50.

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gets all the wool and takes it off quickly and smoothly in one unbroken blanket. To shear with the Stewart Machine seems like play to those who have labored with hand shears in the old, hard, sweaty way. You don't have the same swollen aching wrists. You don't scar and disfigure your sheep with uneven shearing and spoil the wool with second cuts like you used to do. **Get one from your dealer,** or send us $2.00 and we will ship C. O. D. for balance. Money back if you are not well pleased.

Stewart Ball Bearing Clipping Machine
For Horses, Mules and Cows

It pays to clip horses and mules in the spring—they look and feel better, do more work, rest better and get more good from their feed. Clipping the flanks and udders of cows prevents the dropping of filth into milk. The Stewart can be used for clipping horses, mules and cows without change. It's the easiest to turn, does the fastest work, stays sharp longer and is the most durable. **Get one from your dealer,** or send $2.00 and we will ship C.O.D. for the balance. Money back if not well pleased.

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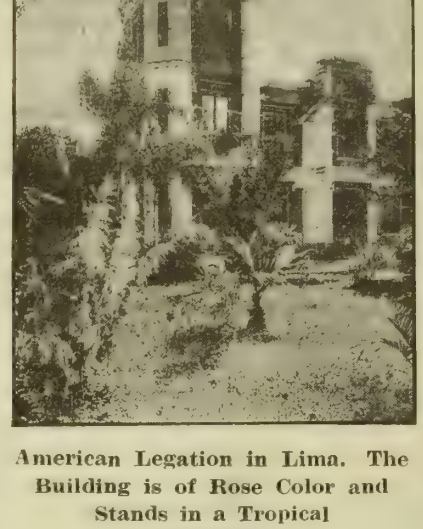
FRED ECHTENKAMP, Box H, Arlington, Neb.

Chat with New Minister to Peru

By Frank G. Carpenter

LIMA, Peru, April 19.—I have just returned from a call upon our new minister to Peru. His name is Benton McMillin, and his native home is Nashville, Tenn. He has long been a figure in American politics, and for many years he was one of the leading democratic members of congress. He was an associate of President McKinley, when the latter was still in the house. I remember that when I first met him Tom Reed was still speaker and Roger Q. Mills of Texas and William R. Morrison of Illinois were joined with him as leaders of the opposition. I knew him later when, after about twenty years in the house, he resigned to be governor of Tennessee, and I now find him here 700 or 800 miles south of the equator, as active as ever, representing our interests in the republic of Peru.

I called upon Mr. McMillin at the American legation. He has rented for this purpose one of the finest houses in Lima.



American Legation in Lima. The Building is of Rose Color and Stands in a Tropical Garden

It is known as the Quinta Herron, and is situated in Carmen Alto, in a beautiful semi-desert oasis which makes up the city. About it are royal palms a hundred feet high, wide-spreading magnolias and tropical trees that bear beautiful flowers. The building itself is of a brilliant rose color. It covers a great deal of ground, and seems very tall in this town of low structures. In the center of the house is a tower, over the front door of which hangs the United States coat of arms. Entering the house you come into a hall with rooms on each side, about twenty feet high. The building is furnished with Spanish chairs and sofas, that date back to the days of the inquisition, and with antique rugs from Morocco and Egypt. It is, on the whole, exceedingly comfortable, and Mr. McMillin tells me he is delighted with the social life of Peru. He has his wife and daughter with him, and he has already established the closest relations with the president and the leading men of the country.

Friendly to United States

Mr. McMillin tells me that the Peruvians are friendly to the United States. They expect to reap much from the Panama canal, and the president of the republic is planning to spend millions upon a great breakwater to connect the island of San Lorenzo with the port of Callao, and thereby create the finest harbor of the eastern Pacific.

In my talk with the minister we went over the general movements now going on for the increase of American trade. He thinks the commerce between the two countries might be greatly developed, and urges our manufacturers and exporters to send down agents and prospect the field. He says they must have men on the ground, and that they should establish agencies here with Spanish-speaking Americans in charge.

The foreign trade of Peru now amounts to between $60,000,000 and $70,000,000 a year, and of this the United States has just a little more than one-fourth. It stands next to Great Britain in the amount of its commerce, and is far ahead of Germany or France. Our exports, however, are much less than our imports. They amounted in 1911 to only about $6,000,000, whereas those of the United Kingdom were at least $2,000,000 more. As to the goods bought of Peru, the United Kingdom takes almost one-third of all the country sells and Uncle Sam gets one-fourth. The trade of the United States has been steadily increasing, and with the opening of the canal we shall probably lead.

American Capital on the Job

Just now some of the biggest things in Peru are owned by Americans, and the machinery and supplies imported by them are a traveling commercial museum showing the benefits of American trade. Take the mines of the Cerro de Pasco, the officials of which are spending millions of dollars a year in bringing in and distributing supplies. They have a great warehouse at La Fundicion, on the very top of the Andes, where they carry everything in the shape of mining and smelting machinery, as well as all sorts of supplies for their men. They have a company store at which the natives can get American goods and they are importing all sorts of materials for use in their work.

Take the item of lumber. As I visited the mines I saw near the shaft which is now taking out something like 4,000,000 pounds of copper a month, a great lumber yard, stacked high with Oregon pine, and I was told that it was cheaper to bring the timber over its long ocean ride, and then carry it up the Andes by railroad than to freight in the eucalyptus which is far away from the railway, but not over 200 miles from the smelter.

Another living example of the benefits of American manufacturers is the Cerro de Pasco railroad. This runs on the Amazon slope of the Andes from Oroya, which has an altitude of 12,000 feet, to Cerro de Pasco, seventy-five miles away and 2,000 feet higher. The road is made of American steel and the ties are of Oregon pine. The track is as smooth as that of the New York Central from Buffalo to Albany, and it has comfortable cars of American make. The bridges come from the American Bridge company at Pittsburgh, and its locomotives are Baldwins and Rogers. The engineers and conductors on the road are Americans, but the road was built by natives under American superintendents and the firemen and all the common employes are Cholos and Indians. I am told that the road paid for itself within the first two years after building and that its traffic steadily grows.

Railways Planned by Americans

Nearly all the leading railways of Peru were planned by Americans. The famous Central road back of Lima, which I have described, was the creation of Henry C. Meiggs of California, and this is so of the Southern railway of Peru and of nearly every line in the country. Since Meiggs' death there have been many extensions. Most of the roads use American rolling stock and are run after American methods. With the exception of the Cerro de Pasco lines, they are under the Peruvian corporation, a financial institution with its headquarters in London, but the subordinate officers are largely from the United States. The superintendent and general manager of the Central is J. T. Feehan, an American, who was for a long time one of the chief officials of the Mexican Central, and the Southern railway is under the superintendence of Mr. L. S. Blaisdell, a Texan who also has been connected with railroads in Mexico.

Peru has now a number of railways in projection in which Americans are interested. It has planned several extensions from the tops of the mountains to the Amazon valley, and what is known as the McCune scheme requires only the

signature of the president to bring it into existence. This road is to extend from the Cerro de Pasco line to the Ucayali river, a distance of a little more than 200 miles. I am told that it will cost something like $11,000,000 to build, and that arrangements have been made for American capital to undertake the work as soon as the concessions have been completed. There is, however, a hitch between the president and Mr. McCune, and just now the president has refused to sign the papers, although they already have been sanctioned by congress.

I understand the president of Peru thinks that the terms given to the American concessionairies are too liberal and that Peru is now too poor to carry them out. According to these terms Mr. McCune is to have 7,500 acres of forest for each kilometer of track and also a grant of 5,000 acres for each vessel of 500 tons that he places on the Amazon and its tributaries.

Another provision is that the subsidy bonds to be issued are to be guaranteed by the receipts from the tobacco monopoly, and that this is to be in the hands of Americans. The government manufactures and sells all the tobacco, and the income therefrom is something like $1,000,000 per year. As to the value of the railroad. no one doubts but that it would be of enormous good to Peru, but at present there is no indication that the president will let it go through.

American Goods in All Stores

I find American goods for sale here in all the stores. The merchants are mostly English and Germans, with some Peruvians and quite a number of Chinese and Italians. The hardware stores carry American axes, hatchets and other tools of all kinds. Much of the cotton prints come from our country, and there are also American meats sold in cans and a great deal of American machinery. You can buy our shoes at high prices, and American hats are sold in competition with the English and French.

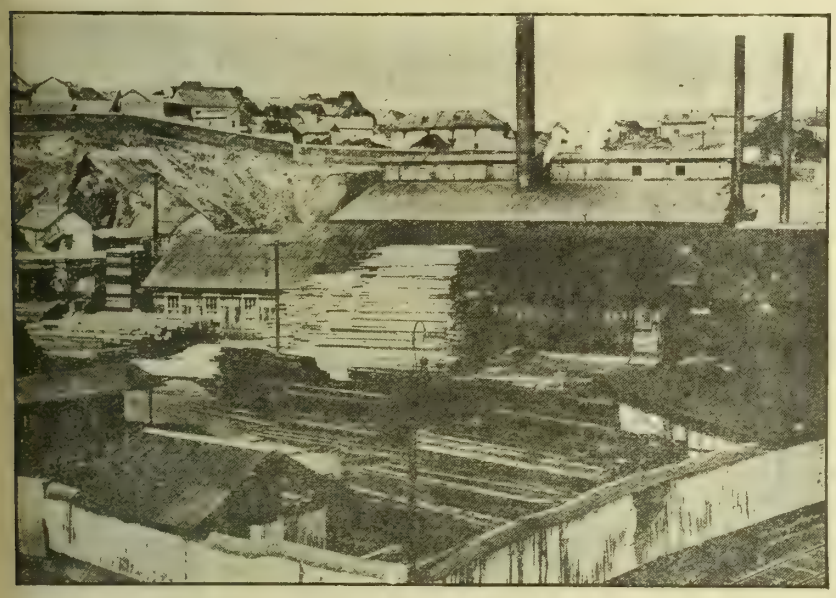
As to woolen goods, the Peruvians have mills not far from Cuzco where they are turning out blankets and underwear, but the most of the other woolens still come from abroad.

And just here I wish to give credit to an American enterprise in Peru that is doing more for our trade than any other single force. I refer to the West Coast Leader, a weekly paper published in English here in Lima, and to Peru of Today, a magazine, which has the same editor. These English journals are devoted to opening up Peru to English and American capital and to the pushing of American trade. Their editor, John Vavasoor Noel, was for a long time a newspaper man in the United States, and he has held important political and official positions. He speaks and writes Spanish and Italian as fluently as English, and his papers deserve the support of our American firms who wish to get trade in this country.

There is a big opening here for a chain of American banks and this may be the outcome of the wedge that J. G. White & Co. of New York have put into Ecuador. They have taken the contract to clean up Guayaquil at a cost of $10,000,000, which may lead to their investing in railroads and other public works in that country, with extensions on into Peru.

American Firm Long Established

At the present time the chief American firm on the west coast is Messrs. W. R. Grace & Co. It has been operating here for more than a generation, and it now has great houses in London and New York, with branches in Peru, Bolivia and Chile. The business was established by Michael P. and W. R. Grace, and it is said to have resulted in very large profits. It now does all kinds of business from the individual package of goods to the rolling stock for a railroad, and it deals in big contracts involving millions of capital. The Graces have long run a line of steamers from New York to western South America, and they are now taking over the management of the Peruvian passenger line which belongs to the government, but so far has been run at a loss. The firm has, I understand, a capital of something like $10,000,000. It is known everywhere for the ability and probity of its officials and members and is an institution of which the United States should be proud.



American Lumber Yard on Top of the Andes, Containing 1,000,000 Feet of Oregon Pine

Another opportunity for American capital down here is in the establishment of a good line of American hotels along the west coast. There should be an American kept hotel at Guayaquil and another at Quito, in Ecuador. There should be a third at Lima, a fourth at Arequipa and a fifth and sixth at Valparaiso and Santiago de Chile. With the opening of the Panama canal there is bound to be an enormous tourist travel to this part of the world, and at present the hotel accommodations are beyond description abominable. I have been stopping here at one of a half dozen hotels owned by a monopoly which charges from $5 to $6 a day gold. My hotel is the Maury. Its rooms are generally filled, and I understand that it is paying enormous dividends. Everything is done in the slowest, most grudging and insanitary way. The rooms are without baths, and the meals are of Spanish cooking such as would not be tolerated in any first-class American hotel. The monopoly knows that there is practically no competition, and if one objects the clerk is liable to say that his house does not care for American customers.

Antiquated Methods of Hotels

To show the antiquated methods of these hotels I have just paid my bill. I have been at the Maury for eleven days with myself and stenographer, and the bill as it lies before me it $123. Of this $22 consists of extras, and I find that in addition to the regular charge I have been paying 25 cents per dish for two poached eggs every morning and little

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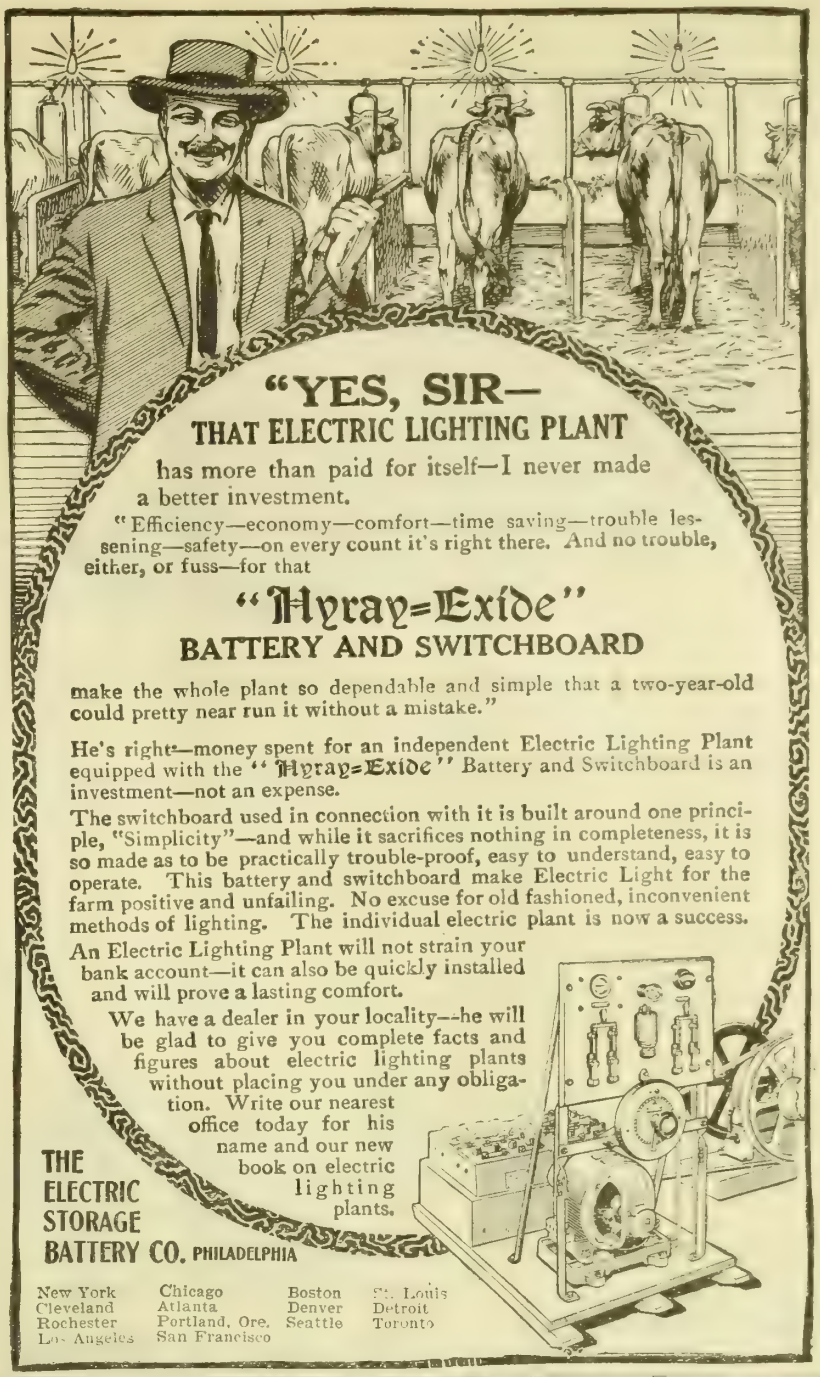

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The switchboard used in connection with it is built around one principle, "Simplicity"—and while it sacrifices nothing in completeness, it is so made as to be practically trouble-proof, easy to understand, easy to operate. This battery and switchboard make Electric Light for the farm positive and unfailing. No excuse for old fashioned, inconvenient methods of lighting. The individual electric plant is now a success.

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We have a dealer in your locality—he will be glad to give you complete facts and figures about electric lighting plants without placing you under any obligation. Write our nearest office today for his name and our new book on electric lighting plants.

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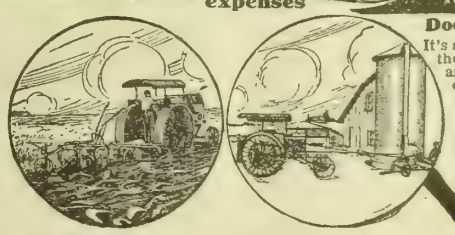

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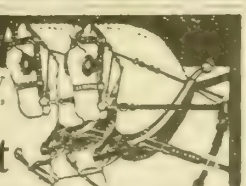

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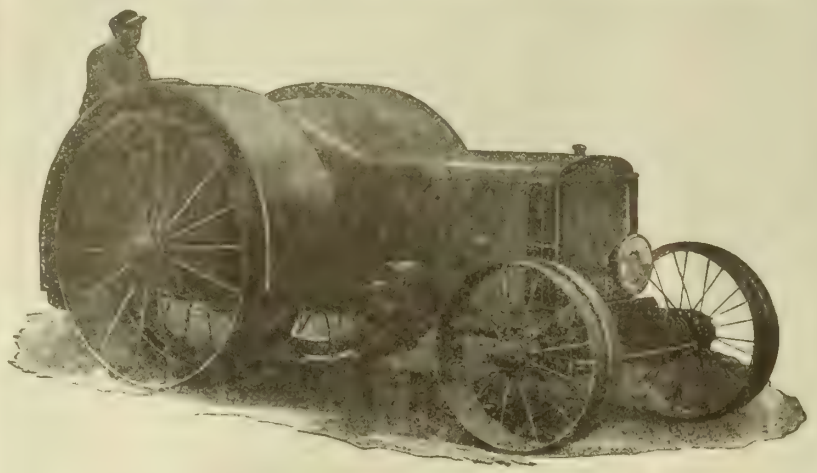
The Little Giant Oil Tractor



Built compact and powerful on attractive lines. The successful tractor for small or large farms in Missouri River Valley. "Little Giant" will do your plowing, threshing, hauling, etc. Its ruggedness adapts it for extra heavy duty. Burns kerosene, gasolene or distillate. Has but 150 machine parts against 350 in majority of other makes, keeping lower repair bills and giving better service. All working parts of engine enclosed. Motor covered with a hood the same as an automobile. Starts like an automobile.

	Model A	Model B
Weight, all tanks full,	8,700 lb.	4,000 lb.
Horse Power	35	24
Draw-bar Pull	4,500 lb.	2,300 lb.
Wheel base	102 in.	87 in.
Width	75 in.	52 in.

"Little Giant" combines efficiency, power and light weight. Sold under a positive guarantee. Ask today for catalogue of the "Little Giant"—the tractor that exactly fits your needs.

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providing you send us, with your order, the names of ten men who use tobacco. State whether for smoking or chewing. As sure as you order one 4-pound lot, you will order 100 pounds. Our old customers are our best customers, so will you be if you try this sample box. Enclose a one dollar bill and ten names. Address,

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185-Acre Farm Equipped $2800

Eight good cows, two hogs, poultry, quantity hay and wood, valuable farming machinery, wagons, tools, etc., go with this splendid farm to quick buyer; dark loam fields cut 40 to 50 tons hay, abundantly watered pasture for 25 cows and 200 sheep, several hundred apple trees; 10-room house, 60-ft. barn, running spring water in both; charming location overlooking village and beautiful valley; only 1½ miles to town, R. R. station, high school, etc.; widow unable to care for it; everything goes for only $2,800, half cash; full details, location, etc., page 3, "Strout's Spring List of Farm Bargains," just out, copy free. E. A. Strout Farm Agency, Station 3128, Union Bank Bldg., Pittsburg, Pa.

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On June 17th the State of Wyoming will sell at public auction, in tracts of 160 acres and up, approximately 40,000 acres choice prairie land within one to twelve miles of Cheyenne, the state capital. Terms one-tenth cash and balance eighteen years at four per cent annual interest. Very low round trip excursion rates will be available for those desiring to attend this sale. For sectional map showing location of the lands and full particulars address

S. G. HOPKINS,
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Capitol Building, - - Cheyenne, Wyo.

OWN YOUR OWN HOME. Don't be a renter. Lands are in Pembina and Cavalier counties, rich, black fertile loam, no gumbo, no alkali. Terms to suit purchaser, small first payment, half crop or annual cash payments. Purchaser must own stock, machinery. For complete details call on or write Red River Valley Land Co., Fargo, N. D.

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This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Says Rabbit Raising Pays

Mrs. F. A. S., Nebraska: I have read so many interesting and valuable articles through the pages of the Twentieth Century Farmer that I think each one that has a paying business should let it be known so that others could profit by their experiences. I have lived on a farm for eleven years and have raised all kinds of poultry and find it a paying business, but, oh, so much work and grief attached to it! I always found more easy money in raising ducks, geese and turkeys than chickens, as they are far easier to raise. I liked the poultry business all right until about a year ago I read in a magazine sent me by a friend that the rabbit business was more paying than poultry and less work and grief and cost far less to feed. It was some time before I could decide to go into the business, for one reason was I imagined it would be a dreadful thing to kill one, as they are so pretty. But after I got so many it was no more trouble to kill one than to kill a chicken. Then I imagined it would be quite a trick to raise them, but after getting them I find they raise themselves—no mites or lice to fight, no roup, cholera or gapes to doctor—just feed them twice a day.

I bought three females, bred, and one buck. I had them two weeks, when each doe gave birth to six little ones, making eighteen, and each doe has produced young every six weeks since I bought them, and with from six to eight in a litter it doesn't take long to get a herd of rabbits. I bought the French white breed, giving $3 each, and I consider them cheap, as I now have a nice herd of rabbits and still increasing.

When I get a nice number ready for market I dress and ship them and get from 20 to 30 cents per pound, and the hides sell from 25 to 30 cents each. The French white rabbit will dress from three to three and one-half pounds, making a neat little sum per head. The feed is scarcely anything compared to what it costs to keep poultry. They eat corn, alfalfa hay, stale bread, crackers, apples and potatoes, and during the summer one can feed them on weeds, grass and vegetable tops. They can be confined in very small pens and do well. I have my does in pens two by four feet and have a larger pen for my others. A pen eight by sixteen feet will afford plenty of room for seventy-five rabbits.

I would like to see others try raising rabbits as a side line and learn by experience how paying it is. After eating one rabbit, anyone would fancy the rabbit business, as their meat is much lighter in color than that of a chicken and is as tender when a year old as a chicken at three months.

Home Canner Successful

Miss G. D., Nebraska—In answer to Mrs. C. W. R. of Nebraska, will say I am the owner of a steam pressure canning outfit, with which I have successfully canned corn, peas, string beans, lima beans, sweet potatoes, hominy, pork, beef, sausage and tripe in glass quart jars. If she will send me self-addressed envelope, I will give her any information free of charge.

Durocs or Poland-Chinas?

T. W. H., California: Will you please inform me which of the two breeds of hogs mature the fastest and which grow to be the largest, Poland-Chinas or Durocs?

Answer—Experiments have shown that between the Duroc-Jersey and the big-type Poland-China there is practically no difference in the matter of size and rapidity of growth. The question of which of these two breeds is preferred is largely a matter of personal taste on the part of the breeder.

Growing and Use of Kafir Corn

J. N. G., Arkansas: I should like to know from your advisor something about kafir corn, how to plant, cultivate and harvest and how to feed it. Is it a fodder crop? Is it dangerous to pasture cattle on stalks after harvesting?

Answer—In the issue of April 18 you will find some reliable information on page four regarding kafir seed. This grain does equally well on clay or loam soil. Prepare as for corn. Plow, then thoroughly disk and harrow, and plant with a corn planter, using the drilling attachment. Or, if your land has been well prepared in the early spring, it may be listed. Rows should be three and one-half feet apart and plants three to five inches apart in rows. Use three to six pounds of seed per acre. If wanted for fodder only, it may be broadcasted, or the press drill may be used, sowing one to two bushels per acre. In any case do not sow until the weather is warm and settled, as the seed rots in the ground easily.

As this plant has not the deep-root system of corn, do not cultivate as deeply. Harvesting may be done by cutting off the heads and then cutting the stalks later for fodder, or the whole plant may be cut and the heads threshed. After threshing the grain cure it thoroughly before storing, as it heats easily. Stalks may be pastured without danger. The grain may be fed to horses, cattle and hogs, and the forage may be fed to cattle. The forage is especially good for dairy cattle. It is a better plan to grow for forage, under ordinary circumstances, as the stalks are pretty coarse and tough for feed when grown for grain. Kafir is a good crop in your locality. In Nebraska and northern states sorghum is better, as the kafir is sometimes bitter so far north, and the cattle do not like it.

Preparing for and Seeding Flax

J. A., Nebraska: Will you please tell me the amount of flax seed to sow to the acre, and also time for sowing, and how to prepare the seed bed. We read the Twentieth Century Farmer every week and value the paper highly.

Answer—Flax is usually grown in this country on sod. This should be plowed in the fall to a depth of about five inches, plowed again in the spring and disked until smooth and firm. Land must not be wet, lumpy or weedy when seed is sown. Any time in May will do for seeding. It may be drilled or broadcasted. The latter is the more usual method. Use two to three pecks to the acre.

If your land is a heavy loam or inclined to gumbo, would not advise you to sow flax. There are a number of other crops that are more valuable, especially on old land.

Thank you for your words of appreciation. We are always glad to

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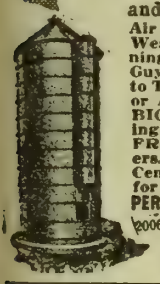

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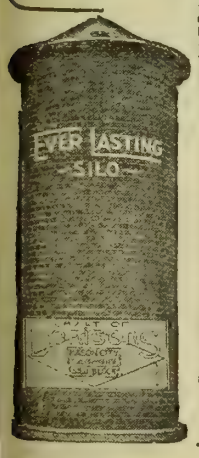

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know that we are of service to our readers.

System of Farm Accounting

G. G. B., Illinois: Do you know of a system of farm accounting you can recommend? I would like one covering both stock raising and cropping. If you know of a system which has been proven adequate and can recommend the same, you would greatly oblige me by letting me know where I can secure it.

Answer—The system of farm accounting described in Farmers' Bulletin No. 572 of the United States Department of Agriculture covers all branches of farming. It is not theoretical, having been used for three years by a number of farmers in different lines in New York state. Address department at Washington and it will be sent free of charge. The state of Oregon has also made some extensive investigations into this subject and may be able to furnish you information. Address agricultural college at Corvallis.

Water Carrying Expensive

If a value of 20 cents an hour is placed on a woman's time, she wastes enough time in a year by carrying water a few rods each day to pay the cost of piping the water into the house. In a few years, besides undergoing the drudgery and exposing herself to sickness through inclement weather, she wastes enough time to pay for a simple water system. To meet the demands of rural communities, the Nebraska University farm at Lincoln has designed several systems, the plans of which may be obtained free in Bulletin No. 18.

The One Woman

(CONTINUED FROM PAGE THIRTEEN.)

if it were the means of helping him make a living.

Then some women go so far as to blame their husbands for not having the necessary and up-to-date kitchen help. From personal observation I will have to admit that I really believe men, as a rule, are more up to date in their methods of work than are women, and in many instances the husband is far more willing to purchase these things than his wife is willing to have him. Some of us have done our work in the old-fashioned ways so long it seems a little difficult for us to do it in a newer and better way. I may be mistaken, but I believe some men would be willing to pay out a considerable sum of money just to keep their wives good-natured, for you and I know just how much harder it is to keep pleasant when we are overworked, and perhaps some of us may remember a time when we have said some some harsh or unkind word to one of our dear ones which we would have given much to recall, and all because we were so tired and nervous we had little control over our dispositions and tempers. This does not pay. Too many of us are putting last things first; too many of us are doing splendid housekeeping, but very poor homemaking. We are putting nonessentials in the place of the most essential duty of all—that of being at our best physically and mentally for our family.

We need all the help we can get from our daughters. We need labor-saving devices, and, more than that we need rest and recreation for our bodies and minds. We should not think it a sin to lie down and rest a half hour in an afternoon when we are especially tired. We will do enough better work when we arise to more than make up for the time taken. Then let us try to have the evenings at least for ourselves, for reading, music, fancy work or whatever the taste may dictate. Try to keep in touch with the outside world by reading a few good books and magazines. Try to keep ourselves alive and alert mentally, that we may be better companions for the fathers and the growing boys and girls.

Hundreds of women all over the world today are fighting for the right to vote, and I believe the time will come when that right will be granted and all thinking women will carefully fit themselves for this new responsibility. But whether or not we ever vote, I fully believe that if the time and energy now being spent in obtaining that right would be spent by the women all over the land in making better wives and mothers of themselves, so that the boys and girls might be trained to be noble, useful citizens, we would accomplish far more toward the betterment of our nation than we would accomplish with our vote.

So let us as the one woman on the farm learn to discriminate between the essentials and the nonessentials of our work, remembering that health must come first. Then let us not lay so much stress upon the providing of the physical comforts of our dear ones that we forget the mental and spiritual natures to which we must administer. The things which our families will remember longest after we are gone will not be our spotless kitchens, nor even the splendid food which we set before them, but they will remember the smiling face, the cheery words and the moments spent in wise counsel, leading some dear one out of the paths of trouble and temptation.

So, with our bodies vigorous with health and our minds alert and full of joy for the glorious work given us to do in the world, let us offer up a prayer for divine guidance, and take up our work anew, remembering—

That this, the greatest, dearest thing of all,
To know that I may answer to my loved ones' call;
That God has made me mother, friend and mate,
Keeper of their lives and molder of their fate;
Is there a greater gift in all God's store?
My woman heart is full—I ask no more.

Ohio. MRS. J. C. INDOE.

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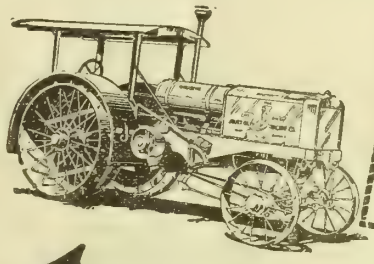

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If you believe in *real* tractor quality—not "blue sky" quality, then the Joliet Oil Tractor should merit your immediate attention. Here's a tractor that in a short time has *earned* the name of "The Packard of the Farm"—a tractor that for dependability, power, fuel economy, ease of operation and simple, staunch construction is in a class alone. This we stake our 30 years of engineering experience on.

What Do *You* Want?

If you think, like many others, that a tractor should be built to give good service for a lifetime—that it should run 8 to 10 miles an hour on the road without excessive vibration—that it should be spring-suspended both front and rear—that all moving parts should have roller bearings, and that it should run on kerosene, then you need the *one* tractor that embodies these and other big features—

QUALITY
THE JOLIET OIL TRACTOR

This wonderful tractor is sturdy and big. But the biggest thing about it is its quality. Get that again—*Q-U-A-L-I-T-Y!*—it sticks right out of every part, from the massive heavy duty kerosene-burning engine to the little easy-working throttle lever.

The Joliet is the lightest tractor for its power ever built, being from one-third to one-half lighter than any other of equal power. It is so well balanced that an ordinary man can roll this 8,700-pound machine along the floor with *one hand!* Looks *impossible?*—let us prove it.

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We will give you absolutely a *free trial* on your own farm and cheerfully refund your money if we don't make good. Remember, the strongest guarantee ever put behind any tractor is behind the Joliet. Let us send you all the facts about this wonderful tractor—the price, the terms and the guarantee. The coupon above brings everything. Mail it to us today. 4)

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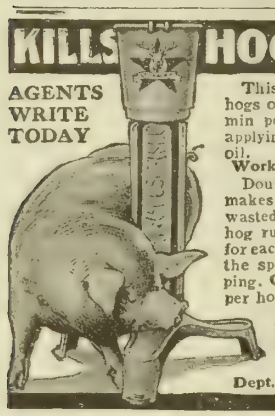
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Double automatic feature makes double saving. No oil wasted---flows only when hog rubs and only enough for each dose. Gets right to the spot. Better than dipping. Costs only 4c per year per hog to keep your hogs healthy. Saves feed. Fattens quickly. Write today for prices and terms.
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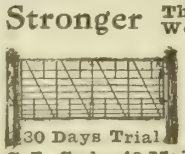
Solid steel bars instead of woven wire. Double automatic latch locks gate. The whole gate raises over snow banks. Also manufacture steel Farm Fence Posts.
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Parties interested in farming should read Dairy Tip Company advertisement, page 8.—Advertisement.

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for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as there is only one of each.

Review of Live Stock Market

By A. C. Davenport

NO NEW or interesting developments took place at the live stock markets of the country last week. The trade everywhere remained in about the same condition as detailed in these columns the previous week. Moreover, no very marked change in the general condition of the trade is looked for in the near future.

Cattle receipts at most market points, while running a little larger than the previous week, were decidedly lighter than for the corresponding weeks one and two years ago. The six big markets show a falling off for the year to date of over 200,000 head as compared with last year.

Moderate receipts gave the cattle market a somewhat better tone last week, although prices at most points showed comparatively little change for the week. Operators on the market, however, were a little more hopeful, feeling that supplies in the country are becoming smaller as every week rolls by. At the same time competition from Argentine beef is not expected to be quite so sharp during the next few weeks as it has been during the greater part of April. This expectation is based on reports indicating smaller shipments now afloat and also smaller quantities to be loaded during the next week or two.

Argentine Beef Not in Demand

Eastern markets still claim to be carrying liberal stocks of the South American product, due to the poor consuming demand. The difference in prices between it and American beef is not sufficiently large to make it any great object for the retailer to handle Argentine beef, and they are, according to most reports, not taking very kindly to it. There is undoubtedly quite a strong prejudice in the minds of most consumers against the imported article, but there is a lot of it being worked off to the restaurant and hotel trade.

A year ago at this time conditions such as now prevail in the market as regards supply would have been a sure forerunner of a sharp advance in the market, but the consuming demand this year has so many times proven disappointing that no one is looking for any marked improvement in the trade. On the contrary, there is a feeling that one or two days of heavy receipts would very likely prove sufficient to wipe out any gain in prices that might be brought about by several days of light receipts.

The Mexican war scare did not appear to have the slightest influence on the market and was not expected to do so. As a matter of course, actual war might stimulate prices somewhat, but the chances were considered too remote even to occasion any discussion of the possibility.

There is so much dissatisfaction with the condition of the cattle trade that there is danger of losing sight of the fact that there has never been a time when the market was as high the latter part of April as it is now. One and two years ago April prices were high, but they did not come up to the high point reached this season. While prices are higher than last year, just as most everyone predicted they would be, the increase in values has not been as large as expected. Farmers and feeders made the mistake last fall of paying too much for stocker and feeder cattle. On top of that came the big advance in the cost of corn and all kinds of feed. High-priced feeder cattle, plus high-priced feed, proved more than equal to the gain in fat cattle prices. Thus it happens that the farmers' books are showing balances on the wrong side of the ledger, and the prevailing dissatisfaction is the natural outcome.

Hog Receipts Liberal

Hogs during the early part of last week showed a good, stiff advance over the previous week, selling at the highest price reached in some little time. Later on in the week the market broke sharply, wiping out all the gain and more, too. Receipts of hogs at the leading market points have been very liberal, although running somewhat behind last year's record. For the year to date there is a falling off at the six big markets of about 320,000 head, while the market has for the last week been only about on a par with a year ago. That, however, is saying a good deal, as it must be remembered that hogs a year ago at this time were bringing the highest prices ever paid in April, with the single exception of the year 1910, when the average price on the basis of Omaha was $10.60 at the beginning of the month and a little over $9 at the finish.

During May, 1913, the hog market averaged around 40 or 50 cents lower than during April, and on the strength of that the bears are now, some of them, predicting lower prices for the next thirty days. The bulls do not subscribe to any such sentiments, although admitting that, with the supply of hogs in the country proving larger than generally anticipated, it is possible that prices may not make any further improvement for some little time to come. There is quite a strong element in the bull crowd that appears to feel that the market is already bullish and about as strong as existing business conditions would warrant, and that they will be satisfied with prices remaining where they are, subject, of course, to the usual fluctuations of a speculative market.

Sheep and Lambs Moving Freely

Sheep and lambs have been moving very freely of late and prices have shown more or less strength; in fact, the trade has been in a good, healthy condition, although, as noted before in these columns, prices as compared to the cost of the feeder lambs and of the feed consumed are not high enough to make the feeder any money.

Hog Cholera

(CONTINUED FROM PAGE THREE)

states should be trained in particular along the lines of what should be done to successfully combat hog cholera. Let them be thoroughly trained in sanitation, given instructions regarding effective quarantine, what should be done and how it is to be done, as well as training in the proper use of serum and virus, when to use it and when not to use it. The agricultural colleges can do much to assist in hog cholera control by a thorough training of the students along these lines.

The Tuberculin Test

It was Prof. James Law who said: "For those who aim at the prompt and thorough eradication of tubercular infection from a herd, and at securing at once a guarantee of progeny and beef and dairy products, no resort can in efficacy be at all compared with the tuberculin test."

Tuberculin, when diluted for use, is the preserved, sterile, filtered product of the tubercle bacillus grown for a proper time upon a glycerinated beef broth culture medium. The fact of its being sterilized and filtered precludes any possibility of its transmitting disease to an animal into which it is injected

Tuberculin, prepared by responsible manufacturers and properly used, will not produce tuberculosis in healthy animals. Nor will it have any permanent effect upon the quality of milk produced. Furthermore, tuberculin will not produce abortions, unless there should be extremely advanced tuberculosis, and that is a rather remote possibility.

It was resolved by the international commission on the control of bovine tuberculosis that tuberculin, properly used, is an accurate and reliable diagnostic agent for the detection of active tuberculosis. But it was admitted that tuberculin may not produce a reaction when the disease is incubating, when the progress is arrested, or when the disease is extensively generalized. The last condition is, of course, relatively rare and may usually be detected by physical examination.

On account of the period of incubation, and the fact that arrested cases may sooner or later become active, all exposed animals should be retested at intervals of six months to a year. And an animal that has given one distinct reaction to tuberculin should thereafter be regarded as tuberculous. No animal whose temperature is above normal should be treated with tuberculin. Healthy cattle suffer no injurious effects from the tuberculin test.

First Cultivation of Corn Crop

(CONTINUED FROM PAGE FIVE)

the right kind of first cultivation. Often have we driven along the roads at the time of or just after the first cultivation, after the corn was up, and seen a nice, green row of grass or weeds along the row between the track of the inside shovels of the cultivator. The farmer who cultivates corn in this manner is simply throwing dollars to the wind.

Many things can be the fault. Perhaps the cultivator shovels were not properly greased when put away last year, and the shovels not scouring. The shovels may be dull or in need of pointing. If so, they are not doing the work they should. They may not be properly set, or the shields set too low. You had better spend one, two or three hours in properly adjusting your cultivator shields and shovels. Never cultivate the first time without fully covering the ground between the rows and having some loose dirt fall around the stalks in the hill.

Some of our corn raisers have the mistaken idea that they can get the weeds between the rows the next time over. If you leave them for the next time, some of them will be so large you can't get them. Be sure to get them the first time.

Don't forget that you can't do a good job with a poor tool. Examine your shovels, and if they need pointing or sharpening don't neglect having it done. A few cents spent in this way will bring you many dollars in return. Anything you can do to make the first cultivation as thorough as possible you should do, be it in the way of a good, steady team or a good tool.

Plan War on White Grub

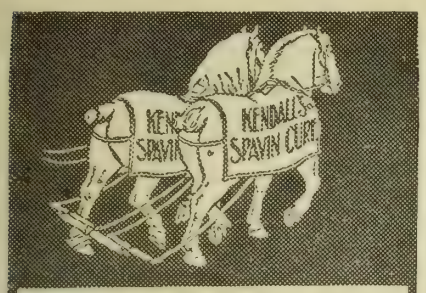
In at least five places in Wisconsin this year the June bug will meet with organized and systematic opposition. Under the provisions of the law passed at the last session of the state legislature, providing for the perfecting of a method of controlling white grubs and grasshoppers, an organized campaign is being planned by J. G. Sanders, state nursery inspector, college of agriculture, University of Wisconsin.

It is expected that the spring of 1914 will mark the appearance of the adult beetles or June bugs in tremendous numbers. Each of the female beetles usually lays from fifty to sixty eggs, which under favorable circumstances would mean a like number of grubs to feed upon corn roots, grains and strawberries. Hence, the importance of exterminating as many of the June bugs as possible.

Three methods of control are proposed. The first is by spraying with poisons on the trees where the beetles feed at night; the second is to jar the trees and catch the beetles on canvas spread beneath, the most favorable time for this operation being from midnight to 3 a. m. The third method, the use of trap lanterns, will probably be practiced most in the campaign. An ordinary barn lantern is suspended over a tub of water upon which a film of kerosene has been spread. The beetles are strongly attracted to the light, and their destruction follows.

Motor Car to Every 100 People

More than 1,000,000 motor cars are at present in operation in the United States. The population of the United States, speaking in round numbers, is 100,000,000. That is to say, there is one car for every 100 people. When it is remembered that $500 has been, until this year, the minimum price of an automobile, and that in population men, women and children are included, it is evident that in no other field of industry has the American genius for distribution and merchandizing been more signally displayed than in that of the automobile.—The World's Work.



Lame Horses Put Back To Work Quick

TRY Kendall's Spavin Cure. It has *saved* a great many horses—has put them back to work even after they had been given up. Over 35 years of success has *proved* the merit of

KENDALL'S Spavin Cure

It is the old reliable remedy for splint, spavin, curb, ringbone, thoropin, bony growths, swellings, sprains and lameness from many different causes.

Its cost is so small a matter, compared to the value of a horse that you *cannot afford* to be without it.

Sold by druggists everywhere, $1.00 a bottle, 6 for $5.00. Get a copy of "A Treatise on the Horse" at your druggist's, or write

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As good as New Milk at half the Cost.

100 pounds makes 100 gallons of Perfect Milk Substitute.

Send for pamphlet, **"How to Raise Calves Cheaply and Successfully Without Milk."**

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HOOF TRIMMER

Keep the colt's hoofs trimmed and avoid cracks, thereby increasing their value. Safe, reliable, easily operated, always handy. Lasts a lifetime. Price very small.

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HORSES

Kodak picture of my jet-black coming 3-year-old Percheron stud, from 2200-lb. imported sire and 1900-lb. imported dam. I have 9 coming 3-year-old studs, 11 coming 2-year-old studs and 6 coming 4-year-old studs. Jet blacks and rich dark grays. Big for their age, one weighs 2110 lbs., one 2160 lbs. and a yearling 1740 lbs. Registered Percherons and straight sound. You cannot get better money-makers. Foaled and grown on the farm and offered at farmer's prices. Intelligent headed colts that have had kind attention, a boy can handle them. Just east of Omaha.

FRED CHANDLER,
Route 7. Charlton, Iowa.

New Minister to Peru

(CONTINUED FROM PAGE SEVENTEEN)

rakeoffs on every sort of pretense. The meals given me for $9 or $10 a day have been desayuno, or coffee and bread, upon rising, and almuerzo, a table d'hote lunch or breakfast at noon, and a table d'hote dinner in the evening. I have pieced out the bill of fare by buying butter and jam on the side and bringing it to the table.

But I started to write of how the bill was paid. I spoke the night before to the clerk, telling him I expected to leave early in the morning and to please have the bill ready. When I came to the office he had done nothing, but he set two bookkeepers to work and they went through three different cash books and ledgers and figured and figured, making enough calculations to have involved the buying of a railroad. As they figured they made memorandums and when they had completed the head bookkeeper took the sheets to a typewriter and in Spanish, with one finger of one hand clicked off the items. He then took the typewritten copy to an old-fashioned copying press and sponged the leaves until they were dripping with moisture. He copied the bill in the book and handed it to me with my chits. I looked over the latter and found that one of $9 belonged to some one else. This was deducted. I then knew the sum I was to pay, but it took me a quarter of an hour more before I could get back my change. Altogether, the whole proceeding consumed fifty-four minutes by my watch and that for an account which would have been rendered at the Willard in Washington or the La Salle in Chicago or the Waldorf in New York in the wink of an eye.

American Hotels Would Pay Well

There is no reason why a chain of American hotels at good prices would not have a large custom. They would be patronized by foreigners and by Peruvians and the expense of running them would be far less than in our larger cities. There are no markets in the world that are better than those of Peru. We have the fruits here of the tropics and temperate zones and that throughout the year. I spent yesterday morning in going through the city market. It covers a square, the chief stalls being in a great court roofed with galvanized iron and surrounded by stores. There were grapes, white and red. There were apples as yellow as gold, peaches the color of snow and pomegranates and guavas, chirrimoyas and tunas, the fruit of the cactus. There were oranges and lemons and pineapples, bananas and bushels of paltas or alligator pears. The latter cost 5 cents or 10 cents, notwithstanding I had to pay 50 cents for the one I ordered extra at the hotel today for my dinner.

And the vegetables. What would you think of string beans as long as your arm, of potatoes as yellow as gold and of yuccas which have flesh like a potato, but consist of roots as big around as a ball club and often two feet in length. I saw roasting ears at nearly every vegetable stand. Some of these were bright yellow and others as black as your boots. I saw grains of hominy of about twice the size of the largest lima beans. They came from a corn grown here which is so mealy you can make flour of it by pounding it with a stone. There were many tomatoes and great heads of cauliflower and cabbage, muskmelons and watermelons and other fruits, the names of which I do not know. A large part of the market is devoted to meats and game. I saw lamb flesh and kid flesh and great cages of guinea pigs, which taste like squab pigeons or tender young squirrels. There were large fish stalls full of corbina and other fine fish from the ocean and some fish which are especially delicious when served raw with the juice of a lemon. The acid seems to have the same effect on the flesh as boiling and it is even better than the raw fish of Japan. There are also many kinds of shellfish and among others a little clam-like creature called the senorita or little girl. This is a clam whose flesh is as white as snow, but which has also a morsel of meat of the color of the brightest red pepper which forms a part of the fish. It tastes delicious.

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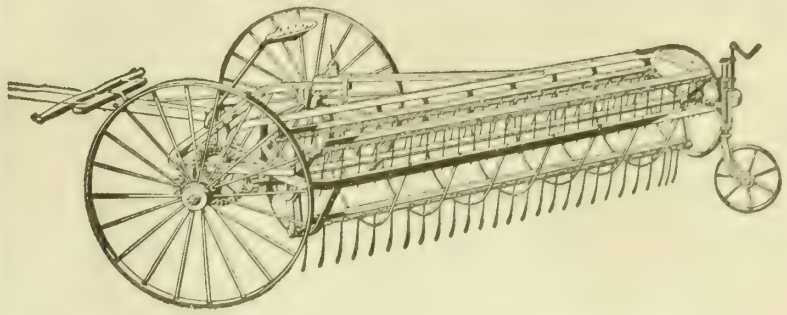
International Harvester Haying Machines



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NO matter how you handle your hay crop after the mowing is done, whether with rake, tedder and loader, side delivery rake and loader, or sweep rake and stacker, the best machines for your work are those that are sold under the International Harvester trade mark.

I H C local dealers sell these machines. It is to their interest to see that your hay is put into the barn, stack, or bale, in the best condition, regardless of weather or accident. When they sell you an I H C tedder, side delivery rake, self or hand dump rake, stacker, sweep rake, loader, combined sweep rake and stacker, or hay press, they sell you a machine that you can depend upon, that will give you perfectly satisfactory service.

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The Cedar Rapids Jack Farm

Is the jack metropolis of the world. All nations buy jacks here. The majority of the best mules in the United States are the result of the past twenty years' improvement, inaugurated and carried on here. Write for catalogue. Come to me when you need stock. I will make it worth your while.

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Stallion and Jack Importing Farm, Cedar Rapids, Ia.

JACKS AND JENNETS

Black Mammoth Jacks and Jennets for sale. Weighing from 700 to 1200 pounds, two to six years old; price, $200 to $1,000. Also thirty head registered Shorthorn cattle—mostly cows and heifers ready to calve. O. J. MAY, Bennett, Neb.

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25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed.

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BRED GILTS FOR SALE—With length, bone and quality.
W. G. UNITT, Seward, Neb., Route No. 2.

MULE-FOOT HOGS

America's Blue Ribbon Herd Mule Foot Hogs
Champion Show and Breeding Herd of United States.
200 Head of Big Type Hogs of ages for sale. Also Imported Shetland Ponies and Milk Goats.
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I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." C. S. BENJAMIN RFD79 Portland, Mich.

HOLSTEIN CATTLE

Purebred Registered
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If your cows produce only about 4,000 pounds of milk per year and 160 pounds of fat they are practically worthless; 350 lbs. of fat per cow should be your minimum requirement.

No matter how poor your present herd is, you can easily raise it to this standard in a few years by the intelligent use of a well selected Holstein-Friesian bull.

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RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants to

W. P. SCHWAB, Clay Center, Nebraska.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

Importance of Tree Planting

THE importance of planting trees on the bare prairie lands should appeal more forcibly to land owners than it does, judging from the lack of shade, ornamental and fruit trees that are found on the average western prairie farm. The value of more trees on the farm is beginning to dawn on land owners and farmers after many years of ownership in which they had no time or inclination to plant trees. In Kansas alone the state forestry department reports that the farmers are crazy for trees. Their demands cannot be supplied; over a quarter of a million young forest trees have been shipped within the ten days preceding April 15.

The value of trees has been overlooked until this late date, when the whole country throughout these treeless prairie districts might have been supplied with fine groves of valuable timber. Great credit is due to the state forestry associations of these states and the forestry advocates who have for years persistently preached "plant trees on the farm; grow your own timber and fuel." Such men as J. Sterling Morton, Robert W. Furnas, C. C. Harrison and Isaac Pollard of Nebraska will live in the memory of generations yet to come because of their great interest in the forestation of the bleak and bare prairies of the state they had adopted as their home.

Not only should Arbor day be an occasion of annual tree planting as a matter of observance, but it should be a reminder that trees should be planted each recurring spring season as a matter of financial value and interest to the farm. The tree planter should exercise judgment in planting the best tree for his purpose. All trees are not useful as timber, fuel, shade, ornamentation or fruit. These matters should be considered in the planting.

Making Auto Tires Last

The essentials of conservation of automobile tires may be summarized as follows:

Uniform inflation depending on load carried; average sixty to sixty-five pounds front and seventy to seventy-five rear for car 2,200 to 2,400 pounds, properly tired.

Test tires every three days. Discard an inner tube that leaks enough to lower pressure fifteen pounds or more in less than three days.

Drive car steady and true. Slewing and skidding are evidences of bad driving just as much as allowing a horse to stumble or fall is evidence of unskillful horsemanship.

Plug small cuts down to fabric to prevent rotting and send separation of tread.

Breeders' Notes

Mulefoot Hogs for Sale

Mr. John H. Dunlap of Williamsport, O., owner of the Ohio blue-ribbon herd of Mulefoot hogs, has shipped hogs into nearly every state in the union during the last year. He has a great many inquiries from all parts of the country and expects to make shipments to foreign countries in the near future. Mr. Dunlap has about 300 head of select breeding stock of all ages for sale and is especially strong on bred gilts weighing from 200 to 400 pounds. All his younger stuff are by his champion and grand champion herd boars. The Ohio blue-ribbon herd is headed by ten big prize-winning boars, and Mr. Dunlap can supply breeding stock that is not related at any time. If you are interested in this breed of hogs, write Mr. Dunlap for further information, mentioning the Twentieth Century Farmer.

DeClow's Great Jack Farm

To anyone who is in the market for a first class jack we have no hesitancy in recommending the jack farm of W. L. DeClow of Cedar Rapids, Ia. Mr. DeClow is a pioneer in the business and the jacks he handles here are famed far and wide for their superior excellence as to bone, size and conformation and also their dependableness as breeders. When you buy anything from Mr. DeClow you can rest assured that it is the right kind and you buy it with the guarantee that he intends to make good when he gives it to you, for every animal that he sells must be just as represented, for satisfaction is guaranteed. The buyer is afforded exceptional opportunities here that are seldom found elsewhere. If you are in the market for a jack, write Mr. DeClow, mentioning the Twentieth Century Farmer.

W. G. Unitt Heard From

In a letter of recent date W. G. Unitt of Seward, Neb., informs us that he is all sold out of bred sows. He also says that he is having excellent success with his spring pigs. Twelve sows farrowed 107 pigs and are raising eighty-seven, and they are coming along in first-class condition. Mr. Unitt says he will have the best lot of pigs he has ever produced, and those who know him and his reputation as a breeder will have to admit that this is "going some." He has one of the best equipped stock farms in Nebraska and is certainly in a position to give his stock the best kind of care. No doubt he will have more to say through these columns at a later date.

Combination Sale at South Omaha

The combination sale of Hereford cattle held at South Omaha, Neb., on April 14 and 15 under the management of W. N. Rogers of McCook, Neb., brought out only an average crowd of buyers, due largely to the fact that the farmers in general are so busy at this time putting in their small grain and attending to their other spring farm operations. The sale as a whole, however was fairly good, due in large measure to the activity of several western buyers. The top bull of the sale went to Jacob Benger, Mynard, Neb., at $650. The top cow went to Guy Schwab of Murray, Ia., at $365. One of the noticeable features of this sale was that whenever an especially good animal came into the ring it generally commanded a very fair price, which went to show that, though the crowd was not large, yet those who were present appreciated good values. Colonels Kraschel and Zaun were the officiating auctioneers, and both did creditable work on the block. Below will be found a list of all animals selling for $100 and over, together with name of purchaser:

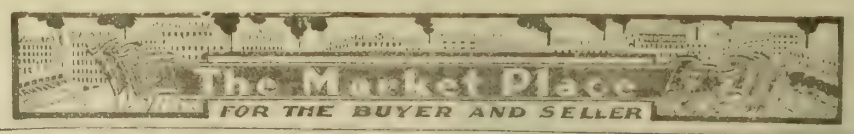
BULLS.

Lot No.	Price.
1—S. M. Estes, Pacific Junction, Ia.	$155
2—Tim Neuhoffel, Central City, Neb.	125
3—Henry Rogers, McCook, Neb.	122
4—Wm. Heelan, Arabia, Neb.	147
6—Wm. Helan	100
7—H. B. Ives, Helena, Mont.	150
9—James Jamison, Amherst, Neb.	130
11—M. E. Rhinesmith, Centennial, Wyo.	250
12—J. O. Whittington, Clarendon, Tex.	340
14—W. V. Hunter, O'Neill, Neb.	100
16—G eo. Brown, Gettysburg, S. D.	160
17—J. H. Farr, Laramie, Wyo.	165
20—Geo. Brown	170
21—M. E. Rhinesmith	300
22—J. B. Newman, Morrill, Neb.	147
23—J. H. Farr	155
29—W. C. Klaussen, Creston, Neb.	140
31—M. E. Rhinesmith	210
33—H. B. Ives	250
41—M. E. Rhinesmith	140
44—George Brown	120
55—H. Hilton, Malvern, Ia.	215
61—Jacob Benger, Mynard, Neb.	650
74—Geo. Brown	117
76—Geo. Brown	110
80—Geo. Brown	115
84—H. B. Ives	140
85—Swan Lundahl, Wheatville, Neb.	135
86—Nels Elmgren, Creighton, Neb.	115
87—Geo. Brown	107
88—M. E. Rhinesmith	305
89—J. H. Farr	235
90—J. H. Farr	155
92—T. F. Sullivan, Spalding, Neb.	300
96—O. E. Olson, Florence, Neb.	107
97—M. E. Rhinesmith	275
98—W. A. Bickel, Glenwood, Ia.	500
99—M. E. Rhinesmith	500
100—J. O. Whittington	185
102—John McDonald, Craig, Neb.	102
103—M. E. Rhinesmith	310
104—H. B. Ives	245
105—Geo. Brown	170
107—Geo. Brown	102
108—Henry Hunterman, Avoca, Neb.	155
109—Fritz Bickel, Loup City, Neb.	135
110—Geo. Brown	115
111—M. E. Rhinesmith	235
112—J. O. Whittington	230

COWS.

5—O. E. Olson	160
13—Klaus Bros., Bendena, Kan.	150
26—O. E. Green, Genoa, Neb.	175
28—Henry J. Wicke, Ludell, Kan.	117
30—John B. Dow, Bedford, Ia.	102
34—Ben Broughton, Lake View, Ia.	102
38—Henry J. Wicke	100
39—O. E. Green	125
40—John B. Dowell, Bedford, Ia.	100
46—J. W. Runty, Milford, Neb.	100
49—Jesse Engles & Son, Sheridan, Mo.	140
54—Henry J. Wicke	117
57—R. P. Clark, Brayton, Ia.	110
58—H. J. Wicke	130
62—R. P. Clark	165
65—Fritz Bickel	115
66—J. C. Parnell, Guthrie Center, Ia.	115
67—H. J. Wicke	155
68—O. E. Olson	122
70 Guy Schwab, Murray, Ia.	365
71—R. P. Clark	255
73—Fritz Bickel	200
75—A. F. Mammon, McClellan, Ia.	167
78 W. V. Hunter	130
93—Amos Rogers, McCook, Neb.	300

Sixty-one bulls brought $10,755, an average of $176. Thirty-four cows brought $4,647, an average of $137.



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POULTRY—Anconas

MOTTLED ANCONAS. THE GREAT egg producers. Mrs. M. J. Gallatin, Wahoo, Neb.

INDIAN RUNNER AND BUFF ORpington duck eggs; also Light Brahmas. Circular free. Frank Healy, Bedford, Ia.

Ducks

FAWN AND WHITE INDIAN RUNner duck eggs, $1 per 12. Heavy laying strain. E. Dooley, Selma, Ia.

BLUE ANDALUSIANS—PRIZE WINners, non-setters, excellent layers; eggs, $3 setting. Maude McMurry, Savannah, Missouri.

RUNNER DUCK BARGAINS—AGNES Young, Loveland, Ia.

Hamburgs

SILVER-SPANGLED HAMBURGS—Eggs, $1.25 per 15, postpaid; $4 per 100. Chas. Voss & Son, Hubbard, Neb.

Houdans

HOUDAN AND WHITE ROCK EGGS, $1 and $2 per setting, $5 per hundred. Geo. J. Wolcott, Box 773, Central City, Neb.

Leghorns

SINGLE-COMB WHITE LEGHORN hens, 2 years in flock, blue ribbon winners, $1.50. Eggs for setting, $1.25 per 15, $7 per 100. Ivar Johnson, Fremont, Neb.

EGGS FOR HATCHING—SINGLE-comb White Leghorns, Rhode Island Reds, White Holland turkeys and Indian Runner ducks. Chas. Cross, Sextonville, Wis.

ROSE-COMB BROWN LEGHORN eggs; none better—$1. 15; $4. 100; chicks, 10c. Olga Havek, Linwood, Neb.

ROSE-COMB WHITE LEGHORNS—Won 65 ribbons. Eggs, $1. 15; $4.50 per 100. Amiel Dorr, Osage City, Kan.

SINGLE-COMB WHITE LEGHORNS of the world's best strain. Eggs, $2.50 per 100. Geo. L. Darling, Doniphan, Neb.

BUFF LEGHORN AND SINGLE-comb Red eggs: 100, $4. Mrs. Alb. Thorson, Mead, Neb.

WHITE LEGHORN, BUFF ORPINGton, Indian Runner duck eggs. Pearl W. Usher, Holbrook, Neb.

SINGLE-COMB BROWN LEGHORN Eggs—$4, 100; $2.50, 50; $1, 15; from 200 2-year-old hens, mated with cockerels scoring 93¾. Edward Dooley, Selma, Ia.

SNGLE-COMB WHITE LEGHORN eggs, 15, 75c; 100, $3.50. Will Rockwell, Hubbard, Neb

BUFF LEGHORNS—ENGLISH VARIety, larger than white or brown variety; lay a larger, white egg. Eggs, $1.50 per 15. Particulars, E. B. Mehl, North Irving St., Fremont, Neb.

EGGS—SINGLE-COMB WHITE LEGhorns, $1. 15; $5, 100. White Egg Poultry Farm, Loomis, Neb.

ROSE-COMB BROWN LEGHORNS—Pure-bred, farm range, excellent layers. Eggs shipped in useful, handy baskets. Safe arrival guaranteed. Fifteen, $1; 100, $5. G. C. Randall, Village View, Stella, Neb.

SINGLE-COMB BROWN LEGHORNS—Eggs, $2 per fifty, $3.50 per hundred, from matured pullets, farm range. Mrs. Ufe Edzards, Bruning, Neb.

Langshans

BLACK LANGSHAN EGGS—CIRCular. Jake Hetrick, Wahoo, Neb.

FULL-BLOOD BLACK LANGSHAN eggs for hatching. C. C. Cunningham, Kennard, Neb

EXTRA BIG-BONED, SCORED Black Langshans and eggs. H. Osterfoss Farm, Hedrick, Ia.

Light Brahmas

LIGHT BRAHMA EGGS—15, $1; 45, $2.50; 100, $5. Fair hatch guaranteed or another order, half price. Frank A. John, Bedford, Ia.

LIGHT BRAHMA EGGS—15, $1; 50, $2.50; 100, $5. Mrs. M. Wall, Eddyville, Neb.

Minorcas

HIGH-CLASS BLACK MINORCA AND Buff Orpington eggs. Frank A. Agnew, South Omaha, Neb.

Orpingtons

EGGS FOR HATCHING—SINGLE-comb Buff Orpingtons, Toulouse geese, Indian Runner ducks. Mating list free. Peter Brehm, Harvard, Neb.

PRIZE-WINNING BUFF ORPINGTON eggs. Mrs. Cook, Eddyville, Neb.

POULTRY—Orpingtons

FOR SALE—BUFF ORPINGTON eggs, $1.50 per 15. Geo. E. Cheney, Fremont, Neb.

BUFF ORPINGTONS, INDIAN RUNner ducks. Catalogue free. Gene H. Huse, Norfolk, Neb.

EGGS FROM KELLERSTRASS strains—Crystal White Orpingtons, scoring 90 to 94 points, guaranteed fertile, $1.50 per 15, $8 per 100. L. H. Klinge, Grand Island, Neb.

EGGS FOR HATCHING FROM THOROughbred White Orpingtons, $1.50 per 15. Wm. Langbehn, Avoca, Ia.

ORPINGTONS—BUFF OR WHITE—Eggs, cockerels. List free. Frank Lewis, Gibbon, Neb.

SINGLE-COMB BUFF ORPINGTONS, Cook strain. Eggs, $2 per 15. George A. Agnew, Central City, Neb.

KELLER'S CRYSTAL WHITE ORpingtons, Kellerstrass strain, direct from his $30 matings. Heavy winter layers. Free range, farm-raised, $7 per hundred. J. W. Keller, Fullerton, Neb.

Plymouth Rocks

BARRED PLYMOUTH ROCK EGGS, both matings. Pens 1, 5, $5 per 15; pens 2, 3, 4, $2.50, 15; $4.50, 30; farm range, $1, 15; $5, 100. Circular free. G. W. Feuerstein, Fremont, Neb.

THOMPSON'S STRAIN BARRED Rocks—Vigorous birds, nicely barred, yellow beaks and shanks. Great layers. Eggs from pens, 85c to $1, 15; utility, $2, 50. H. H. Unruh, Hillsboro, Kan.

FISHEL STRAIN WHITE ROCK eggs, $1.50 for 15, $5 per 100. J. L. Young, Rolfe, Iowa.

WHITE ROCKS—LARGE, GREAT laying strain; eggs, 15, $1; 100, $4. Geo. Clauson, Mead, Neb.

BARRED ROCK EGGS, 5c APIECE. None shipped over three days old. Miss Voorhees, Sweetwater, Neb.

BARRED ROCK EGGS FOR HATCHing, $5 per 100, $2.75 per 50, $1.50 per 15. Fertility and safe delivery guaranteed. Fred Kroeger, Carroll, Ia.

BARRED ROCK EGGS—Fine pen, $1 per setting; range flock, $3.50 per 100. B. F. Johnson, Fairfield, Neb.

RINGLET BARRED ROCK EGGS from fine pen and range flock. Jos. V. Beran, Verdigre, Neb.

WHITE PLYMOUTH ROCK EGGS—$1 per setting, $5 per 100. G. W. Hollenbeck, Craig, Neb.

BARRED PLYMOUTH ROCK EGGS from greatest prize winners of Nebraska. J. W. DeVore, Valley, Neb.

PARTRIDGE PLYMOUTH ROCK eggs for sale—$3 for 15 eggs. A. G. Burbank, Cordova, Neb.

EGGS—BARRED PLYMOUTH ROCK—Grand champion sweepstake Iowa State show. Free catalogue, showing real photos, champion winners, price of eggs. A. D. Murphy & Son, Essex, Iowa.

PRIZE-WINNING BARRED ROCK Eggs—Cockerel matings, $2, 15; farm range, $1, 15; $5, 100; baby chicks, 12½c each. Mrs. Geo. W. Schulz, Yutan, Neb

BARRED PLYMOUTH ROCKS EXclusively; choice, pure-brd stock; selected eggs, 100, $5; 50, $3. Safe delivery guaranteed. Adam A. Weir, Clay Center, Neb.

HILLCREST BARRED ROCKS AND Indian Runner ducks. Stock and eggs for sale. D. T. Gantt, Crete, Neb.

BIG PRIZE-WINNING WHITE Rock eggs. W. W. Liebhart, Nemaha, Neb.

CHOICE BARRED ROCK EGGS FOR hatching. Mating list free. Arthur Gillette, South Omaha, Neb.

BARRED PLYMOUTH ROCK EGGS—Best quality stock. Davis Bros., Lincoln, Neb

WHITE ROCK EGGS—EXTRA GOOD laying strain. George Hollbusch, Belgrade, Neb.

WHITE ROCKS, BRED FOR EGGS and size. Eggs for hatching, baby chicks. Mrs. Lulu Bures, Nelson, Neb.

BUFF ROCK EGGS FROM STATE Fair and Lincoln winners, $5.50 per 100. R. E. Thompson, Normal, Neb.

CHOICE BARRED ROCK EGGS—$1 for 15, $5 per 100. W. W. Johnson, Council Bluffs, Ia.

POULTRY—Plymouth Rocks

WHITE ROCK EGGS—$1.50 PER 15, $5 per 100. Mrs. Harry Butler, Bellwood, Neb.

Rhode Island Reds

RHODE ISLAND REDS (BOTH combs). Eggs half price from high-class exhibition hens. Order now—$7 per 100, $12 per 200. Single-comb stock from my fancy pens at bargain prices. Catalogue ready. W. I. Mouser, Red Oak, Ia. Route 5.

ROSE-COMB RED EGGS FROM EXhibition and utility stock. Free catalogue. George Ainsworth, Fremont, Neb.

SINGLE-COMB RHODE ISLAND RED eggs from Reds that are red. J. W. DeVore, Valley, Neb.

SINGLE-COMB REDS—AFTER APRIL first eggs from prize-winning pens, $3, 15; $5, 30. Scott Covalt, Box O, Council Bluffs, Ia.

ROSE-COMB RHODE ISLAND RED eggs. $1 per setting, $5 per 100. Mrs. H. H. Bixler, Route 5, McCook, Neb.

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POULTRY—Wyandottes

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ALFALFA SEED, $5.50; TIMOTHY, $1.50. Farms for rent and sale. J. Mulhall, Sioux City, Iowa.

I GUARANTEE 95 PER CENT GERmination on my seed corn. Paul Rohwer, Waterloo, Neb.

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PURE-BRED YELLOW SEED CORN, $2.50. P. Clausen, 506 28th St., East Omaha, Neb.

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Here's a stove that looks and works like a city gas stove but you can use it on the farm or in the villages and towns, miles away from any gas supply.

Detroit Vapor Stoves are not like common gasoline or oil stoves. They are made strong and substantial like high grade city gas stoves and they burn inexpensive oil or gasoline vapor with a hot steady flame directly under the cooking utensils.

Detroit Vapor Gasoline Stoves light exactly like gas and are absolutely safe, as the gasoline that flows into the burners is piped to each burner through heavy iron pipe which prevents the escape of gasoline. The burners work on a different principle from those of the ordinary gasoline stove. No generating is necessary. In the usual stove you must fill the cup, shut off the gasoline, apply a match, wait for the burner to heat, turn on the gasoline again and apply another match. If the burner is not hot enough, as often happens, the gas will not generate and there is trouble.

In the Detroit Vapor Stove, you simply turn on the burner, apply a match, and set your cooking on at once—just like a city gas stove.

In Detroit Vapor Oil Stoves there are no dirty wicks to look after. In fact there are no wicks, asbestos rings, or anything that looks like a wick to buy, burn out or replace.

The operating valves of all burners are at the front of the stove just the same as on a gas stove. These valves are made of pure German silver—this metal will never rust and allow the fuel to leak into a burner when it is turned off. Detroit Vapor Stoves are at all times safe.

With all the gas stove advantages of Detroit Vapor Stoves, no piping or pressure tanks of any kind are necessary. This avoids expense and the need of cutting holes in your floor. Detroit Vapor Stoves are complete in themselves and can be placed in any part of the kitchen.

Don't Swelter over a Hot Cook Stove this Summer Use a Clean, Safe, Reliable, Detroit Vapor Stove

In the summer time a hot coal or wood range is daily torture for the one who does the cooking. Unless you let the fire go out after each meal the kitchen becomes unbearably hot.

All this discomfort and the dirt of coal, wood and ashes can be avoided if you use a Detroit Vapor Stove.

With a "Detroit" your fire is directly under the cooking utensils. You get the benefit of all the heat for the cooking without heating up a heavy iron range. For this reason Detroit Vapor Stoves are very economical. The entire cost of running is less than one cent an hour per burner. That's less than half the cost of coal and wood ranges or city gas stoves.

Detroit Vapor Stoves are made in fifteen handsome styles and sizes, selling from $10 up—the prices vary according to the style and number of burners. Our less expensive stoves are made just as well as our higher priced ones—the difference in price does not mean a difference in quality—merely size. Your hardware dealer will be glad to show you a stove exactly suited to your needs. See him and write today for our free illustrated stove book No. S-2

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Detroit, Michigan

TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, May 2, 1914 | Number 699

Prattle of the Youngsters

Cause of Dew

The small boy, being asked the cause of dew, gave this answer: "Earth, revolving rapidly on its axis once in twenty-four hours, causes it to perspire freely—hence the dew."

New Botany

The teacher had been reading to the class about the great forests of America. "And now, boys," she announced afterward, "which one of you can tell me the pine that has the longest and sharpest needles?" Up went a hand in the front row. "Well, Tommy?" "The porcupine, ma'am."

Almost All

Carl was going out with his mother one afternoon, and had been sent upstairs to get ready. After a considerable wait, the mother called from downstairs:

"Hurry up, Carl! We're late now. Have you got your shoes on?"

"Yes, mother," replied the boy, "all but one."—Lippincott's.

Good Guess

"Do animals possess the sentiment of affection?" asked the school teacher of the little girl.

"Yeth, ma'am; almotht alwayth."

"Good," said the teacher; "and now," turning to a little boy, "tell me what animal has the greatest natural fondness for man."

The small boy considered carefully and finally answered, "Woman."

Liver's Partner

Young Arthur had recently taken up the study of anatomy at school and had shown a great interest in the course. He drank in all information about the various parts of the body with absorbing interest. The progress at school, however, was too slow, so he sought to gain more information at home. One afternoon, upon returning from school, as he sat hungrily devouring a generous-sized piece of bread and molasses, he asked his mother, in grave perplexity:

"Mother, I know where my liver is, but where is my bacon?"—American Boy.

Like the Rest of Us

"Bobby is attending to his piano lessons very faithfully of late," said that youth's uncle.

"Yes," replied his mother. "I don't have any trouble with him about that now."

"How do you manage it?"

"Some of the neighbors complained of the noise his exercises made, and I told him about it. Now he thinks it's fun to practice."

James Explains

James started his third helping of pudding with delight.

"Once upon a time, James," admonished his mother, "there was a little boy who ate too much pudding, and he burst!"

James considered. "There ain't such a thing as too much pudding."

"There must be," contended his mother, "else why did the little boy [illegible]"

James passed his plate for the fourth time, saying: "Not enough [illegible]"

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Information Regarding Hog Cholera

WE ARE now publishing a series of articles on the subject of hog cholera, its control and treatment. This question is a live one, as evidenced by the fact that, although but two of these articles are in the hands of our readers, we are already receiving letters asking for special information about the disease from different standpoints.

Mr. E. Z. Russell, one of our associate editors, made the investigation for this paper, getting facts from government and state authorities in different states, from veterinarians and farmers. On the information thus obtained these articles were written. Mr. Russell is not a veterinarian, is not a college man. His twenty-five years of experience as a hog raiser, from the standpoint of a breeder and farmer selling hogs on the market, have given him a thorough knowledge of the hog business from a producer's standpoint. He knows the business side, knows the farmer's needs. The knowledge Mr. Russell has acquired from his visits to these different states, talking with experts in the treatment of this disease, has given him quite an insight into the other side of the question.

We invite our readers to write to us at any time on this subject, and, if it is possible to do so, we will gladly answer their questions. We don't pretend to have scientific knowledge of this matter, and will not be able to give scientific answers. We do think we have some practical knowledge on this question and may be able to assist our readers in suggesting the practical things to do. We welcome these letters of inquiry, for in this way we find out just what our readers want to know.

Bright and Breezy

Perfectly Safe

Mrs. Capron saw old Uncle Timothy starting away on a fishing expedition and, knowing how hard his wife worked, thought it a good time to reprove him for his laziness.

"Timothy," she said, "do you think it's right to leave your wife at the washtub while you pass your time fishing?"

"Yassum, miss," replied the old colored man. "It's all right. Mah wife don' need any watching. She'll wuk jes' as hard as if I was dah."

Good Work

Edith was light-hearted and merry over everything. Nothing appealed to her seriously. So one day her mother decided to invite a very serious young parson to dinner, and he was placed next to the light-hearted girl. Everything went well until she asked him:

"You speak of everybody having a mission. What is yours?"

"My mission," said the parson, "is to save young men."

"Good," replied the girl. "I'm glad to meet you. I wish you'd save one for me."

Army Catechism

A young German who wished to be enlisted in the navy, but was unable to speak English, was being coached by an officer. "Look here, Mike, when the inspector comes to you he will ask you how old you are, and you must say 27 years—2-7 y-e-a-r-s. Then he will ask you how long you have been in the service, and you tell him three months—t-h-r-e-e m-o-n-t-h-s.

"His next question will be, Are you provided with food and clothing? And you must say, both—b-o-t-h."

The following week the inspector came, and, walking up to the German, said: "Good morning, friend, and how long have you been in the service?" "Twenty-seven years," was the answer. "Well, that's funny. I never saw you before. How old are you?" "Three months," replied the German. "Say, what do you think I am, a lunatic or a fool?" "Both," boldly, answered the German.

Dispelling Ignorance

A benevolent old gentleman one day saw a rural looking man sitting on a stone wall swinging his legs and gazing earnestly at the telegraph wires. Going over to him, he said:

"Waiting to see a message go 'long, eh?"

The man grinned and said, "Ay."

The benevolent old gentleman got on the wall and for the next quarter of an hour tried hard to dispel his ignorance.

"Now," he said at last, "as you know something about the matter, I hope you will spread your knowledge among your mates on the farm."

"But I don't work on a farm," replied the rural citizen.

"Where, then, may I ask?"

"Me and my mates are telegraph linesmen, and we are testing a new wire."

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Can You Afford to Buy a Manure Spreader?

You Either Can't Afford to Have One or You Can't Afford Not to, Depending on Conditions

By A. C. Hartenbower

MANY farmers who do not own manure spreaders have not been properly brought to appreciate that machine. Hundreds of farmers who could well afford to own machines argue that manure can be spread just as satisfactorily ith the pitchfork. With this latter nine times t of ten the manure is not spread, but is rown unevenly over the surface of the ground.

There are at least three important reasons hy the manure spreader is preferable to hand reading. We may mention that, first, it akes the sames amount of manure cover sevral times as much space as would be covered the hand-spreading method; second, it saves me and labor, and third, it brings better reults, due to its thorough pulverization and ore even distribution of the manure.

In many cases there should be added a urth reason, viz.; that the owning of a manure preader would result in the application of much ore barnyard manure. When a farmer does ot own such a machine the spreading of manre becomes a drudgery—a task that is put off nd put off, oftentimes, until the manure has ecome so leached and fermented that more an one-half of its value has been destroyed efore it is finally hauled to the fields.

Increases Value of Manure

Perhaps the greatest advantage possessed the manure spreader is its ability to spread e manure economically. Experiments have own that, in some cases at least, as good reults have been obtained from eight loads of anure to the acre when spread with a manure preader as from sixteen loads to the acre when e spreading was done by hand, and common xperience has shown that it is in reality easier spread eight loads of manure over an acre ith a manure spreader than to spread more an twice that amount over the same area by and. Further, trials have gone to show that takes about one-sixth to one-third as much me to spread manure with a spreader as by and, depending, in particular, upon the thickess of spreading. A man and team will, herefore, do at least as much work in a day as vo men and two teams by the hand method of preading.

It becomes an utter impossibility to spread light layer of manure by hand spreading. Of e value of light applications of manure the hio experiment station says: "Other conditons being equal, the effectiveness of a given eight of manure is practically in inverse ratio the thickness of spreading; that is, the thiner it is spread the greater the effect in proporon to the quantity." By the use of the manre spreader it is possible to obtain good results rom a light top dressing on alfalfa, wheat, etc. his is practically impossible by the hand ethod in top dressing fields, the large lumps the unpulverized manure become fire-ganged nd kill out the crops under them, thereby doig harm instead of good.

In a previous article in the Twentieth Centry Farmer I have called attention to the need of using barnyard manure as a top dressing in the more semi-arid sections of the southwest. Under those conditions the manure spreader becomes of special importance. What was said of those sections is also true to a great extent in the more humid sections. In fact, many experimenters with barnyard manure assert that the effectiveness of an application of well rotted barnyard manure is greatest when it is applied as a top dressing. At that time the crop can make the best use of manure.

The effectiveness of barnyard manure depends to a great degree upon the degree of pulverization given it. Farmers generally will agree that it is almost an impossibility to thoroughly break up and evenly distribute manure by the hand method of spreading. The manure spreader can generally be depended upon to break up the manure and consequently greatly to enhance the value of the manure as well as to procure an evenly covered field.

Buying a Manure Spreader

In buying a manure spreader, as in buying other farm machinery, the important thing is to know what points to consider in making the purchase. There is no best make throughout in any kind of machinery. Certain machines are strong in most all points for most purposes, but may be weak in some points for certain demands. The following constitute the more important things that the prospective purchaser should look for in buying a manure spreader:

The material and workmanship should be of of the very best. Every piece of wood in the machine should be of the best hardwood. The acid in manure decays any kind of wood quickly —and you should insist upon the best kind. Test the wooden parts before buying. The machine should be made of the best materials throughout, be strongly built and should plainly show the evidences of careful manufacture.

One consideration in favor of a low-set spreader, other things being equal, is that it reduces the labor necessary in loading it. The main drive should be strongly and simply constructed. Power may be obtained either from the main axle by means of a large gear wheel or by means of a large sprocket and a heavy chain belt. Many users prefer the latter type because they insist that their repair bills are less. The gearing should be well protected, else it will become fouled in loading. Large bearings, especially on the main shaft, should be provided, and there should be a reliable method for oiling and for excluding dirt.

The beater is also an important part. Iron bars are being substituted for wooden bars on many makes of spreaders, but if not, see that the latter are made of the best hardwood. It is well to state that the iron bars seem to be giving good satisfaction. The teeth of some beaters are arranged in diagonal rows, tending to carry the manure from the center to the outside, as the load is generally heavier in the center than at the outside. Some provision should be had for keeping the manure from the beater while loading. This will prevent big chunks from being thrown out and also eliminate unnecessary strain on the machine.

The wheels and frame should be strongly constructed and, let me repeat, made of the best hardwood, if wood be used in their construction. The front wheels should be of narrower tread than the hind wheels in order to permit short turning of the spreader and also to prevent "whipping" the horses' necks in particular. Plenty of oil holes should be provided; these should be easy of access. There is a great deal of discussion as to the comparative value of endless or return aprons and rachet or worm gear drives. The concensus of opinion today among farmers who have owned both return and endless apron machines shows in favor of the latter type, while many insist that the rachet drive is much superior to the other type. There is need, however, for further experimentation with these types before a definite decision can be made about their comparative values. Either type of apron or drive has given good results when proper care has been taken of the manure spreader.

Does It Pay to Own Spreader?

The question is often asked, "Will it pay me to purchase a manure spreader?" To reply to that question for all farmers is, of course, an impossibility. There are, however, certain conditions that the farmer should consider before he buys that machine. Experimental results have shown that the average annual depreciation in the value of a manure spreader amounts to about 12 per cent; that is, under average conditions a manure spreader will last a farmer a manure spreader is, we will say, $125. It, manure spreader is, we will say, $125. It, therefore, costs the farmer in depreciation alone a little more than $15 per year to own a manure spreader. On top of this he should add the cost of repairs, insurance, housing and oil. This latter outlay will depend upon local conditions to a large extent, but we may safely say that it costs, including the average depreciation, at least $25 per year to own a manure spreader.

Considering the cost of owning a manure spreader, it is necessary for the farmer to figure the profits such a machine will bring from the spreading of the manure produced by his live stock, in the first place; again, if he can procure manure from town for spreading on his farm, that machine will come to be of special importance; and, finally, the ability of the manure spreader to top-dress fields successfully, which is of especial importance in the southwest. After considering these things a good idea can be formed as to whether or not a manure spreader will be a profitable purchase. It is well to state that many farmers today could well afford to purchase manure spreaders. While there are many crop growers who have too many machines in proportion to their investments in live stock, for example, there are few who extend these investments to manure spreaders. Buy that machine only when it will pay for itself—don't purchase it unless you have a real need for it.

Planning and Constructing Farm Buildings

Improvements Are a Matter of Comfort and Value and Should Receive Due Attention

THE farm buildings, to a very great extent, govern the desirability and selling value of the farm. There is, in fact, no other single feature that measures so impressively with the land buyer and the home-seeker as the farm buildings, in the matter of convenience, utility and durability of construction. Good buildings, conveniently arranged for the operation and handling of the various industries to which the farm, by its location and quality of soil, is naturally adapted are necessities. The great need on the American farm is better farm buildings, better accommodations for the handling of crops, the handling of stock and the conveniences for the comfortable operation of the farm and the enjoyment of farm life.

The lay-out of the farm is an especially important consideration in the construction of permanent farm buildings, barns, stables, sheds, etc. The scattering of these buildings around over the farm at considerable distance apart or outside the general group of farm improvements proves an inconvenience and extra expense of both labor and time in their attention and operation.

Around Common Center

The farm should be laid out with one common center, where are gathered for storage and feeding all crops produced on the farm. This represents the home and base for directing the entire operating force of the farm.

There is never any danger of getting the ground or lot space for yard and buildings too large for the comfortable handling of the various divisions of live stock. Yards and buildings more frequently lack space or the comfort of the stock than are too roomy. The plan of the barnyard and its buildings, stock lots, feed yards, watering fixtures and appliances for the successful and economical management and handling of the farm animals is a matter of vital importance to the farmer. Inasmuch as the element of profit or loss is introduced at this juncture, it becomes very important that a proper and correct foundation be laid in the establishing of the stock lot and feed yard system of the live stock industry of the farm.

Comfort and Sanitation

Comortable, roomy sheds and stock barns must be provided for all stock. These should be made to open out into spacious yards or lots, well protected by proper drainage to carry off all surface waters, and be supplied with the best modern appliances for keeping pure and clean everything in the way of feed and drink intended for the animals. Feed platforms for the hogs should be of concrete, or they may be made of two-inch planks, closely jointed and set on an elevation slightly above the surrounding surface. If wooden, they should be kept clean by scraping and sweeping. Self-feeders may be employed. Sanitary possibilities are the first matters of consideration in the selection and arrangement of the the barnyard and stock lots.

The barnyard should not be a stock lot, nor considered as one, other than its proximity to the stock lots and its advantage for opening into them as a matter of convenience.

The extent of farm buildings can be outlined only as the need for such improvements arises in the development of the farm, and the inclination of the farmer to utilize his crops on the farm as stock feed, by breeding and feeding, or buying and feeding live stock. The barnyard and stock lot accommodation should be made quite liberal, and all buildings and yards constructed with a view to permanency.

There is getting to be a disposition to build separate barns for the various kinds of stock, instead of concentrating all the stock under one roof as a matter of economy. Thus the horse barn is preferably a building by itself on many of the good, well improved farms of the country. Likewise the sheep, the hogs and cattle are kept apart, because of the belief that better results can be had by this separation. The distinctive odor or smell from each of these kinds of animals is claimed distasteful to the others.

Separate Barns for Different Kinds of Stock Are Becoming More and More Common.

Buildings and Fences Rotten and Insecure Detract from the Appearance and sale Value of the Farm.

Comfortable, Roomy Stock Barns, Opening Into Well Drained Yards

In the matter of yardage, there can be no dispute as to the greater liability of these animals to injury when given the same yards to feed and exercise in. There should be a special hog yard in connection with the hog house, the same with the cattle sheds and stabling, and the same with the sheep department. The lots should be large and free from all superfluous furniture and fixtures, old machinery, etc., except the necessary feed bunks, hayracks, watering tanks, etc. All these buildings and appliances cost money to build and maintain. They are, however, necessities in the successful operation of the farming and live stock business and add many times their cost in the appearance and selling value of the farm. It pays to put good, substantial buildings on the farm just as fast as the demands call for them. It pays to build of the best materials, and to build a little in advance of present needs.

Barns and Cribs

The common improvements that all farms demand are barn for hay and feed storage, with the ground floor or basement, as the case may be, fitted up with stables and stalls for the accommodation of horses or cattle, with the usual driveway and barn floor for various uses in matter of storage, etc. The old-fashioned double corncrib, with driveway and wagon shed between, was one of the very serviceable buildings, and is yet an economizer of space, and when provided with doors to close up when not in active use is a very satisfactory building. It may be made entirely rat-proof by a little extra work on the foundation.

Grain storage on the farm is a necessity and buildings should be constructed in view of security and freedom from all influences of loss or damage by weather or rodents. Thus it behooves the builder to plan carefully the construction of all grain or crop storage buildings, that they may be made of good material and skillfully put together for utility.

Cattle stables, hog houses, sheep barns, with their outside sheds, board windbreaks and yards, are just as important for the successful management of each of these departments of farm industry as any other feature of farm improvement.

Keep Poultry Separate

The farm poultry demands its share of buildings, yardage and equipment just as urgently and as completely as any branch of the farm live stock. It is practically a necessity to have the poultry under control and a fixed place for their home and lodging quarters, or they will become a nuisance and annoyance on the farm instead of a profit and feature of satisfaction. Good, roomy house or houses, well planned for sanitary comforts, should be erected on a piece of ground set apart for the poultry industry.

Every farm should have some up-to-date water system for the furnishing of water to all buildings, stock lots, yards and divisions that demand water supply. This can readily be had by the use of one or two good power wells, with reservoir, supply tank or some convenient storage system from which underground pipes are laid to carry water to the various feed tanks or watering basins, in lots and buildings. Under such system one can attend to the feeding and watering of more stock than three or four hands under the old plan of shifting stock around to one common watering place. But this is all going to demand considerable expense in material and building? Yes, it will require a pretty large supply of lumber to put up all the buildings, fence all the feed lots, etc. But it is the duty of every farmer to plan a beautiful farm home, and to commence by a study of how and where improvements are to be erected, then arrange to build each year a part of them. Buy at wholesale prices a carload or two of material suited for such work, and soon there will be realized a little village of useful buildings on the farm, all of which contribute to the harmonious operation of the farm home as it should be.

Hog Cholera---Prevention and Treatment

III---Organizing the Hog Owners and Instructing Them in Sanitary and Other Control Measures

IN THIS article we are going to take up and discuss some things essential in combatting hog cholera from the standpoint of education and the organization of the farmers. Let it be first understood that when speaking of education we don't mean the farmer is the only fellow who should be educated. Every man who is dealing with the subject must give the matter close study, be he one of the live stock sanitary board, the state veterinarian or any of his assistants, the veterinarian practicing in the field or the farmer who owns the herd.

Any man who undertakes the responsibility of serving as a member of the live stock sanitary board should make a special effort to acquaint himself with hog cholera, its control and its treatment. He should not trust everything to the state and other veterinarians.

The state veterinarian should especially school himself along this line. He should study every detail of the work and have such reports from his field men as will enable him to know exactly the outcome of each case.

We Must All Learn

The veterinarian practicing in the field has the greatest opportunity for study along this line. He should accept this opportunity to the fullest extent and study every side of the subject. He should not confine his work to the application of serum and virus, but carefully look into the subject from the sanitary and quarantine viewpoint. A careful and unbiased study of the subject by the veterinarian in the field and a giving to the authorities of an unprejudiced result of this study and investigation will materially assist in the work in hand. Don't let any of us think that we have learned it all.

The farmer must come in for his share of the study of the subject, for on him principally will depend the success attained in preventing and combatting disease. To begin with, the hog raiser must be a close observer of his hogs. He must not let a day go by that he does not note carefully the condition of the herd and each individual hog; he must know that each hog is in his normal condition, and if they are not, get the individual that is not right out of the herd at once and into quarantine. Don't wait until tomorrow to see if he is better or worse, but get him out at once. A careful watching of the droppings is one of the best methods to be pursued in knowing how the herd is coming along.

How to Know Cholera

What are the symptoms of hog cholera? The disease may take an acute or chronic form. There is first a loss of appetite, which may be only partial, or they may refuse to eat anything at all. Generally, they will be found lying around in the summer, in the tall grass or weeds, and in the winter under the bedding. The hair becomes rough, the sides and flanks tucked in, the eyes inflamed and sunken, discharging a watery pus. Sometimes the eyes become glued shut. When the hog does move about it is with a weak, wobbly gait, particularly so in the hind parts. Sometimes the animal is affected with diarrhoea and sometimes will be very constipated, with lumpy excretions, very offensive in odor, and covered with mucus. Fever is always present, ranging from 104 degrees to much higher.

When one is not sure he has cholera in his herd it is best to kill one or more of the sickest of the hogs and examine the carcass. This examination (if hog cholera is present) will show any one or all of the following symptoms: In well defined cases the lungs are often congested, covered with small, red spots about the size of a pin, or there may be many purplish spots of larger size. The heart may be covered with

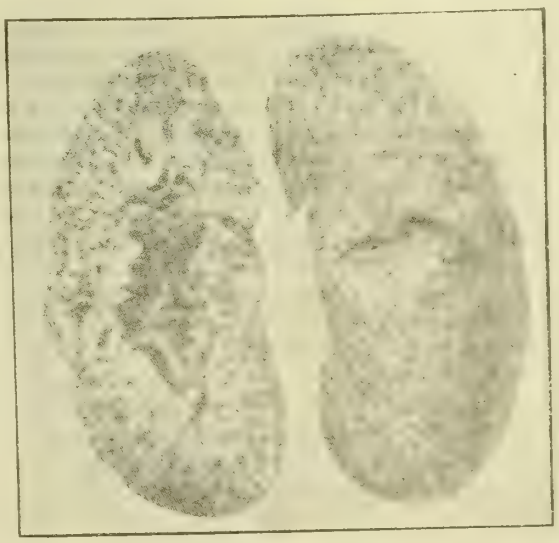
Portion of Large Intestine Showing Button Ulcers.

bloody-looking botches similar to those on the lungs. The spots on the heart are rarely seen except in acute or virulent cases of cholera. The spleen in acute cases is generally found to be quite large, soft and gorged with blood. The kidneys, which in their normal condition show a light brown color, may show numerous dark red spots, ranging in size from a pin point to larger than a pinhead. The general appearance of the kidneys of a cholera hog is that of the speckling on a turkey's egg.

The stomach should be opened, the partly digested food removed and thoroughly cleaned with water so a good examination may be had. Hog cholera may show the inside lining of the stomach much inflamed and red, and close examination shows numerous ulcers.

Intestinal Ulcers Characteristic

The small intestines may show on the outer surface an almost complete covering of bloody spots which cannot be washed off. The large intestine may show some hemorrhage spots, the same as in the small intestine, but the inner lining shows what is commonly called the button ulcers. These ulcers are usually round, hard and yellowish, are distinctly raised above the surrounding healthy inner surface of the large intestine. These ulcers vary greatly in size, some being as large as a 25-cent piece. The illustration given herewith will give you a very good idea of their appearance. The finding of



Kidney of Hog, Showing Small Spot Like Hemorrhages, Often Found in Cholera

this ulcer in the large intestine may be considered as positive evidence of the existence of hog cholera. Any one or all of the above lesions may be found in the carcass of a cholera hog, though it is very rare that all of them are found in any one carcass.

It is well to use great care in examining the carcass of a dead animal of any kind. While hog cholera is not communicable to man, there is always danger of the hog being affected with other diseases, such as tuberculosis or anthrax, which are very dangerous and communicable. Be very careful not to cut or scratch your hand in the operation.

Cholera Causes Ninety Per Cent of Losses

It has been commonly thought by a large number of our hog raisers that there are many distinct diseases other than hog cholera that cause large losses among our hogs. The Department of Agriculture, after careful investigation along this line, states that more than 90 per cent of our hogs die from hog cholera, and that we should not confuse the genuine article with infectious pneumonia, pig typhoid, etc. It is best to think at least when we notice sick hogs in the herd that we have hog cholera. If you are not able to diagnose the case yourself, call at once an expert veterinarian that you may know exactly what is wrong with your herd, and lose no time in getting to the necessary treatment. Your hogs may have cholera and these lesions not show upon a post-mortem examination. Have the temperature taken of every hog in your herd. This done by an experienced man will show pretty conclusively whether or not your herd is infected.

The hog owner should carefully study all these symptoms and conditions and accept every opportunity offered to better acquaint himself with the disease and the right thing to do to best combat it.

Farm Demonstrators Useful

In three of the states in which we have made our investigations there are now some farm demonstrators or advisers. We believe Missouri has ten, Iowa ten and Nebraska seven. It is our belief that these men are going to do more for the farmers of the corn belt in combatting hog cholera than they will do along any other line. Don't let us be misunderstood. Don't get the idea that we in the least undervalue the services of the farm demonstrator in the many other ways he will be able to materially assist the farmer. We ask the farmers of all localities in which the farm demonstrator is now working to accept his services and make the most of him. Because this farm demonstrator may say something with which you do not agree, do not brand him as a fool and say that the money spent for this work is thrown away. If you will try to assist the farm demonstrator you will find that he will be able to assist you in many ways.

In counties where the farm demonstrator is located we believe school house meetings of the farmers and hog owners should be held. State or government men could be had to address these meetings who are thoroughly conversant with hog cholera, its treatment from all viewpoints, the use of serum and virus, etc. The farm demonstrator should in a manner have charge of the treatment of hogs in his locality, thus being absolutely in touch with conditions. Any farmer can find out just where there is cholera in his county and take pains to avoid going to these places.

Anti-Hog Cholera Clubs

We believe in the formation of what is known as anti-hog cholera clubs among the farmers. These clubs are formed by the farmers of each school district, banding themselves

(CONTINUED ON PAGE SEVENTEEN)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Co-operative rural credit associations are planned for the Philippine islands. The object is to help the small farmer.

In Kansas, where large pastures have been fenced and provided with permanent water supply for summer and autumn grazing of cattle, this industry has attained a very profitable position as an agricultural venture. The scarcity of cattle this season has temporarily cast a cloud over the prospects of land owners thus equipped. Seven dollars per head for the grazing season is the lease price which a great many of these pastures have been bringing. This is a very profitable enterprise, when it is considered that the land should improve under the fertilizing influence of the cattle.

Spring pasturing of winter wheat is damaging to the crop. As soon as the winter wheat commences its spring growth stock of all kinds should be removed, as the trampling of the ground following the spring rains is very damaging to the plants. The wheat is usually benefited by careful winter pasturing, depending, of course, on the weather following the turning into the wheat fields. The fall growth it is ordinarily better to pasture than to leave on the ground, and it affords a large amount of good feed, which this season proved a great blessing to the owner of cattle and other live stock. On the farms of small wheat acreage the young stock—calves, colts and sheep are usually given the run of the winter wheat and rye fields during suitable weather.

A Chance to Make Good

On page eight of this issue will be found an article explaining some matters regarding the Live Stock Sanitary Board of Nebraska.

This paper believes the live stock interests of Nebraska are more fortunate than the same interests in some of the other states and are in position to get good results in combatting animal diseases if the Live Stock Sanitary Board will use the mears and men at its command and get down to business and try to show the people that it is trying to perform the duties the legislature intended it should.

There is a friendly and co-operative feeling between Dr. J. H. Gain, chief veterinarian at the agricultural college, and Dr. L. C. Kigin, state veterinarian—something that does not exist in some other states, and something which is absolutely necessary for efficient work.

Dr. Gain has been tried by our live stock men and found to be efficient and always willing and ready to do what he can to help them.

Dr. Kigin has not been in office long enough to be so well known but our observations now lead us to believe him to be a good man for the place. If Dr. Kigin is backed up by the Live Stock Sanitary Board and given sufficient authority and funds, we can look for efficient work from his department. Dr. Kigin has been doing some splendid work for our people in relation to tuberculosis in cattle.

Let the Live Stock Sanitary Board make the most of the co-operation between these two men by consulting them freely on all rules and appointments.

What Ditches Cost

Many of the soils on the farms in the territory covered by this paper wash more or less during the cultivated season. Some of our farmers can't give this matter the attention they should. In the plowed fields many little ditches start and grow wonderfully if not given attention. Generally speaking, these little ditches can be easily stopped if looked after at the right time.

We have in mind a ditch, or rather a gorge, some thirty feet deep and more than 100 feet wide in places that was started by the owner of the land, plowing a furrow to carry off some surplus water standing in a little pool. This ditch has caused the county alone many thousands of dollars in bridges, to say nothing of the damage to farms adjoining, all because the "stitch in time" was not taken.

On our hilly lands we should be careful in plowing. If you can do so, plow so the furrow will be crosswise of the hill. The water cannot then follow the plow mark. Thousands of tons of fertilizer annually go down to the Gulf of Mexico on account of carelessness in plowing.

Often a heavy rain comes up while we are planting corn, and the water follows down the wheel tracks, not only washing away the dirt, but the seed corn as well. It will pay you to have the wheel tracks covered up each day before leaving the field. We know this is not always easy to do and sometimes not possible. Give the matter a little attention, however, and do the best you can to save all this good soil, as well as getting away from replanting.

Watch your fields. If a little ditch starts, throw into it at different places some coarse manure or straw. Don't do this carelessly, but take pains to pack it into the ditch so it won't wash out. If necessary, stake it down with some stakes or posts.

Some of us move onto farms where ditches are already formed, some of them of considerable size. If you have this condition you have something to do to get this ditch back to cultivated land. Take some brush, preferably red willow, eight to twelve feet long, and make a dam in the ditch, placing the tops up stream. At least two ties should be made to hold this brush in place. Make these ties by setting or driving a solid post on each side of the brush opposite each other and fasten a pole or board to one end with a smooth wire; then pull down the other end, fastening to the opposite post with a wire so it firmly binds and holds the brush in place. When the heavy rain comes the water will do the rest, provided you hav ufficiently anchored your brush.

The ditch is a menace to any farm. It is destructive; it is unsightly; it takes away your best soil; it makes a place where your stock may be injured. You can't afford to let it start and grow.

The finest horses in the world will be found in Manitoba if the ambitions of its horse breeders' association are realized. A law was recently passed by the government, at the instigation of the breeders' association, which forbids the standing for service of grade or scrub pure-bred stallions. In Manitoba there are enough good pure-breds, so the association states, to cover the province if properly distributed. It will easily be seen that the enforcement of this law will result in the gradual elimination of poor horses. At present the difficulty has arisen of making matters as easy as possible for the owners of grade and scrub stallions. They hope to reduce this hardship to a minimum and make it possible for these stallion owners to put good animals in place of their inferior ones.

Market for Springers

The present shortage of cattle in the territory of last summer's drouth, which was caused mainly by shipping out too closely last fall, owing to the belief that there would not be feed under ordinary winter conditions to carry the cattle through to spring, is now experiencing its reaction. The cattle dealers, feeders and large land owners who have the pasture for summering are on the markets for anything in the form of cattle that gives promise of utilizing feed to advantage—stockers of any age, especially yearlings and 2-year-olds, and cows representing the springer class.

This is practically a new deal for the country or farmer buyer. This class of cattle usually came in small numbers to the market, and depended mainly upon the dairy cow trade for their outlet. Scarcity of cattle of the steer and stocker sorts has influenced a general demand for anything, of any kind, of any age of the bovine family, and the milch cow demand as a result has competition with the farmer and ranchman, who thinks he sees a little better chance with the springer raising him a calf than to invest in the stock steer at the present high prices.

All the big central markets are filling orders for the country in springers. One farmer in Nebraska took from Kansas City last week 200 head of this class of cows, and others are coming to the same belief—that they can see a safer investment in the cow with prospective calf than in any other form of cattle. The calf is coming to its own as a safe investment. The way to solve the cattle shortage, the scarcity of beef, is to create more cattle, and this is a very plain proposition. There has never been but one way of doing it, and no amount of ingenuity or inventive skill will ever help materially in this work. The man who gets the cows and directs his attention to breeding will be on the ground floor, and if there is money in the business he surely will get his division of the proceeds first.

The use of the stalk cutter to reduce this form of waste in the stalk fields so they may be plowed under and become a source of enrichment to the soil, does not appeal to all farmers. It is of quite frequent occurrence to find the cornstalks, after the stalk cutter has been used, raked into windrows and set on fire as the most ready means of getting them out of the way. Occasionally a land owner plows them under, believing in getting the nitrogen they contain into the soil by this means, which is estimated by some agronomists as worth on an average of $4.50 per acre if bought for use as a commercial fertilizer. The humus which the cornstalks supply when turned under is a valuable consideration also.

There is a plan on foot to establish a creamery in connection with the Nebraska University farm. Only the best cream obtainable would be purchased, and good prices would be paid for it. Minnesota already has such a creamery in connection with its university.

What Soil CUlture Means

A farmer in Nebraska, known for his custom of raising good crops, was asked, "What method do you use in your farming?" and replied, "I use Campbell's system of soil culture." "Is that very difficult?" "Yes, it is for the man who does not like to work." "Would you please explain what this system is; I have heard so much about it for so many years?"

"It is simply good farming, nothing more, nothing less. It means just what anyone of sense who works in the soil knows. You want to plow deep, in the first place, so as to enable your ground to absorb lots of moisture. Then, by frequent shallow cultivations, both before and after you put your crop in (if it is a crop to be cultivated), try to retain this moisture just as long as you can. In short, this is all there is to my success in crop growing. I observe season, of course, in all my work. I have, as nearly as can be, barring weather conditions, of course, a time to plow, a time to sow, a time to plant, and I cultivate whenever I can. You see, I have no idle days. I am always in the field, cultivating in the cultivating season, when it is fit, even if I just finished the corn the previous day. These shallow cultivations are not injurious. The injury is in not getting back to the field quick enough, especially if there has been a rain just sufficient to form a light crust on the soil.

"When we all get to farming a less acreage and putting about twice or three times the work on it that we now are doing, we will then begin to understand what soil culture means, what intensive cultivation means. Of course, we must add to this labor of cultivation plenty of fertilizer if we are to get the best results. We have scarcely touched on this feature in Nebraska, but it is coming. You will observe the farm machinery people are each year adding improvements to cultivators, plows and all the active, vital machinery necessary to do our principal work with the soil."

Watch the Herd Bull

The above significant admonition means even more than the majority of bull owners and bull handlers appreciate at first thought. The bull is the most dangerous animal on the farm or range and has recorded to his credit more fatalities than all other sources of animal injury that the handler of stock is subjected to. Quietness and gentleness in the herd bull are features that all bull owners delight in mentioning when speaking of the all-around usefulness and desirability of their animals.

There are, however, so many instances of sudden viciousness developed in the quiet bull, who for years had been regarded as perfectly safe, gentle, easily handled by man or boy, that the only safe plan is to treat all bulls with the greatest of caution and suspicion of danger. It seems that the accidents resulting from the vicious attacks of the bull are mostly upon children or old persons not capable of putting up a vigorous remonstrance at the first indication of revolt. No one should be assigned the care of a bull who is not an active, alert, prompt handler and has means to combat any sudden tendency of the animal to become unruly. Prompt punishment, even if no more than a slight rap over the nose or face with a strap or whip, has changed the attitude of the bull from one of vicious promptings to submission and quiet deportment.

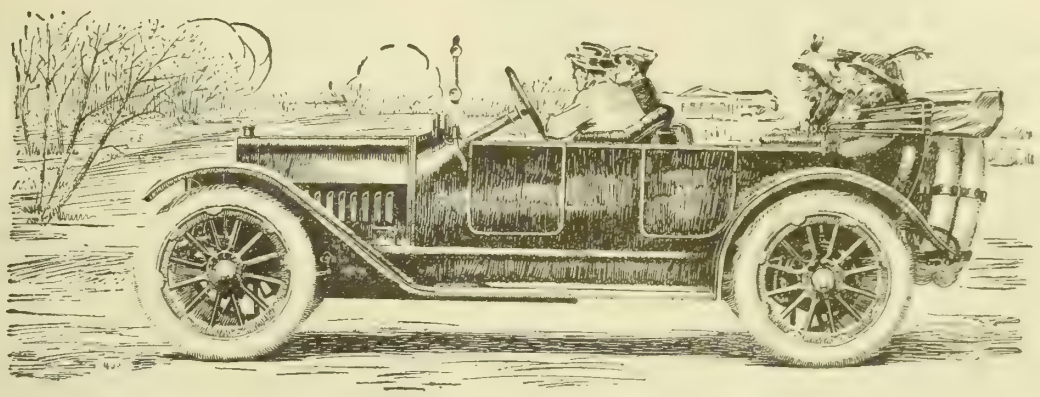
The reports of fatalities from this source of injury are not an infrequent thing. In the newspapers these notices are so frequent as to suggest that some system of caution should be urged upon the owners of such animals as to secure greater safety in their handling. Bulls are too frequently turned out among the farm herd and pastured with the milch cows that are each morning and evening brought into the barnyard or cowyard to be milked. Children are liable to injury at any moment where these animals of vicious inclinations are at liberty. The nose ring is at all times a necessity, and leading a bull without sufficient protection fully to control him from this sensitive organ is a risk that no one should take with an animal that so frequently develops the spirit of killing his best friend—his caretaker.

Co-operation and Restraint

Farmers' co-operative associations are liable to be declared in violation of the Sherman anti-trust law. This statement was recently made by Charles R. Van Hise, president of the University of Wisconsin, in his address before the national conference on marketing and farm credits. If it is true that co-operative associations are combinations in restraint of trade, something must be done either to the associations or the law.

President Van Hise suggests modifying the law by an amendment providing that restraint of trade be prohibited only where such contracts or combinations are detrimental to the public welfare. He further suggests that an interstate commission be formed with power to pass upon the question of whether or not proposed combinations are detrimental.

We may be wrong, but the idea occurs to us that places on this commission would yield rich returns to the politicians fortunate enough to secure them, and that it might be found that well established and wealthy manufacturing concerns were far more beneficial to the public than small combinations of producers, whose profits would not be sufficient to admit of distribution for political purposes.



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Put your money into a KisselKar and enjoy the ownership of a capable, dependable automobile, a car of fine appearance, ample power, exceptional strength, unsurpassed comfort.

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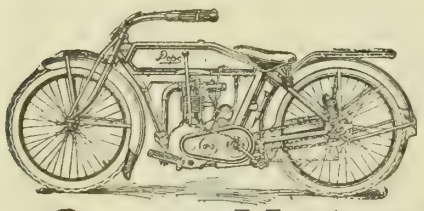

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Hog Cholera and Politics in Nebraska

Why is the Live Stock Sanitary Board Inactive?

IN RECENT issues of this paper we have had something to say about the Nebraska Live Stock Sanitary Board and what it is doing, but more particularly what it is not doing. We have been criticised for some things we have said by no less an authority than the governor of the state. We feel safe in saying that what we have said in this connection was not our opinion alone, but the opinion of a very large portion of the farmers and live stock men of the state. Permit us to call your attention to some facts relating to the Live Stock Sanitary Board.

At a meeting of the board held January 15, 1914, it adopted a set of rules and regulations. These rules were formulated by a committee consisting of the editors of the different farm papers in the state, some live stock men and veterinarians. Among other things in these rules was one saying that the board would appoint not to exceed five men for special work in the state on live stock diseases.

At Least One Man

In the issue of this paper of March 21, more than two months after the adoption of these rules, we called upon the board to wake up and do as it agreed and appoint at least one man for this work without further delay. While in Lincoln on March 20 the editor of this paper was told by J. S. Bulla, the chairman of the Sanitary Board, that the board would have a meeting in South Omaha on March 24, and was requested by Mr. Bulla to be present at this meeting and tell the members of the board what he had in mind for a special man to do when he called for one to be put in the field. We went to South Omaha on the date stated, found some of the members of the board there, with the governor, and found there was no meeting of the board. Before going, however, we expressed our views in writing in a letter addressed to Mr. Bulla, which we gave to him. He in turn immediately gave this letter to the governor without reading it. The governor at that time made the statement that there would be five men appointed at once. One of the members of the board present that day told us that the governor said he would name the men in about two weeks.

Letter to Bulla

The letter we wrote to Bulla is as follows:

Agreeable to your request, we submit to you herewith some of the reasons why we think your board should employ one or more competent men, on a yearly salary, to give their whole time and attention to the infectious and contagious diseases of live stock in Nebraska, and also give you herewith some of the duties we think should be performed.

Hog cholera is the disease that is now uppermost in the minds of our farmers and live stock men, and if only one man is employed we believe he should be in particular a hog cholera man.

The Twentieth Century Farmer has made quite an extended investigation of the hog cholera situation, sending a man into several states, who has talked personally with probably the best posted men in the country on this question. One of the conclusions we have reached in this connection is that in the fight to eradicate hog cholera the education of the farmer and stock raiser is of great importance. Sanitary rules and regulations, coupled with quarantine regulations, will without doubt be one of the greatest factors in combating this disease.

Before putting this man in the field we believe that your board should prescribe certain rules and regulations to be followed by live stock owners. The owners of a herd of hogs where an outbreak of cholera occurs should be required to notify each neighbor on the adjoining farms that he has sick hogs, and without delay notify the state veterinarian. On the farm where an outbreak occurs the owner of the herd should be required without delay to burn the carcasses of all hogs that die from any disease. Hogs sick with cholera should not be allowed to be driven or hauled in wagons on any public highway.

The state veterinarian, upon notification of an outbreak in any locality could then send the man employed as a field man to that particular farm. His duties would be to assist the farmer where the outbreak occurs, quarantine the sick hogs, etc., using every precaution possible to clean up and prevent the spread of the disease.

We are satisfied that many hog cholera outbreaks can be prevented by the education of the farmer as to the necessary means for preventing the spread of the disease. When the man employed by your board visits a herd where there is cholera we think it would be a good idea for him to call a meeting of all farmers in the vicinity at some central point, probably the school house, and at that meeting explain to them the nature of hog cholera, the necessity of staying away from an infected herd, and the things to be done to prevent the spread of the disease.

The government's investigations have shown that the most common cause of infection is farmers visiting each other or exchanging work, and thereby carrying the germ from one farm to another. The next most common cause of infection is attributed to birds, crows, buzzards and pigeons. Let the field man explain to the farmers at these meetings that they should be exceedingly careful about going from any public stock yards infested with cholera into their own herd of hogs. It is nine chances out of ten that if they do cholera may be carried on their feet, or if they are hauling hogs in wagons the germs may be carried on the feet of the horses or even on the wagon tires.

He could also show the necessity of keeping hogs away from running streams, teach them the need for disinfecting their own premises by burning all litter, such as cobs, sticks, loose boards and trash of every kind, spraying their hog houses thoroughly with some well known disinfectant.

All dogs should be tied up, especially at night. Cats are also carriers of cholera germs.

Notice to the general public that hogs on this place have cholera should be given by the posting at the road or roads leading from the public highway to the premises on which is located the cholera-infested herd of a notice, printed in large type, substantially as follows:

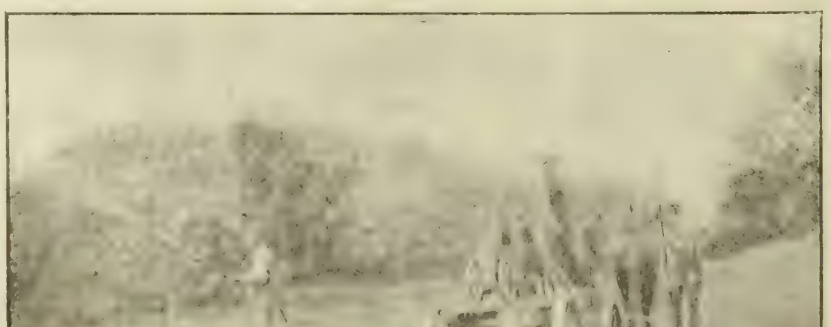
"HOG CHOLERA. KEEP OUT.

"You must not go near the hog lots

Result of Buying a Sprayer

Hauling the First Sprayer Home from the Station—Note the Use of Road Drag by This Up-to-Date Community

IN THE spring of 1911 an orchard owner down in Missouri bought a power sprayer. It was the first sprayer that had been seen in that vicinity. The benefits to his orchard were so great that the next year many of his neighbors followed his example, with the result that the 1912 crop from that locality attracted the best buyers and the sprayed fruit sold at a much better price than the fruit raised by those who did not spray, and in 1913 orchard buyers refused to look at the fruit from the unsprayed orchards. As a consequence orchard buyers in that vicinity this spring received a carload of spraying compound for their orchards, consisting of sixty-five barrels of lime and sulphur compound, which is mixed and boiled in galvanized tanks in the orchards. This carload cost about $400. There are now a dozen power sprayers in this community, many of them being used on more than one orchard.



After This No One Would Buy Unsprayed Fruit

on these premises. Parties living on these premises must not go near the hog lots on any other farm.

"(Signed) STATE VETERINARIAN."

In general it is our idea that the man or men whom you might employ should do more in the line of education than in the line of actual treating of sick hogs. However, he must be a man thoroughly conversant with the business, a veterinarian who knows how to handle both serum and virus.

In Nebraska there are seven counties with farm demonstrators. We believe the man or men your board employs should co-operate with these farm demonstrators, and by doing so could help them to become more efficient in the treatment of hog cholera and in educating the farmers as to the best methods to quarantine and clean up.

The measure in which the foregoing is made a success depends upon the kind and character of the men that are chosen to do the field work. With such men as Drs. Kigin, Bostrom and Gain at the head of the executive office and educational departments, and their work supplemented by men who will spend their time in the field, Nebraska will be in better position than ever, through the Live Stock Sanitary Board, to combat infectious and contagious diseases among all kinds of live stock.

There should be hearty co-operation between your board, the state veterinarian, the veterinarian at the agricultural college and the man or men whom you might employ in this special work. There should also be close co-operation with the government men doing work in Nebraska.

This will give you in general our ideas why one or more men of this kind should be employed. We think the fight against hog cholera is the greatest thing before the people of our state today with which your board has to deal. We believe the reasons set forth herein for the employment of one or more men to do this special work are sufficient.

Assuring you of our hearty co-operation at all times with your board, we remain, etc.

Letter to Governor Morehead

Realizing now that the matter was in the hands of the governor, and not the Live Stock Sanitary Board, we, the next day, sent the governor the following letter, stating some things we had in mind regarding the party to be appointed, and which we intended to bring before the board orally:

Since writing the letter under date of March 24 to Mr. J. H. Bulla, chairman of the Live Stock Sanitary Board, I have thought of one or two things that were not included in the letter, but which I had in mind to suggest to the board verbally, that I believe you would be interested in knowing.

To secure the best results, the man that goes into the field should be able to command the respect and confidence of the farmers. For this there are two requisites: First, the man should be a farm-raised man, who has had experience in handling hogs and live stock on the farm; he should have some ability as a speaker and be able to answer questions that will be asked in the meetings of farmers. There are a large number of men in the veterinary profession who are city-raised men. They understand horses and the animals used in city work, but if they were to get up before a bunch of every-day farmers they might soon be discredited because of a lack of the knowledge of every-day work of the farmer.

Second, I believe the man should not be too young. I have found that farmers are somewhat prejudiced against the young man just out of college. A man who goes out to handle this educational work for the Sanitary Board should be a man who is able to impress the farmers with the fact that he has had experience and that what he is saying is not theoretical.

Personally, I would rather see one or two first-class men, at a good, fair salary, in the field than three or four men who might be hired for less money.

I have taken the liberty of making these suggestions because I had no opportunity yesterday to talk the matter over with members of the board or yourself.

Conference in Our Office

On April 7 Mr. Bulla and Dr. Kigin, deputy state veterinarian, called at our office to talk about the appointment of these men. Mr. Bulla made the statement at that time that he didn't think it advisable to send out so many men just now. (Evidently he had not read our letter to him, for in the letter, as you will note, we stated that we wanted one man put in the field now). We fully explained to Mr. Bulla and Dr. Kigin that we didn't think it advisable to put more than one man in the field to start with and as the demand increased to put out additional men.

While in Lincoln recently we called on the governor, at his request, and went over the matter of putting men in the field to do special work. At this time we again said that we did not think it advisable to send out more than one man at first and increase the force when needed. It was certainly, to our mind at least, clearly understood by the governor that we wanted not more than one man to start with.

The next day after our visit to the governor the following appeared in the Omaha World-Herald:

T. F. Sturgess has approached the State Live Stock Sanitary Board in an endeavor to get seven or eight veterinarians sent out into the state on lecturing tours. The governor is opposed to that action, and voices his displeasure in these words:

"Mr. Sturgess little figures on the expense that would be entailed in such an activity. It would mean the expenditure of from $75 to $100 a day, and what guarantee would the board have that the lecturers would have audiences? I have announced that whenever a community of farmers decided they wanted a man to come to them to work and lecture, the board would be glad to send a man. But we are not going about this in a haphazard way. It would be a waste of money to follow the Sturgess plan."

Our Open Letter

On our arrival home from Lincoln we found a letter in the office, which is published in the Readers' Exchange in this issue. This letter is from a prominent farmer and stock breeder of the state who wants his name withheld from publication. We felt that we were clearly misrepresented in this statement published in the World-Herald. That the farmers and stock breeders of the state might know fully what our position was in the matter, we addressed to the governor the following open letter, which was given to the press:

We have noticed several quotations in the state press as quoting what I have said in our talk last Thursday.

Here we quoted the foregoing interview in the World-Herald.

I am certainly very much surprised at such a statement coming from you after the clear understanding we had in our talk in your office last Thursday. The Twentieth Century Farmer has taken somewhat of an active part in the doings of the Live Stock Sanitary Board, feeling that this board is in a position to be of great benefit to the farmers of this state.

You say that I have urged the appointment of seven or eight men to be sent out to lecture to the farmers. This you cannot help but know to be a misstatement. At no time, either in my talk in your office last Thursday; in my letter to Mr. J. H. Bulla, chairman of the Live Stock Sanitary Board, which letter was handed to you; in a letter sent to you personally on March 23, or in any article or editorial appearing in the Twentieth Century Farmer, have we urged the employment of any such number of men. Mr. Bulla and Dr. L. C. Kigin, deputy state veterinarian, were in my office on April 7 to talk this matter over, and we made it very clear to them that one man was all we thought should be sent out at first, and should there be a demand for more it was a matter wholly within the hands of the Live Stock Sanitary Board to send out such number as it might deem necessary.

You say in the World-Herald, "I have announced that whenever a community of farmers decided they wanted a man to come to them to work and lecture the board would be glad to send a man." We are enclosing you herewith a copy of a letter received from a subscriber of this paper, who is a prominent farmer and stock breeder in this state, but wishes his name withheld from publication. What he says in regard to the farmers asking for a man to instruct them is exactly in accordance with our views in this matter. If you will refer to the letter to Mr. Bulla to which we have referred, you will note the following:

"We are satisfied that many hog cholera outbreaks can be prevented by the education of the farmer as to disease. When the man employed by your board visits a herd where there is cholera we think it would be a good idea for him to call a meeting of all farmers in the vicinity at some central point, probably the school house, and at that meeting explain to them the nature of hog cholera, the necessity of staying away from

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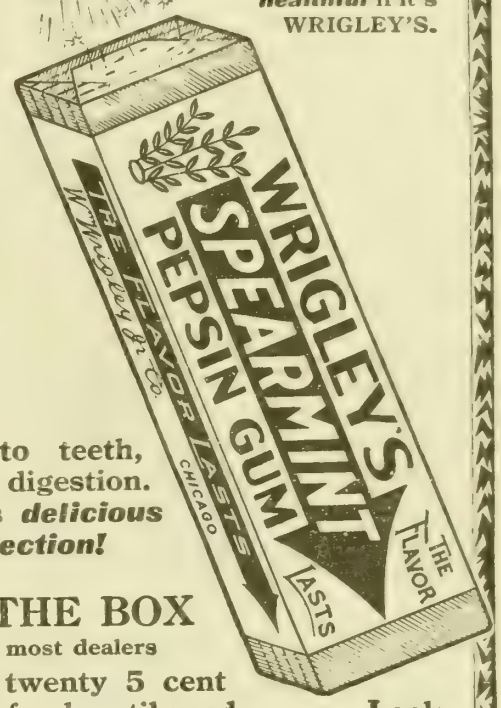

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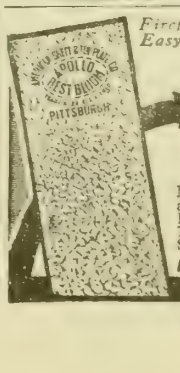

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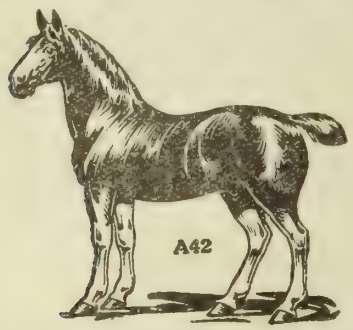

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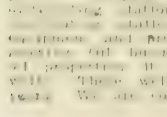
Price $5 per bottle, and worth it. Address **McKallor Drug Co., Binghamton, N. Y.**



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Five hundred to a few thousand dollars invested in an established and growing, producing, manufacturing and marketing oil company can easily grow into enormous value.

Only competitor worthy the name of the convicted and despised oil monopoly has increased its capital stock and has started a campaign to raise ($2,000,000) two million dollars of new capital to extend at once its business over ten states. This independent company has been built up in the state of old John Brown, fought for and protected by stockholders and leaders that have the spirit of freedom bred in them. The company now has accumulated substantial assets of the reasonable value of over ($3,000,000) three million dollars, including 27,000 acres of leases and land that can easily develop into a gain of 20 to 50 times.

Oil is a necessity. It sells for cash. Rich conspirators to grab big business, may bring on a free trade panic and generally depress and destroy thousands of small industrial concerns—but Oil is a life necessity—panics and business depression cannot materially check it. Furthermore, this company has its trade built up and is reaching out for more commerce in the great agricultural district of Kansas, Missouri Iowa, Minnesota, North and South Dakota Wisconsin, Illinois, Arkansas, Oklahoma, Nebraska, Northern Texas and Eastern Colorado no matter how much other great industrial concerns are injured by ruinous and vicious state and national legislation still the manufactured products of oil will be in demand in these great wealth producing states—making such an investment safe and profitable to the exclusion of all others. Kansas-Oklahoma Oil should now bring from $1.35 to $1.60 per barrel, according to gravity grade, and the price is certain to be secured as the monopoly grip is broken in the West as it will be known as the successful anti-trust leaders from the free soil of Kansas.

We already have Refinery No. 1 at Cherryvale, Kansas, near the heart of the Kansas Oil fields. Refinery No. 2 at West Tulsa, Oklahoma, in the heart of the Oklahoma Oil fields. Refinery No. 3, with a different manufacturing site, in the big trade center of Kansas City, Kansas.

We plan owned by the company will be connected with the Kansas Oil Refinery in the near future as quick as new capital will permit. Companies buy 250 miles of pipe line to [illegible] tank cars and many [illegible] and much necessary equipment and property necessary to conduct a business on business lines. On the 27,000 acres of oil properties it now has 107 producing oil wells. These wells should produce for many years. We are confident, drilling more than 27,000 acres are situated in between some of the greatest oil pools ever developed in the West. Coming toward a part of our big leases in one big Oklahoma Oil county are deep wells that are producing as high as from 2,500 to 4,000 barrels daily on the start.

We undoubtedly have many acres that contain rich oil pools, worth millions. It is to drill these important test wells and enlarge the business that new capital is being raised. We also have an Osage lease of 430,600 acres—the richest plum in the oil world—that the Oil Trust influence has so far cheated us out of the validation of this lease in Washington. A bill is pending in congress to validate this great lease and a fight is being made for it in Kansas that will force a divorce of officials from convicted monopoly and eventually protect this great lease, which, when developed, as this company can develop it, will add one hundred million in value to the company and absolutely perpetuate it in the oil world for a hundred years.

The fight this company has male from brutal persecution against criminal money to startling prosperity is fully explained in our 96 large-page Prospectus. This Prospectus contains truthful reports of crimes of the oil trust in collusion with state and federal grafting officials that will make you want to shoulder a gun and help shoot this black slave power of the oil trust out of the government. It contains so many startling truths that no newspaper dare publish it. Every loyal patriotic citizen should join in the mighty contest to force justice to Each Producer and Consumer and make your patriotism profitable and also aid the right.

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Write at once and secure your stock before a big advance that must soon occur.

Respectfully submitted

THE UNCLE SAM OIL COMPANY.

By H. H. TUCKER, JR., President.

ADDRESS ALL COMMUNICATIONS TO THE UNCLE SAM OIL CO., DEPT. 2, KANSAS CITY, KANSAS.

an infected herd, and the things to be done to prevent the spread of the disease."

We quite agree with you that financial matters should be looked after, but we also think there are two sides from which this can be viewed. You say in the World-Herald my plan would mean an expenditure of from $75 to $100 per day. As above stated, I want to make it clear that at no time have I advocated any such expenditure. Suppose, however, that the state of Nebraska would spend in hog cholera work $100 a day, which in round numbers would be $30,000 per year; is this exorbitant? Is it unreasonable? From the best figures obtainable, Nebraska suffered a loss of $6,500,000 in 1913 due to hog cholera. With the progress made in combatting hog cholera through sanitary measures and treatment there can be no question but that if the Live Stock Sanitary Board takes hold of this matter and acts before there is another serious outbreak, by using such men as are necessary on full time in this special work, large sums of money can be saved the farmers in this state from losses by the terrible disease. We want to urge the fact that in the saving of hogs the farmers alone are not the only ones to profit. The more hogs that can be raised in any state and put upon the market the less will become the price of meat over the counter, and in consequence every resident of the state is benefited.

Just recently the United States government appropriated $600,000 for this work. Nebraska is the fourth state in the union in numbers of hogs. Six hundred thousand dollars would mean the expenditure of $30,000 in twenty states—the amount that would be spent by this state if we used a $100 a day, as was suggested by you. There are not twenty states that would justify the expenditure of $30,000 of this appropriation by the government. I simply mention this, governor, to call your attention to the fact that farm papers and live stock men of Nebraska, in asking for one or more special men to take up this work, are not unreasonable in their request. The matter appeals to us in this light.

The legislature enacted the law creating the Live Stock Sanitary Board. When it did so it certainly had in mind this board being effective in treating diseases of live stock within its state in different ways. It appears to me that the men having in charge the carrying out of this work should do what they can along the line of eradicating diseases of live stock, and cholera is certainly one of the most disastrous and most prevalent diseases in this state at this time.

Can you, with the Sanitary Board, afford to take chances on an outbreak of cholera without doing something to help the farmer in combatting an outbreak of this disease?

Stockmen Must Help

This letter explains the situation, but there are some things we want to say to the farmers and stockmen of the state in this connection. You can rest assured that the Twentieth Century Farmer and the other farm papers in the state are doing what they can to get for the farmers and live stock men the protection to which they are entitled and the protection the legislature intended they should have when it created the Live Stock Sanitary Board. Don't forget, however, that you have something to do in this matter yourself. If you want this protection (which it seems the Live Stock Sanitary Board is not inclined to give you), you must let your wants be known. Remember all the time that the other fellows—the railroad managers, telephone companies, etc.—are letting their wants be known, and they are getting some of the things they want. Don't be backward in letting your wants be known.

It is the opinion of this paper that the legislature created this board for the purpose of getting out of politics as far as possible live stock sanitary matters, realizing the great importance of this industry in Nebraska. From present indications it looks as if no advancement has been made. Nothing has been done except by the governor. The state veterinarian can't even employ or discharge a stenographer in his office; they are all employed by the governor. It seems to us that efficient work can't be done by the state veterinarian if he can't run his office, can't say what his help shall or shall not do. Politics must be cut out. The governor should have more important work to do than looking after the stenographers and other office help in the office of the state veterinarian or any other state office.

The Twentieth Century Farmer in its issue of April 25, in one of the series of articles on hog cholera, stated clearly our idea of how the Live Stock Sanitary Board should be formed to get away from petty politics in such important matters as the guarding of our live stock against destructive infectious and contagious diseases.

In conclusion let us again say that what we have done in this matter has been in the interests of the live stock men of the state; that the other farm papers in the state are doing their part, as are officers of the Live Stock Breeders' Association. It is up to the farmers and breeders to do their part. If they do, we can force results, even though the powers that be don't want to do their plain duty. Keep this in mind and make it your business to keep tab on what your Live Stock Sanitary Board is doing just as much as it is your business to feed your hogs and cattle each day.

Permit us to say in this connection that the Improved Live Stock Breeders' Association is not asleep. But recently the executive committee of this association held a meeting in Lincoln and instructed President Ollis and Secretary Gramlich to call upon the Live Stock Sanitary Board to do something. These gentlemen in writing asked the board to hold a meeting and take some action in the way of putting a man in the field to do this special work. In response to this demand the board held a meeting at Lincoln on April 22, this being the first meeting held by the board since January 15.

Meeting on April 22

The Live Stock Sanitary Board held a meeting in the governor's office in Lincoln on April 22. This meeting was attended by about forty representative members and officers of the important live stock organizations in the state.

The night before this meeting a large per cent of these men held a meeting in the Lindell hotel to discuss their needs in the way of sanitary and quarantine rules and field men for special work in combatting animal disease. This conference was called by the officers of the Improved Live Stock Breeders' Association of Nebraska and was presided over by the president of this organization, J. A. Ollis of Ord. These matters were discussed from every standpoint. It was finally decided that this conference should formulate a request for some needed changes in the rules, and also for at least one field man for special work, for presentation at the meeting the next day of the Live Stock Sanitary Board. The conference prepared the following request, which was presented to the board by President Ollis:

A conference of representative live stock and farmers' organizations and representatives of the different farm papers in Nebraska was held last evening, upon a request of the officers of the Improved Live Stock Breeders' Association. This conference was for the purpose of talking over some matters of interest to the live stock men of the state over which the Sanitary Board has control.

First, the board has been asked to place in the field at least one competent man, on full pay, to do in particular hog cholera work. In a recent issue of some of the state daily papers the governor gave out that in localities where farmers requested it a man would be sent to instruct them in hog cholera work. In our opinion this would not meet the requirement. Farmers would not call for instruction. This statement of the governor, however, shows to us that the authorities show a willingness to do something along this line. Permit us to suggest some important things in connection with the appointment of such a man or men.

We believe the man or men appointed should be a graduate veterinarian of experience, a farm-raised man, who has had practical experience on the farm in handling farm animals. He should be a man who has had actual field experience in this state. We feel this man should not be too young in years—should have the judgment acquired by years of actual work.

We are firmly of the opinion that co-operation will be a very important factor in the control of hog cholera. The man or men to be put in the field should be more of an organizer than a practitioner. Co-operation of the different authorities in the states is absolutely necessary to do efficient work. Before appointment is made thorough investigation should be made regarding the man. We believe your board should make this appointment, and in doing so should call in consultation on this appointment Dr. L. C. Kigin, deputy state veterinarian, and Dr. J. H. Gain, head of the veterinary department of the State Agricultural College. These gentlemen represent the police power and educational interests in our work. Get a man who will work in accord with these authorities. Your appointee should be a man competent to earn a good salary and should receive a salary commensurate with his ability. He should be given to understand that the job is permanent so long as he makes good. We feel sure the right man will grow in the position and each year become more valuable to our live stock interests. After the appointment of such a field man or men we believe your board should prescribe such rules and regula-

tions as may be necessary for efficient work.

At your last meeting you passed a rule requiring that the mallein test must be applied to all horses, mules and asses to be shipped into the state. We believe this was a mistake and this rule should be abolished. We believe the enforcement of your present rule is a detriment to the horse interests of the state, and that it overcomes any good that may come from its enforcement. Strict enforcement of laws or rules on districts should be made where an outbreak of glanders occurs.

The requests of the stockmen as set forth were all complied with by the board.

Mallein Test Undesirable

We wish to explain the reasons for requesting the abolition of the rule requiring the mallein test for horses. This test works a great hardship on the commercial horsemen of the state, which is a large industry. Many of these horses are wild range animals, bought in the western states. The application of this test requires catching and throwing the animal three or four times. In many cases the animal is absolutely ruined for practical purposes. In other cases he is injured, requiring his selling at a decreased price and also entailing a very considerable expense.

It was shown that in some places in the state of Nevada where these horses are bought by our dealers it was necessary to send 200 miles to get a veterinarian to do the work. Reports at hand from the state veterinarians of two western states show less than one in a thousand of the horses given the mallein test as reacting.

It must be borne in mind also that the mallein test is not positive. In many instances have horses reacted to this test and still not had glanders. Figures at hand show that about 40,000 horses were imported into the state in 1913. A low average cost for application of the mallein test would be $5 per head; in other words, an outlay of at least $200,000 for this work.

Three years ago the legislature appropriated funds to be used for indemnity to owners of glandered horses ordered killed by state authorities. Prior to that time no indemnity was paid. It is fair to presume that some glandered horses were then in the state, having been held by owners who were not positive the horses were affected with glanders. These horses were all killed by order of the state veterinarian and paid for on a basis of two-thirds value. During the first year of the life of this law, in round numbers, $5,000 was paid as indemnity under this act. In the last nine months of 1913 $3,437.06 was paid for this purpose. The veterinarians are very vigilant in looking after glandered horses, and without question all animals having this disease will be promptly destroyed and the premises quarantined.

It will be readily seen that the amount of money being paid by our horsemen and farmers to comply with the requirements of this rule would be so much in excess of the amount necessary to be paid to owners of glandered horses which are killed on this account that the enforcement of the rule would be unfair. You will note that strict enforcement of quarantine regulations on farms or in districts where glanders are found is requested.

In the fore part of this article we published a clipping from the Omaha World-Herald, our letter to Governor Morehead and some other facts regarding the attitude of this paper and its editor relating to special veterinary field work. Governor Morehead stated in this meeting that the clipping in the World-Herald was evidently written before the visit of the editor of this paper to him in his office as referred to in the other article; that he was fully in accord with our views, and hoped for the adoption of the plan advocated by this paper.

This conference and meeting the next day with the Live Stock Sanitary Board was the most representative meeting ever held of all the live stock interests in this or any other state, meeting for the purpose of requesting the enactment of certain things pertinent to their business over which the Live Stock Sanitary Board has control. Nebraska live stock men have taken the initiative in this matter. Live stock interests of other states should get together and freely discuss rules and regulations deemed by them best to be enacted in their states. One matter should always be borne in mind in the enactment of sanitary and quarantine regulations, and that is the minimum of hardship to live stock men should be carefully considered. Often are hardships on particular individuals necessary for the general public good, but these should be avoided whenever possible to do so. If all live stock interests in the state would take an active interest in these matters and present their views to their live stock sanitary board, or such authority as prescribes sanitary and quarantine regulations, we believe the necessary rules and regulations could be adopted working the least hardship on individuals.

State Lines Imaginary

A very important matter to be considered in this connection is the difference in these rules and regulations in different states. The truth of the matter is, as far as efficient work in this line is concerned, state lines are only imaginary and should be wiped out in considering quarantine rules and regulations. We believe that this can largely be done by authorities having charge of these rules and regulations in the different states having joint meetings and considering these matters in connection with representative live stock men from these different states.

In combatting any infectious or contagious animal disease affected districts only should be quarantined, be this district a particular farm, neighborhood, precinct, county, or several counties, or state or states. It might easily happen that an outbreak might occur on a state line, and it might be just as necessary to quarantine animals on an adjoining farm which would be in another state as to quarantine animals on adjoining farms in the same state. This can be accomplished by co-opertion. The Twentieth Century Farmer suggests and urges this cooperation among live stock sanitary boards or authorities of the various states.

We want to congratulate the live stock interests of Nebraska on the results obtained at this recent meeting of the Live Stock Sanitary Board. It is the first time in the history of Nebraska that all the various live stock interests have gotten together and worked for a common good. The horsemen, cattlemen, hogmen and farmers in general were strongly represented at this meeting. The desirability of such union of forces was clearly demonstrated to those who attended the meeting. There is no question in our mind but that future conferences of this kind will be held by the live stock men of Nebraska, and that matters pertaining to sanitary and quarantine rules and regulations are going to be given more attention by our live stock men than has ever before been given. We believe there is going to be a closer and more hearty co-operation between the live stock interests and our State Sanitary Board, a thing absolutely necessary for the most efficient work.

Dawn of a Better Day

As will be noted in the above request, Dr. Gain, head of the veterinary department at the Nebraska Agricultural College, was asked to be called in conference in the selection of a special man to do field work. The board heartily adopted this recommendation, and Dr. Gain's experience and advice were made available. This will mean a closer co-operation between the different authorities

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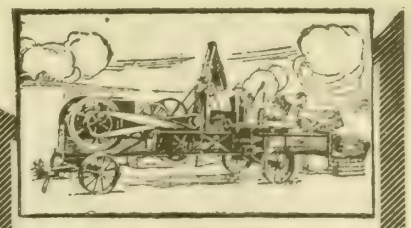

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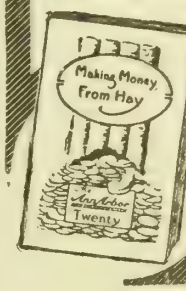

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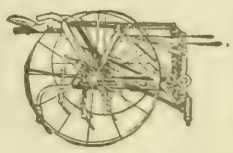

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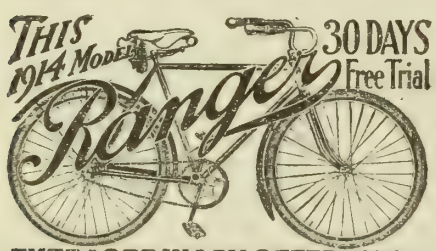

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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Playing Sunshine

I cannot be a little bird
And sing the livelong day;
I cannot be the rippling brook
That sparkles on its way.

I cannot even be the flower
That smiles from morn till night,
But I can be one lovely thing—
A bit of sunshine bright.

And when the little birds have gone,
Since summer time is o'er,
And winter drear has chained the brooks
So they can sing no more,

And e'en the flowers fade and die
'Mid leaves all brown and sere,
There's all the better chance for me
With smiles to help and cheer.

For I can shine when days are dark,
And when the raindrops fall,
When other sunbeams hide away
And have no chance at all.

So, though I love you, little birds,
And brooks and blossoms, too;
Just playing sunshine is the best
A little girl can do.

—Winifred Arnold.

Harry's Daddy Longlegs

"Here is a daddy longlegs, Uncle Jack," said Harry, holding up a frightened insect, with its long legs waving wildly in every direction.

"Well, let it go," said Uncle Jack. "Do you want to hurt one of your very best friends?"

"I like daddies," said Rose, "but I didn't know they were especially good friends. What do they do for us?"

"They eat up aphids and other harmful bugs. All spiders do. Spiders are among our most valuable insects."

"Is the daddy longlegs a spider?" asked Harry.

"It certainly is. I wish I might show you one under the microscope. You would be surprised to know how interesting it is. Those long, hair-like legs have each of them seven joints. That is why they bend about so easily. The daddy longlegs has eight eyes, two little ones in the middle, where you would expect to find them, and a group of three larger ones on either side of them. Under the eyes are the mandibles, or big, strong jaws. The mother wraps the eggs in a soft, silken cocoon and carries them around in her mandibles until they hatch."

"Do they spin webs?" asked Rose.

"Yes, indeed," said Uncle Jack. "They make loose, flat webs in dark corners and may often be seen hanging in these webs upside down."

"What are aphids?" asked Harry. "You said the daddies ate them."

"They are the tiny green bugs that suck the juices out of the peas and roses and other plants. Some time I will tell you all about them, but your father is calling now. Let's see who will get there first." And away Uncle Jack ran across the field with the children and the two dogs racing and shouting and barking behind him. HOME EDITOR.

(Prize Story)

A Narrow Escape

By Everett Van Horn, Aged 10, North Loup, Neb.

One hot, sultry day in July Ross and Betty were going to have a little picnic in the woods. The children's father had told them how, years and years before they were born he had escaped death in a treacherous forest fire by plunging into the river and staying there on a floating log until it had passed.

They got their lunch and started about noon for the timber, which was not far off. They soon found a shady spot and sat down to rest. They were not hungry yet, however, so they strolled about the timber a while, catching butterflies and chasing squirrels. Then, feeling rather hungry, they went back to their lunch. Betty soon laid the contents of the basket on the grass and the two munched sandwiches and drank milk.

When the children had finished their lunch and were putting away the dishes Ross jumped to his feet and exclaimed: "Look! Look!" Betty turned and looked in the direction Ross' finger pointed. There, above the tree tops, they could see black clouds of smoke rolling up into the sky.

"Run for the river!" shouted Ross, catching Betty's hand. The river was but a little way off and the children were soon swimming to a large log which was in the middle of the stream. The fire passed, leaving a long, black path. The children scrambled out on the bank and ran home, stumbling over burned logs and fences.

"Well, for goodness sake!" exclaimed their mother when the two dripping figures came into the house. The children told her of the fire and then went and changed their clothes. It was not until night that they thought about their lunch basket.

Note—The winning of this prize makes Everett Van Horn a member of the honor department, as he won a prize for the best story in the issue of June 7, 1913. He says that he has been laid up for the last eight weeks with a broken leg, which has given him plenty of time to read and write stories. We are very sorry about the broken leg and hope it is about well by this time. This makes five members of our honor department, two girls and three boys. We hope our honor members will write often during the summer, as we are always glad to hear from them. HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and over 200 words.

Write with ink, on one side of paper only.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

Picture Contest No. 13

Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it bright and original. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor Twentieth Century Farmer, Omaha, and must reach this office not later than May 30. Answers to contest No. 12 will appear in the next issue.

(Honorable Mention)

My Pet Fox

By May Bernice Viles, Aged 9, Warrensburg, Mo.

Once I had a pet fox, which a man caught in the woods near my home and brought her to me when she was a tiny baby. I got a big box and fixed her a house in it. I fed her milk, and my dog, Leo, caught her some rabbits to eat. I kept her in the box until the weather was warm enough to let her out; then I fastened a chain around her neck and tied her to a tree near her house until she got used to her new home. The next night she got loose and ran away. She was gone two days, when I found her under a bridge in our field. She was awfully frightened when I caught her. I brought her to the house and tied her up again and gave her some milk to drink. She was very good for a few days, but one night she got loose and ran away again, with the chain fastened to her neck. She came back once after that and tried to catch our little chickens, but my dog ran her away and we never saw her again.

A Bird's Nest

By Jennie Wilson, Aged 11, Logan, Ia.

Two years ago this spring, when the birds came back from the south, we hung a gallon pail on the fence and a little wren built a nest in it. We did not harm the eggs. We loved the little birds, and when we went past the nest the mother wren came out and flew at our heads and pecked us. She was a brave mother. This is a true story.

Additional Stories

Joseph Donat, Brainard, Neb.; Florence Bruard, Madison, Neb.; Norvall De Moss, Callaway, Neb.; Flora Parks, Kearney, Neb.; Katherine Jensen, Valley, Neb.; Zelda Fentress, Osceola, Neb.; Dora Iberg, Elgin, Neb.; Hannah Nyquist, Gross, Neb.; Zoa Fairchild, Miller, Neb.; Homer Loney, Neola, Kan.; Retha Cloud, Marshfield, Mo.; Edwin Nunnelley, New Florence, Mo.; Edith Hartness, Maryville, Mo.; Eunice and Vivian Blakemore, Brighton, Mo.; Robert Dazel, Sanborn, Ia.; Sallie Thompson, Danbury, Ia.; Donald McLeod, Hawthorne, Nev.; Alina J. Luoma, Leo, Wyo.; Floyd Jenkins, Colfax, Wash.; Ella Erdmann, Briton, S. D.; Vesta Hales, Midvale, Idaho.

Of Interest to Our Women Readers

Carry Me Back

Carry me back to the scenes of my childhood,
Carry me back to my home when a boy,
There just to roam in the dense of the wildwood,
There to live over the days of my joy.

Thoughts of my childhood about me still flowing,
Vivid impressions grow stronger with time;
Live as I may in the years that are going,
Fond recollections will always be mine.

Give me the hopes of my youth that were glowing,
Take me away from turmoil and strife;
Carry me back again just to be growing,
Fondly surmising the fruits of a life.

Resting, O resting, serenely reclining,
Viewing the world with the least bit of care,
Pleasantly dreaming, the future divining,
While I would sit in the old rocking chair.

Give me, O give me, my youth to live over!
Backward, O backward, allow me to fly!
When in the fields I would roam through the clover,
Chasing the butterfly into the sky.

Give me, O give me, the sweetness of slumber!
Cuddled and tucked away snugly in bed;
Mother's caresses I never could number,
Countless were they on my wee, sleepy head.

Carry me back to my childhood's adorning,
Carry me back to my youth and my play;
Carry me back to my life's early morning,
Carry me back and allow me to stay.

—Henry M. Hopewell.

Conservation of Strength

The summer time is the season of which the poets sing as the most beautiful of the year. The trees, flowers and birds and all the other beauties of nature are at their fullest glory then. The woman on the farm, however, is often too busy in the kitchen and too hot and tired from cooking big dinners for the hay hands and harvesters over a hot range to care much about the beauty in nature, or in anything else, including herself.

One of the big problems of the farm in summer is to find a method of cooking whereby the cook will not be cooked also. We must have a stove less heating than the wood or coal range. So many accidents have happened with the gasoline stove that we have grown to fear it. Were it safe, it would be a great blessing, but we do not dare risk the danger of fires, especially where there are children who may tamper with the stove. The use of the old-fashioned high-tank gasoline range was a tempting of providence.

However, gasoline has proved itself too useful to be discarded as a fuel with insufficient trials, and manufacturers have been experimenting with it for several years. The result is the invention and placing on the market of gasoline ranges that are not dangerous if ordinary care is used. The fool-proof stove has not been discovered. One should, of course, not fill any stove while it is burning or when there is an open flame in the room; gasoline should not be spilled, and great care should be used in storing this fuel and not mistaking it for kerosene.

Acetylene is being used to some extent for cooking, and burns with a good, clear flame, without heating up the kitchen very much. It is fairly expensive and requires a specially constructed plant, but the same plant may be used for both lighting and cooking.

Kerosene or oil stoves are now being made that have not the disadvantages of the old kind, which gave off smoke and evil-smelling fumes.

Before hot weather is upon us it would be well to investigate the cooking stove question. It is poor economy to use the wood or coal range, burning up your own strength and health and good disposition, when it is possible, without great expense, to secure the comfort of a non-heating cooking stove.

HOME EDITOR.

Sentimental Nuisances

Sentiment and a false sense of economy are responsible for many uncomfortable homes that are a pleasure to neither the sight nor any of the other senses of the family and their visitors. Just because "mother" or someone else loved a certain chair is no reason why it must be kept about, unsightly and unreliable, for years to come. If it cannot be made serviceable and at least not offensive to the sight, why not put it in the attic?

A Lady of Leisure

"I've a corn!" groaned a young person, wildly hugging her foot and rocking to and fro upon the floor.

"I've a sure cure for corns," declared the bed-ridden woman, who had not walked for three years.

"What is it? I'll get the prescription filled right away." And the young person brightened visibly and temporarily forgot her corn.

"My feet were calloused and sore all over and I had corns and bunions until walking was an agony," began the old lady.

"Yes, and now your feet are as soft as those of a babe. What did it?"

"It's a costly cure," the bed-ridden woman warned speculatively.

"I'll pay the price, whatever it is," asserted the young person vigorously.

"Six months in bed," came the thunderclap from the bed. There was lightning and storm in the young person's heart.

"I said I'd pay the price, but I won't!"

"Some folks are born with leisure, some achieve leisure and some have it thrust upon them," came the oracle, "and I am one of the last class. I am a farmer's wife, and I always worked more than I was able to—not because the work was so much, but because I had lost my rightful inheritance before I was born and never had the strength for the things I ought to do, let alone the things I wanted to do. I had aspirations and I wanted leisure; I didn't exactly pray for it, unless 'desire is prayer,' as the theologians say. I desired leisure, and they say if we desire a thing long enough and hard enough we get the thing desired. Well, I have leisure, but not because it is my birthright, nor because I achieved it, but because it was thrust upon me, and the thrusting was the thrust of a surgeon's knife. There are many things worse than callouses and corns and work. Why, I'd welcome a—oh, almost anything—if I could have the ability to work along with it."

The young person was thoughtful, but it was noticed that she stopped complaining, and that she worked willingly for some time after.

ROSE SEELYE-MILLER.
South Dakota.

Good Baking Powder Biscuits

The best biscuits I ever ate were made by a southern woman. The rule was quite exact—a quart of flour, a good tablespoonful of lard, three heaping teaspoonfuls of baking powder, one even teaspoonful (very scant) of soda, and sour milk for wetting. This transgressed the traditions of the mothers, but the result justified the means. The biscuits were mixed soft, but not too soft to handle reasonably, and baked with a good, hot fire. The bottom of oven should be hissing hot when the biscuits are put in.

If placed so they do not touch, they will form a crust on all sides, and many prefer them crusted lightly. If crust is not wanted, place them closer together. Before putting in oven swab over the tops with melted butter. A small, common paint brush is ideal for this purpose.

Some think soda and baking powder cannot be successfully used together. This is a fallacy, as the lightest productions are made thereby. Of course, when soda is used a counteracting acid is required. Sweet milk cannot be used therewith. Frequently, however, milk does sour and it can be utilized in the above way with better results than sweet. It can also be used in cake making where sweet milk is called for, if soda is used to counteract the acid.

One thing about using soda, the good cook above mentioned said: "Be sure you have too little soda and you will have it just right."

Have You Ever Tried This?

Hard Ginger Bread—This is a delicious edible, especially with the morning coffee: Two cups of molasses, one cup of sugar, one cup of lard, one cup of buttermilk, in which has been dissolved two even tablespoonfuls of soda, one even tablespoonful of powdered alum; season with a teaspoonful of ginger; stir all this together and mix stiff with flour, adding four teaspoonfuls of baking powder to the flour. Roll out into portions about half an inch thick, fully that thick, and place in big pans, uncut save to trim it to fit the pan; then, after it is in the pan, cut it into pieces about two inches wide by three long and bake in quick oven. When done remove from pan to a stiff paper and let cool, and when all is done make a boiled frosting of two cups of sugar and water cooked till it hairs, then pour over the beaten whites of two eggs and beat well. Flavor with rose; there is no other flavor that seems quite right but the rose. Spread the cakes with this frosting and when cold they may be broken apart where they had been cut, or can be left until ready to use. Theso

This Power Washer A Mechanical Masterpiece.

Has a large well built tub of cypress. All mechanical parts accurately made and fitted. All gears enclosed so injury to operator is impossible with this machine. Mechanism is so constructed that it is impossible for any part to get out of line because mechanism is compact or in place instead of being scattered. Look at picture and see detail of construction.

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To operate, open lid which throws machine out of gear. Fill tub two-thirds full of water. Put in clothes, clamp down lid, thereby throwing machine into gear and your washing is under way. Only one lever on entire machine. This operates wringer.

FAIRBANKS MORSE & CO., OMAHA, NEB.

Ask Your Dealer

Don't let him insist on selling you some other washer that he claims to be just as good. Insist on the "Eclipse" Electrical Power Washer with the reputation

should be put in a tight tin box to soften, but care must be taken about piling them together, as they sometimes stick together unless the frosting is dry.

Believe in Your Boy

Is there a boy problem in your home? If so, you are looking for its solution. It is to be found in a little sentence of four short words—believe in the boy.

It is a sad day in a boy's life when he hears a parent say, "I have no confidence in you." And yet parents—well meaning parents, too—say these very words to their boys, and other parents say them as plainly by actions as if they had spoken.

A boy's daily chores included looking after the barnyard, milking the cow and caring for the family horse. On several occasions the faucet that supplied the tank with drinking water was found open and the barnyard flooded. Of course, the boy was charged with carelessness. He stoutly denied having left the faucet open; but he was threatened with punishment next time such trouble occurred, and he missed it only by chance. The cook happened to look out of the kitchen window just in time to see the old bay horse turn the faucet with his nose. He had probably learned the trick by accident and was smart enough to draw his drinking water fresh.

Many a boy has been punished for just such acts which he never committed, so be slow to judge the boy. The normal boy is quick to respond to kindness and just as quick to be hardened by unjust judgments of those in authority. More than one boy came safely through the stormy years of his teens, not because of, but in spite of, the system of discipline to which he was subjected in the home.—Mother's Magazine.

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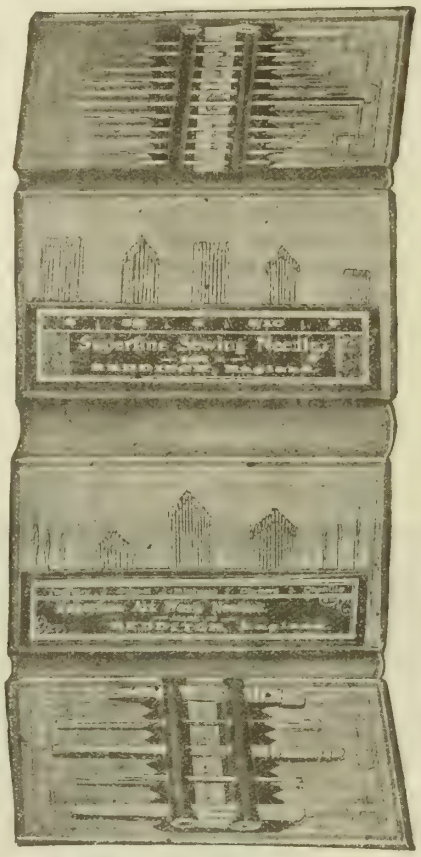

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Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6649—Ladies' Apron and Cap—This apron is almost a dress. It has a short waist in empire style, with little ruffles for sleeves, and the skirt is gathered all around. The closing is in the center of the back and there are two patch pockets. The best apron material is gingham, but calico, chambray and various other wash fabrics can also be utilized. Pattern No. 6649 is cut in sizes 34 to 44 inches bust measure. Medium size requires 4½ yards of 36-inch material.

6644—Ladies' Dressing Sacque—In this model we have the body and half of the sleeve in one, a single seam running down from the neck edge to the wrist along the outer arm. The neck is trimmed with a handsome collar, and cuffs to correspond complete the sleeves. The pattern No. 6644 is cut in sizes 34 to 44 inches bust measure. Medium size requires 3⅞ yards of 36-inch material.

6651—Misses' Dress—For dressy occasions, such as graduation and party wear, this model is suitable and dressy. There is a one-piece body lining, and the outer bodice has body and sleeve in one. The surplice crossing idea is used in the back, as well as in the front. The pattern No. 6651 is cut in sizes 14, 16, 18 and 20 years. Medium size requires 4½ yards of 45-inch bordered material, ⅝ yard of 40-inch net for body lining, 1¼ yards of ribbon for girdle or 3⅝ yards of 36-inch plain material.

6646—Boys' Dress—For our very little sons we have here a dress which closes in front and which has a single tuck at each side of the front as its only ornament. The neck is a little open, with removable shield and wide collar, and the sleeves are inset in the regular manner. The pattern No. 6646 is cut in sizes 2, 3 and 4 years. Medium size requires 2 yards of 36-inch material.

6638—Ladies' Four-Gore Skirt—The novelty of the skirt is in the arrangement of the side gores over the straight front and back panels. The top is fitted by darts, but gathers may be used instead, and there is an ornamental girdle. Raised or regulation waistline may be used in making. The style is excellent for serge, cheviot and especially for linen. The skirt pattern No. 6638 is cut in sizes 22 to 32 inches waist measure. Medium size requires 2¾ yards of 36, 44 or 54-inch material.

6600—Girls' Kimono Apron—This apron may readily be turned into a dress by placing the closing at the side of the front and adding a belt. As an apron it may have a seam along the shoulder and down the arm, or not, as preferred, and either round or square neck. Long or short sleeves are also provided. Gingham, calico, percale or crossbar muslin will make pretty aprons. The pattern No. 6600 is cut in sizes 2, 4, 6, 8, 10, 12 and 14 years. Medium size requires 2⅛ yards of 36-inch material.

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The sum realized for Beef, Butter, Milk and Cheese **will pay fifty per cent on the investment.**

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Capitol Building, - - Cheyenne, Wyo.

OWN YOUR OWN HOME. Don't be a renter. Lands are in Pembina and Cavalier counties; rich, black, fertile loam; no gumbo, no alkali. Terms to suit purchaser; small first payment, half crop or annual cash payments. Purchasers must own stock, machinery. For complete details call on or write Red River Valley Land Co., Fargo, N. D.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

IF, AFTER the eggs have been set on long enough to give the chick a strong, healthy start, the lamp has gone out in the incubator, or the hen has left the eggs to the cold even so long as a full day and night, don't conclude they are dead and throw them away, for they are quite likely to be yet alive, as the embryo does not die so soon of cold as you might judge. Warm the eggs up with flannel dipped from hot water and get into the heat of hen or incubator as quickly as possible.

***

People who use plenty of charcoal as an addition to their poultry feed know what it will do for the health of the fowl. Kept in the drinking water of the wee chick, it promotes digestion, shuts off bowel troubles and causes the chick to grow fast and take on weight rapidly. Experiments made in fattening hens and capons have shown that the lots fed plenty of charcoal became much heavier in a certain time than the lots deprived of it in the feed.

***

Five goose eggs are enough to give the chicken hen unless she be very large, and then, if the weather be warm, she can manage seven. Chicken hens make the best gosling mothers. Wet the eggs every day with luke-warm water the last week of hatching. Don't let the gosling get wet or go on to water until well-feathered. Give green stuff from the first. Onion tops or even the chipped onion itself will often prevent the gapes goslings sometimes take on in long, protracted damp weather. A goose seldom scatters her eggs, and has been known to keep the same nest year after year if it is left unmolested. Twenty-five geese will eat about as much grass as one cow.

***

Guineas begin laying some time in April, more often the last, in our late springs, than in the first. They always make ground nests and will hunt a slight depression in the ground for the nest making. It was once thought they would desert the nest if one took away even so much as one egg. This is not true, as they cannot count very far. It is best to leave in at least three or four eggs, as they suspicion enemies if all are taken.

***

There are two kinds of guineas, Pearl and White. Both are favored by those who like the flavor of wild meat. Choose a big, white or yellow hen to raise the guineas. They often get lost from the mother and seek to locate her by color. The guineas must be guarded well or they will run away directly after they are hatched and get lost or slip down some crack or hole, they are so tiny at first.

***

On the farm where many hens are kept the owner should not put less than from three to five and more hens to brood at the same time. Then, after seven or eight days, these eggs should be tested and all infertile eggs taken out. If you do not want to double up the nests now and send some of the brooders back to laying, it will be all the better for the remaining eggs, as the smaller number now left in will get more and steadier heat, with little liability of breakage. Infertile and rotten eggs breaking over the fertile eggs will close the pores of these and keep them from hatching.

***

Eggs as laid by the hen and left in the nest to be warmed each day afresh, usually, if fertility be present at all, hatch every egg fertilized. Believing that this daily warming strengthened the germ in the egg and kept it alive, the Pennsylvania station made tests with warmed and unwarmed eggs from the same lots. The eggs warmed for an hour each day while being kept for brooding purpose showed in one instance a 68 per cent hatch over a 52 per cent hatch of the eggs left unwarmed. A second test showed a difference of over 9 per cent in favor of the warmed-an-hour eggs. Warmed for thirty minutes also showed a hatch in favor of the warmed eggs, but another test of two hours' heat instead of one hour showed a low per cent hatchability. This warming was too long.

***

There are many kinds of metal brood coops on the market—round and square, small and large. These are cheap, lasting and sanitary, taking but a small amount of labor to keep clean, and, placed in connection with wire runways, are as good as many; although being low, they are very hot on a warm day or night. These are increasing on the farms. For one who raises several hundred chicks the large, A-shaped brood coops are best, and when raising so many, as it is advisable to raise them without mothers, into each of these large, A-shaped brood coops, made weather tight, should be placed a coal or gasoline heating brooder. The coal heater is more economical than the gasoline.

Quick-Acting Remey for White Diarrhea

When I ordered the remedy I had 125 chicks in the brooder and they were dying fast from white diarrhea. After the sixth dose they stopped dying and I haven't lost any since.

I have another lot of 125 chicks just hatched. I am giving your remedy and have not lost any so far. I am nearly out of the Abbott's Remedy now. I want you to send me two large boxes.

MRS. TILLIE ADLER.

La Salle, Mich.

This remedy for white diarrhea, chicken cholera and other bowel ailments in poultry may be secured from the Abbott Alkaloidal company, Ravenswood, Chicago, Illinois. Fifty cents and $1 boxes, with booklet on poultry diseases, by parcel post. Money back if not satisfied.—Advertisement.

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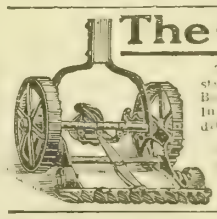

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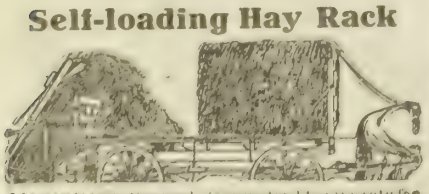

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Arequipa, the Metropolis of Southern Peru

By Frank G. Carpenter

AREQUIPA, Peru—I am in the metropolis of southern Peru; it is the city of Arequipa, situated 100 miles back of the Pacific ocean and perhaps 1,600 miles south of the Panama canal. The town is built in an oasis, made by the Chile river in the arid Andes of this Pacific coast desert. It is surrounded by ragged dry mountains, but bedded in a valley of perpetual green. The city is a mile and a half higher than Philadelphia, Boston or Baltimore. It is about 7,600 feet above the sea, and some of the mountains about it are four miles in height. Just behind it is the great volcano, Mount Misti, which has a crater a half mile in diameter, and on the top of which Harvard college has established a sort of an automatic meteorological station, which is more than three miles above Mount Weather, Virginia. To the left of the Misti is Chachacani, over 20,000 feet high, and there are other Andean giants behind.

Indeed, there is no more beautifully located city anywhere in South America, and you will go far before you find one which is so fresh, so bright and so quaint. The houses of Arequipa look as though they had just come out of a bandbox. The most of them are of only one story. Their walls stand close to the street, and these walls are of all colors of the rainbow. I bought my postage stamps today in a building that was the color of ashes of roses. I ate my breakfast in a restaurant painted sky blue, and next door was a house of rose pink. This morning I visited the new market of Arequipa. It consists of great walls of Spanish architecture surrounding a court roofed by the sun. The front of the market is a yellow as gold, and its inside as blue as the Andean skies that form a part of its roof. The surrounding buildings are of the same bright colors, and the whole seems to fit in with the gorgeous air of southern Peru.

Plowing in Valley of the Chile River

Oasis of Andean Desert

But come with me into the market. This will show us something of the way the city of Arequipa has been built where it is. The wares all come from the valley of the Chile river, in which the city is situated. This valley has something like fifty square miles of cultivated land. It is a great oasis in the heart of the Andean desert, and that on the road that leads from the sea to the mountains. The oasis makes Arequipa a great agricultural and fruit center, and also one for the raising of grain, alfalfa and cattle and sheep. As you go through the market you see everywhere evidences of the fertility of the soil and the wonderful climate. Nearly every fruit that can be raised in the United States is sold here. There are apricots, peaches, apples and plums and strawberries as big as walnuts. There are oranges and lemons, bananas and figs and bunches of pears or alligator pears. There are green watermelons as big around as the waist of your sweetheart, some of which have as red a flesh as any that ever made a darkey mouth water, and others with a flesh as yellow as gold, although the seeds are jet black.

In the vegetable quarters you find fully as great a variety. You people at home are now in the heart of midwinter, but here on the other side of the line it is summer, and they are selling new potatoes and green corn. They have bright red tomatoes, white cauliflower and great quantities of cabbage. They have also the yucca, sweet potatoes and yams. Peru is the home of the potato, and I understand that our Department of Agriculture has recently sent men here to get new varieties.

Valley Rich in Agriculture

The valley in which Arequipa is situated raises great quantities of very fine barley. It has fields of alfalfa and pastures upon which are fed cattle and sheep. The city is the chief wool market of Peru. It imports vast quantities of alpaca and sheep's wool from Bolivia and the Peruvian plateau, and ships it to Europe and the United States. These shipments amount to more than 10,000,000 pounds weight every year and they have a value of perhaps $2,500,000. The leading exporting houses of the city have their agents in all parts of the Andean plateau, and the wool is bought from the Indians and haciendados and sent to Lake Titicaca, from where it comes over the railroad to Arequipa. Some of it is consumed in the woolen mills here, but the majority of the product is sent abroad. Nearly all of the vicuna and alpaca wool passes through Arequipa.

Returning to the city itself, Arequipa is quite a manufacturing center. It makes harness and saddlery, boots and shoes, and it has large cotton mills. It also has the railroad shops of the Southern Railroad of Peru, which makes this place its headquarters. There are about 500 men employed there; they are now making their own passenger and freight cars, as well as all the repairs for the rolling stock.

Much Exporting and Importing

The town also manufactures chocolate. It has a flour mill and it does a great deal of exporting and importing, being the center of trade for southern Peru and also for a great part of Bolivia. The Southern railway is the chief gateway to La Paz, and it will always compete with the other roads that go to and from Bolivia and the seacoast. It is on this account that Arequipa will probably be improved by the Panama canal. The city is 100 miles from Mollendo, the chief port of the south for this part of the world. The landing is poor, however. The ships have to anchor far out from the shore and the swell is worse than that of Jaffa, which tossed Jonah's ship so that the sailors threw him out to the whales. The Mollendo landing is often so rough that passengers have to be taken up by steam cranes from the boats that bring them to the port from the steamer, and goods have to be put on and off of the launches by cranes. The ocean was tamer than usual when I came into port, but my boat went up and down eight or ten feet, and I had to make a flying leap, when it was on the up grade, to get to the steps that led to the custom house.

When I visited Arequipa in 1898 it was lighted by coal oil, and I do not remember that it had a car line. It has now an electric light plant from turbines run by water power and also an excellent system of tramways, which it is extending out into the country. It is well equipped as to telephone, both local and long distance, and the telephone companies will accept long-distance messages at telegraph rates, which are only 16 cents for ten words. For 32 cents you may talk for five minutes between Arequipa and Mollendo, a distance of more than 100 miles. I venture the rate is less than one-half that of the United States.

Will Become Tourist Resort

With the completion of the canal Arequipa will become a tourist resort. It is a place for breaking the journey on the long ride up the Andes mountains from the ocean to Lake Titicaca and Cuzco, and it ought to have good hotels. The best of those it has now is kept by an Italian named Morosini, who quarters his guests on one side of the plaza and feeds them on the other side in a long, low, cave-like vault, which is known as the comedor, or dining room. The food is good and the bedrooms are large, but there are no modern improvements and the sanitary arrangements are poor.

From a sightseeing point I find Arequipa quite as interesting as Lima. It has a great cathedral, built of white stone, which must cover an acre or so of space. This faces on the plaza, filling the whole of one side of the square. The three other sides are occupied by stores, more quaint than any in Europe. The buildings are of only one story, and in front of them extend wide portals or corridors with huge columns separating them from the plaza. On the other side of the corridors is a wall of cave-like vaults, lighted only from the front and the roof. The stores are fifteen or twenty feet wide and twenty or thirty or more feet deep, and their ceilings are arched, so that the whole looks like one long vault. The goods are hung from the ceilings and piled up on the floors. The market seems to be a good one, and I saw many American articles.

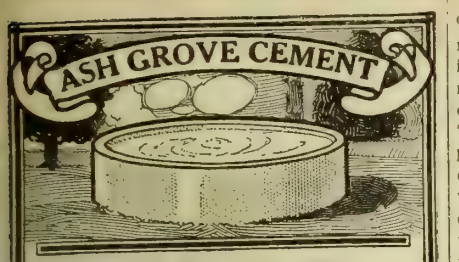
Nearly all the houses of Arequipa have vaulted roofs and on some of the one-story structures the roofs extend up in oval domes or hoods. The city is under the shadow of the volcano Mount Misti and in the past has had serious earthquakes. For this reason the skyscraper will never be known, and today a five-story building would be the talk of the town.

Town's Birth Dates Away Back

The city is one of the oldest towns in America and it dates back almost to the days of Pizarro. It is a place of old families, and of considerable culture. It is an ecclesiastical and political center. It has a university and several colleges, and also a school of arts and an agricultural institute. Moreover, it boasts of having the finest hospital in all South America, and that although its climate is one of the finest on earth.

In fact I doubt whether you will find many places that have finer weather all the year around than Arequipa. The sky is almost always blue, and the sun almost always shines. At least this has been the case until lately. The people tell me there are more clouds in the sky now than ever before, and I understand that this cloudy condition is so increasing that Harvard university is seriously considering the removal of its observatory from here to some other place.

I doubt not, many of you have heard of the Harvard observatory. It is one of the most noted astronomical stations of the whole world. It is situated on the slope of Mount Misti, 500 feet above Arequipa, at such a place that its telescopes have an unobstructed view of the heavens. The institution has a fine plant, and it is equipped with great telescopes, one of which has a lens two feet in



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diameter enabling them to take photographs on plates fourteen by seventeen inches in size. The tube of that instrument must weigh a ton, but it so delicately hung that a child could move it. There are other telescopes for taking the portraits of the stars and for the last two or three decades these scientists of Harvard have been making heavenly records of this southern hemisphere. They have taken as many as fifty a night and thousands a year. The negatives after having been developed are shipped to Cambridge, where they are kept on file for scientific work. There is no such collection anywhere else and astronomers have to go there if they would make certain classes of study.

There is, I am told, nothing duplicated in the sky. Each half of the world has its own stars and constellations, and there are some here that we never see in the north. One of these is the southern cross, but it seems to me that its beauty has been greatly exaggerated. There are only four stars in it, and they are so small that you have to look hard to find them. They do not compare with the great dipper. Many of the other stars are far more brilliant than in the north. This is so of the milky way and of the most of the planets. I have been on the equator when the path of a planet on the still waters of the ocean was almost as well marked as that of the moon, and in riding at night up the Amazon river the stars were so close it seemed as though I could almost reach out and grasp them. Another reason for moving the Harvard observatory is that its work has resulted in the southern heavens having been pretty thoroughly studied and mapped, and that reason for its existence has to some extent passed away.

The story of the establishment of this observatory is interesting. It is now about thirty-five years since Uriah H. Borden died and left $200,000 to Harvard university, with the understanding that the money was to be used to build an observatory at the best place upon earth for the study of the stars. The college authorities first tried Colorado and California, and then came to South America. Their first work was done back of Lima, at an altitude of about that of Mount Washington on what is now called Mount Harvard, but in 1890 they changed their station to Arequipa. The change was made because this place was thought to have more clear days and clear nights than any other locality on earth. Since then the astronomers of the university have been working here right along and that not only at the observatory, but at the automatic meteorological station, which they have placed on the top of Mount Misti.

Mount Misti is 19,200 feet high, and this station is said to be the highest of its kind in the world. It is higher than any point in America outside Alaska, and it is fully a mile higher than our observatory on the top of Pike's Peak. The site of the station is on the edge of a huge crater, which until lately has been sending out clouds of yellow sulphurous vapor a thousand feet into the air. These clouds have now stopped and I am told that the volcano has been spitting out water and steam. No one knows what this may portend. The automatic instruments on the mountain are keeping a record of meterorological movements and the scientists visit them at intervals and bring back the results. The machines work with great regularity, but sometimes the mountain is so covered with snow and at other times visited by terrible winds, so that there may now and then be a break. Prof. Bailey, who established the station, had great trouble in getting the Indians to help him up the volcano with the instruments, and it took a large number of mules to carry the material. At the top he found an iron cross standing and at this the Indians fell down and worshiped.

Trip from Mollendo to Arequipa

I wish I could take you up over the trip I made up the Andes from Mollendo to Arequipa. The country is more dreary and wilder in aspect than that above Lima. We rode for miles without seeing a blade of grass or anything green. We passed over great beds of sand, walled with bluffs that had been ground so smooth by the winds that the strata showed forth. We passed traveling sand hills, great crescents or dunes, made by the grains of sand rolling over and over up the hill until they reached the top of the crest and rolled down the inside. Further on the sand had cut into the rock of the mountains, making great cracks in it like the wrinkles on an old woman's face. All the erosion here comes from the winds. There is no rain whatever, nevertheless the rocks in many places are ground to a powder.

At the same time, the scenery was magnificent. The air is so clear here that you can see for miles, and the clouds painted velvet spots on the hills. Toward evening the sun tinted the mountains with the most delicate blues, pinks, lavenders and mauves, and the whole looked like a mighty picture in colors, instantaneously sketched by the hands of the gods. As we started out we could see the ocean rolling its spray high on the beach, and at the close of our journey the moon was just rising over the snow of the mountains above old Arequipa. The whole formed a panorama such as I have seen nowhere else, and such as I venture can be seen nowhere else in the world.

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Cholera---Prevention and Treatment

(CONTINUED FROM PAGE FIVE.)

together as a club, signing an agreement to do certain things necessary to be done to successfully cope with the disease, these signed agreements to be kept by the farm demonstrator. If one of the members fails to keep his promise he is reminded of what he promised to do. In this work a close co-operation is had between the state veterinarian, the veterinary and farm extension department of the agricultural college and the farmers.

Missouri has been working along this plan for some time and marked success has been attained. When we were at the farmers' meetings at Columbia in January more than seventy members of these clubs from one county were in attendance, coming to Columbia in Pullman cars and staying in them all the time they were at the meetings. The representative of this paper talked with a number of these men and we found them very enthusiastic over the success of the Anti-Hog Cholera club. The farm demonstrator was certainly making himself felt in the country.

Meetings of these farmers are had from time to time and matters pertaining to the business in hand fully discussed. It is all along the line of education, which in the end is going to be the main factor in wiping out this dreaded disease. Careful statistics should be had showing the number of hogs raised and the number of them that die from diseases each year. In counties where the farm demonstrator is located this is possible. He can have to assist him one man for each township, who in turn should appoint an assistant for each school district, and reliable information will be gathered through these different men each year.

Money Well Spent

We cannot urge too strongly upon the hog growers and farmers of this country the importance of the matters we have just discussed. We know it will cost some money to carry them out, but the amount of money spent will be insignificant as compared with the great good obtained through these agencies.

Some of our readers who are not farmers may think that the general taxpayers should not stand this added tax for the benefit of the farmers alone. They think that the farmer is the only beneficiary from the eradication of hog cholera. Disabuse your mind of this. While it is a fact that the farmer would be a large gainer if hog cholera could be eradicated, yet every man in the country who eats meat, and that includes about all of us, would be in a degree benefited if by eradicating hog cholera we may be able to lessen the price of pork or other meat.

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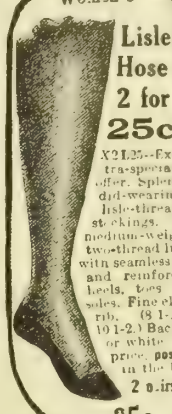

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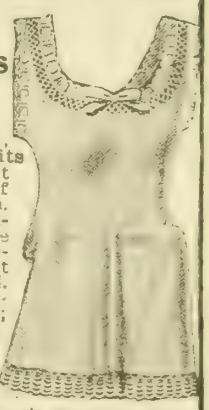

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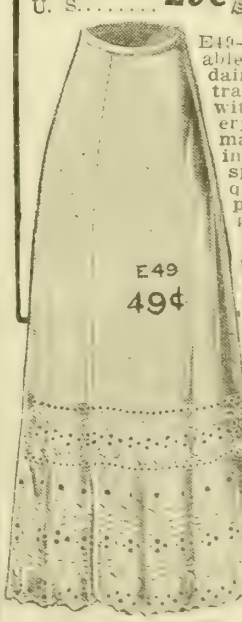

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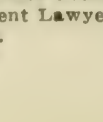

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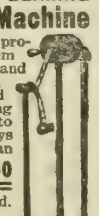

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Single Tax Benefits Farmers

J. H., Nebraska: In some late issues of your paper are letters criticizing the single tax and claiming it would be unjust to the farmer, yet the writers fail to propose any remedies to correct existing evils brought about by land speculation. They think all property should be taxed, which would be right if it could be done on an equitable basis. There is much personal property on which taxes are not paid at the present time, and honest men are paying more than their share.

Many people think that prices for farm produce should be increased in order to pay interest on high-priced land, yet fail to consider the fact that these increased prices would increase the valuation of the land, and nobody would benefit but the speculator. High prices for land benefit nobody in the long run. Land should be for sale at a nominal value, which should be low enough so that a man could buy a farm and pay for it in a reasonable number of years. It should be possible for the farmer to enjoy a good living and improve his farm and invest some of his surplus in good stock, and not be compelled to invest all his profits in land.

The farmers who own their land and are out of debt bought their land years ago when land values were lower, and are now receiving the increased price for produce. We cannot expect produce to advance every time land values do, and the time will come when advancing land values will have to be checked.

Farming requires capital as well as other lines of business, and if a farmer accumulates a sum of money he is taxed at a higher rate than if he invested the same money in land. One of the good points about the single tax is that money in the bank or other forms of personal property would not be taxed, while the land would be, so a man would not be likely to invest money in more land than he could use. The trouble with the American farmer is that he has paid too much attention to increase in land values and not enough to the real business of farming.

There is a general unrest among farmers, shown by the formation of the farmers' unions, frankly organized for the purpose of increasing the farmer's profits in an effort to make a creditable showing on high-priced land. Why not increase the farmers' profits by lowering the amount of capital required to purchase the land? High prices for land do not mean that the farmer has the increased amount of money to use. He merely has this money tied up in land, which does not increase his crops and profits.

No one should be allowed to make money out of land except as the result of labor. The speculator should not be allowed to grow rich at the expense of the man who desires to own his own farm. Land is public property and should bear the expenses of running the government. If all taxes were placed on land, it would greatly simplify the work of collecting taxes, and this work would be comparatively simple. Personal property is easily hidden and therefore difficult to assess on an equitable basis. The farmer cannot hide his property and therefore pays an unfair share of taxes. The best interests of this country demand that the greater number of farmers own their own land. Unless we have lower prices for land this cannot be, and we are going to have a landed aristocracy, which I hardly think is possible.

Man's Experience with Canners

D. C. B., Texas: I have been a reader of the Farmer for a year and a half. Did not care much for the paper at first —just thought it was gotten up by theoretical book farmers, as most of the farmers' papers are. However, after reading a few copies I found out my mistake and found that it contained many things of value to me, and now I would not be without it.

Noticing someone wanting experience of people who had experience with home canners, I want to give mine. Being well supplied with vegetables and no market forced me to see if I could can some of them for winter use. I bought an open home canner made of tin, and soon found that an open canner would do very well for a few things, but would not can corn, string beans and a great many other things. Besides, unless I put in acid of some sort a great many of my tomatoes would spoil.

This was very unsatisfactory to me, so I then bought a steam pressure canner and have had no trouble canning anything since. We have canned goods the entire year and I never have a can or glass jar spoil. I have learned to preserve fruits or vegetables in jars or cans. Many degrees higher temperature are required than can be obtained by boiling water in an open canner. After three years' experience with an open canner and one with a $10 steam-pressure canner, I no more want to fool with anything in the open canner style.

Note—Thank you. We appreciate the fact that you realize we try to get the best of practical experience for our readers. We also appreciate your giving us your experience with the canner. These canners are just coming into use in our part of the country and we are receiving any number of inquiries as to their value. We are glad to have actual experiences for our readers.

One Hired Man's Experiences

C. J. F., Washington: I have been reading your paper for the last three or four years and notice lately a number of articles about farmers and hired men. I have worked as a hired man off and on since 1901. Was born and raised on a farm in West Virginia, moving to Kansas with my father in 1901, when I began working on the farm as a hired man.

The summer of 1901 was an exceptionally dry one in Kansas and work was not very plentiful, but I got 50 cents a day keeping weeds out of kafir corn, and thought I was getting good wages, considering the drouth. That winter I went to school and the following spring my father went back east and I stayed in Kansas and started to work on a farm for $15 per month, with $1.50 per day extra through the harvest season, then $20 per month through the fall. Again I went to school during the winter. I worked for three different farmers that season, and was treated like one of the family.

After school I went to work on another farm for $15 per month till harvest, and then I found that farmers were not all alike. I never refused to do odd jobs on the farm and always have milked cows. This farmer, in settling with me, beat me out of part of my wages, and then he wanted me to come back and work for him again after harvest. I worked for different farmers in the same locality, and can say there is as much difference in farmers as there is in hired men. I know some hired hands that don't treat the farmer right. I have worked for farmers that you couldn't do enough to satisfy them, and neither could you work to suit them, always criticizing your work. Then, again, there are farmers that are always praising you when you do some-

thing that suits them, and that farmer is going to get something out of his hired man in the way of help. I've worked on the farm in Kansas, Ohio, North Dakota, Canada and Washington. I started here in Washington last fall at $25 per month, which I was to get all through the winter. The first of December the wages were cut to $20, but I stuck to the job, while others quit. This was a 2,200-acre ranch. The proprietor lived in the city and came to the ranch once or twice a week to look over the work with the foreman, but said nothing to the hands. At the first of the year wages went down to $12.50, and I was ready to quit and go to work on the public works.

I like to work on the farm better than any place else, but today I am working in a paper factory, because the farmers in Washington don't know how to treat their hired help. You are put in a bunk house, furnishing your own bedding, and get your laundry done the best way you can, and are never able to go to church, and all are paid the same regardless of ability.

I saw an article in another paper once about giving hired men examinations and issuing licenses, as they do to engineers. I believe such a plan would work and would help to solve the hired man problem.

Note—This letter covered sixteen pages. We had to cut it down. In doing so we have tried to preserve all the essential points. In writing to the Readers' Exchange please try to make your letters only four or five pages long at the most, as our space is not unlimited and many letters are received.

What is the Board Doing?

Stockman, Nebraska: I write to inquire what the Live Stock Sanitary Board is doing. I noticed some time ago it had adopted a set of rules, which I thought was very good, and I had hopes that we had a real, live board, but I have been watching ever since for something that would indicate that it really meant business, but so far have not noticed any signs of activity.

I noticed a few days ago that the governor had a statement in the papers saying he would send a veterinarian out to lecture to the farmers where they demanded it. The governor is not a member of the board, and I don't believe the legislature intended him to sit on the lid.

The Sanitary Board has been in existance for nearly a year, and during that time the farmers of this state have lost over $1,000,000 worth of hogs. I believe the board could have prevented at least half that loss.

The legislature appropriated $37,200 for the use of the board and state veterinarian. Did it have an object in making this appropriation, and is it being expended as the legislature intended?

Now, everyone knows that the demand the governor speaks of will never materialize. Neither will the merchant who is careless in regard to firetraps ever demand that the fire warden shall come and lecture to him about cleaning up, but he goes just the same. Is it because the fire insurance companies are closer to the powers that be than the farmer is?

This board should get busy quickly and appoint some competent person as a field man—and more than one if necessary—and when a case of cholera breaks out in any county in the state, send the man there on the first train. He should go to the farm where the disease has started, compel the owner to clean up, burn all dead hogs, post notice that cholera exists, and have him kill the dog or keep it tied up. Then he should go to the telephone and call up all the neighbors, telling them that hog cholera is in the neighborhood, and he will meet them at the school house that evening and tell them about it. At the meeting let him tell them that he did not come to teach them, but to call their attention to the police regulation relative to that business, and that he wants to enlist every farmer within ten miles to help him enforce the law and prevent the disease from spreading to other herds. He will get every farmer there (and they will all be there, too) to agree to co-operate with him.

Now, Mr. Editor, if this could be done with the first outbreak of cholera in every county in the state this summer, I believe it will save $1,000,000 in the next eight months.

If the governor has not appointed men of ability to handle this question as the legislature intended, but has to sit on the lid for fear they will make a mistake, he had better recall them and appoint a board that can handle it. There are plenty of men. Just let him forget politics and look about, for there is not a county in the state but could furnish them.

The legislature has furnished the money and provided the machinery, and if an epidemic of hog cholera sweeps over this state again this season, as was unnecessarily allowed last season, I imagine there will be something doing.

Note—The foregoing is from a subscriber to the Twentieth Century Farmer, who is one of the well known hog raisers of Nebraska. He signed his name to the letter, but asked that it be withheld from publication.

Help from the Government

Mrs. M. T., Colorado—Have been a reader of the Twentieth Century Farmer for a number of years and think it one of the finest farm papers printed. It is up to date on most subjects, but I think it is taking the wrong position on relief for the farmer's wife. The sentimental outbreak on the first page of the issue of April 11 calls for a protest. It is almost foreign to the question.

The government is seeking to improve living conditions, which will not only benefit the wife on the farm, but through her the children, and will help to solve the problem of keeping the boys and girls on the farm. The question is, how to improve conditions. Perhaps we are ahead of our grandmothers; perhaps we do have an easier time than the washerwomen in town; these are not questions that concern us. Anyone who has spent much time on the farm, who has visited different neighborhoods, knows that conditions can be improved.

The poor man of the farm will probably receive consideration later on, and I am sure that manhood and chivalry would say, "Ladies first." If some of these women who sympathize with the men of the farm would cook a dinner on wash day over a hot stove, with the temperature of the kitchen at 120; serve a dollar-a-plate dinner to a crowd of hungry harvest, hay or fruit hands, perhaps they would realize that conditions for even the women might be improved.

Government ownership of creameries, of country laundries, government ownership of country stores, scattered along at convenient intervals, are some of the ways conditions might be improved—public libraries, to include books of history, fiction, science and domestic economy; public halls, where everything worthy in a social or beneficial way may be permitted in a whole-hearted freedom that is not granted by the school as a social center. Politics and religion now control our school houses and make it impossible to reach all the people.

Many people are beginning to realize the need of government ownership of utilities and believe we can go still farther with profit to the human race. Just now may the Twentieth Century Farmer expend some time and energy to assist the government in its endeavors to improve the conditions in the farm home for the wife and mother.

Note—People are not made good by law. If the schools are under the sway of politics and religion, it is either because the people of the communities in which they are located are interested in politics and religion, or because a few are and the rest are too indifferent to protest. In these things the spirit of the community is shown. It does not seem to us that it is the business of the

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government to interfere. What is the government going to do to keep the farmers' wives from cooking for the hands in a kitchen of 120 degrees? Pass a law requiring the farmers to buy them non-heating stoves? Conveniences are on the market and can be bought. It is up to the farmer and his wife to decide whether or not these things shall be purchased, and if the wife cannot induce her husband to get them for her, why ask the government to step in and force him to? As for government ownership of utilities, co-operative creameries, laundries, libraries, etc., they have generally been found successful; why not try them first?

Former Farm Hands Best Kind

L. L. W., Texas: An old-time farmhand, I am a constant reader of the Twentieth Century Farmer, and believe it to be the best farm paper published. I thought I would give my views on the farmer and hired hand. I have worked for seven years on the farm, in many different states and for several different nationalities of farmers, and I certainly agree with L. B. of Nebraska that all farmers are not alike.

I find the best farmer to work for is an old-time farmhand, or the most of them are, as they know what a day's work is and what a man ought to be able to do in a day, and if a man shows willingness and ability to do things you can rest assured he will ask his opinion about things that have to be done and treat him as an equal and not as if he were a piece of machinery that never gets tired.

I have worked for a few farmers who acted as if every minute you lost cost them a day of their lives, and they would swear at you and kick so much that you would rather want a job than work for them, and when you went to get your time you would have to take all his insulting words about not being worth your salt, and lots of times worse than that.

Now, for instance, take a farmer who treats his hired man as his equal in every way; doesn't he always seem to be able to get more work and better work out of a man than one who wants his man to work from daylight till dark and doesn't give any credit for what he does and knows? I will agree, I have seen some awfully poor excuses for farmhands, and boys that couldn't or wouldn't work enough to pay for their board, but give most of us a chance and I think we will earn every nickle you pay us.

Caked Udder

J. W. A., Missouri: What is good for my cow's udder? One teat has a cord extending down from it about one-half inch long, and on that cord is a knot, and the udder is caked as hard as can be in that teat; the others are all right. This condition has existed off and on for a year; only since she bore a calf, four weeks ago, it is worse. We sold the calf two weeks ago, and she is giving about five gallons of milk a day.

Answer — The milk should be taken out of this quarter with a milk tube and then the quarter massaged well. It would be well to rub camphorated oil into this quarter every day.

Jealousy and Selfishness

S. A. P., Nebraska—I have been reading the articles on the hired help problem, and, as I have had plenty of experience, I hope to say something that will brighten, comfort and enlighten both the hired man and his employer. First of all, learn to study character. The man that doesn't talk too much usually is the best. He must talk enough to have a good understanding when hiring. And be reasonable, both of you. Remember, the world cannot belong to any one of us, and we never know what day something is going to happen to us, especially accidents on farms, when we will need assistance from each other. Another thing is to watch ourselves and see that we are doing what is right. Jealousy and selfishness are the great sources of all evil, and these, I am afraid, are working havoc with the hired man and the farmer.

How Can One Learn to Farm?

A. Y., Nebraska: As I have read a great deal on the hired help problem in your paper, I would like to give you my idea on this question. I think good men are very scarce nowadays, for the reason that they are all boys and don't see life as they should. Those that are any good generally start for themselves in a short time. Of course, there are exceptions.

If hired men would see things as they should, they would change their ways a whole lot. In the first place, they would work for the farmer's interests the same as if they were members of the family. Four-fifths of the hired help are boys who are away from home and who are working for their own bread. Most of these boys are young and the reason why they do things that are not right in the eyes of others is because they don't know any better. I am telling this from my own experience. If the farmers would take a little more interest in their hired help, advise the boys as to what is best for them, explain their way of farming a little, show them why they want certain work done a certain way, they would not only be helping the boys, but they would be helping themselves a great deal.

As to the farmers, it makes a whole lot of difference with me for whom I work. There are farmers in this vicinity that I wouldn't work for at any price. They are the kind that try to get everything out of a man and treat him worse than they would a horse.

Now, I would like to hear from some of you experienced farmers on what chance a hired man has in life. Would it pay him to go to the state agricultural school if he wanted to start farming for himself and had to work his own way through? Suppose I spent two years at the agricultural school. I'd have to work about three years in order to save enough money to put me through, and then it would take me five or six years to save enough money to start farming on. By that time I'd be an old bachelor; and, besides, a man has to have the actual experience before he is any good. Or is there any other way one could learn what he should know to be a successful farmer? Let's hear from you. It might do me and a lot of others some good.

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How a Farmer Got Rid of Flies

By Robert K. Sampson

THE flies were very numerous about our farm during the summer and we determined to wage a relentless war against them. The first thing to do was to clean up, and this we did, paying particular attention to the stables where the horses were kept. The walls of the stalls were newly whitewashed and then sprayed with kerosene, and the manure pile, which was never allowed to get very large, was occasionally treated likewise. There were no stagnant pools of water about, so I did not have those to contend with.

I began my campaign about the middle of April, so that when the first flies made their appearance, about May 1, I was all ready for them. I purchased four dozen wire flytraps of the double, inverted type that can easily be bought in any city. These I placed about the farm in the following manner: I put one outside of each window of the farm buildings and several in the barn. Flies seem to have a liking for screens, and it is best to have a trap near each one; and I did not forget the woodhouse, for the dark corners proved great hiding places for the house fly, and my traps there were always worked overtime.

Get Flies Out of Doors

It will be noticed that I fought the hardest out of doors, for I depended on our screens to keep the flies outside, and one trap in each room took care of what few managed to enter; and I took great pains to put all traps in a position where they would be exposed to the sun as much as possible. Flies do not often gather in the shade, and when they do it is usually to sleep and not to feed.

Now as to bait. The first flies that appear are the small, black variety, commonly known as house flies. For these I used bread and water, slightly flavored with milk. It is useless to use meat for this species, as the odor fails to attract them; and a great point is to keep the bread wet. I found that by noon the sun had usually dried it hard, so I took an old teapot and, filling it with water, went the rounds of my traps. This general plan worked well and my traps always had a buzzing mass in them by the time the sun went down.

Beef for Horse Flies

After the house fly has gone, about the middle of June, comes the horse fly, a big, blue creature, whose biting propensities are only too well known. For him I used raw beef when possible, but raw meat always, keeping the bait moist as before. My traps now redoubled their usefulness and often had to be emptied twice a day. Raw, wet meat decays rapidly in a hot sun, and the odor, as far as the flies were concerned, carried to some distance. I have seen my traps choked with them and hundreds trying to get in.

My method of killing and disposing of the catch was as follows: I dipped every trap, with its restless contents, into a pail of boiling water. This kills them instantly. Then I always buried the remains, taking great care that every bit of meat used for bait went into the ground. I have seen a piece of meat exposed for just one day swarming with maggots, and often those in the center of a piece of meat would escape killing, so it is imperative that everything be buried. I was killing flies, not hatching them.

I used a piece of meat about the size of a quarter and found this sufficient. If no beef was available, I would shoot a couple of gophers and cut them up; every fragment can be used. I tried the experiment of using cooked meat, but nothing proved so effective as the raw material.

Traps Carefully Placed

I made a chart showing the location of all my traps and looked after them regularly every morning. By means of this chart, on which I noted the amount caught by every trap each day, I was able to place my traps where they were most needed, and thus always had them working to the best advantage. The kitchen door was the place where I caught the greatest number and it was there I put nine traps.

There is one fact about flies that made my task easier than it would at first seem; that is, they do not fly far from their breeding place, and one does not have to feel that he has to rid all out of doors before he can be successful.

One morning, August 18, I made the round of my traps and from the whole four dozen I took sixty-two flies. I had, indeed, won, and simply by keeping the place clean and catching them as fast as they hatched. I estimated my total catch at several millions, and the number I prevented from being born would run beyond the grasp of the human mind.

Selling Real Estate by Auctio

The practice of selling real estate at auction has been gaining in followers in recent years. Sellers say that there is less expense involved in the selling, thereby allowing buyers to secure the land at lower prices without lessening profit to seller. An important business corner in Omaha was sold at auction a short time ago. Some of the states are employing this method at the present time in disposing of school lands. The excitement of an auction always draws crowds of buyers and spectators and makes these sales very successful.

Hog Cholera and Politics

(CONTINUED FROM PAGE ELEVEN)

along this line in Nebraska. Without question, there is a dawn of a better day for the live stock interests of this state. There is going to be a better understanding between the live stock men, the farmers, the veterinarians and the officials. They are all going to realize the fact that their interests are in common and more harmonious work will be done.

We can't help but feel that our live stock men are to be congratulated on the efficient organization they have in the Improved Live Stock Breeders' Association. This is an association of all the live stock interests in the state. Particularly do we feel these interests are fortunate in having for officials in this organization J. A. Ollis of Ord for president and Howard Gramlich of Lincoln for secretary, the two main officers in any organization. Mr. Ollis has long been identified with the live stock and farming interests of the state. He served in the state senate from his district for three years, and during that time was always a leader in the senate. Never for a moment did he neglect or fall behind in looking out for the live stock and farming interests of Nebraska. Since his election as president of the Improved Live Stock Breeders' Association this association has been more active and accomplished more real good than ever before in its history. Mr. Ollis has particularly shown his efficiency during the last year as head of this organization in working for the good of the live stock men of this state in connection with matters of particular importance to our live stock interests over which the Live Stock Sanitary Board has control.

Secretary Gramlich is always on the job, and has proven that insofar as he is concerned the live stock interests are being looked after.

Let our live stock men and farmers take a more active interest than they have in these matters. The Live Stock Sanitary Board is without question the one of greatest importance in Nebraska to live stock men. Its doings should be watched closely by our farmers. We feel sure its members would be pleased at any and all times to receive opinions from farmers and live stock men of the state, giving them their views on matters pertaining to their particular work.

Advice for Landseekers.

Deal only with reliable land agents and quit chasing the ends of the rainbow is the advice of the Nebraska conservation and soil survey after a widespread investigation of the practices of land sharks in different parts of America. Dr. Condra, director of the survey, believes that the realty agent who is honest, who has a knowledge of land classification and soil types, and who is good at the bank, fills an important part in the development of the country. On the other hand, he advises that the buyer see the land he purchases, that he get a reliable and competent report upon its quality and value from a person known to be entirely disinterested, and that he get a title rather than a promise to deliver.

A proposition has been made by an attache of the Canadian agricultural department to require the sterilization of all threshing machines which are moved from farm to farm, a custom generally followed in that and other countries. This recommendation is made as a means of preventing the spread of smut.

Durocs and Red Polls

George W. Schwab, Clay Center, Neb., still has a number of bred sows and gilts that he is offering for sale at prices that should cause them to be picked up readily by anyone wanting something in this line. These sows represent the very choicest blood lines of the breed and are grown and developed in a manner that insures their going out and doing good service for the purchaser. Mr. Schwab ships his hogs on approval, and they have got to be just as he represents them to be or your money is refunded. He also has a number of choice Red Poll cattle for sale, both young bulls of serviceable age and also females. If you want anything in this line, write him, mentioning the Twentieth Century Farmer.

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"In conclusion will say, I would not give my tractor today for any two new tractors of any other make. Assuring you that my heart is full of praise for the honest goods you are offering the public, I beg to remain, Yours very truly, W. E. SWARTZLANDER, Sidney, Neb."

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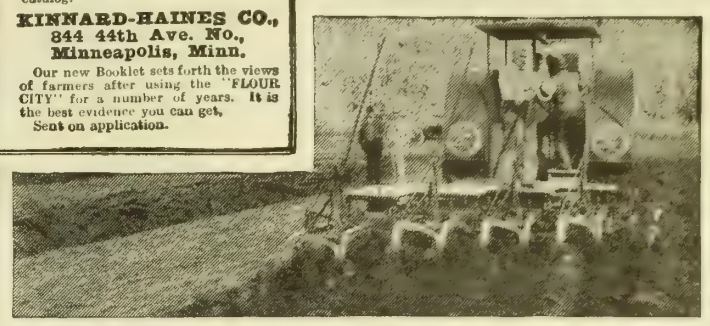

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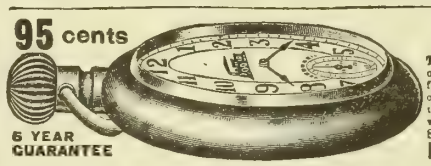

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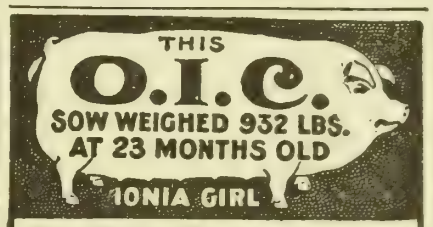

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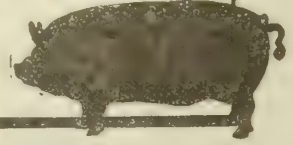

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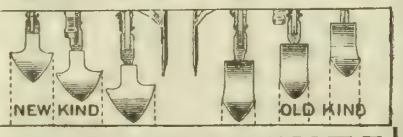

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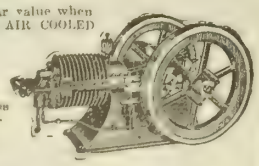

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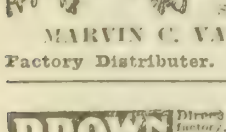

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Review of Live Stock Market

By A. C. Davenport

RECEIPTS were the controlling factor in the cattle trade last week. There seemed to be a fair demand for meat at large consuming centers, and less was heard regarding a surplus supply of the product than for some time back. There was also a noteworthy absence of Argentine scare news. In truth, packers had no need of such news, as the liberal receipts gave them a most effective club with which to pound the market. That they made good use of the weapon placed in their hands is borne out by the fact that prices at most market points showed a depreciation during the week of 10 to 25 cents so far as beef steers were concerned. The market, however, had a better tone; that is, buyers seemed less indifferent and apparently wanted the cattle at the reduced figures, whereas during some recent weeks they have acted as if it made very little difference with them whether they really secured any cattle or not. Thus, while prices were lower and to that extent unsatisfactory, the feeling on the market, if anything, was a little better.

The bulls in the cattle trade, who have been in hiding for some time back, are beginning to show their heads again, one by one, but as yet are not indulging to any appreciable extent in bull talk. The most optimistic still feel that there is not much hope of any great improvement in market values, while receipts of live cattle and importations of foreign beef continue as large as during recent weeks. There is, however, an expectation that a change in this regard may not be far off. Really, the season for corn-fed cattle is now well advanced, and those who are keeping informed as to country supplies profess to believe that receipts cannot continue much longer as large as they have been of late. At the same time they have figured it out that the season for heavy importations from Argentina must be drawing toward a close. If so, the surplus of beef at the big consuming centers, which the packers have used as an excuse for pounding the market so persistently, ought to disappear. With lighter receipts the bulls feel that prices must show improvement.

As noted a week ago, Mexican war talk has not had the slightest influence on the cattle market thus far, and no one is expecting that it will, at least not in the very near future. As a matter of course, an army invading Mexico would be supplied very largely with tinned meats, and this supply might to a considerable extent at least be drawn from Argentina. The navy has already used considerable Argentine beef, and if the packers in that country are able to under bid the American packers, it is more than likely that the army also will use the South American product.

While a war with Mexico would not be likely to have any direct effect upon the cattle market, it might in the course of time have a very appreciable indirect influence. The withdrawal of a large army of men from the regular occupations of life to serve in the ranks would create a demand for labor and would have a tendency to transform the unemployed from non-meat eaters to meat eaters, and thus increase the consumption of beef. Such indirect influence, if felt at all, would in all likelihood not become apparent for some time.

Slump in Hog Market

Hogs broke sharply at the beginning of last week, and the bears were jubilant. It looked to them for a time as if they had the bulls on the run, as prices went sliding down hill at a rapid rate. Prices on live hogs broke in the neighborhood of 25 to 30 cents in three days' time, which was the most severe slump that the hog market has experienced in a long time; in fact, the break brought prices to the lowest point since the beginning of March. The joy of the bears, however, was short lived, as the market, in response to heavy speculative buying of provisions, began recovering later in the week. The heavy buying of provisions was generally looked upon as purely speculative and the direct result of war talk. There is a feeling among the trade that the provision market would be directly benefited by a foreign war, and that the improved demand would be very likely to hold hog values right up to the high level of recent weeks. Even the bulls, however, do not have much confidence in the market going very much higher than it has been most of the time of late, as they feel that hog prices are already high, and especially so when compared with prevailing prices of cattle and sheep.

Improvement in Sheep

Sheep and lambs have been selling at somewhat better prices of late, in spite of the fact that receipts at practically all points have been very liberal. The consuming demand for mutton has been quite brisk and it has been a matter of great satisfaction to sheepmen to note the firmness in the market at a time when receipts have been of such generous proportions. There is a feeling that prices may show some further improvement as the season advances and supplies of corn-fed stock become less plentiful. In fact, the sheep market is in a good, healthy condition and entirely satisfactory to that extent, although prices, as noted before in these columns, have not been high enough to make the feeders very much money.

Breeders' Notes

Jacks and Jennets

O. J. May of Bennett, Neb., is offering for sale at this time a number of extra choice black mammoth jacks and jennets. They are the big, heavy-boned kind, weighing from 700 to 1,200 pounds, and are from 2 to 6 years old. They are a very choice lot, right in every way, and are being priced to sell. If you want something that is right, you do not have to go outside of Nebraska to get it. Mr. May is located at Bennett, Neb., a short distance from Lincoln, and will be glad to have prospective buyers get in touch with him and come to his place and inspect what he has to sell. Besides these jacks and jennets he also has a choice lot of Shorthorn cows and heifers that he desires to dispose of at this time. These are a straight, clean lot of highly useful cattle, and he will sell them on terms satisfactory to purchaser. Get in touch with him if you are interested in anything he has to sell, and kindly mention the Twentieth Century Farmer when writing.

Poland-China Futurity

The American Poland-China Record Association has issued a list of the Nebraska herds entered in the futurity show at the Nebraska State Fair in 1914. There are more entries in this show in Nebraska this year than there have been in any prior show, the very best herds in Nebraska being represented. The entries are as follows: Beall & Jackson, Roca; T. W. Cavett, Phillips; W. B. Cooper, Milford; Phil Dawson, Endicott; W. E. Epley, Diller; William Ferguson, Scribner; L. P. Fuller, Bethany; G. A. Kissinger, Milford; W. A. Lingford, Dannebrog; D. C. Lonergan, Florence; O. J. McCullough, Clarks; H. C. McGath, Foster; McNutt & Meese, Ord; J. C. Meese, Ord; Tim Neuhofel, Central City; L. F. Reilly, St. Paul; Harry Seltz, DeSota; Lloyd S. Taylor, Steele City; Paul Wagner, Pierce; W. E. Wiley, Steele City.

THE MARKET PLACE

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THE MARKET PLACE

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Ducks

INDIAN RUNNER AND BUFF ORpington duck eggs; also Light Brahmas. Circular free. Frank Healy, Bedford, Ia.

FAWN AND WHITE INDIAN RUNner duck eggs, $1 per 12. Heavy laying strain. E. Dooley, Selma, Ia.

BLUE ANDALUSIANS—PRIZE WINners, non-setters, excellent layers; eggs, $3 setting. Maude McMurry, Savannah, Missouri.

THOROUGHBRED FAWN, WHITE Indian Runner ducks; standard egg strain; eggs, $1.25, 15. Thoroughbred Buff Orpingtons, large, true color, laying strain, winter eggs; $1.25 per 15 eggs. Rhode Island Red eggs, $1, 15. G. Stewart, Henderson, Ia. Box 52.

Hamburgs

SILVER-SPANGLED HAMBURGS—Eggs, $1.25 per 15, postpaid; $4 per 100. Chas. Voss & Son, Hubbard, Neb.

Leghorns

EGGS FOR HATCHING—SINGLE-Comb White Leghorns, Rhode Island Reds, White Holland turkeys and Indian Runner ducks. Chas. Cross, Sextonville, Wis.

ROSE-COMB BROWN LEGHORN eggs; none better—$1, 15; $4, 100; chicks, 10c. Olga Hayek, Linwood, Neb.

ROSE-COMB WHITE LEGHORNS—Won 65 ribbons. Eggs, $1, 15; $4.50 per 100. Amiel Dorr, Osage City, Kan.

SINGLE-COMB WHITE LEGHORNS of the world's best strain. Eggs, $3.50 per 100. Geo. L. Darling, Doniphan, Neb.

BUFF LEGHORN AND SINGLE-Comb Red eggs; 100, $4. Mrs. Alb. Thorson, Mead, Neb.

WHITE LEGHORN, BUFF ORPINGton, Indian Runner duck eggs. Pearl W. Usher, Holbrook, Neb.

SINGLE-COMB BROWN LEGHORN Eggs—$4, 100; $2.50, 50; $1, 15; from 200 2-year-old hens, mated with cockerels scoring 93¾. Edward Dooley, Selma, Ia.

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BLACK LANGSHAN EGGS—CIRCUlar. Jake Hetrick, Wahoo, Neb.

FULL-BLOOD BLACK LANGSHAN eggs for hatching. C. C. Cunningham, Kennard, Neb.

EXTRA BIG-BONED, SCORED Black Langshans and eggs. H. Osterfoss Farm, Hedrick, Ia.

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LIGHT BRAHMA EGGS—15, $1; 45, $2.50; 100, $5. Fair hatch guaranteed or another order half price. Frank A. John, Bedford, Ia.

LIGHT BRAHMA EGGS—15, $1; 50, $2.50; 100, $5. Mrs. M. Wall, Eddyville, Neb.

LIGHT BRAHMAS—EGGS; 30, $1.25; 50, $2. Mrs. A. J. Applegate, Gilmore City, Ia.

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PORTER'S MINORCAS WON SWEEPstake cup at Fremont. Baby chix, 25c each and up. Eggs, 10c each and up. Circular free. J. F. Porter, Fremont, Neb.

BLACK MINORCA AND BUFF ORpington eggs. Frank A. Agnew, South Omaha, Neb.

Orpingtons

EGGS FOR HATCHING—SINGLE-Comb Buff Orpingtons, Toulouse geese, Indian Runner ducks. Mating list free. Peter Brehm, Harvard, Neb.

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ORPINGTONS—BUFF OR WHITE—Eggs, cockerels. List free. Frank Lewis, Gibbon, Neb.

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NORTH DAKOTA, LAMOURE county, champion corn county of the state. Rich lands, yet low in price. We are owners. Tracts any size to suit. Easy terms. Catalogue of improved and unimproved prairie lands sent free. Special snaps for early buyers. Write Sheils & Weaver, Drawer F, Edgeley, North Dakota.

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GOVERNMENT LAND GIFT 320 acres. We locate you free, buy your crop, stock your land. Particulars free. Wyoming Range, Janet, Wyo.

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YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

WANTED—A MAN TO SOLICIT SUBscriptions for Twentieth Century Farmer; salary $42 a week. Address Circulation Manager, Twentieth Century Farmer, Omaha, Neb.

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GOVERNMENT FARMERS WANTED—Make $125 monthly. Free living quarters. Write Ozment, 39 F, St. Louis, Mo.

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FOR THE NEXT 30 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Kan.

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DOGS

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FOR SALE — PEDIGREED SCOTCH Collie female, sable and white, $10. Geo. E. Cheney, Fremont, Neb.

SEEDS

ALFALFA SEED, $9; TIMOTHY, $1.50. Farms for rent and sale. J. Mulhall, Sioux City, Ia.

I GUARANTEE 95 PER CENT GERmination on my seed corn. Paul Rohwer, Waterloo, Neb.

ALFALFA SEED — DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

I AM IN THE MARKET FOR CLOVer, timothy, alfalfa, cane and millet seed. Send samples. I have 1912 crop seed corn grown in Washington county, Nebraska. Werter DeVaughn, 1914 Harney St., Omaha, Neb.

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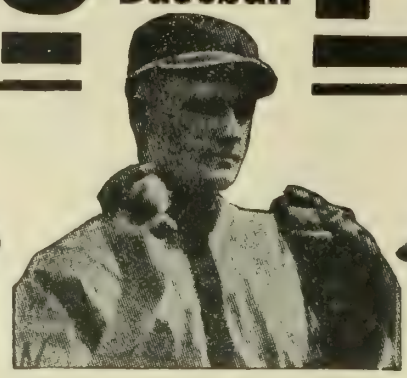
ED. WALSH
of the Chicago WHITE SOX
will teach you the detail of his Spit Ball

Joe Wood

of the BOSTON World Champions

will teach you his great secret of breaking over his world famous Smoke Ball.

JOE WOOD



WALTER JOHNSON
of the Washingtonians will teach you how to acquire and maintain Speed

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"Nap" Rucker

of the Brooklyns

will teach you the mastery of his famous Knuckler.

CHRISTY MATHEWSON
of the N. Y. GIANTS
will explain fully his Fadeaway Ball

BOYS We are able to offer you the most complete and fascinating course of baseball ever compiled. In this course CHRISTY MATHEWSON of the N. Y. Giants; ED. WALSH of the White Sox; WALTER JOHNSON of the Washingtons; JOE WOOD of the Boston World Champions; "NAP" RUCKER of the Brooklyns and "DOC" WHITE formerly of the Chicago Americans, will through personal and direct lessons teach you the secret of Professional Pitching.

Every boy should have this course. It will make a man of him mentally, morally and physically. Every mother should urge her son TO SECURE IT and EVERY father should insist that his son ***follow its teachings*** to the letter. We give here small portions of Doc White's lesson which deals in part with proper methods of training and living. We also give part of the introductory paragraph of Ed. Walsh's instructions.

Our First Lesson

Our first lesson will be by "DOC" WHITE, prefaced by some timely advice on physical condition—how to get it and how to keep it. No one is better qualified to give you advice on this most important matter than is "Doc" White. He is a college bred man, who by using his brains, devised a secret, self-teaching system that enabled him to blossom out over night with that rifle-shot control of the ball that has ever since been a terror to the best and surest batters. Read carefully and follow faithfully his advice on getting into condition and conserving your health, wind, sight and energy—then follow and practice his system of gaining control of the ball.

Lesson Number 1

By G. HARRIS WHITE
"DOC" WHITE

In this lesson I will talk "right off the bat" in plain, short English. Let's begin by admitting that Baseball is the Great American Game. Why? You will say—because it is the most popular—everybody plays it or is interested in it. A good reason, but here is a better one: Listen: It is the best builder of health (mental and physical), and a tremendous moral force. It is a game that will not stand for whisky, cigarettes, profanity, vulgarity, cowardice, dishonesty, anger, discourtesy and lack of respect for superiors—not to mention a long list of minor faults and frailties. Exceptional playing talent sometimes gets a man of questionable habits or character into a club, but he must "clean up" and reform from the moment he dons the uniform. Unless he does so, he is simply a "flash and a sputter" and goes back where he belongs, and is out of baseball for keeps.

To be a good ball player you must be a good man or boy physically. This is simply a matter of right living and faithful practice. Good pitchers are not often men of exceptional strength, but they are always good and fit men physically. Pitchers must have the pliable, sinewy, resilient muscles that endure, rather than the bulky masses that are capable of tremendous exertion that cannot be sustained or quickly repeated. Below I will note a few simple rules to be followed which if faithfully undertaken will bring about your physical fitness in the very shortest time in which it can be done. As many of my readers have not attained their full maturity, I will particularly keep them in mind in my advice, so that any boy or youth as well as men can easily follow it.

SHADOW PITCHING. There is a name I have carried under my vest for a long time. It made a pitcher of me and gave me that control of the ball that has turned the scale many a time against the best batters and players in the big leagues. Not every man can be a "SPEED KING," but any man who has "CONTROL" can be a successful pitcher. A slow ball and control are a far better combination than fast balls and passed balls and a few walks to first base. A base on balls is practically a hit—it gives the batsman just as good a title to "first sack" as if he had knocked the stitches out of the first ball pitched.

When I joined fast company I was a raw recruit—just a good prospect. On the first trip of the club around the circuit I was not considered worth a ticket, and was left at home with the cripples and with instructions to practice with anyone who wanted exercise. This gave me something of a jolt and time to think. It also gave me a realization that some day, in a one-sided game, the "Boss" would send me to the mound, and that my fate depended upon my showing him something when that day came. Control of the ball and how to get it was my problem, and after heavy drafts on my gray matter and much experimenting, this is how I solved it:

Complete details of shadow pitching are given in the complete course of instructions

Some of "Doc" White's Instructions for Shadow Pitching

Introductory to Ed. Walsh's Contributions to This Course of Lessons

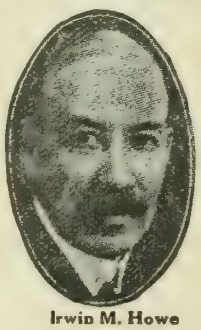
By ED. WALSH

For eight long years the spitter has been my stock in trade. With its aid I have won more games in one season than any pitcher of modern times. It helped me to do my share in one American League Championship, one World's Championship and in two series of games for the Championship of Chicago. Having thoroughly mastered control of this style of twirling, I have, for many years, been able to go in and finish (and sometimes save) games for my team with little or no time devoted to "warming up," and I count this one of the very valuable features of the spit ball. The change from a fast ball, a curve or a cross fire (left-handed), is so radical that it is an easy matter to baffle the most dangerous opponents if one has control. That last word is the secret of my success.

The full instructions of Ed. Walsh are included in the course and are marvelous in the extreme.

Grip for the Curve
Note position of Fingers on Seams

IRWIN M. HOWE, Principal



Irwin M. Howe

Mr. Howe is an eminent baseball writer and authority. He is the OFFICIAL STATISTICIAN of the American League, the American Association, the Western and the new Federal League. He is the author of The Players' Handbook of Baseball, and Pennant Winning Plays and Players—two works that have had a circulation of more than a million copies. He is the best qualified man in the world to put before you in plain, understandable English the direct and personal teachings of the wonderful galaxy of instructors, each the undisputed leader in his specialty, and every one A MONARCH OF SPEED and CONTROL.

The Fadeaway Grip

Full Details of All the Grips Given in the Complete Course of Instructions

Knuckle Ball Grip

Every Detail from Grip to Delivery Given in the Complete Course.

YOU CAN PUT ONE OVER TODAY

These lessons are so plain, practical and so profusely illustrated, that by following the instructions given, ***you*** can not only develop pitching ability but by "Doc White's ***Shadow Pitching,*** can practice and learn in secret. ***You can pitch to yourself*** and at the same time get splendid practice in ***Bunt Fielding.*** You will also learn how to ***Increase Your Batting Average*** and more effectively ***Hit Any Pitcher.*** Every lesson edited by IRWIN M. HOWE, the official Statistician of the American League, the new Federal League and other organizations and an Eminent Authority on Baseball.

Well Worth $100 to Any Man or Boy Whether or Not He Ever Expects to Become a Big Ball Player

Given Free To You

NOW is the Time to Get This Course and BEGIN Following Its Instructions If You Wish to SURPRISE YOUR FRIENDS With Your Skill, Strength and Speed In Pitching and with your Improved Batting Average.

This COMPLETE COURSE May Also Be Purchased From Us at the REGULAR PRICE OF $1.00. Mail Orders Promptly Filled. Remit By Post Office or Express Money Order

Do It Now Boys!

Get your father, mother or big brother or some neighbor to subscribe for the Twentieth Century Farmer, or renew their subscription for one year at the regular price of $1.00, and we will send you the Pitching Course free.

Address

TWENTIETH CENTURY FARMER,
OMAHA, NEB.

TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, May 9, 1914 | Number 700

Prattle of the Youngsters

Literally?

"Now, Henry," said Mrs. Tomley, "I want you to be good while I'm out."

"I'll be good for a penny," replied Henry.

"Henry," she said, "I want you to remember that you cannot be a son of mine unless you are good for nothing!"

Certainly Was

Miss Wheat, the new teacher, was hearing the history lesson. Turning to one of the scholars, she asked:

"James, what was Washington's farewell address?"

The new boy arose with a promptitude that promised well for his answer. "Heaven, ma'am," he said.

Confirming the Book

Mr. Brown had been helping little 8-year-old May with her school work and she had learned to believe implicitly in his knowledge.

One day at dinner she asked Mr. Brown what the United States paid for Alaska.

"A little over $7,000,000," he answered.

"All right," said May as she consulted a slip of paper. "I looked it up in the encyclopedia."

"Why did you ask me, then?" said her father.

"I wanted to see if the encyclopedia was right."

Good Reasoning

Little Willie's mother had made him a fine new pair of knickers, but the little boy complained that they were uncomfortably tight. "They're tighter than my skin, mummie!" he declared. "Don't be silly, dear," remonstrated his mother. "They can't possibly be tighter than your skin." "But they are, mummie; because I can sit down in my skin, but I can't sit down in these trousers!"

From Experience

The pretty teacher was trying to explain the difference between good conduct and bad.

"Good actions," she explained, "are the lovely flowers. Bad ones are the weeds. Can you tell me, Walter," she asked the quiet little fellow in a back corner seat, "the difference between flowers and weeds? What are flowers? What are weeds?"

"Weeds," said Walter, who had been struggling with the sorrel in his mother's garden, "are the plants that want to grow, and flowers are the ones that don't."—Ladies' World.

Modern Methods

Miss Varney was trying to illustrate to her youthful Sunday school class the lesson, "Return good for evil." To make it practical, she said:

"Now, suppose, children, one of your schoolmates should strike you, and the next day you should bring him an apple; that would be one way of returning good for evil."

A little girl, sitting in one of the front seats, raised her hand.

"Well, Elizabeth," said the teacher, "what is it?"

"Then," said Elizabeth firmly, "he would strike you again to get another apple."—Ladies' Home Journal.

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Why Rainfall is Decreasing

SOME sections of the United States that were once fertile and had plenty of rainfall are now producing less and less, and the rainfall is becoming so scant and irregular that crops are very uncertain. Moisture falling in the spring and fall causes freshets, after which long dry spells set in, accompanied by hot winds, and the result is drouth. Kansas has recently passed a law whereby land occupied by lakes and ponds are exempted from taxation. This is in the hope of overcoming this dry condition and making the rainfall more plentiful and regular. How will this help? In an article to appear in our next issue we will try to explain how this surface moisture is expected to act as a magnet whereby atmospheric moisture may be attracted, and lands now arid may be reclaimed, and our now fertile lands kept fertile.

In the series of hog cholera articles we have reached that in which Mr. Russell advises what is best to be done when hog cholera puts in an appearance in your neighborhood. We receive many letters saying, "There is one case near me; what shall I do?" This article will tell you.

Bright and Breezy

No Dream

Professor at Agricultural School—What kinds of farming are there?

New Student—Extensive, intensive and pretensive.

She Knew Him Best

"I don't want no rubbish, no fine sentiments, if you please," said the widow, when she was asked what kind of an epitaph she desired for her late husband's tombstone. "Let it be short and simple—something like this:

"'William Johnston, aged 75 years. The good die young.'"

Necessities

"With telephones and automobiles," said the economist, "the farmer will soon be entirely independent of the city."

"Never," replied Mrs. Corntossel. "We'll always have to be going to town—unless they discover some way of sending moving pictures by mail."

Good Cooking

Several ladies sat after a card party a few mornings ago discussing the virtues of their husbands. "Mr. Bingleton," said one of them, referring to her life partner, "never drinks and never swears—indeed, he has no bad habits." "Does he ever smoke?" someone asked. "Yes; he likes a cigar just after he has eaten a good meal. But I suppose on an average he doesn't smoke more than once a month."

Sweet Poetry

He was enraptured with the scenery. His fair companion at the country resort sat upon the stone wall beside him.

"Behold that exquisite sunset!" he exclaimed. "Note the delicate flesh tints, the cream shades, the long dashes of vermillion, and the almost living fire that leaps up from the sinking sun as from a fountain. Behold the framework of darkening skies and of deep green. Isn't it wonderful?"

His fair companion sighed heavily.

"You just bet it is!" she exclaimed. "It looks just like a great big lobster salad!"—Lippincott's.

The Only Way

Sandy and Donald were discussing the domestic infelicities of a mutual friend.

"Ay, ay," said Sandy. "Jamies Thompson has a sair time wi' that wife o' his. They say they're quarreling."

"What else can ye expect?" was Donald's scornful retort. "The puir feckless creature marit after courtin' for only seven year. Man, he had no chance to ken the woman in sich a short time. When I was coortin,' I coorted for twenty years!"

This little dialogue took place on a railway journey, and in the further corner of the compartment sat an Englishman, listening and much amused.

"And may I ask," he inquired, "if connubial bliss followed this long courtship?"

Donald looked at him reproachfully.

"I tell ye I coorted for twenty year," he said, "and in that time I kent what woman was, and so I didna marry."

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Operating and Regulating the Separator

Experience Shows that Certain Details Must Be Observed to Obtain Best Results

By a Western Dairyman

MOST farmers separate their cream by machinery at the present time. Many of them have difficulties in the operating of the separator or complain that the quality of the cream is not of the best. The reason for this is usually that the separator is not being managed properly. After several years of dairy experience, I believe that the most satisfactory method of securing cream from milk on the farm is by the use of a standard make of hand separator. The cost of such a machine may seem high, but when the amount of butter-fat obtained by machine separation is compared with the butter-fat obtained from the same kind and amount of milk by other methods, one can easily figure how long it will take to save the cost of the machine.

General instructions for the care and handling of the hand separator are: Set the machine perfectly level on a solid floor; be sure that no grit has found its way into the gearing; clean all parts thoroughly before using; all the parts that come in contact with the milk should be thoroughly scalded; oil the machine each time it is used with the best grade of separator oil; once a month remove all gearing guards and examine to see if everything is working properly. If at this time it seems advisable thoroughly to clean all the bearings and gearing parts, kerosene applied, wiped off and replaced by oil, will materially lengthen the life of the separator. If by accident some milk should get into any portion of the machine, it must be cleaned out, as it will soon clog the gearings and give an offensive odor to the room. It is well to look occasionally to see if the machine is standing level.

Thorough Cleaning Important

One should not think that the separator is a difficult piece of machinery to handle and that it is hard to care for. By following the directions given in the book of instructions pertaining to the make of separator, the successful operation and handling of the machine is an easy matter. The separator should be cleaned each time after using, as once a day is not sufficient, and cleaning is best done immediately after the machine has been used. Take it apart, rinse well with cold water and then wash all parts of the bowl and tinware in warm water, using the brushes that accompany the machine. It is best never to use a dish-cloth or soap of any kind, but rather small quantities of washing powder free from grease. After all parts are thoroughly washed rinse in boiling water and place in the sun. Even the brushes used in washing should be scalded and placed in the sun.

It is best to skim the milk immediately after it has been drawn from the cow, or while it is still warm. Most separators do their best with the milk at a temperature of 95 degrees Fahrenheit. The machine should be operated at full speed and full capacity. If turned by hand, see that the speed is uniform and evenly applied. It is a mistake simply to push when the handle goes down and pull when it starts up, as this is hard on the separator. Prior to turning on the milk supply, and just after separating is completed, it is well to run a quart of water through the bowl. The common practice is to stop turning and then pour in warm water, but the speed should be increased while flushing the bowl. Unless there is a brake attached, the bowl should be allowed to come to a standstill of its own accord.

The relative amount of cream obtained from the amount of milk will depend upon the cow or breed of cows, the season of the year, and whether the cows are fresh or advanced in the period of lactation. The percentage of fat in cream varies as the season advances, because the milk does not test the same throughout the year. Other conditions being equal, the richest milk is obtained when the cows are on dry feed and toward the end of the lactation period.

Quantity of Butter-fat is What Counts

It is best to skim a cream that will test from 30 to 40 per cent; or, in other words, in skimming ten gallons of milk one or one and one-third gallons of cream should be obtained. It is not the amount of cream that is important, but the quantity of butter-fat. If the cream is sold to a creamery where testing is done by weighing instead of measuring, the correct test will be secured whether the cream be thick or thin. Cream testing between 30 and 40 per cent means more skim milk left at home. Higher testing cream keeps better and naturally there is less to transport.

If a certain amount of cream is churned at home and an equal amount sent to the creamery, the number of pounds of butter obtained will be a trifle more than the butter-fat figured from the test of the cream at the creamery, simply because the test determines the amount of butter-fat. When a separator is set to skim a 40 per cent cream it does not mean that every can of cream obtained will test 40 per cent, for the percentage of fat in the cream varies with the speed of the machine, temperature of the milk going into the bowl, amount of water used in flushing the bowl, and, as stated above, variation in the test of the milk.

Separating by Engine Power

Many farmers at the present time have gasoline engines for such purposes as pumping water, filling silos, grinding feed, etc. The more purposes for which such an engine can be used the sooner it will pay for itself, and nowhere does it do more useful work than in the dairy. Attached to the separator, it not only saves the farmer or other members of the family many hours of monotonous labor, but it does much more efficient work than can be done by hand. The absolute regularity and uniformity of the motion save wear and tear on the separator and prevent the waste of butter-fat. Irregularity of motion is a great cause of loss of butter-fat and dissatisfaction with the separator. Nothing will help eliminate this to better advantage than the use of engine power.

The Farm Boy's Dream

Evansville (Ind.) Courier.

And Modern Scientific Inventions Are Rapidly Bringing All This to Pass

Hog Cholera---Prevention and Treatment

IV--Some Things that Hog Raiser Himself May Do to Prevent Infection and Spread of Disease

IT IS of the utmost importance that the hog raiser himself should do everything within his power to prevent the disease from gaining a foothold in his herd. What things are possible for him to do? These are many, and we will take up and discuss some that we think most important, bearing either directly or indirectly on the subject.

It is a common practice among a large per cent of our hog raisers to buy every year a male to be used in the herd, buying for this purpose a spring pig. After the breeding season he is put into the feed lot and sold on the market. About as many of our hog raisers use at the same time gilts, having them raise one litter and then fatten them for the market during the following winter. We are satisfied that by following this method year after year you are building up a herd that will be far more susceptible to disease than would be built up by using mature males or sows, or, better yet, the use of both mature males and sows. The continuous raising of pigs from immature animals has a tendency to lessen their vitality, and vitality is one of the things to be desired should cholera attack the herd. Years of experience and observation have impressed this thoroughly on our minds, and we can't help but believe that many attacks of cholera might be warded off if more mature animals were used in our breeding operations than are now used.

Conserve Vitality of Herd

After sows are bred another very important thing to be done to insure strong vitality in the pig is proper exercise and the feeding of a balanced ration. Former articles in the Twentieth Century Farmer have taken this matter up in detail. Hence we will not repeat the things to be done here, but we simply want to call your attention to the importance of the proper conditioning of your sow for farrowing time, as her condition at that time has much to do with the producing of a strong, vigorous litter, which is felt by the pigs during their lifetime, especially the pigs used for market purposes.

Streams Running from One Farm to Another Carry Cholera Germs. If You Allow Your Hogs to Go Into the Stream, and a Cholera Carcass is in the Stream Above, They Are Sure to Get Cholera

After farrowing the proper feeding and handling of your pig has much to do with his condition and vitality, consequently much to do with his withstanding an attack of disease. Do not confine him in small, dry lots. By all means let him have the use of the pastures and fields.

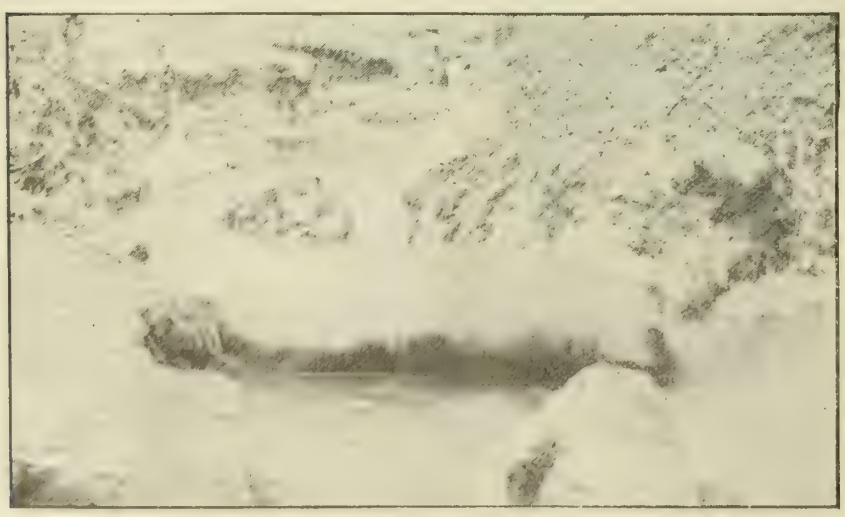
Plenty of Water Important

Pure water is one of the things to be most desired in the proper raising and conditioning of your pig. Many hogs raised on the farms in the corn belt get water two or three times a day, when the owner of the herd feeds in the morning and at night and when he comes in from the field at noon, the water being thrown into a trough and, especially in mid-summer, becoming unfit to drink after being drawn from the well an hour or more. There are many automatic hog waterers now on the market that are practical and serviceable. Arrange to have your hogs supplied with good, pure water all the time. If you will install a self-waterer on the premises, arranging a place accessible to the hogs, you will be surprised, if you will take the pains and time to stand around for a few hours and note how often any particular hog will go to the water for a drink. He will only take a few sips and then go away, to return again within a short time. If a barrel or small tank is used for this purpose, put into this receptacle about once a day a chunk of rock lime the size of your two fists. This will have a tendency to clear the water and kill many of the germs that may be floating around.

Hogs Need Pure Air

Why do we have so many sick hogs in the fall? We believe that one of the reasons is because of the general weakened condition of our hogs at that period of the year, due to the dry season. A hog by nature lies with his nose close to the ground, and if he is compelled to lie down in dusty quarters, drawing a certain amount of dust into his lungs every time he breathes, it is no wonder that he is in a weak condition and unable to withstand the attack of disease. This same hog, if conditions are made for him so that when he lies down to rest during the day or at night he is on a hard surface, either dirt or otherwise, that is kept clean from dust, will very often withstand an attack of disease that otherwise he would not. We can't urge too strongly the importance of keeping down dust in the sleeping quarters of your hogs.

It is a good plan not to allow hogs to sleep in buildings of any kind during the summer. We prefer a good shade, natural if you have it; if not, make this shade by setting posts in the ground about four feet high and on these posts



This Carcass Was Found in a Nebraska Stream. Soon After, Cholera Broke Out All Along the Line of Farms Below This Spot Through Which This Stream Ran

Do Not Confine Your Hogs in Small, Dry Lots. Let Them Have Plenty of Pasture. Strong, Healthy Hogs Are in Condition to Resist Disease Even When the Germs Are Present

place boards or brush and cover with two or four feet of straw or hay. If the rains are not frequent enough to keep down dust in these sleeping places, and you have no system of water works on your premises by which you can keep this dust down by turning on the hose, have a sled or cart and a water barrel and haul enough water to keep the dust down. By a continuous wetting down of these places, a hard, smooth surface is accumulated. Many an attack of cholera can be prevented by taking this precaution.

Source of Infection

The table shown below giving the source of infection is one gotten out by the government, showing the results of its investigations of the sources of infection on 380 farms. One hundred nine of these farms are in Dallas county, Iowa; 160 in Pettis county, Missouri; 111 in Montgomery county, Ind. A great deal of time was spent and a very careful investigation made to obtain the figures as presented herewith. Therefore it can be relied upon as being as nearly correct as is possible to trace the subject of infection, and is certainly worthy of your serious consideration. Look it over and study it carefully, as it will undoubtedly assist you in preventing an outbreak of cholera in your herd if you will but follow out the conclusions at which you will arrive by its careful study:

	Farms.	Per Cent.
Visiting neighbors, exchanging labor, etc	126	33.0
Sick hogs on adjoining farm	16	4.5
Infected by dogs	25	6 5
Infected premises	25	6.5
Escaping hogs	15	4.0
Infected by birds	104	27.5
Contaminated streams	31	8.0
Purchasing of new stock	38	10.0
Totals	380	100

There are many ways by which hog cholera may be transported from one community to another. Too many of us do not recognize the importance of doing a great many little things that we can do to keep cholera away from our own herd. An examination of this table will show that 33 per cent of all the sources of infection on these 380 farms were from farmers exchanging work with their neighbors and visiting among neighbors. You are probably sitting at the breakfast table enjoying your meal, when the telephone rings, and a neighbor wants you to come over and help him. You are a good neighbor, and you go without further question. This neighbor of yours has probably noticed that morning that two or three of his hogs are off. He is scared, and he thinks he will sell everything possible. By so doing he will accomplish two things—get all the money he can out of the hogs he has, and help to wipe out the disease in his herd. You go and help him haul the hogs. You probably go into the field and shuck a load of corn and throw it into your hog lot. A week or ten days later some of your hogs are off, and you wonder how in the world they got the disease.

Don't Bring Cholera Home

Do not under any circumstances haul hogs for your neighbor until you inquire whether or not he has any sick hogs, and if he has not, and you help him, don't bring the wagon home with any bedding in it. There is no question but that practically every stock shipping yard in the corn belt is infested with hog cholera germs. If you haul hogs for yourself or your neighbor to any of these public yards, you are without doubt coming in contact with the germ. You may be in town doing some trading, and some of your neighbors may haul in some hogs to market. You want to see how his hogs look and what they weigh. You go down to the stock yards, which are full of cholera germs, then go home without any precaution being taken. Don't cuss your luck if your hogs get sick soon after this. To be safe, you had best rub some air-slaked lime over your wagon wheels and your horses' feet, as well as your boots, before going back to the hog lots. This may seem foolish, but if you will follow it out you may possibly save yourself a big loss from hog cholera some time in the future.

Reference to this table shows that 4.5 per cent of the infection is from sick hogs on adjoining farms, and that 4 per cent is due to escaping hogs. We are going to combine these, as the main cause of these two is poor fences. The Twentieth Century Farmer has urged upon its readers the necessity of good woven-wire fences on their farms, securely put up. If you have not read these articles, it will be to your advantage to refer to these back numbers and read carefully what we have had to say regarding good fences. If by the proper construction of your fences you can eliminate 8½ per cent of the danger of infection of hog cholera on your farm, it does not seem to us that you can longer question the advisability of your spending the money necessary for the erection of a permanent hog-tight fence. We might mention incidentally that the uses to which this fence will be put are manifold other than the prevention of the spread of hog cholera.

Observe Quarantine Rules

Social visiting between neighbors has often transmitted hog cholera. If, as suggested by this paper, notice be given to all adjoining farms when an outbreak occurs on any particular farm, and quarantine notice be posted up on the road leading to such a farm on the public highway, this visiting will stop, and in that way many herds will be saved from an attack of hog cholera.

Tie up the dog at night. You may think you have a good dog and he never leaves home, but you are not awake the entire twenty-four hours in the day and do not know just where he may roam. The owner of one of the good, pure-bred herds of hogs in Nebraska told the writer this last summer that in order to catch an early train he was up and about the farm extra early one morning, and noticed coming up over the hill the little house dog. He did not think much about it, but in about ten days his hogs had cholera. About half a mile, and in the same direction from which this dog came, was a ditch into which some cholera hogs had been thrown the winter before, the owner not burning or burying them. We cite this as an illustration of what is possible and probable from the dog you least suspect. Reference to the table shows 6½ per cent of infections come from dogs.

Destroy All Carcasses

Infected premises are the cause of 6½ per cent of our infections. This is a matter in which the farmer is solely to blame. When you have disease on your farm, under no circumstances should you dispose of the carcass of a dead hog in any other way than by destroying it by fire. Careful investigation has shown that where diseased hogs have been buried five and six feet under ground infection has started in the herd several years later from this particular spot. Do not under any circumstances bury your dead hogs. We would go further, and burn, if possible, the carcasses of all animals that die on our premises. You may have a cow or horse die from bloat or colic, and think, as is generally thought, he will make good feed for your hogs, which is probably true. But while your hogs are feeding on this carcass a flock of crows or buzzards may come and also partake of the meal offered. These birds may have come a hundred miles or more directly from a cholera-infected herd, and in that way transmit the disease directly to your herd, through the fact that you do not protect it by destroying the carcass of this animal that died.

Reference to the table shows that 27½ per cent, or more than one-fourth of our infections come from birds. A good implement to keep the disease from your premises is an old shot gun standing around handy to use on any crows that may alight on your premises. It has been thoroughly demonstrated that crows and buzzards are the cause of many an outbreak.

Cholera Germs in Streams

Don't let your hogs under any circumstances drink from the stream running through your place that runs through adjoining farms. If the fellow up stream has cholera-infected hogs, and you do this, you are almost sure to suffer with him. Contaminated streams cause 8 per cent of our cholera outbreaks. Don't overlook the importance of fencing your hogs away from streams.

In Pennsylvania a few hogs located in a mining camp sixty miles from any other hogs were taken sick and some of them died from cholera. The question was, how did the germ get to these hogs? A careful investigation revealed the fact that quantities of bacon were used by the miners, the rinds being dropped into the slop bucket and fed to the hogs. It was found that in some of these bacon rinds were hog cholera germs. Never feed anything of this kind to your hogs. Burn all ham and bacon rinds.

W. N. Rogers Leaves Nebraska

THERE are but few states in the United States that have attained so high a reputation in the breeding of pure-bred cattle as the state of Nebraska. There is probably no other state so large a per cent of whose breeders are distinguished for their superiority in breeding, for their achievements as producers of cattle of high merits and distinction as exhibition cattle. Nebraska is comparatively a young state in the pure-bred stock industry, but in recent years has made astonishing developments in numbers and quality of its herds.

This is due to the enterprise of such men as W. N. Rogers of McCook, Neb., of whom there are a score or more in the state deserving of the highest honors and merited recognition for their work as promoters and achievers of distinct success in the building of high-class herd reputation. It is a well recognized fact that there are comparatively few persons in each state who attain distinction as breeders and who can advance in quality beyond the foundation stock used in the beginning of their herd enterprise. Out of the great army of admirers and fanciers of pure-bred stock there are but few who possess the qualities of breeders, or who can conceive an ideal above and beyond the animal they see, and which is the creation or chance product of someone who has gone before.

Breeders of progress and distinction in the creation of better animals are a class of men that any state can ill afford to lose. In the announcement of W. N. Rogers' removal to Florida there has been voiced throughout the state of Nebraska a feeling of most profound regret by all his friends and acquaintances, and by the general public, who realize the business reputation of state-wide importance that such a citizen as W. N. Rogers contributes to the live stock industry of the country.

Mr. Rogers came to Nebraska thirty-six years ago from his native state—Illinois—where he was born and raised on a farm in Joe Davis county. His first location in Nebraska was in Seward county, where he became interested in Hereford cattle, and after eleven years decided to go farther west and start his herd with a larger basis for operation, more and cheaper land. A valley farm near McCook, in Red Willow county, was purchased and the Shadeland Park pure-bred Hereford cattle ranch was started, where Mr. Rogers has for twenty-five years been diligently prosecuting his work of breeding the big, smooth type of Hereford.

Mr. Rogers could never be satisfied with a fine-boned, neat little show bull. His ideal was

(CONTINUED ON PAGE SIXTEEN)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
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Are you planting "tested, not guessed at" seed corn this year, and taking no risks of a poor stand?

"That forty has been planted to corn every year for the last fifteen years, ever since I have lived here," said a man, indicating his neighbor's field. "And still he wonders why he has such bad luck with his crop every year."

Hired men are hard to get, hard to keep and expensive. A one-eighth horsepower motor equivalent to one man power costs about $10, with an operating cost of less than 1 cent an hour. Instead of two hired men, why not have a motor to relieve you of some of your chores?

Silo clubs are the latest arrangement for building these useful additions to the storage capacity on the farm. Several men living in the same neighborhood make arrangements to buy their material together and assist each other in performing the labor, thereby each getting his silo at a remarkably low cost. This is neighborhood co-operation in a simple but useful form.

Forty-seven per cent of the dairy cattle in a herd of 208 found to be tubercular! This is the discovery made by State Veterinarian Kigin of Nebraska at Thedford. These cattle were shipped into Nebraska from Illinois or Wisconsin, just across the Illinois border, and most of them came either directly or indirectly from the man Dorsey of Gilberts, against whom the Twentieth Century Farmer has more than once warned its readers.

Yearling Heifers Selling for Beef

Notwithstanding the general scarcity of cattle in the country, which is conceded by every cattleman of intelligence, there continue to appear in all the stock yards daily journals reports of carloads of extra fine yearling heifers that brought the top price for the day, etc. Of course, these reports are true. It is an absolute fact that carloads of the very best heifer calves have been bought, fattened for the baby beef market and shipped back and sold to the packers for slaughter.

This system of depletion of the breeding stock of the country is going on continuously in the face of what might be termed a cattle famine. When will it stop? Not until these heifer calves will bring more for breeding demands than they do now, or will bring as feeders. As long as the feeder can afford to buy this class of cattle and make his feeding venture profitable, or more profitable than by using other kinds of cattle, he will keep right on buying and feeding these choice heifers, calves and yearlings. There may be a little sentiment in this business with some people, but there are so few of this kind of persons in the beef-making industry that they are lost sight of in the scramble for gain of the almighty dollar.

There will come a time when these extra good kinds of heifers that are market toppers in the beef classes cannot be bought at any reasonable feeder price. There is now a demand that should get this class of heifers, but it is not sufficiently designated or organized so as to centralize the demand into market requirements. How many thousands of yearling heifers are there that could find a good advance market over any class of feeders if properly advertised in the agricultural papers and live stock journals of the country by carload lots? This class of heifers is needed now in the breeding herds of the country—badly needed, every one of them—and yet the sacrifice is going on for want of a proper system of advertising and distribution.

Army Mule and Range Horse

That there will develop a very strong demand for the American mule and the western range-bred horse is already indicated by orders from the War department for several hundred of these animals to fill up the ranks in both pack mules and cavalry horses. The first call was for 200 mules and 1,200 horses. These orders were promptly answered by numerous bids from practically all the big mule and horse supply markets of the country. In the event that war with Mexico is declared, large numbers of cavalry and artillery horses will be in demand, and the pack mule will be found quite serviceable in the mountain districts of Mexico. The general utility of the mule in army requirements, be he large or small, is so well known that he is a recognized necessity and is found wherever the soldier is demanded.

Contagious Animal Diseases

The live stock interests of the entire country are now wrought up over the prospect of contagion being introduced through imports of animals and grain from foreign countries. Especially is the prevalence of foot and mouth disease in Argentina under discussion. So hazardous has this feature of disease and contagion become that the American National Live Stock Association, the National Wool Growers' and Sheep Breeders' Association, the Texas Cattle Growers' Association and other kindred interests have appealed to the secretary of agriculture for immediate action in view of protection against any possible outbreak from the introduction of the animals, meats and feeds now being shipped into the United States. These are being distributed, it is asserted, broadcast over this country without due consideration by our authorities of the possibility of the disease germs they may be carrying, and the unlimited distribution they may be getting.

The great danger in which these present conditions are placing our live stock interests should be readily appreciated by our authorities at Washington, who have knowledge of what it has taken to fight down the foot and mouth disease in former developments, where only a single chance of its introduction was the basis of infection.

The Chicago Live Stock World, in its comment on this subject, contains the following statement:

The Argentine correspondent of the London Meat Trades Journal comments on the prevalence of foot and mouth disease during the last summer, and says that there has been exceptional mortality among calves. He estimates the loss of calves in the republic at 1,000,000 head. This pest is likely to appear in the United States at any moment if unrestricted importation of Argentine grain is permitted. The latest is that Argentine corn is to be worked to Chicago by the St. Lawrence river route. It is being manufactured into chicken and dairy feed and distributed all over the country.

Is it any wonder that our live stock people are aroused, alarmed at such a menace to our stock industry at this time, when every effort, energy and exertion are employed in an attempt to increase our already depleted herds and flocks. Should such a calamity befall our people now, no amount of imported meats or feeds could justify the loss and sacrifice to our producing industries. The need of the most rigid laws of quarantine and inspection to keep out diseased animals and other imports that may be the means of introducing these dreaded animal diseases is imperative, and the bureau of animal industry cannot move too fast in putting a check to the open channel and free transport of this scourge from foreign countries into the United States.

Nature's Remedy for Animals

The spring season introduces a system of life invigorating influences which act as a panacea for almost all animal ailments. With the starting of the new growth of grasses comes a renovating power that has never been equaled by any stock food, condition powder, appetizer, digestor or system cleanser yet put on the market for animals.

The farm animal commences to show its infirmities and decline usually when the autumn season advances toward winter. The winter season throughout is one of precarious conditions for the animal. Its feed supply is of the cured, ripened, dry kind; the succulent properties of the grasses have passed, and the cured hay is not in the same form of digestible food. The animal eats too much or gets too little to satisfy its demands, and a condition of unthrift is soon observed. Too many feeders depend upon the animal to shift for itself for a large part of its winter feed. This can sometimes be safely done. If plenty of cured feed is available for the rustling animal, and the animal is a vigorous feeder, with a disposition to forage, it may succeed fairly well. But many animals are helpless when the natural grazing is gone; they depend entirely upon assistance in the way of prepared feed. The dispositions of animals are not much different from those of persons when it comes to acting for themselves.

The diseases that appear in the flocks and herds through the winter and feeding season vanish when these animals are turned out on grass. This is so universally the case that the coming of grass means to most animals the cure-all, the rejuvenating of the system, and a season of good health. This is the case because the majority of animal ailments are influenced by lack of care and proper feed to keep the animal in proper physical development. The importance of this knowledge is its prompting to observe a liberal supply of winter feed of the best quality and afford the animal, as nearly as possible, feed conditions approaching those of the grazing season. This means green-cut, well-cured hay and fodders, an abundance of root crops or silage for winter feeding, and in all respects good care. If the animal inclines to depend upon feed, there is the more reason why it should be provided.

Provide good pastures now since the grazing season has started, and remember that the end of pasture grasses introduces a change in feed that requires your careful attention in order that the flesh and health of the grazing animal be maintained throughout the winter and be brought back to grass in good condition. These observations are important, because the demands of the times require economy and saving, a conservation of the life, growth and development of the animal. It is not only dangerous to starve down the animal during the feeding season, but this sacrifice of flesh and vitality already secured by nature's greatest feed—pasture—is the most disgraceful business proposition that any intelligent, sensible person ever practiced.

Alfalfa Growers' Contest

It seems that there must be some contest incentive to instill into the farmer an ambition to do good farming. This is not true, however, among all farmers. The promptings of profit in the industry are what create an ambition in the thrifty farmer to prepare the soil, cultivate and grow the crops. The land owner has plenty of inducement to stimulate activity and energy in his work. With the boy it is not so. He needs to be encouraged to take hold of farm interests and farm enterprises. The contest of some sort attracts his attention, because he is not financially interested or especially engrossed with the care of the farm, especially in immediate results, and this is the basis of estimate with most boys.

The boy contests may be made to cover a large field of farm operations. The sooner the boy is taken in and becomes an interested party in the game of farm operations and farm interests the better, if it is intended that he is to stay on the farm. Long-time promises do not go far with the boy. There is an ambition to be realizing something now, not hereafter. It is the demands of the present that most engross his consideration. This is the reason that the boy is appealed to in the crop interests, and this is why the lists for these contests fill up so promptly.

Illinois has been a little slow in the cultivation of alfalfa, and they are now organizing associations for the promotion of this hay crop. One of the means of encouraging special activity in this line is the organization of boys' alfalfa-growing contests. The best methods of alfalfa culture are being studied in view of securing advantage in these contests. It is believed that the spirit of contest cannot be kept within age limits, as there is now evidence of it spreading among the more mature land owners and farm managers. The value of the alfalfa crop as a feed, as an economical crop to produce, will very soon appeal to the Illinois farmer. The idea that it is hard to raise, hard to get a good stand, does not adapt itself readily to the soil and climate is gradually wearing out, and alfalfa is becoming a reasonably sure crop all over the United States where it is given a chance.

Give Them All a Chance

The owner or manager of the farm stock is responsible for their condition, their health, their growth, their development or their lack of thriftiness and general prosperity. If the accommodations for the newborn colts, calves, pigs or lambs are not such as to protect them from the inclemencies of wet, cold weather, from mud and unwholesome surroundings, then there will be loss in the business and disappointment to the owner.

Provide housing accommodations of the right sort for all the stock that is to be kept on the farm. Plan well and build well; no temporary makeshifts will answer the purpose, except under unusually temperate conditions of weather, which cannot be counted upon. It is all right to hope and pray for the winds and the storms of spring to be tempered to suit your careless, unprepared situation, but there are no reasonable grounds for hope that you will be favored with immunity. Keep no more animals than are provided with dry, comfortable quarters.

It does not pay to breed stock and at the same time provide in advance every conceivable means for the destruction of these animals as soon as they are born. Neatness, cleanliness, sanitation, under the most exacting and scrupulous system of observance, must be practiced if the best results are to be had. Build living quarters for all the stock on the farm if they are not already provided. Build with a view of permanency and having the best of modern conveniences. It will pay, and anything that is not absolutely free from the injurious influences of weather exposure and disease contamination is not worth its cost.

The damp, cool weather of March and April has been reported from some districts as very disastrous to young animals, especially pigs. These conditions could have been largely guarded against in the beginning of life with all young animals by having comfortable, clean, warm housing accommodations. It never pays to breed and when the gestation period has been fulfilled sacrifice the produce to carelessness, to lack of ambition and attention to prepare for them. This is criminal carelessness, and there should be some means of punishment aside from the death loss of the unfortunately provided-for young.

The All-Year Feed

It would seem that some of the most enthusiastic silage advocates are willing to go on record as advocating the summer use of silage. This is a hard blow on nature's best of all feeds—pasture. It has always been considered that the grass and herbage of great variety was a sort of panacea or cure-all for all the ills and ailments that the ruminating beast of the fields was heir to. Just get the animal nursed along until green grass season, then all that was necessary was to turn it out and nature would supply the remedy for renewed health.

The preservation by silo of green feeds of various kinds, fodders, hays, etc., has been so favorably tested out, not only as an autumn, winter and spring diet, supplying the succulent qualities of the green herbage, but carrying this feature of demand through the summer months, that all divisions of the year by seasons have been bridged over, and silage is now an all-year possibility. Even the soiling crops, so much in use in some of the dairy districts in recent years, are threatened by the silo, owing to its cheaper feed and better quality. The saving of labor and the cheapening of production are the questions that are being studied, and will be more carefully looked into as time moves along.

The high price of pasture lands is getting to be a question in many localities with land owners. Very high-priced lands must be employed in the production of high-priced crops—crops that are large producers and find ready sale at prices that will yield a good return for the investment in the land. It has usually been left to the poorer soiled lands to produce the pasture, not because it was the best pasture land, but because it would not produce anything else. Thus the rough lands, the thin, poor-soiled lands, in every locality have generally been turned to pasture production.

The soiling crops on good, rich lands have been recognized as a saving of feed, because of their ability to produce a larger tonnage per season of feed than could be produced in any other way. Of course, increased fertility is necessary to keep up the demands made on these lands by this process of intensive cultivation. When the silo can be made to carry its storage of feed, canned, so to speak, in perfect order for use at any time, it may be opened just as the properly canned fruits or vegetables are. Then the feed cost problem will be solved to a degree that will approximate the corn in the crib or the wheat in the bin. It would seem that this condition of feed supply is practically on the verge of introduction, and the growing of silage crops for silage purposes will supplant any effort at soiling crops, and to a very large degree will satisfy certain demands for feed that are now depending upon more labor and more cost.

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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

The Wind

I saw you toss the kites on high
And blow the birds about the sky;
And all around I heard you pass,
Like ladies' skirts across the grass—
O wind, a-blowing all day long!
O wind, that sings so loud a song!

I saw the different things you did,
But always you yourself you hid.
I felt you push, I heard you call,
I could not see yourself at all—
O wind, a-blowing all day long!
O wind, that sings so loud a song!

O you that are so strong and cold,
O blower, are you young or old?
Are you a beast of field and tree
Or just a stronger child than me?
O wind, a-blowing all day long!
O wind, that sings so loud a song!

—Robert Louis Stevenson.

Celebrating Mothers' Day

Next Sunday, May 10, is Mothers' day. That doesn't mean so very much to most of you, for your mothers are with you all the time, so that every day is really mothers' day. When you grow older and go away from home, or if your mother is taken away from you, then Mothers' day will mean a great deal more. The Mothers' day symbol is a white flower. The white carnation is the accepted flower, but when one has no carnation any other white flower may be worn and will do just as well. This is to represent the pure, sweet thought that you are supposed to have of your mother.

Symbols, however, mean but little unless the thoughts they represent are present. Don't forget on Mothers' day to think one especially loving thought of your mother, and give her one special Mothers' day kiss. If you celebrate Mothers' day by being especially kind and thoughtful to your mother, it will help you to form a habit of kindness and thoughtfulness that you will be glad is yours in years to come.

HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Prize Story)

Lost in a Cave

By Willie Westwick, Aged 13, La Boute, Wyo.

On a spring morning, as the weather was nice, I thought I would walk on the mountain. I took a lunch, and my dog went with me. I walked to the top of the mountain, which was about four miles from my home. On the way I played and rolled rocks down the hills. There are many caves in the mountains. I had been in all of them but the largest one, so I thought I would go through this one, too.

On my way I saw a coyote, which my dog chased into the rocks. As soon as the dog came back I went on to the caves. When I got there I sat down and rested before I went in. After I had rested a few minutes I went in, with my dog following close at my heels. I had not gone very far when I found I was lost. All the rest of the afternoon I wandered around in the cave, until my dog finally found the way out.

It was just 4 o'clock when I came out of the cave. I hurried toward home, and on my way a coyote jumped out of the brush. This scared me all the worse. When I got to my uncle's house I stayed there all night. The other boys and I played checkers until 9 o'clock. The next day the boys went home with me. I don't think I will go into that cave alone again.

(Honorable Mention)

A Spelling Contest

By Helena Kleinjan, Aged 12, Bruce, S. D.

One Friday afternoon the township had a spelling contest in our school house. The pupils from three other schools came about 2 o'clock. There were nineteen of them.

It was a long time before the teachers had their word lists matched out. They had to select 100 words. We were to write the words. While the teachers were selecting the list of words my schoolmates and I were making friends with some of the other girls and jumping rope. We tried to get some more of them to jump, but they would not.

It was about 3 o'clock before we were called in to write. The grades were divided into two divisions—the seventh and eighth grades were called the A division; the fourth, fifth and sixth grades were called the B division. The A division wrote their words first. I was in the A division. When the A division were through writing their words the B division wrote theirs. My teacher pronounced the words for the B division and the three other teachers corrected the papers of the A division.

When all the papers of both divisions were corrected we were called in and had our papers handed back, and the names of the prize winners were written on the board. I won first prize in my grade. I went home as soon as we were excused.

All of the prize winners go to Brookings, S. D., the first day of May to the county spelling contest. I will write again after the county contest and tell how it turns out. If it turns out as well as the township contest I will be satisfied.

Additional Stories

Rubie Crocker, Nickerson, Neb.; Annie Reichmuth, Leigh, Neb.; Myrtle Mischke, Crofton, Neb.; Eula Hilton, Palisade, Neb.; Thomas Bryan Goodill, Cedar Bluffs, Neb.; Kathryn Dresback, Humboldt, Ia.; Lora Peterson, Popejoy, Ia.; Marie Reynolds, Delta, Ia.; Floy Dickson, Delta, Ia.; Cora Canon, Bedford, Ia.; Lois Dunn, Delta, Ia.; Harold P. Rissel, Kinsley, Kan.; Carol Floyd, Echeta, Wyo.; Annie Major, Thermopolis, Wyo.; Berdena McLaughlin, Del Morte, Colo.; Margaret Horney, Merino, Colo.; Clara Schick, Westcliffe, Colo.; Fransena Schwartz, Luverne, N. D.; Helen Barnhouse, Lane, S. D.; Glenn Watson, Dewey, S. D.; Helen Batinovich, Lead, S. D.; Effie Strickler, Esmond, S. D.; Sophia Elliott, Warrensburg, Mo.; Zadie and Alpha Adams, Fair Grove, Mo.; Bernice Morris, Melrose, N. M.

Awards in Picture Contest No. 12

Over one hundred answers to this contest again, but they were not quite so good as some of the verses that have come in response to some of the other contests. Perhaps it is because summer is coming and the older ones are too busy to send in verses. And do you notice that we are not printing a single verse written by a boy? There were not many boys who sent in verses this time. Don't think this is merely a girls' contest. Some of our winners have been boys in other contests, and we hope they will again. Below we give the prize winners and a few of the best verses sent in:

(First Prize)

By Verna Hansen, Aged 9, Verdel, Neb.

How glad these little girls appear
To think they've their colties dear;
Some day big horses they will be,
And bring these girls to visit me.

(Second Prize)

By Mildred Hancock, Aged 8, Verdon, Neb.

Hold tight, nice little maids
Sweet Geraldine and May—
For the horses are so large
I'm 'fraid they'll run away.

By Marie Ruppert, Aged 11, Parker, S. D.

Bess and Nell are playing with
Their little colts, so gay;
When time has come for supper
They'll give them both some hay.

By Mary Schrad, Aged 14, Reaville, Neb.

Here's where you see
Sister and me,
Goldie and Pat;
And aren't they fat?

By Thelma Julian, Aged 10, Golden City, Mo.

These girls and their pets are looking quite proud
(As they rightfully ought to look),
For Twentieth Century Farmer has vowed
They'll cause someone to win a book.

Ingrid Madsen, Aged 11, Thimballton, Ia.

These colts and girls look nice and good;
Wish they were in my neighborhood;
'Twere better still if the colts were mine,
Though father says we have them as fine

By Inez Harding, Aged 12, O'Neill, Neb.

Two little colts, with faces white;
Two little girls that look so bright.
When to the fair they go,
I think they'll win at any show.

Of Interest to Our Women Readers

A Mother's Birthday Prayer

Lord Jesus, Thou hast known
A mother's love and tender care;
And Thou wilt hear
While for my own
Mother, most dear,
I make this birthday prayer.

Protect her life, I pray,
Who gave the gift of life to me;
And may she know
From day to day
The deepening glow
Of joy that comes from Thee.

As once upon her breast,
Fearless and well content, I lay;
So let her heart,
On Thee at rest,
Feel fear depart
And trouble fade away.

Ah, hold her by the hand,
As once her hand held mine;
And though she may
Not understand
Life's winding way,
Lead her in peace divine.

I cannot pay my debt
For all the love that she has given;
But Thou, love's Lord,
Wilt not forget
Her due reward—
Bless her in earth and heaven.
—Henry Van Dyke.

Are You a Lady?

"Are you the lady of the house?" asks the peddler as you open the door.

"I understand there is a woman somewhere about here who sells fresh eggs. Is this is the place?" asks the housekeeper from the city.

Which speech is the more respectful? At first thought the peddler's seems to be, but is it really? He wants to sell you something, and to that end he, perhaps unconsciously, tries to flatter you. Flattery is the most subtile kind of insult. The woman from the city wants to buy from you; she knows that if you have the eggs to sell and she is willing to buy them and pay the price, both of you are equally benefited. She neither desires to flatter nor to insult you, so she calls you a "woman." You may be a lady or you may not; she neither knows nor cares, for her dealings with you are purely business.

When the term "lady" was first coined it was used to express the idea of noble or "gentle" birth. At that time only the non-producers, those who lived on the labors of others, were considered noble. The idea of noble or "gentil" birth. At democratic country, where we have no real class distinctions. By many the woman who lives without toil, whose birthright of labor for the home and loved ones is sold to others for the doubtful blessing of continued leisure, is the one who is called a "lady." The term has been thus abused for so long that it has ceased to carry with it anything of respect.

To be a woman in the best sense of the word is the highest kind of ambition. It carries with it the idea of gentleness and good breeding, usefulness and wisdom. To be a lady is a different kind of ambition. Too often it means to wear fine clothes and live a life of idleness. At its best it means to exercise those virtues which come from a feeling of superiority, such as consideration for and kindness to so-called inferiors and the observation of certain rules of conduct on all occasions.

If a woman lives up to her highest ideal of true womanhood, she will never need to worry about being a lady. That will take care of itself.

HOME EDITOR.

Improving Rural Schools

I see so much in your paper about rural or country schools, in which I am interested and always have been, but, like the other mothers, I don't like to see them consolidated, for I think there is a better way if we could only get at it. I think the country schools are all right. The trouble is with the people who run them.

In nearly every district in northwestern Nebraska there is a big quarrel at school meetings. They don't meet to arrange things for a good term of school; they mostly meet to fix things to spite some neighbor who has children to go to school because they don't like him: and, if we have to have school, we won't have but two or three months; and then if Miss S. gets the school we won't let our children go, because she will run it to suit Mrs. X.

The only way to do, according to my way of thinking, is to let the county superintendent run the school, and have two county superintendents if necessary. It is their duty to look over all the papers anyway, and they have to know just how all the schools are run, and giving them full control would put a stop to the spite work in each and every district.

As a rule the teacher and scholars get along all right. It is the parents who make the trouble. The children that are taught to mind at home give little trouble in school. There are very few districts, with the help we get from the state, that can't have from six to nine months' school every year, and it should be seen to that the boys and girls are kept in school. In some districts school could not start as early as in other districts, but two good county men could see to that. Then the men and women would learn something besides spite.

I have seen a few country schools run. Our children were educated in a country school, and there is nothing better than a good country school. If our men and women would work for the good of the child, even if they have had trouble with its parents, and be honest men and women and stay by the children and get good teachers and honor and help them all would be well. The teachers have so many things to put up with from our children that we should help them from the first day to the last day of the term. And if some little trouble should come up, take the child and go to the teacher, or else stay at home and keep still.

Nebraska. MRS. A. K. R.

Little Things

The day came when I would have to take as few steps as possible when going about my daily tasks, so I looked about me to see where labor might be saved.

On my work bench I kept white oilcloth. I felt I could not give up the white, but, hanging over the edge of the table was an unnecessary edge of the cloth. Every time I washed dishes this edge must also be washed along with the rest of the oilcloth. Taking the scissors, I cut two inches off all the way around the work bench. Thus, though I had before been certain that I had my work cut down as much as possible, I eliminated about five minutes' work each day.

I had no sink, so had to use dishpans for all dish washing. There was no place to set the dirty vessels to let them soak, so I induced my husband to put up a small shelf which would just hold a dishpan. Then each morning I filled the pan half full of water, put borax and soap into the water and as each vessel was used it was put into the pan to soak. Much scraping was thus saved, and my pot vessels were never left until after the meal to be washed.

Before I had kept a dipper in the bucket of water, which I used for cooking and washing dishes. Cooling the dish water by the dipperful was often a tiresome job, so I placed a quart stewpan, with a handle on it, in the bucket of water, and many minutes each day were saved when filling the teakettle or the dishpan.

I had always kept newspapers on my cupboard shelves. This often required changing every other morning. The papers taken off the shelves must then be burned or put somewhere to be carried away. For less than a dollar and with a few minutes work, the shelves were covered with a pretty flowered oilcloth, which could be rubbed off with the dishrag, and thus I had cut down a few steps each day and saved a little time.

On one nail hung sometimes two and three spoons and forks. By putting a nail for each utensil worry and stopping were cut out, as I never had any trouble with the wrong spoon coming down, or perhaps dropping to the floor, to be picked up and rehung. When I reached for one article I was certain I would get it and no other. The spices, etc., were placed on a low shelf, where I could reach them without reaching high.

By covering a small box with colored oilcloth and setting a gallon bucket inside it, I had a handy receptacle in which to put the scraps. They could then be carried outside to the garbage can at one time, when the meal was finished, so a great many steps were saved.

These were only a few of the little things which went to save steps, and when the entire time is counted up there was much time for me to rest, caused by the elimination of such little amounts. In my other rooms I found many ways to help get a few more minutes' rest. My dresser had been the resting place of several pictures and cases of different kinds, which did not need to be there. Every time I dusted they must all be moved. By putting into the drawers every article which was not absolutely necessary for every-day use,

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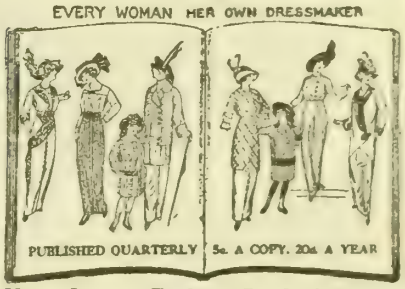

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the dresser was much easier to keep free from dust. The piano met the same fate, only one or two articles being left on it. The plate rail had more on it than was necessary or even in good taste, so it, too, was cleared of all but a few pretty plates, which I left scattered here and there.

A can of cleanser was left in the bathroom, and each person in the family was asked to leave the bathtub and lavatory clean after using them. So much of my work in the bathroom was entirely done away with.

I think every woman could look around her and find many places where a few minutes' labor or a few steps might just as well be eliminated and yet the household run along just as smoothly and be kept as clean as before. At any rate, it does no harm to try it once; then, if it does not seem satisfactory, one may go back to the old way of doing. ALETHA WALKER.

Thinks Voting Will Not Help

A Nebraska subscriber, writing for some information, adds: "I enjoy your paper and would rather have it than any other we take. There is so much of interest to the women on the farm. I think Mrs. C. J. Indoe's paper is just right, especially on the suffrage question, when she speaks of women paying more attention to their homes and children instead of trying to be equal to men in politics. If she is not on equal terms at home with her husband now in every way, voting will make it no better." Needless to say, we are always glad to get letters expressing so much appreciation as this one does and displaying so much interest in the topics treated.

Oatmeal Drop Cakes

One cup of sugar, one-half cup of butter and half cup of lard; beat to cream with the sugar; add three eggs, two-thirds cup of buttermilk, one teaspoonful of cinnamon, cloves, nutmeg and a little ginger, one teaspoonful of soda. Stir into this mixture two cups of rolled oatmeal and two cups of white flour; let stand an hour and add three heaping teaspoonfuls of baking powder; drop in pans and bake in quick oven.

A variation of the above is to leave out the spices and flavor with almond extract. This gives the cakes a peculiarly nutty flavor that is very good. These are particularly fine with coffee in the morning.

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1-F

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6652—Ladies' Dress—Simple and most appropriate for the soft materials now in vogue, this dress has a dainty blouse, with sleeves extending to the neck edge, a handsome collar and removable shield at the neck and sleeves full length or shorter. The skirt has three gores and may be made with high or regulation waistline. The pattern No. 6652 is cut in sizes 34 to 44 inches bust measure. Medium size requires 3¾ yards of 44-inch material.

6639—Child's Dress—For very little girls we have here a novel frock. The long-waisted blouse has body and sleeve in one and a panel in the center of the front. At the neck there is a large collar. The little one-piece skirt is gathered, and the joining with the blouse is concealed with a girdle. The pattern No. 6639 is cut in sizes 2, 4, 6 and 8 years. Medium size requires 1¾ yards of 36-inch material.

6571—Misses' Dress—This highly novel costume has a blouse in one piece, over which is worn a bolero, also in one piece, showing a vest effect in front. The two-piece skirt is full at the waistline and has a drapery suggestion at the knee. The under blouse may be of lace or net and the outer portions of cashmere, messaline, twilled fabrics or simple serge. The dress pattern No. 6571 is cut in sizes 14, 16, 18 and 20 years. Medium size requires for skirt and bolero 3¼ yards of 36, 44 or 54-inch material; for waist, 2⅛ yards of 36-inch net.

6660—Child's Apron—For warm weather wear this little garment may take the place of a dress and at other times it will offer complete protection to it. Body and sleeve sections are cut in one and the sleeves may be entirely omitted, using only a wide armhole. The neck is cut square and the closing is in the back. The pattern No. 6660 is cut in sizes 2, 4, 6, 8 and 10 years. Medium size requires 1⅝ yards of 36-inch material, with sleeves, or 1½ yards without them.

6616—Girls' Dress—This pretty style gives a frock with blouse and skirt. The blouse is plain except for the long line of closing which is trimmed with revers extending from the collar. The skirt is pleated all around and is attached to the blouse. Both open at the left side of the front. The sleeves are of bishop design and may be made full length or shorter. The pattern No. 6616 is cut in sizes 6, 8, 10, 12 and 14 years. Medium size requires 3 yards of 36-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

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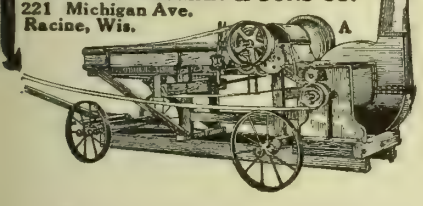

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BECAUSE the turkey eggs are precious, few poultry writers advise putting them to brood by any other way than the natural way—under the chicken or turkey hen. And yet turkeys have been successfully hatched by artificial means, and reared as successfully by hand. One who knows the working of an incubator thoroughly, and can keep it gauged every minute to the proper heat, necessary moisture and right amount of air, need have little fear but that a satisfactory hatch of poults will come out of these eggs given the incubator.

The beginner must never attempt anything of this kind. If the hatch goes wrong, the beginner must remember that the number is limited in turkey laying and time short. With this advice we give an experiment made at the Washington Agricultural Station a couple of years ago in hatching and raising turkeys by artificial means.

The machine, built to accommodate 150 hen eggs, held very evenly the 102 Mammoth Bronze turkey eggs placed in it when it had been heated to a regular temperature of 102 degrees. The machine held a moisture pan about the size of the egg tray and located about two inches below it, filled with sand wet up with warm water. This sand was kept so wet with warm water during the whole time of incubation that puddles of water stood on it. Every day water was put on the sand and every twelve hours the eggs were turned, beginning on the third day after placing in the incubator. The eggs in turning were shifted about from place to place, the inner eggs out, the outer eggs in.

On the tenth day the eggs were tested, and four infertile and three cracked eggs were found, leaving ninety-five in for first testing and ninety-one after the second testing, which was done on the twentieth day. On the twenty-seventh day the poults began hatching and on the twenty-eighth day all that were coming out were out—eighty-seven in all, four dying in the shell. The next day after the hatch the incubator door was left open one-eighth of an inch and that night one-fourth of an inch to get them used to outside air. On the next day they were put in one hover—a bad mistake, as the turkeys bunched up and soon a large number were smothered. The remainder were divided into three hovers, and this stopped the death rate from bunching together.

The hovers were kept at a temperature of 90 degrees the first week, gradually reducing to 70 degrees, which temperature was kept up until they were 6 weeks of age, after which they were large enough to do without artificial heat.

Teaching them to eat was a difficult task, but a few young chicks turned into each hover soon told them what food was for. In one hour the chicks taught them how to eat and drink. Their first feed was stale bread, moistened with milk; chopped onion tops, grit and pure water. When 6 days old they were put on commercial chick feed, curds and chopped lettuce. Four days later scrap beef was added and bran—five parts bran to one of scrap. This mixture was kept before them all of the time until they were 5 months old. They fixed up wooden hoppers, and put in each morning scrap and bran enough to last all day. Fresh green stuff was given, milk and water in vessels, washed daily. A box of grit and oyster shell and a dusting box were kept in with the turkeys.

As these poults were not on range, it seems strange that we find no record of one dying after the division into limited numbers to each hover. When the poults were 8 weeks old they went into nursery pens, each 4x12 feet, with an outside run to each of 4x20 feet. These runways were constantly enlarged as they grew, until at 4 months of age they were turned loose, though not inclined ever to get out of sight of their nursery homes.

Poultry Paragraphs

Lice are among the greatest foes lurking about to shut off the life of the chick. Just plain grease of any kind fixes them. Look on the head and under the throat for the big lice, under the wings for the other kinds.

***

The subject of disease in poultry catches the ear and eye of the average poultryman before almost any one other subject connected with the business. The poultryman is anxious to know just what symptoms certain diseases show in the flock and how to get rid of the disease.

***

The farmer, the village poultry keeper and the fancier long ago knew the fact that today the managers of laying contests are telling us that the smaller the flock of hens the greater the per cent of eggs laid per hen over the same hens if kept all together in one great flock.

***

Originally, the Barred Rock, oldest of the Plymouth Rocks by many years, had five toes, but now these never appear. Originally, in the old flocks one would appear now and then showing feathers on the legs of the then best pure-bred. Should this happen today, one would discard it immediately as far from pure-bred.

White Diarrhoea

Dear Reader: I see reports of so many losing their little chicks with bowel troubles, so thought I would tell my experience. I used to lose a great many of my little chicks from this cause, tried a good many remedies and was about discouraged with the chicken business. Two years ago they began to die and I thought I would try Walker's Walko Remedy. I used two 50c packages, raised 300 White Wyandotte chickens and never lost one or had one sick after getting the medicine. Readers can get it by sending 50c (M. O.) to the Walker Remedy Co., D. N. 8, Lamoni, Iowa. I wouldn't try to raise incubator chicks without it.—Mrs. C. M. Bradshaw, Beaconsfield, Iowa.

Farmer Onswon Talks on

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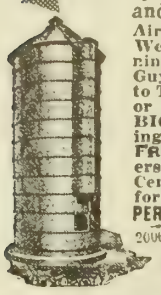

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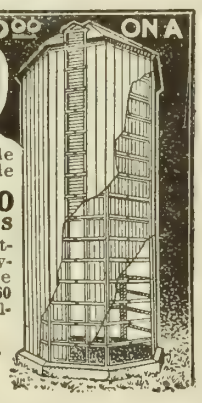

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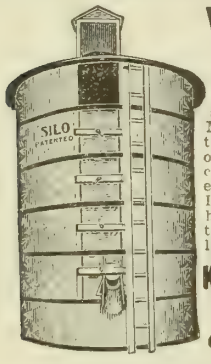

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Farming at 13,000 Feet Above the Sea

By Frank G. Carpenter

I AM at Sicuani, a little town on the great plateau that lies between the two ranges of the Andes. This plateau runs north and south for 1,000 or more miles through Ecuador and Peru. I am now at the southern end of it, several hundred miles south of the region I have described in my letters from Cerro de Pasco. To reach Cerro, I had to cross the mountains at an altitude of 15,000 feet. The pass by which I came here is only 1,000 feet lower, and it was through a driving snowstorm that I slid over the mountains from the Pacific slope to the Atlantic.

It took me three days by rail to get here from the ocean. My road was the Southern Railway of Peru, which is one of the best managed in the republic. Its trains start on time and get there. The ride here was comparatively comfortable, although a part of my journey was not on the express. By the fast trains it is possible to reach Cuzco from the ocean inside of three days. I am taking four, in order that I may better see the country and people. The first stage of my travels was up the mountains from the port of Mollendo to Arequipa. That city is the metropolis of southern Peru. It is 7,600 feet above the sea, and in reaching it you cover only a little more than half of the altitude to the top of the Andes. I stayed there for a day or so, and then went on to Juliaca, a town a short distance from Lake Titicaca. The latter journey requires a full day's railroad travel. During it I crossed the pass of Crucero Alto, and in coming down to Juliaca fell to a height of a little less than 13,000 feet. The high altitude affected me, and I felt a slight touch of soroche at the hotel where we stopped over night. Juliaca is the juction where the Southern railroad divides; one branch going southward to Puno on Lake Titicaca, and the other northward over the great plateau to the valley and ancient city of Cuzco. This journey is made by the express in one day. The ordinary trains take two days, and therefore after nine hours from Juliaca I have to stop over night at Sicuani. Tomorrow I shall resume my journey to the famed city of the Incas, which is about 100 miles further on.

A Wonderful Journey

I have already described the ride over the Peruvian desert from the ocean to Arequipa. The journey from there to the top of the mountains is even more wonderful. You start from the level of Mexico City and wind your way around Mount Misti, which is more than 19,000 feet high, and at the same time you can see other mountains, such as Chachacani, which are more than four miles above the sea and which are covered with snow all the year round. Higher still there are mountains covered with glaciers and on the way up the valley to Cuzco at La Raya you see glaciers in the far distance, which must cover many square miles.

The greater part of the way is through extinct volcanoes. The slope of Mount Misti is covered with great blocks of black lava and the mountains that wall this high valley in the region where I now am have Niagaras of lava which seem to have been frozen as they flowed from the craters above down the slopes. In places you look over the walls of such rock a thousand feet high, and above them see glaciers on mountains that are more than four miles in height. At times these mountains rise up like a great white rampart of irregular shape, kissing the sky; and again they extend in a saw-tooth construction as far as your eyes can reach.

Changes in Vegetation

The vegetation changes the moment you near the top of the Andes. As you climb the western slope at an altitude of two miles or more the grass begins to sprinkle the semi-arid hillsides, and when you cross the pass and come down to the plateau you are in a region of sod covered with tufts of wiry grass which are too coarse for anything but the llamas. The plateau itself is covered with flocks of sheep and alpacas. There are herds of cattle, and you see droves of llamas loaded

Llamas on the Pampas—Indian Huts in the Rear

with goods of one kind or another being driven along. There are Indian villages at every few miles, and in places the pampa is spotted with low mud huts roofed with straw, each of which is the home of an Indian who grazes his alpacas and llamas nearby. Everywhere on the sides of the valley are the remains of the cultivation of the Incas. There are terraces that run from the plateau for thousands of feet up the mountain. These terraces were walled with stone, and where possible the water was carried from level to level. In many places the terraced farms had no water and the crops grown depended upon the scanty rainfall.

Farming on "Roof of the World"

And just here I want to give you an idea of the farming that goes on away up here on the roof of the world. The average altitude of the region I refer to is 12,000 or 13,000 feet above the sea, and it runs from that to more than 14,000 feet. There are millions of acres of such land in Peru, with a climate in which white men can live. They comprise a great part of the wide valley that runs north and south through the continent, and at this altitude they support hundreds of thousands of Indians and tens of thousands of cattle and millions of alpacas, llamas and sheep. The highest of the plains are covered with native grasses, which are short and close to the earth. Scattered over them are the tufts of wire grass, the new sprouts of which are eaten by the stock and the coarser shunned by all but the llamas. Here and there near every Indian hut is a small patch of potatoes or quinua or barley, and there is no doubt but that the whole region might be plowed up and greatly improved.

Agricultural Expert Employed

And this brings me to the movement for the improvement of the high plateaus of the Andes, which has been inaugurated by the Peruvian corporation, a British company that has charge of the railroads for the government. This institution has sent to the United States for one of its agricultural experts; and he is now experimenting here in different places to find out the best grasses and best grains to be grown upon the plateau. The man chosen was Mr. Harry V. Harlan, the agronomist, in the barley investigations of our Department of Agriculture. He came here seven months ago and is already making good progress. I met Mr. Harlan at Juliaca, and went with him to some of the experiment stations. He has one little farm of four or five acres right near the railroad, and this has been planted to cereals and grasses of various kinds. He showed me one plot of barley consisting of perhaps fifty rows, each from seed gathered from a different part of the world. Some of the barley came from Smyrna, some from Servia and some from Russia and the western highlands of the United States. Other rows were of seeds from Manchuria, the high plateaus of India, and others were from the plateau of Tibet. All of these barleys are growing well and many of them far better than that from the native Peruvian grain. There seems to be no doubt but that almost any kind of hardy barley will grow on the pampas, and the experiments of Mr. Harlan may open up a new future for the highlands of Peru.

Soil Rich and Free from Rock

The soil of the plateau is almost free from stones. Its soil is rich, that of this region being almost alluvial. It is composed of the shrunken basin of Lake Titicaca, and there are millions of acres of it which have never been touched by the plow. Indeed, it is doubtful whether any of it has ever been thoroughly farmed. The Indians use plows made of wood that cut the ground to a depth of three inches. They have bullocks to drag them, and farm the same way they did generations ago. Nevertheless they grow fairly good crops, and with deep plowing large crops of barley might be produced.

I talked with Mr. Harlan about the grasses of the pampa. We went together out on the plain, and he showed me the sod. It is a compact turf made of short native grasses, mixed with the wild clover that lies close to the ground.

It seemed to me very poor, but Mr. Harlan says that the sheep and alpacas and llamas live well on it, although it is short for the cattle.

Experimenting with Many Grasses

Leaving this place we went to the grassplots where experiments are being made with hardy grasses from different parts of the world. There I saw American timothy and red clover sprouting through the brown soil. I saw patches of Russian grasses that were growing luxuriantly and also wheat grasses from western plains, as well as one of the families of blue grass that thrive on the high plateaus of the Rockies. So far the experiments are not advanced enough to make decided predictions, but there is no doubt but that a great improvement can be produced by new seeds from abroad.

The farming I have referred to is where the moisture is supplied entirely by the rainfall. This is scanty, but it is enough for barley and grasses of various kinds, and it is a question whether with dry farming it would not be sufficient for wheat. It relates mostly to the pampa, which is 13,000 feet high.

It is different where the soil can be irrigated. Everywhere along the railroad from the sea to the tops of the Andes there are irrigated valleys. On the western slopes the water supply is poor, and the streams are small, but a little water makes the desert a garden. The Chile river is one strip of green all the way from the sea to the tops of the Andes, and about Arequipa it raises wheat, barley, corn and all of the vegetables and fruits of the tropic and temperate zones.

Little Gardens of Eden

Crossing over the coast range and coming into the plateau, you find cultivated lands along both sides of the Vilcanota river all the way down to Cuzco. The valley in the plateau is in fact a series of little gardens of Eden, the water being carried out over them so that it falls from level to level. The fields are in terraces that are now green with luxuriant crops. In coming here to Sicuani I saw many patches of barley, potatoes and beans; and also hundreds of little fields of Indian corn. This crop now reaches to the height of my knee in the high altitudes, but to the height of my shoulder where the lands are a little lower and consequently warmer.

In the valley of Cuzco, which we shall go through tomorrow, the crops are still more advanced, and the barley, which is green in the highlands, is there almost ready for harvest. The lands of these valleys look very different from the plateaus, that are fed alone by the rains. The irrigated lands are exceedingly valuable. They have all been taken up by

the whites or the Cholos, and are exploited by them with Indian labor. Here the lands are often divided by mud fences. The fields are consecutive, and you see the villages made of mud huts which are occupied by the Indians, who do the hard work. On the nonirrigated plateaus the land yields much less and the greater part of them are given over to pastures. Here you find hundreds of Indian squatters, each of whom has his little mud hut, with a corral or so made of stones or mud into which his flocks are driven at night. He may have two or three acres of potatoes or quinua, and perhaps a small patch of barley, but as a rule the crop is grown only to supply his own needs. The methods of such farming are crude to an extreme, but the patches seem clean and the Indians work very hard.

Live Stock Chief Industry

The chief industry of this great plateau of the Andes is the raising of stock. I have seen millions of sheep on my way across the plateau, and tens of thousands of alpacas, llamas, as well as many horses, cattle and donkeys. The donkeys and llamas form the beasts of burden, and you see them driven in long caravans over the plain, followed by Indian men and women, who are either their owners or in charge of them for their masters. I never get tired of watching the llamas. One can see them everywhere on the plateau. They walk in caravans along the trails; they crowd the streets of the villages and droves of them line the plazas of every city and town. They are, in fact, the freight trains of the high Andes, and they compete with the railroad. They carry grain, vegetables, hides, alcohol, coca leaves and goods of every description. Many of them are used to transfer the ore from the mines to the smelters, and the farmers employ them to take their goods to the towns and railroads.

The llamas pack the freight on their backs, the burden being tied on like a saddle, and not in panniers, as upon donkeys. There is a current story that a llama will carry just 100 pounds, and that if you put on one ounce more he will lie down, and no whipping or beating can make him go on. This statement is ridiculous. The llama, if overburdened, will surely lie down and refuse to move, but as to his having the intelligence to know when the hundred-pound load is reached, that is one of the fictions of traveling Munchausens. Indeed, there are very few llamas that can carry as much as 100 pounds. The animals are of different strengths, and the average load is about seventy-five or eighty pounds, although there are some beasts that will carry 120. A matter of a pound or so makes no difference, and it is only when the animal feels that he has much more than his strength will support that he refuses to go.

Like Miniature Camels

The llamas are of different sizes, according to their ages and the care that has been taken of them. When full grown their heads reach a height of six feet or more; but they have long necks and they hold these straight up, which makes them look taller. They have long ears that stand up like those of a fox terrier. They have full, round bodies, like that of a sheep, and comparatively long legs. They look, in short, like miniature camels, and I am told that they have the same power as the camel of going for several days without food or water. Many of the farms are long distances from the towns or railroads, and a llama has often to make a journey of four or five days or a week in carrying his load to and from home. During this time he eats practically nothing, and gets along without water. This seems incredible, but I am told it is true. The llama wool is coarse, and it has no value in commerce. It is used by the Indians to spin thread and make cloth. The meat is also too coarse for the markets.

The alpacas are much smaller than the llamas, and in some respects the more beautiful. They are a great deal more delicate, and are not used as beasts of burden, although there are crosses between the alpaca and llama which act as freight carriers. They are usually to be seen in the llama trains and are often of a brownish yellow color. The alpacas one sees on the pastures, and there are millions of them on the high Andes, are white, black or brown. Sometimes they are spotted. They do not thrive anywhere below a mile above the sea, and they are mostly found at a height of two miles or more. They have a fine long wool that brings 4 or 5 cents more a pound than sheep's wool. They are kept for their wool, being clipped every two years, when the fleece of the ordinary animal should weigh five pounds. If the shearing is done sooner the wool is short and it brings very much less.

Vicunas Mix with Llamas and Sheep

I have seen some vicunas during my trip through the Andes. They are the wild half-sisters and brothers of the llamas and alpacas and are smaller than either. They cannot be domesticated, but they will sometimes come down from the mountains and mix with the flocks of llamas, alpacas and sheep on the plains. They are often shot by the Indian and Cholos, although this is against the law.

The vicuna wool is finer than that of the alpaca, and it brings a high price. There is so little of it, however, that it is hardly worth mention, much of the vicuna cloth, so-called, being made of alpaca wool. The vicunas are yellow in color, and their woolly fur is as soft as that of a seal. For this reason their skins are used to make the rugs so highly prized by the tourists. These rugs vary in value according to the part of the animal from which the pieces of skin come. A rug made from the necks or legs is much more valuable than one from pieces taken from the rest of the body. During my visit to South America fifteen years ago I bought a beautiful rug in La Paz, Bolivia, for about $20 in gold. I am told that similar ones will now cost $50 and upward.

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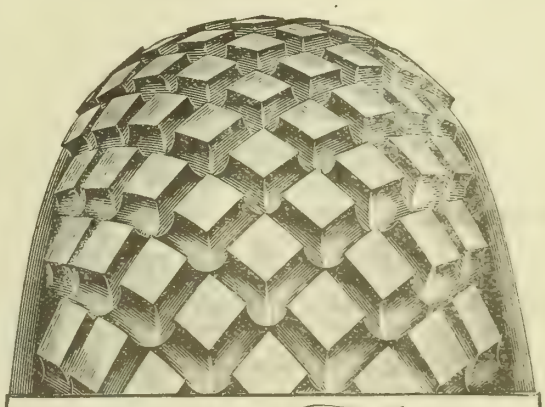

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Hurry-up calls for the Powerful Smalley to replace broken-down, flimsy silage machines happen every day. The Smalley works on the *grip-hook, force-feed* principle; it does work that no cheap machine can stand up under. The grip hooks and extra paddle roller *force* the corn, alfalfa, oats or peas into the knives as fast as you can throw it on the table. And it cuts that silage *fine and uniform*. No uneven, coarse pieces. Your silage packs tight—you get more tonnage.

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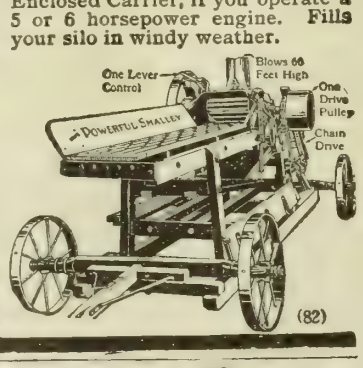

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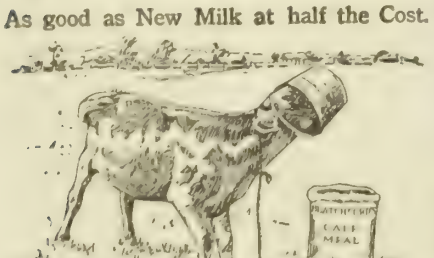

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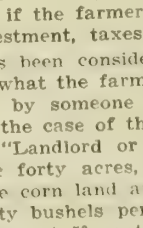

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Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Quarrel Over Line Fence

J. S., Nebraska: We are two neighbors, A and B, with a fence between us. On account of a slope, causing rubbish to be washed against it, this fence has left the line onto A's ground. Is there any law that can make B remove the rubbish and make the line straight? Would like to get your advice on this subject.

Answer—Our advice would be to have a friendly talk with B and try to get him to help you put the fence right and remove the rubbish. If he will not, would advise you to do it yourself. Any resorting to law or threatening to do so would cause hard feelings and loss of friendship. A lawsuit would cost you far more than the entire work of fixing up the fence.

Earns and Receives Good Pay

A. P., California: Having had thirteen years' experience as a laborer, wish to say all employers are not alike. I worked out four months for $5 per month in New York state and saved $13. Then I borrowed $45 from my uncle in Nebraska and worked it out at $10 per month, and also the rest of the year at the same price. My salary was increased each year until I was getting $20 a month for eleven months and $30 for one month. During that time I worked three years and nine months out of the four years without losing a day. Later I went to Wyoming and received $40 per month, but preferred Nebraska at $35; so I worked three years and three months for another man. I was considered one of the family. I still have 480 acres back there that I have rented, because I don't like to batch, so I am still working out, but now I get $75 per month.

Replies to Several Letters

A. G. H., Oklahoma: I have been a pretty constant reader of the Twentieth Century Farmer for the last year, though not a subscriber. I have read the articles from hired men and farmers, and I think their spats back and forth are not bettering conditions any and only creating hard feeling on both sides. I would like to make one comment on Mr. D. Dickinson's remark in regard to unskilled labor of other vocations. I have had a little experience along this line and believe I can truthfully state that a farmhand at $30 per month is the best paid, considering board and washing and under present-day conditions of farming, of any laborer, and his work is lighter, owing to the fact that he is sitting on the seat of some riding implement the greater part of his time. I want to say right here that at these wages he is making more money than the farmer if the farmer counts interest on his investment, taxes, etc.

There has been considerable windjamming over what the farmer makes, written mostly by someone living in town, such as in the case of the issue of April 18 on the "Landlord or Renter." That fellow took forty acres, as he said, of $150-per-acre corn land and figured on it making fifty bushels per acre one year with another, at 50 cents per bushel. I have seen that same $150-per-acre land make thirty bushels per acre at 30 cents per bushel, and if he will get out on the farm a little he will find more thirty or thirty-five-bushel corn years—yes, five to one—than there are fifty-bushel years.

There is a lot of howl about the government doing something for the farmer, such as rural credits and government loans at 5 per cent, and a lot of people are traveling in foreign countries to study the rural credit system there. It gets into the papers and that is about all the farmers ever get out of it.

Note—The letters written to the Readers' Exchange, while not always expressing your opinions about things, and frequently not expressing the opinions held by the Twentieth Century Farmer, should not be, therefore, credited to city men. Almost every letter that is published in the Readers' Exchange bears an "R. F. D." address. That is one reason why we require the addresses, although they are not published. We do not wish to allow this department to become one in which city men having some axe to grind may obtain a hearing from our readers under false pretenses.

Concrete Tank and Legal Question

O. I., Nebraska: I take several agricultural papers, but I think the Twentieth Century Farmer is one of the best. I saw in your issue of April 11 of H. B. of South Dakota inquiring about a concrete water tank. I have made several out of silo blocks 8x8x16 inches, which gave better satisfaction than any other tank I ever saw. I made one for myself three years ago and it nearly froze solid several times, but it never had the least sign of a crack. It has no reinforcement whatever. It was made of the first blocks I ever made and was the first tank of blocks I ever saw. After the tank was put up I plastered it on the inside with half cement and half sand, and if a tank like that has a good, tight cover it freezes but very little in the winter on account of the dead-air space in the center of the blocks. There are several concrete and also solid block tanks in this neighborhood, but I have not seen any that did not leak or else crack. Most of them crack in a short time.

I would like to have you tell me, through your paper, regarding damages. If A hires a hand for $20 per month and the keep of his pony, can the hand (B) demand damages if he turns his pony loose to go to water and the pony runs out in the pasture with A's horses and gets to fighting and gets cut in the wire so he cannot use her for nearly a month, and will spoil the sale at least $50, besides the danger of losing her colt or perhaps the pony and the colt both?

Answer—He could demand damages, but whether he could get them or not is another matter. If such a case were tried a number of questions would be asked, on the answers to which would depend the outcome of the case. Would advise a friendly settlement if possible. Would never advise appealing to law when there is any possibility of settlement otherwise.

Farm Demonstrators

J. V., Nebraska: In every farmers' paper we read arguments for and against the farm demonstrator. Now, I have been thinking this over and would like to make a few suggestions. If there is to be such a profession as "farm demonstrator," then why not have it like any other profession—make those who need the advice or suggestions of the professional man pay for his services. The way they are coming at us here in Nebraska, the demonstrator is to receive his salary from the county; then everybody in the county helps to pay his salary. I say, let men who wish to enter this profession select some location wherever they please, and hang out a shingle with large lettering on it, "Farm

Demonstrator." Then, when he has given advice or help of any sort to a farmer, let the demonstrator make charges at his own discretion and according to his business instincts.

In this business, if he be a man of worth and ability, he is bound to flourish, except for one condition—do the farmers really want a demonstrator? If they do, his business will flourish; if his business is a failure, then it is evident there is no demand for this sort of talent. Then why have the county pay such a man a large salary?

The Twentieth Century Farmer has a wide circulation, and I should like to read the suggestions and ideas of other farmers in regard to the farm demonstrator. No doubt many arguments pro and con can be advanced, and I feel quite certain that, if the editor has space in the paper, they will be printed.

Answer—We are glad to print them. We only ask that the matter be looked at fairly and without prejudice. Sometimes we think we do not want a thing, and after we have had it a while we wonder how we ever got along without it.

Cholera in Western Nebraska

G. H., Nebraska: I have just read your outlines and plans as to how to combat hog cholera in this state. We farmers in this part of the state are very much interested in this kind of work, Mr. Sturgess; therefore this letter to you. This part of the state has been practically free from this disease until last fall, when it appeared in several herds, and has taken quite a few hogs.

I have read with interest your statement to the governor, Mr. Morehead, as to the cost of the work as you propose. How much good could such a plan as you mention do in our particular case—hog cholera just showing up, with the biggest part of the hog owners absolutely unfamiliar as to how to handle this disease or cholera in general! How little or small would the cost look in comparison to the good it would do here! It may possibly mean the stamping out of hog cholera in this part of the state for several years to come. Of course, we are not raising hogs in numbers here, as in the eastern part of the state. Nevertheless, it is and will be more so in the near future our "main crop." Myself and two of my neighbors have about 1,000 to 1,200 hogs. Another neighbor has 700 or more alone.

Now, Mr. Sturgess, I would like to impress on your mind how important your plan is, and how we farmers appreciate your work, and how we would like to help you out in your work if we can, and last, but not least, how bad we need a man up here to educate us farmers as soon as this dreaded disease shows up again, or, better, before it shows up again. There is one case here now.

Answer—The Twentieth Century Farmer has been for some time urging the Sanitary Board to put one or more men into the field to do hog cholera work. We know that there are many localities in the state where such conditions exist as in your locality, where valuable assistance can be rendered to the farmers and hog raisers by having the right kind of man to show them what can be done to prevent the disease. We believe that very efficient work can be done by the farmers themselves by organizing what we call anti-hog cholera clubs. You can readily see that if an entire neighborhood would band themselves together and make a determined effort to do the best they could to prevent the disease, and, in case an outbreak occurs, make an effort to confine it to as small a territory as possible, many serious outbreaks could be entirely prevented.

We want to thank you very much for your kind expressions of appreciation of the work we are doing and assure you that we appreciate receiving letters from men like you telling of things of interest to them in this connection. We know that, while hogs are not as numerous in your locality as in other parts of Nebraska, in a short time it is going to be one of the best hog countries in the state. Be free to write us at any time on any matter you have in mind. We assure you it will be our earnest desire to answer any question you may ask.

Duplication of Cream Stations

A farm journal, discussing cream receiving stations in Nebraska, states that in a town of 1,000 population there were five cream receiving stations when one could have cared for all the business, and says: "Such a situation is uneconomic." Such a condition is not local. In the state there are 900 railroad stations, and an average of one cream receiving station to a railroad station could easily care for and ship all the cream received, and yet there are more than 2,700 cream receiving stations in the state and 3,158 licensed cream receiving agents. In the town to which the farm journal referred could doubtless be found four or five grocery stores, two or more dry goods stores, two banks, three or four churches, each with a building and pastor; on farms are not needed horses and starboarder cows; in the state are being published five farm journals, each traveling the same road, discussing the same problems, having the same object in view. On every hand, in every business, there is unnecessary duplication, unnecessary expense.

We clip the foregoing from a daily newspaper. It comes from a prominent dairyman in Nebraska and is a reply to our article published on February 28 entitled "Who Pays Cream Receiving Station Costs?" We admit that there is unnecessary duplication in the matter of grocery stores, churches, etc., and are in favor of the elimination of the unnecessary ones by consolidation and co-operation. In the matter of starboarder cows, unnecessary horses, etc., why keep them? As to farm papers, there is no doubt that the United States contains too many of these. The process of elimination is going on and there will be less in a few years, only the better ones remaining. However, one paper can never serve the needs of all, as different tastes and opinions are to be met, and no one paper can fill every need.

Is Sweet Clover Profitable?

A. R. W., Nebraska: Have been reading articles recently on the value of sweet clover for hay and pasture. We have a hog pasture sown to oats and rape. The oats are coming up nicely, and would like to be advised if it would be profitable to sow sweet clover in the oats and rape? The soil is sandy, but quite productive. If any of the readers of the Farmer have given this plant a trial, would like to have some information. Have been advised to sow it in the cattle pasture on the sod, and that it would be profitable and easily grown.

There is more moisture stored in the subsoil this spring than for several years. It is up to the farmer to conserve this moisture by the right kind of cultivation. It will be needed in July and August.

Quality Must Be Improved

THE number of co-operative creameries is rapidly increasing. Co-operation is the watchword among progressive and up-to-date farmers, who realize that some more economic method than our present methods must be found of marketing our goods. One of the strongest supporters the co-operative creamery has ever had is the Dairy Record. From the last issue of this paper we are quoting a timely warning to the men who supply cream to creameries, especially co-operative creameries.

Not only are hundreds of thousands of dollars lost to the farmers every year, and hundreds of dollars to each individual buttermaker, on account of poor raw material and slack factory methods, but also the average co-operative creamery is doomed unless there is a general awakening all around, from the manager and the buttermaker down to the smallest patron.

Poor butter doesn't get any better because it is made in a co-operative creamery. Slipshod factory methods are just as expensive in the co-operative plant as in the big centralizing plant. Owning a share in a co-operative creamery and delivering any old kind of cream to it, acknowledging and living up to no rules for the care and delivery of the cream, is not co-operation. When farmers deal with their own creamery in this manner, it doesn't profit them a cent to own the factory; anybody else might as well own it. There is no denying the fact that the centralizers have a more direct way of selling their butter than have the co-operative creameries and in the nature of things they always will. Under present conditions our butter merchants furnish as good a marketing service to the co-operative creameries as can be had and this service is excellent, provided the creameries make fancy butter. What the big centralizers gain in their direct marketing system the co-operative creameries must make up in a higher quality of butter. When they do, no other system on earth can compete with them and no other system can pay as high returns to the patrons.

The co-operative creameries are in position to manufacture a much better grade of butter than can be made under any other system, if the farmers really do co-operate, adopt rules for the proper care and delivery of cream and live up to them, and when the buttermakers will be real buttermakers and not simply dump the stuff in the churn and then dump the butter in tubs and call that buttermaking. Boys getting $7 a week in the city can do that. We must realize that quality means everything; that co-operation is worth anything only when people co-operate, but in the creamery business farmers do not co-operate at all if their creameries do not turn out a high quality of butter. We hold much advertised co-operative marketing conferences and we drum the creamery men together and gravely discuss organizing large co-operative marketing concerns, undertakings demanding the highest degree of co-operation—and then when one slouchy, good-for-nothing cream buyer entirely ignorant of the creamery business opens his shack next to the co-operative creamery back home the farmers and the buttermaker let him kill off all system, all care, all co-operation in that neighborhood! Let us come down to earth and begin all over again. Let us see if it isn't possible to get every farmer to understand that if his creamery is to be a success he must do his share. Let us see if it isn't possible for the creamery to adopt and enforce a few simple rules as to the care and systematic delivery of cream and by grading the cream and paying for it accordingly secure raw material that a good buttermaker can make into first-class butter. And there are plenty of good buttermakers well worth $100 a month to any creamery ready and willing to take the place of those who cannot or will not employ up-to-date factory methods. Will it pay to make this effort? Does it pay to make good butter? You bet it pays!

UNITED STATES
Cream Separators
LEAD
Under Any Conditions

For the reason that:

There is as much difference in efficiency between U. S. Skimming Sections and all other skimming devices as between the Twentieth Century Limited (20 hours between Chicago and New York), and the average passenger train (25 hours).

The U. S. Bowl is a marvel of perfection because of its ability in the average dairy to save in closer skimming from $50.00 to $100.00 each year (15c to 30c each day) over all other separators, and because it can be cleaned in about one-half the time of other separators, and easily kept perfectly sanitary always.

The U. S. Separator is the only Separator having the non-rusting Nickel Silver Metal which is non-adhesive like glass or ivory, easier than other devices to clean by ordinary methods and immensely easier by the Mechanical Washer.

The 1914 Sanitary Liner for bowl chamber supplies the most sanitary equipment. Iron is quick to rust when milk touches it. This is why other separators become insanitary. Milk cannot touch the iron bowl chamber of the U. S. for the liner prevents.

The U. S. Separator separates thick cream when desired, and at the same time **skims clean.** This is a hard test, and under it all other separators skim poorly, and some clog. The advantages of thick cream are many.

There are many cream separators outside the class of so-called "cheap separators" which in reality, like poor cows, are "star boarders" because they have not the ability as has the U. S. to meet perfectly the variations found in every day conditions in the average dairy.

The U. S. Cream Separator is in a class by itself.

It holds the World's Record in the longest and hardest fought world's contests. This statement cannot be successfully denied for the proofs are on record.

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Pasturing Alfalfa Requires Care

By A. C. Hartenbower

WHILE alfalfa is widely recognized as a pasture plant for the different classes of live stock, yet care is necessary in using it as pasture. Many fields have been destroyed by injudicious methods of pasturing.

The first requisite in pasturing alfalfa is not to pasture the crop until it has made a good start. Experienced growers of alfalfa state that alfalfa should never be pastured the first year after it is planted. The alfalfa plant requires at least that much time in order to develop a root system which will maintain the crop when pasturing is done. More than this, but little pasturing should be given the field of alfalfa the second year. Care in this particular is absolutely necessary.

The second requisite in pasturing alfalfa is not to pasture the plants too close in the late fall. Many fields of alfalfa have been frozen out because the crowns were left totally exposed in the late fall. The plan pursued by many farmers of using their alfalfa fields for pasture in early winter and permitting their live stock to eat all of the growth, thus leaving but the bare alfalfa plant crowns, has brought failure where an excellent stand has been procured.

The third requisite is not to pasture the plants too early in the spring. This is especially true just when the plants are starting growth. The young plants should be given an opportunity to develop early every spring. When live stock is permitted to pasture off the young plants as fast as they grow up destruction comes to a larger or smaller per cent of the plants in the field.

The fourth requisite is not to pasture when the field is extremely wet Every farmer knows the evil effects that may come from using any pasture when the ground is saturated with water. While the bad effects of pasturing at this time are well known, yet there are many farmers who go against their better judgment and pasture alfalfa, and other crops, for that matter, when the ground is so soft that the animals almost mire down. Why not quit such pasturing?

The fifth requisite is to keep the pastured field well cultivated. Unless some precautionary measure be practiced the tramping of the live stock will pack the ground to such an extent that the growth of the crop will be materially checked, if not destroyed. One of the most satisfactory tools for cultivating an alfalfa pasture is a common spike-tooth smoothing harrow which has been well weighted down. Some growers use an especially constructed tool called an "alfalfa cultivator," which has blunt points. This machine is costly and requires a great deal of horse power, although it does very effective work. Many farmers are now using a common hoe drill for cultivating their alfalfa fields. One of the most desirable and convenient times for cultivating an alfalfa pasture is in the early spring. A good cultivation given at this time gives the plants a good opportunity to start into vigorous growth because it opens up the soil, allowing air and moisture to enter freely. These cultivations are advantageously kept up at intervals during the season. No tool should be used for cultivating which tends to cut up the alfalfa plant crowns. The disk harrow, which was a popular tool for cultivating alfalfa fields some few years ago, is rapidly going out of use.

While doubtless the most satisfactory results from using alfalfa as a pasture plant for all classes of live stock will be found most profitable when hay, as well as pasture, is obtained each season, yet the judicious use of alfalfa entirely as pasturage has given excellent returns.

Marketing of American Wools

IT IS important that the grower of wools, the American sheep breeder, handler, dealer, the ranchman or larger sheep owner, who shears his sheep and puts the wool crop on the market, should handle this wool, in preparation and grading, so that it will bring the highest prices when offered to the factory or the wool trade representing the manufacturer.

The wools of the western range country are usually of a varied grade; mixed breeds of sheep from the mutton type of the long wools, medium wools and fine wools, constitute many of the flocks, there having been but little attention paid to grade when buying for the start. Others make a business of buying any kind or quality of sheep and turning them in with the main flock, thus losing any uniformity of fleece that may have been started by the use of one breed of rams. Other flocks are bred for uniformity of fleece and type of sheep from a mutton standpoint. These well-bred flocks after a few generations, grade very uniformly in fleece quality, and such wools sell at the top price for the grade they represent.

The American flock master must be more careful in grading his wool to a strict conformity of quality and condition. The manner and style of putting the fleeces in package for sale demands special attention also. Fleece shorn and dropped in a confused mass to be packed and mixed up with other fleeces, tags, etc., will not bring the price it merits in quality. The poor condition thus represented governs in its sale, and the better quality is thus reduced to a level of the poorest.

The farm method of the old eastern states should be resorted to as far as practicable, each fleece to be carefully tied up by itself, no dirt tags to be included in the fleece, the most approved soft wool-twine to be used, and the package when completed to be neat and easily handled, showing all the fleece character, so far as condition and quality is concerned. It will pay any sheep owner to give his wool this attention. It will pay all extra expense and more.

The recommendations being sent out by the Department of Agriculture on Australian methods, are plain, and what some of our sheep and wool associations are practicing:

Australian and New Zealand wools are graded or "classed" at the time of shearing. They are also shipped in bales instead of sacks. The "wool classers" who do their work at the shearing plant are familiar with the basis of grading wool for manufacturers' uses. No bale contains more than one grade of wool, and any one bale is a true representative of others of the same grade shorn from the same flock. In many instances the fleeces are also "skirted." Skirting is the removal from the fleece of that part of the wool shorn from the legs and belly. Such skirtings contain most of the dirt and foreign matter present in the fleeces, and when baled and sold separately bring their actual value and do not detract from the appearance and uniform character of the body wool.

W. N. Rogers Leaves

(CONTINUED FROM PAGE FIVE)

size first, then all the finish, style, beauty and refinement that could be induced to go with this big animal. At the fairs and big live stock shows, during the years of his activity in the show ring, he was not infrequently twitted by the sarcastic Shorthorn breeder of having a Shorthorn wrapped up in a Hereford hide.

His herd bulls from which he achieved his great success as a breeder were: Vincent 2d, bought of Macon Bros., Florence, Kan.; weight, 2,800; Anxiety Monarch, weight 2,800, bred by Mr. Rogers; Monarch of Shadeland 3d, weight 3,000; Beau Donald 28th, weight 2,800, bred by W. H. Curtis of Eminence, Ky. Mr. Rogers started in with a 2,800-pound bull, and has kept well within this limit in size, and always carrying quality with it.

The Rogers herd, at its dispersion sale, March 25, 1914, distributed many fine specimens among the Hereford breeders of the Missouri valley that will carry his name down along the years of future Hereford history long after W. N. Rogers has ceased to be a figure in the activities of the pure-bred cattle industry of this world. His achievements will be a monument to the memory of his life in Nebraska that any man might feel proud to leave as an inheritance to the coming generations.

The friends of Mr. Rogers will join with the Twentieth Century Farmer in wishing him and his family success and the enjoyment of the best that the southern country can contribute in his years of retirement.

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Farm Buttermaking

The experiment station at Pullman, Wash., sends out the following set of rules:

Cool the cream from the separator as soon as possible to 55 degrees Fahrenheit or lower.

Never mix warm cream with cool cream.

Mix all the cream to be churned in one vat or can at least eighteen hours before churning.

Ripen at a temperature of 70 to 75 degrees Fahrenheit for from six to eight hours, stirring frequently during this period.

Cool cream to churning temperature as soon as ripe.

Let the cream stand eight hours or more (over night) at the churning temperature.

The temperature of churning should be such as to make the butter come in from thirty-five to forty minutes, usually 55 to 60 degrees Fahrenheit.

If it is desired to use artificial coloring, it should be added to the cream just before churning.

Stop churning when the granules are about the size of peas, varying to wheat, and draw off the buttermilk.

Wash the butter once with pure water at the churning temperature, agitating three or four times, and drain.

Wash a second time with water about four degrees above churning temperature, agitating seven or eight times, and drain.

Add the salt wet, while the butter is in granular form, using about one to one and one-half ounces for each pound of butter, according to the demands of the market.

Work the butter just enough to distribute the salt evenly.

If the butter is to go on the market, it should be put up in neat, attractive packages.

Prolific Cattle Tick

A male and a female tick hatched in April may by October 15 give rise to 3,750,000,000 descendants, about half of which, being females, will lay about 4,500 more eggs apiece immediately or the following spring. Take the cattleman's point of view: A thoroughly, although not exceptionally, infested cow may carry several hundred thousand ticks at one time, and during one season may be infested by four such broods. Now, 1,500 ticks, after having engorged themselves for three or four days, will weigh about a pound, this representing almost entirely the weight of the blood taken from the host. Thus the helpless beast may actually lose from 200 to 500 pounds of blood in a single season. Little wonder that thousands of southern calves never reach maturity; that the pitiful spectacle of a valuable dairy or beef animal actually starving to death in the midst of rich, nutritious pasture is not a nightmare, but a terribly frequent reality—The World's Work.

Percheron Society Report

The Percheron Society of America has compiled a summary of transfers entered of record between November 1, 1913, and April 1, 1914. During this time 4,935 transfer certificates were entered on the records; 1,836 of these were for animals sold prior to November 1, 1913; of the 3,099 remaining, which were for animals actually sold between November 1, 1913, and April 1, 1914, 1,653 were for stallions and 1,446 were for mares. This record is known to be incomplete. It is worthy of note that more sales have been made by small farmers and breeders than heretofore. Personal reports from a great many farmer breeders justify the conclusion that the prices obtained for American-bred horses have been more satisfactory than in the past. Indiana has been especially active in the purchase of stallions, while Illinois, Ohio and Iowa, the oldest breeding states, have been heavy purchasers of mares.

Turberculosis in Pennsylvania

During the ten years ending in 1911 there were 120,309 cattle tested for tuberculosis in Pennsylvania. Of this number 18,359, or 15.2 per cent, were found to be diseased. In 1909 the average percentage of reactors was 14.4 per cent; in 1910, 13.6 per cent, and in 1911, 11.3 per cent. This decrease in the percentage of reactors is both interesting and instructive. It should give renewed courage in the fight against the spread of this disease.—Hoard's Dairyman.

Breeders' Notes

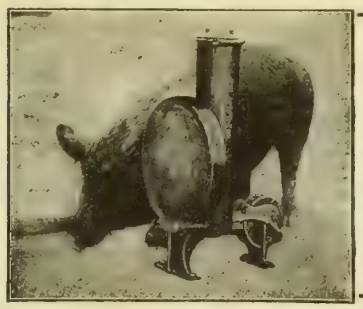
Red Polls for Sale

W. F. Schwab, proprietor of Falstaff herd of Red Polled cattle at Clay Center, Neb., has twelve bulls of breeding age that he is offering for sale at this time. He also has about an equal number of heifers that are of an unusually high character. Here is an exceptional opportunity for anyone wanting strictly first-class cattle. This is one of the oldest herds of Red Polled cattle in the west, and Mr. Schwab's aim has always been to hold his herd up to the highest possible standard. In order to do this he has always used the very best breeding animals obtainable. The growing demand for dual-purpose cattle has made the Red Polls eagerly sought after, and we trust any of our readers who are in the market for anything in this line will write Mr. Schwab at once, as these cattle are not going to last long at the price for which he is offering them. When writing him kindly mention the Twentieth Century Farmer.

O. I. C. Hogs

G. S. Benjamin of Portland, Mich., is one of the largest breeders of O. I. C. hogs in the United States. He has probably been instrumental in starting as many breeders in the business as any other one man, if not more so. If you are in the market for anything in the line of a Chester White hog, we would advise you to write Mr. Benjamin, mentioning the Twentieth Century Farmer.

The above represents the type and character of the Percherons being offered for sale by Fred Chandler of Chariton, Ia. Note the drafty character expressed in this picture.



Agents! Wanted Everywhere for the Sherman Hog Greaser

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Hogs are always kept healthy and take on fat rapidly. Best results are certain. Write today for Special Offer.

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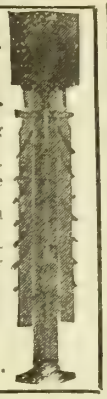

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Our oil will positively eradicate the hog louse, mange and skin diseases

Save your hogs from cholera by keeping them healthy.

Write for prices and circulars. Agents wanted in every vicinity

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COUNCIL BLUFFS, IOWA.

The Original Genuine SCHULTZ HOG OILER

First successful crude oil machine invented. The hog man's wish is now a reality.

Hogs positively rid themselves of lice and mange. Don't cost much more than inferior imitations.

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Dead Hogs or Live Hogs
WHICH DO YOU WANT?
Anti-Hog Cholera Serum

will immune your hogs and prevent them from dying with hog cholera.

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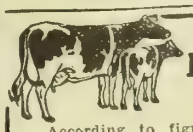
HOLSTEIN CATTLE



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HOLSTEIN CATTLE

According to figures compiled by the department of animal husbandry of Illinois University a cow must produce 4,000 pounds of milk and 160 pounds of fat a year to pay for feed and labor. Every 1,000 pounds above this brings a yearly profit of $10. Thus a 5,000 pound cow earns $10 a year, an 8,000 pound cow earns $40, but when production reaches 10,000 pounds the profit is $63.

Systematic investigation confirms the wisdom of those who have taken up the Holstein-Friesian breed.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro, Vt.

HORSES AND MULES

Kodak picture of my jet-black coming 3-year-old Percheron stud, from 2200-lb. imported sire and 1900-lb. imported dam. I have 9 coming 3-year-old studs, 11 coming 2-year-old studs and 6 coming 4-year-old studs. Jet blacks and rich dark grays. Big for their age, one weighs 2110 lbs., one 2160 lbs. and a yearling 1740 lbs. Registered Percherons and straight sound. You cannot get better money-makers. Foaled and grown on the farm and offered at farmer's prices. Intelligent headed colts that have had kind attention, a boy can handle them. Just east of Omaha.

FRED CHANDLER,
Route 7. Chariton, Iowa.

JACKS AND JENNETS

Black Mammoth Jacks and Jennets for sale. Weighing from 700 to 1200 pounds, two to six years old; price, $200 to $1,000. Also thirty head registered Shorthorn cattle—mostly cows and heifers ready to calve. O. J. MAY, Bennett, Neb

RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

W. F. SCHWAB, Clay Center, Nebraska.

LEARN TO BE AN AUCTIONEER National Auctioneering School of America Box 31, Lincoln, Neb

O. I. C. HOGS

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN** RFD 79 **Portland, Mich.**

LARGE ENGLISH BLACK HOGS

The best and largest bacon breed They make the best cross for the lard type hogs known. The leading bacon breed in England. A few 25-lb Bred Gilts for sale at $50.00. J. DUNLAP Box 406, Williamport, Ohio.

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FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

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That's what you save on my direct-from-factory-to-farm plan. Big output, 20,000 this year. Standard construction, latest labor-saving machinery and my direct plan of selling, make this big saving possible. It's your opportunity to get a real engine at a price that is based on 20,000 output.

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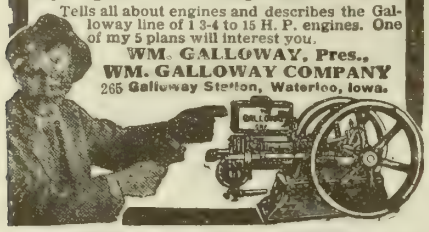
Now Sold on Five Different Plans — Cash or Credit

Try the Galloway engine 30, 60 or 90 days right on your own farm. Send it back to me if it isn't right. I have five different plans of selling this engine on cash or credit. I'm so sure it will make good I give it an unqualified guarantee and send it to you on your own terms.

My Engine Book and Special Offer Free

Tells all about engines and describes the Galloway line of 1 3-4 to 15 H. P. engines. One of my 5 plans will interest you.

WM. GALLOWAY, Pres., WM. GALLOWAY COMPANY
265 Galloway Station, Waterloo, Iowa.



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The Adel Vitrified Tile Corn Crib has five times more ventilation than any other practical crib. This means higher graded corn. Ventilating core absolutely prevents mould. You can husk earlier and avoid freezing fingers. Costs no more than wooden crib and is fire, wind, rat and time proof. No painting or repairs. Takes less ground room for capacity than double crib.

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18 decided advantages set out in our new catalog which you can have free. The permanent crib for modern farmers. Circular form prevents racking. Cone spreader spreads evenly, forcing moisture to evaporate. The Adel Tile Crib has all the advantages of the wooden crib and none of the disadvantages. Tile cribs are built with or without granaries, from various plans.

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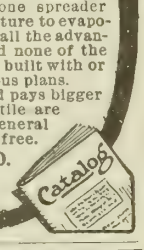

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about any section of the country through The Twentieth Century Farmer's Free Land Information Bureau, which is maintained for the benefit of our readers. Let us know what locality you are interested in and we will be glad to tell you of its crops, climate conditions, live stock, government land, etc.—all such facts may be had if you will simply send postage for reply and address

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Review of Live Stock Market

By A. C. Davenport

DURING the month of April most of the live stock organizations of the west hold their annual meetings, and these meetings are usually the occasion for a getting together of stockmen of all shades of opinion, and in all lines of business, so that it is possible for the visitor to get a very general idea of the changes taking place in the live stock industry. At all of these meetings this year it was very noticeable that the number of old-time cow men is gradually decreasing, while their places are being taken by stock farmers and small ranchers. This means that the range is passing away, and that from now on the business of raising cattle in the west will be done on a smaller scale, which will undoubtedly tend to the raising of better stock. Stock will be cared for in better shape and be more valuable either as feeders or as beef.

Another noticeable feature of these meetings was the importance that was attached to the matter of feeding cattle throughout the winter and early spring months with a view of getting them in beef condition and selling them as such rather than as heretofore has been the proceedure, preparing them only for feeding purposes in the corn belt. In other words, the west is going to produce more and more beef every year and the supply of stocker and feeder cattle from this source will show a corresponding decrease. There is also a manifest disposition on the part of stock men to broaden their operations, and in many cases the same man runs cattle and sheep, and at the same time does quite a little grain and alfalfa farming. In almost every section of the northwest there has been a noticeable increase in dairying, and it is surprising to what extent the new comers, or new settlers, have taken up this industry. It has the advantage of providing a ready source of revenue, and this has always been a most important item in a new country. Those who attended these meetings, as a general thing, report grass early and abundant throughout the northwest, and this usually means a prosperous year for stock men.

Argentine Shipments Overestimated

It is becoming more and more apparent every day that both producers and consumers have greatly overestimated the influence on the cattle trade of the shipments of beef from Argentina that now comes in free of duty under the Underwood tariff. For a time, owing to the active advertising propaganda of the American packers, it looked as if enough South American beef would be thrown on the market to completely demoralize prices for both cattle and beef. It now transpires, however, that the effect of liberal importations of Argenine beef did not reduce the price to consumers appreciably, and that the only visible effect was a general lowering of prices for the medium grades of steers, and a general weakening of the market as far as fat cattle were concerned. This was manifestly satisfactory to the packers, but unsatisfactory to the producers as well as the consumers in this country. It also appears now that there is little danger that Argentine will ever be in a position to flood this country with beef. A study of conditions in the South American republic shows its ability to produce cattle is comparatively limited, and that the season of heaviest production and consequently of heaviest exportation is now past aind that until next spring the receipts of beef from Argentina will be of very limited proportions.

Another thing that will tend to limit these importations is the fact that the foot and mouth disease is more prevalent there now than ever before, and this has lead to the loss of thousands of calves which it will take months and perhaps years to replace. Since the breaking out of hostilities in Mexico the government has purchased over 1,500,000 pounds of Argentine beef for the navy, and it is noteworthy that an American packer, Swift & Co., was given the contract for furnishing this beef. So long as there is a world-wide shortage of cattle the importations of beef from Argentina will have little effect in this country, but should home production ever catch up with the growing demand there is no doubt but that the liberal shipments of beef from Argentina will prove very disastrous to American stock raisers.

Sheep Feeders Dissatisfied

The sheep feeding season throughout the corn belt is now practically over, and on the whole it has been a rather unsatisfactory one for feeders. There were several reasons for this state of affairs. In the first place feed of all kinds was comparatively high in price and a good share of the men who fed sheep the last season did so as an experiment. Perhaps the most general cause for dissatisfaction, however, was the high price that feeders were compelled to pay for their stock sheep last fall. In their anxiety to secure good feeding stock they frequently paid more for thin sheep than the packers were paying for fat grassers. Manifestly this course proved unwise and must be avoided in the future if feeders are to realize a reasonable profit on their operations. In many cases experienced sheep feeders had a profitable season, but it will be noticed that in most instances these men secured their stock sheep at a reasonable figure. It is an old adage of the trade that stock "well bought is half sold," and the amateur sheep feeder will do well to bear this adage in mind in making his purchases this fall.

Parcel Post Hints

Pack and wrap your parcels securely.

Most of the damage and losses are due to insecure packing.

Address your parcel correctly and plainly.

Write your own name and address in the upper left hand corner.

Packages containing eggs should be marked "eggs."

Packages containing perishable matter should be marked "perishable."

Packages containing liquids, jellies, etc., should be marked "fragile."

Don't pack eggs, berries or similar produce in a thin pasteboard box.

Eggs wrapped separately and surrounded in cotton or excelsior and packed in a strong corrugated wooden, pasteboard or metal box can be sent any distance.

Don't put any writing in the package unless it is a bill for the goods, or a description of the contents of the package.

Do not send perishable matter so that it will arrive in the city on a Saturday evening or on Sunday—unless you use a special delivery stamp.

Consult your postmaster as to the best time for mailing country produce so as to reach the city at the best hour, the quickest time and in the best condition.

Soil Texture and Soil Moisture

The term texture when applied to the soil refers to the size of the soil particles. Generally speaking there are three main classes of soil based on texture, sand, silt and clay, and all productive soils are, as a rule, composed of combinations of the above classes.

The amount of movement and the rate of movement of soil moisture are governed to quite an extent by texture. In sand we find that the action is rapid, but lasts only a short time. On the other hand, the movement in clay is very slow, but the water travels through a much greater distance. In soils of medium texture the action is intermediate throughout. In the average soil movement of water is confined to a few feet, but in some of the fine textured soils it may travel a considerable distance.

JAMES D. MARSHALL.
Colorado Agricultural College.

For the first time since 1885 Spain, in January, had a fall of snow sufficiently heavy to whiten the landscape throughout the country.

THE MARKET PLACE

MISCELLANEOUS

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

FREE FOR SIX MONTHS—MY SPECial offer to introduce my magazine, "Investing for Profit." It is worth $10 a copy to anyone who has been getting poorer while the rich richer. It demonstrates the real earning power of money and shows how anyone, no matter how poor, can acquire riches. Investing for Profit is the only progressive financial journal published. It shows how $100 grows to $2,200. Write now and I'll send it six months free. H. L. Barber, 472, 28 W. Jackson Blvd., Chicago.

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

FENCE POSTS AND LUMBER DIrect to consumer. C. J. Coleman, Sand Point, Idaho.

ANY FILM DEVELOPED, 10c PER roll; prints, 2c to 5c. Cameras and supplies. Photo Craft Shop, 4160 Bee Building, Omaha.

POULTRY—Baby Chicks

WHITE ROCK BABY CHICKS, 10c each. Houdan and White Rock eggs, $1 per setting, $5 per 100. George J. Wolcott, Central City, Neb.

Bantams

GOLDEN SEABRIGHT BANTAMS—Eggs from prize-winning mating, 15 eggs, $2. Harold R. Hufford, Wayne, Neb.

Ducks

INDIAN RUNNER AND BUFF ORpington duck eggs; also Light Brahmas. Circular free. Frank Healy, Bedford, Ia.

FAWN AND WHITE INDIAN RUNner duck eggs, $1 per 12. Heavy laying strain. E. Dooley, Selma, Ia.

Hamburgs

SILVER - SPANGLED HAMBURGS — Eggs, $1.25 per 15, postpaid; $4 per 100. Chas. Voss & Son, Hubbard, Neb.

Leghorns

EGGS FOR HATCHING — SINGLEComb White Leghorns, Rhode Island Reds, White Holland turkeys and Indian Runner ducks. Chas. Cross, Sextonville, Wis.

ROSE-COMB BROWN LEGHORN eggs; none better—$1, 15; $4, 100; chicks, 10c. Olga Hayek, Linwood, Neb.

BUFF LEGHORN AND SINGLEComb Red eggs; 100, $4. Mrs. Alb. Thorson, Mead, Neb.

SINGLE-COMB BROWN LEGHORN Eggs—$4, 100; $2.50, 50; $1, 15; from 200 2-year-old hens, mated with cockerels scoring 93¾. Edward Dooley, Selma, Ia.

SINGLE-COMB WHITE LEGHORN eggs, 3½c each. Will Rockwell, Hubbard, Neb.

EGGS — ROSE-COMB BROWN LEGhorns, 15 for $1; 50, $3. Also cockerels. White Wyandottes, 15, $1. Geo. A. Richards, Route 2, Kearney, Neb.

ROSE-COMB BROWN LEGHORNS—15 eggs, $1; 100, $4. Mrs. E. Fauquet, Wahoo, Neb.

SINGLE-COMB WHITE LEGHORN eggs from trap-nested, high-record layers, $1, 15. F. Strahan, Linwood, Neb.

SINGLE-COMB BROWN LEGHORNS —Eggs, $2 per fifty, $3.50 per hundred; from matured pullets, farm range. Mrs. Ufe Edzards, Bruning, Neb.

Langshans

BLACK LANGSHAN EGGS—CIRCUlar. Jake Hetrick, Wahoo, Neb.

EXTRA BIG-BONED, SCORED Black Langshans and eggs. H. Osterfoss Farm, Hedrick, Ia.

Light Brahmas

LIGHT BRAHMA EGGS—15, $1; 45, $2.50; 100, $5. Fair hatch guaranteed or another order half price. Frank A. John, Bedford, Ia.

LIGHT BRAHMA EGGS—15, $1; 50, $2.50; 100, $5. Mrs. M. Wall, Eddyville, Neb.

LIGHT BRAHMAS—EGGS, 30, $1.25; 50, $2. Mrs. A. J. Applegate, Gilmore City, Ia.

BLACK LANGSHANS AND HOLland turkey eggs. Mrs. J. W. Johnson, Loup City, Neb.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

RATE—Five cents per word per issue. Cash must be sent with all orders

Count every word, initial and numeral, including the address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred five thousand farmers are regular paid-in-advance subscribers to TWENTIETH CENTURY FARMER. If you have any wants or if you have anything to sell, insert an ad. in this department.

POULTRY—Minorcas

BLACK MINORCA AND BUFF Orpington eggs. Frank A. Agnew, South Omaha, Neb.

PORTER'S MINORCAS WON SWEEPstake cup at Fremont. Baby chix, 25c each and up. Eggs, 10c each and up. Circular free. J. F. Porter, Fremont, Neb.

Orpingtons

EGGS FOR HATCHING — SINGLE-Comb Buff Orpingtons, Toulouse geese, Indian Runner ducks. Mating list free. Peter Brehm, Harvard, Neb.

EGGS FOR HATCHING FROM thoroughbred Buff and White Orpingtons; $1 per 15, $5 per 100. Chas. Lessman, Wayne, Neb.

BUFF ORPINGTONS—FINE, FREE-range flock; eggs, $4, 100; $2.50, 50; $1, 15. Frank Kaiser, Daykin, Neb.

EGGS FROM KELLERSTRASS Strains—Crystal White Orpingtons, scoring 90 to 94 points, guaranteed fertile, $1.50 per 15, $8 per 100. L. H. Klinge, Grand Island, Neb.

PRIZE-WINNING BUFF ORPINGton eggs. Mrs. Cook, Eddyville, Neb.

EGGS FOR HATCHING FROM thoroughbred White Orpingtons, $1.50 per 15. Wm. Langbehn, Avoca, Ia.

ORPINGTONS—BUFF OR WHITE—Eggs, cockerels. List free. Frank Lewis, Gibbon, Neb.

Plymouth Rocks

BARRED PLYMOUTH ROCK EGGS, both matings. Pens 1, 5, $5 per 15; pens 2, 3, 4, $2.50, 15; $4.50, 30; farm range, $1, 15; $5, 100. Circular free. G. W. Feuerstein, Fremont, Neb.

BARRED PLYMOUTH ROCK EGGS—$1.25 per 15. Indian Runner ducks, $1.25 per 13; white egg strain, fertility, delivery guaranteed, prepaid. Henry Korgan, Hastings, Neb.

WHITE ROCKS — LARGE, GREAT laying strain; eggs, 15, $1; 100, $4. Geo. Clauson, Mead, Neb.

BARRED ROCK EGGS FOR HATCHing, $5 per 100, $2.75 per 50, $1.50 per 15. Fertility and safe delivery guaranteed. Fred Kroeger, Carroll, Ia.

BARRED ROCK EGGS FOR HATCHing, 60c per 15, $3 per 100. Mrs. Anna Eklund, Waterloo, Neb.

PRIZE-WINNING BARRED ROCK Eggs—Cockerel matings, $2, 15; farm range, $1, 15; $5, 100; baby chicks, 12½c each. Mrs. Geo. W. Schulz, Yutan, Neb.

CHOICE BARRED ROCK EGGS AT reduced prices for May. George Franklin, Axtell, Neb.

BARRED PLYMOUTH ROCKS EXclusively; choice, pure-bred stock; selected eggs, 100, $5; 50, $3. Safe delivery guaranteed. Adam A. Weir, Clay Center, Neb.

BUFF ROCK EGGS—$1.75 PER 15, $3.50 per 50, $6 per 100. Single-Comb Buff Leghorn eggs, from pen 1, $1 per 15, $2.75 per 50, $5 per 100. Farm range Leghorns, 50c per 15, $1.75 per 50, $3 per 100. Mrs. Albert Nagengast, Howells, Neb.

BARRED PLYMOUTH ROCK EGGS —Best quality stock. Davis Bros., Lincoln, Neb.

WHITE ROCK EGGS—EXTRA GOOD laying strain. George Hellbusch, Belgrade, Neb.

BUFF ROCK EGGS FROM STATE Fair and Lincoln winners, $5.50 per 100. R. E. Thompson, Normal, Neb.

FISHEL'S SNOW WHITE ROCKS—Won first prizes. Eggs, 15, $1; 50, $2.50; 100, $4. Mrs. J. M. Lampert, Wahoo, Neb.

Rhode Island Reds

SINGLE-COMB REDS—AFTER APRIL first eggs from prize-winning pens, $3, 15; $5, 30. Scott Covalt, Box O, Council Bluffs, Ia.

ROSE-COMB RHODE ISLAND RED eggs, $1.75 setting. Stock for sale. Claude Musselman, Lyons, Neb.

ROSE-COMB RHODE ISLAND RED eggs, $1 per setting, $5 per 100. Mrs. H. H. Bixler, Route 5, McCook, Neb.

SINGLE-COMB RHODE ISLAND RED eggs, $1 per 15 eggs, $5 per 100. Delmer McCann, Arlington, Neb.

ROSE-COMB RED EGGS FROM EXhibition and utility stock. Free catalogue. George Ainsworth, Fremont, Neb

SINGLE-COMB REDS AT PIONEER Home—Large, dark red; heavy layers. Pens, $1.50 per 15; utility, $4 per 100. Mrs. John Hall, Valley, Neb.

SINGLE-COMB RHODE ISLAND RED eggs from pure-bred stock—$1 per 15, $5 per 100. Mrs. Chas. Kellett, Waterloo, Neb.

POULTRY—Turkeys

TURKEY EGGS — LARGE WHITE Holland, $1.50 per 12, postpaid; $10 per 100. Mrs. C. A. McEndaffer, Sterling, Colo.

Wyandottes

WHITE WYANDOTTES—EGGS HALF price. Best strains in America. White Wyandotte Farm, Oscar L. Bock, Prop., Council Bluffs, Ia.

EXPRESS PREPAID ON OUR HIGHquality White Wyandotte and Indian Runner duck eggs. Cedar Lawn Poultry and Stock Farm, Fairfield, Neb.

WHITE WYANDOTTE EGGS—15 FOR $1. A. M. Neidig, Madison, Neb.

WHITE WYANDOTTE EGGS FROM best matings in Nebraska. G. W. Harden, Ulysses, Neb.

THOROUGHBRED SILVER WYANdotte eggs. H. Clabaugh, St. Edward, Neb.

BUFF WYANDOTTE EGGS FOR setting. Mrs. Chas. Hough, Weston, Ia.

Miscellaneous Poultry

EGGS! EGGS! FROM THOROUGHbred turkeys, geese, Pekin, Rouen, Muscovy and Runner ducks, Pearl and White guineas, Bantams, Rhode Island Reds, Houdans, Games, White and Brown Leghorns, Hamburgs, White and Buff Orpingtons, White and Silver-Laced Wyandottes, Buff, White, Barred Plymouth Rocks, Cochins, Langshans. Hen eggs, 15 for $1. Also dogs, rabbits, fancy pigeons. Free circular. D. L. Bruen, Platte Center, Neb.

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

ROTTEN EGGS—WE SELL NICE, fresh eggs from 26 varieties of chickens. Catalogue free. Aye Bros., Box 3, Blair, Neb.

EGGS — BARRED, WHITE, BUFF Rocks, Buff Orpingtons, Rhode Island Reds, White, Brown Leghorns, Black Langshans, Toulouse geese. Mrs. Frank Davis, Holbrook, Neb.

WYANDOTTES, LEGHORNS, ROCKS, Reds, Orpingtons, water fowls. Free catalogue. C. W. Brehm, Harvard, Neb.

EGGS FOR HATCHING FROM PUREbred ducks, turkeys, chickens. Poland-China pigs, $15 a pair (not related). Mrs. Maggie Rieff, St. Peter, Minn.

LICE KILLER, BALANCED EGG Ration, Crate Fattening Ration. Formulas free with our monthly poultry magazine at 25 cents the year. American Poultry Instructor, 238 Campau Bldg., Grand Rapids, Mich.

THOROUGH-BRED EGGS — HOUdans, White Wyandottes, Rose-Comb White Leghorns, Buff Orpingtons, $5 and $6 per 100; Rocks, Reds, B. Leghorns, $4 and $5 per 100. Winners fifteen prizes Nebraska Central 1913 show. Baby chicks, all leading varieties. C. & K. Lee, Box C., Hastings, Neb.

EGGS FOR HATCHING—ALL VARIeties of Plymouth Rocks, Wyandottes, Rhode Island Reds, Orpingtons, Leghorns, Hamburgs, Brahmas, Langshans, Minorcas, Campines and Bantams; also ducks, geese and turkeys. Write for catalogue No. 11. Logan Valley Poultry Farm, Wayne, Neb.

For Exchange

SWAP — GOOD RAYO INCUBATOR for a trio of 2-year-old Toulouse geese. W. D. Stambaugh, Richfield, Neb.

LANDS—Arkansas

160-ACRE RICH CREEK IMPROVED farm; 60 cultivation, balance timbered—$20 acre. Sessions Co., Winthrop, Ark.

FREE GOVERNMENT LAND—NEAR 500,000 acres in Arkansas now open to homestead entry. Guide book, with list, laws, etc., 25c. Township map of state, 25c additional. L. E. Moore, Little Rock, Ark.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

AM IN TOUCH WITH EASTERN buyers for farms and ranches. Send details with legal description and best cash price in first letter, allowing 2 per cent commission. Thomas Campbell, 530-32 State Bank Bldg., Omaha, Neb.

WANTED—TO HEAR OF GOOD farm or unimproved land for sale. Send description and price. Northwestern Business Agency, Minneapolis, Minn.

LANDS—Florida

YOU CAN SETTLE A COLONY OF your friends in Florida and make a fortune in two years. We have many large tracts suited to the purpose at a very low price and easy terms. A resident of Florida from Nebraska. Write for particulars. Address C, care Twentieth Century Farmer.

Kansas

WE OWN 13,600 ACRES IN FERTILE Pawnee valley, smooth as a floor; best alfalfa and wheat land on earth; five sets of improvements; shallow water; will sell 80 acres or more. Frizell & Ely, Larned, Kan.

320-ACRE FARM IN THE SHALLOW water belt of Scott county, Kansas. Improvements cost $3,500; half mile from railroad town with three elevators; all tillable; 170 acres in cultivation; black loam soil two feet deep; 120 acres now in winter wheat. Rented for half crop delivered. Price $25 per acre; $2,000 cash handles it. We have cut the price $2,000 to sell it quick. L. B. Scott & Son, 526 City National Bank Bldg., Omaha, Neb.

Minnesota

NORTHERN MINNESOTA — THE greatest natural cattle section; no drouths; alfalfa, clover, corn and potatoes are principal crops. Prairie or timber. Free information. We have no land for sale. Write W. R. Mackenzie, 904 Palace Bldg., Minneapolis, Minn.

200 FARMS IN THE FAMOUS PARK region and Red River Valley District, Otter Tail and Wilkin counties. Level or rolling prairie land. Timber land. Any size farm you want from $30 to $80 per acre. Easy terms. Otter Tail county has never had a crop failure; 50,000 acres of corn last year, making from 30 to 70 bushels per acre. Natural clover and alfalfa country. Write for free booklet and lists. Park Region Land and Loan Co., Fergus Falls, Minn.

100 CHOICE FARMS IN THE GARden spot of southern Minnesota, where corn is king. Price, $75 per acre and up Prices advancing rapidly. Come now. Free list. The Paffrath-Schmit Company, Springfield, Minn.

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FARM LOANS WANTED — QUICK sales, exchanges; large property list. Write John L. Maurer, Omaha, Neb.

CHOICE 80-ACRE FARM, WITH $3,000 improvements, one mile from town, within 30 minutes of Lincoln. Easy terms. German neighborhood. Sickness cause. John L. Maurer, Omaha, Neb.

North Dakota

NORTH DAKOTA LANDS DIRECT to Purchaser—We have listed with us to sell several hundred thousand acres of choice North Dakota lands. In order to obtain settlers along our 1,200 miles of track in North Dakota we will sell these lands at cost. Prices are about one-fifth those asked in Iowa or Illinois and agricultural possibilities are just as great. Roads, schools, churches, railroads all established. Very low excursion rates. For literature and full particulars write J. S. Murphy, Immigration Agt., Soo Line Railway, Minneapolis, Minn.

Oregon

ONTARIO, IN EASTERN OREGON, on the Snake river, is a most extraordinary location. Seven railroads radiate therefrom. Abundance of water for light, heat and power, domestic use and irrigation—the making of a great city. We offer you the choice of thousands of acres, all ready for cultivation, such as have produced 120 bushels of corn per acre and other crops in proportion. Do you think this an exaggeration? We are eager to give you proof you are bound to accept. We sell on long time and easy terms. Excursion rates first and third Tuesdays of every month. Let us give full particulars. Address Oregon & Western Col. Co., 536 Paxton Block, Omaha, Neb.

South Dakota

BARGAINS—GOOD DEEDED INDIAN land—160 acres in Bennette county and 80 acres in Tripp county, South Dakota. Owner, Luther S. Bear, care Hicks, Fuller & Pierson, Sioux City, Ia.

FOR EXCHANGE—RANCH NEAR Fairfax of 1,318 acres; fair improvements; 150 acres in cultivation, balance in hay and pasture. All good, hard land. Price, $30 per acre. Encumbrance, $18,000, 6 per cent, long time. Want income or small farm for equity. L. B. Scott & Son, 526 City National Bank Bldg., Omaha, Neb.

LANDS—Wisconsin

BARGAINS IN WISCONSIN FARMS —422 acres in Oneida county, 2½ miles from railroad station. Fine grazing and hay land, also good for grain, corn and potatoes; 180 acres under cultivation; house and barn. Will be sold cheap to clean up estate. 240 acres in Fond du Lac county; every foot the very best soil; good buildings and first-class stock. Will be sold cheap if taken at once. Other farms anywhere in the state of Wisconsin. Write or call on Conrad Thiemann, 323 Germania Bldg., Milwaukee, Wis.

UPPER WISCONSIN—BEST DAIRY and general crop state in the union. Settlers wanted; lands for sale at low prices, on easy terms. Ask for booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

76-ACRE LAKE SHORE FARM with stock, tools, machinery, crops and household goods, at only $4,000. Clay loam soil, level surface, 6½ miles from town. Good buildings and field. Frame house 16x30 and 12x12, frame barn 16x48, with silo; 2 horses, 10 head of cattle. One mile from school, creamery and store. Fine farm at low price for quick sale. Come at once. Martin Yde, Milltown, Wis.

Miscellaneous Lands

GOVERNMENT LAND SCRIP FOR Sale—Soldiers' additional land scrip in 40, 80 and 120-acre assignments. Can be located on vacant government land. No residence or cultivation required. Address Fred D. Mason, Security Mutual Life Bldg., Lincoln, Neb.

INVESTIGATE THIS — EXCELLENT land in Minnesota, North Dakota, Montana, Idaho, Washington and Oregon—adjacent to the Northern Pacific railway—the best developed sections of the northwest. Obtainable at low prices. State land on long payments, and deeded land on crop-payment plan; good climate; good schools. No isolated pioneering. Send for literature, saying what state most interests you. L. J. Bricker, Gen. Immig. Agt., 377 Northern Pacific Ry., St. Paul, Minn.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

WANTED—A MAN TO SOLICIT SUBscriptions for Twentieth Century Farmer; salary $42 a week. Address Circulation Manager, Twentieth Century Farmer, Omaha, Neb.

THE AUTOMOBILE BUSINESS PAYS $25 to $50 weekly. We teach you how. Write for our free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

WANTED—AGENTS IN GOOD FARMing district to sell western land where the crop pays for the land in two years. For commission and literature write 522 State Bank Bldg., Omaha, Neb.

SALESMEN FOR HIGH-CLASS TObacco factory; experience unnecessary; good pay and promotion for steady workers. Complete instructions sent you. Piedmont Tobacco Co., Box Y-27, Danville, Va.

BOYS, EVERYWHERE — $1 TO $10 week after school; 2c stamp for samples and particulars. Card Novelty Co., 312 W. 23d St., New York, N. Y.

GOVERNMENT FARMERS WANTED —Make $125 monthly. Free living quarters. Write Ozment, 39 F, St. Louis, Mo.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Kan.

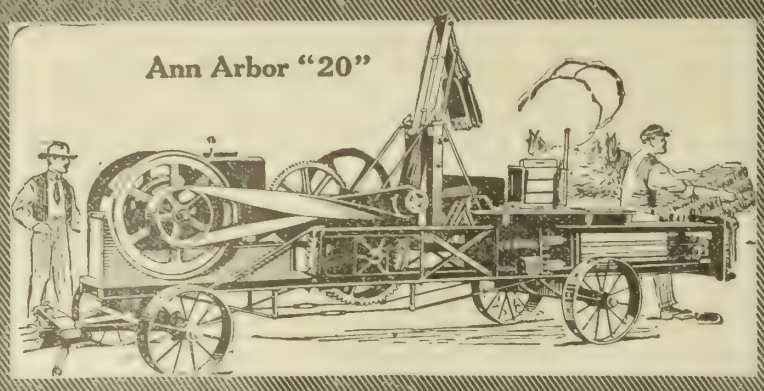
DOGS

COLLIES—SEND FOR LIST. W. R. Watson, Box 501, Oakland, Ia.

SEEDS

ALFALFA SEED — DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

I AM IN THE MARKET FOR CLOver, timothy, alfalfa, cane and millet seed. Send samples. I have 1912 crop seed corn grown in Washington county, Nebraska. Werter DeVaughn, 1914 Harney St., Omaha, Neb.



Hay Balers Can Now Make Good Profits

DID you ever think of how easy it is to get started making a good, big income baling hay? Let us tell you how you can do it with an Ann Arbor press. Send us your name for the booklet, "Making Money from Hay." It has an interesting and profitable story to read.

Baling the *most hay* in the *least time* with the *least expense* is an *easy* trick for Ann Arbor presses. Western hay balers can now do *better work—more of it* and at a *lower cost*. *More* profits—are the results. Here's *your* opportunity to work up a good income. Get an Ann Arbor outfit and bale your own hay and your neighbors, also. Write us and learn how easily you can do it.

Ann Arbor
"THE BALER FOR BUSINESS"

Now Cutting the Cost of Baling in the West

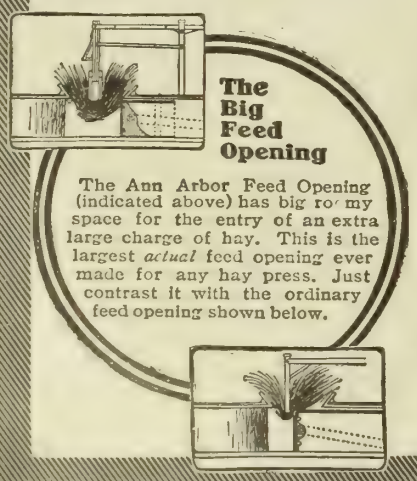
It's particularly suited for this territory. It's *the* hay press which bales Alfalfa with the minimum breakage of stems and leaves. Government reports show stems and leaves the most valuable part of the plant. This fact was the basis for Ann Arbor construction.

No matter what grass or hay you handle—the Ann Arbor can bale it at the *least* cost. Just what you need for baling vetch and cowpeas. No other baler has as large feed opening or as fast feeding device or as simple construction.

Feed hopper is only 39 inches from the ground. Take the baler out in the field—bale direct from windrows—save time, work and expense. Use any engine—set it right on the platform with the baler. Detach the truck truss rods, move rear wheels forward, and you have a portable outfit for your engine.

If you have no engine, and don't wish to get one this year, one of the Ann Arbor line of horse presses will best fit your needs. Ask us about the two man horse press with low step-over and a positive self-feed without springs.

The Ann Arbor is the baler for profits—why not get started? Write.



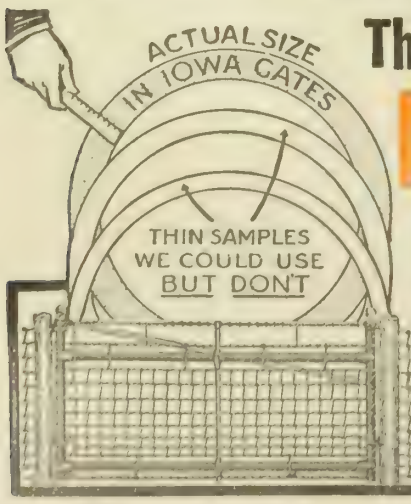
The Big Feed Opening

The Ann Arbor Feed Opening (indicated above) has big room my space for the entry of an extra large charge of hay. This is the largest *actual* feed opening ever made for any hay press. Just contrast it with the ordinary feed opening shown below.

Every Ann Arbor Owner Is Protected by an Individual Guarantee

The strongest ever given on a hay press. Write for booklet "Making Money from Hay." Mail postal or letter today. Address

Ann Arbor Machine Co.
48 Broadway Ann Arbor, Mich.



The Secret Strength In Iowa Gates

is the thick wall of the tubing made of high carbon spring steel. When a bull hits your gate, it can't be too strong. A weaker gate than the Iowa will not turn your stock.

Measure the Wall of the Tubing

Do not be deceived by the outside diameter; it may be the same.

Ask Your Dealer for Iowa Gates.

IOWA GATE CO., 21st St., Cedar Falls, Iowa

An Electric Lighting Plant on Your Farm Means Safety

from such a disaster as this, and will add to your comfort and well-being in a hundred different ways.

The individual electric lighting plant has been perfected by the development of the

"Hyray=Exide" BATTERY AND SWITCHBOARD

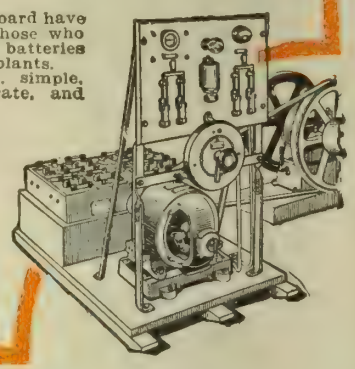
which bring the elements of safety, comfort and convenience into every household **at a minimum of cost.** No longer need you worry over the possibility of an overturned lamp in your house or lantern in your stable, making a wreck of your home.

No more lamps to fill—no more smoky, hot, burned-up air and straining of eyes. Instead of this, you have at your command a pure, clear, modern light, ready at the press of a button, wherever and whenever you want it.

The "Hyray=Exide" battery and switchboard have been **designed and built for your home** by those who have designed and built the enormous batteries which are used in the large city lighting plants.

Individual Lighting Plants are compact, simple, inexpensive, easy to understand and operate, and require little attention.

You want electric lights, so write our nearest office to-day for the name of our dealer in your territory and our new book on electric lighting. You should know all about the subject.



THE ELECTRIC STORAGE BATTERY CO.
PHILADELPHIA

New York, Chicago, Boston, St. Louis, Cleveland, Atlanta, Denver, Detroit, Rochester, San Francisco, Toronto, Portland, Ore., Seattle, Los Angeles.

Farmers are Shrewd Buyers

and excellent judges of tobacco quality—being naturally expert at valuing any product of the soil. They are big users of PIPER Heidsieck because they appreciate the high quality of the leaf and the wholesome *satisfaction* in this rich, pleasant, tasty tobacco.

PIPER Heidsieck
CHEWING TOBACCO (CHAMPAGNE FLAVOR)

"PIPER" is the highest type of chewing tobacco in the world—made from ripe, mellow, choice leaves of Kentucky White Burley. "PIPER" is distinguished from all other chewing tobaccos by its famous "Champagne Flavor"—a luscious, winey tang that gives an added delight to this splendid tobacco. Get the healthful "PIPER" habit today, and you'll discover supreme tobacco enjoyment.

Buy "PIPER" by the Box and you'll always have a supply handy. For your convenience we pack "PIPER" in 2-lb. boxes of 36 separate foil-wrapped 5c Pocket Plugs; also in 2-lb. boxes of 18 ten-cent cuts.

FREE Send 10c and your tobacco dealer's name, and we'll mail you prepaid, anywhere in U. S., a full-size 10c cut of "PIPER" in a handsome leather pouch FREE. The tobacco, pouch and mailing expenses cost us 20c, and we gladly spend the money to get you to try "PIPER."

Sold by dealers everywhere, in all size cuts from 5c up.

THE AMERICAN TOBACCO CO., 111 Fifth Ave., N. Y. City, Room 1157

TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, May 16, 1914 | Number 701

Prattle of the Youngsters

Their Relation

Teacher (drawing two parallel lines on the blackboard)—What relation are these lines to each other?

Head of the Class—Twins!

* * *

Kindness

John, whose father was a baker, was in the habit of bringing his teacher a fresh pretzel each day.

"I wish you would tell your father not to make them quite so salty," she once said, laughingly.

Thereafter the shiny, brown delicacy—always minus the salt—was found frequently on her desk. "It is very kind of your father to make one on purpose for me," she told him.

"Oh, he don't make them this way. I lick the salt off!"—American Boy.

* * *

No Difference

Marjorie's mother was afraid her daughter was learning some "swear words," but she did not wish to put the idea in her head by asking her directly. One day, however, she felt quite sure that she overheard the parting echoes of a "d—" about some childish misadventure.

"Marjorie," she said gently, "what was that word you used just now? It doesn't make any difference what it was, but I want you to tell mother."

Marjorie considered the situation. "Well," she replied at length, "if it doesn't make any difference what the word was, I said 'teakettle.' "

* * *

Advertising Versus Praying

The small daughter had been praying each evening at bedtime for a baby sister. The other morning her mother, reading the paper, exclaimed: "I see Mrs. Smith has a little daughter."

"How do you know that?" asked the child.

"I read it in the paper."

"Read it to me."

The mother read: "Born, on March —, to Mr. and Mrs. — Smith, a daughter."

The child thought a moment, then said: "I know what I am going to do; I am going to quit praying and begin advertising."

* * *

Might Have Guessed

As a reward for good behavior Johnny was allowed to come to the dinner table when company was expected. He wanted to appear big, too, so he chose a low chair, which brought his mouth just to the top of the table. But he didn't mind this, because it was on a line with his plate and he was not so likely to drop anything while eating. He ate ravenously of everything, having nothing to say to the guests, as his mother had told him to remember that good children are seen, not heard. Finally, after dessert, when there was a lull in the conversation, he exclaimed:

"Say, pop, you can't guess what I've got under the table?"

"No, my son," said his father, with an indulgent glance; "what is it?"

Stomachache!" shouted Johnny [illegible]ly.

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Farming Becoming Fashionable

ALL the suburban and semi-agricultural papers, as well as many of the popular magazines, are playing hard upon the slogan, "Back to the Farm." They are publishing stories of clerks, bookkeepers, day laborers even, who tire of the hard work of office or factory and get out under the open sky on an abandoned farm or a government claim. Here they manage to acquire a few seeds and hens and a beast or two, all of which grow and multiply with amazing obligingness. The farmers thereabout, men who have spent their lives on the farm and supposedly learned a few facts about crops and live stock in the course of many years, laugh at first (here is a touch of nature) and then watch with open-mouthed astonishment the success of their city neighbors, finally learning of them and adopting all their theories when they see how well they work out.

This kind of story has led numbers of men and women to invest their small savings in farm land and set out to show the farmer how farming should be done. It means a rich harvest for the land agent, who is the only man who profits. Southwest Texas has received at least its share of these "back-to-the-land" enthusiasts. In our next issue Chester T. Crowell will tell you how they have fared. "Sometimes I think it is funny," he says, "and sometimes I could cry over it."

Bright and Breezy

Tear Mover

Admirer—Where did you get that heartrending description of a sick child?

Great Author—It's the way my boy says he feels when he wants to get out of going to school.—Life.

* * *

Cured Insomnia

"For weeks and weeks after my husband died I was unable to sleep."

"I hope you are all over that now," her sympathetic friend replied.

"Yes. The lawyers finally found his insurance policy in a safety deposit box that he had never told me about."

* * *

Good Place for Them

An old colored woman boarded a street car and proffered the conductor five pennies for her fare. "I can't use them," he said gruffly. "Dat's all right, honey," she replied. "Jes' you give 'em to the company; it can use 'em.—The Delineator.

* * *

Too Smart

Paddy Doolan went into a shop one day to buy eggs.

"What are eggs today?"

"Eggs are eggs today, Paddy," replied the shop man, looking quite triumphantly at two or three young lady customers who happened to be in the shop.

"Faith, I'm glad to hear you say so," replied Paddy, "for the last ones I got here were chickens."

* * *

Secrets of the Wardrobe

When Winston Churchill was running for the governorship of New Hampshire his opponents became pestiferously active, making speeches, writing letters and distributing campaign buttons. One morning a friend sent this telegram to Churchill:

"Have you no buttons for your supporters?"

The candidate was out of town and did not get the telegram, but a pretty girl stenographer did. She sent this answering wire:

"No. We use safety pins.

(Signed) Winston Churchill."

* * *

Thrilling Adventure

She was even more afraid of cows than most girls, so when she spied a placid animal recumbent under a tree, peacefully chewing its cud, she at first refused to go through the pasture at all. Her husband calmed her fears to some extent and they started by, when the cow slowly commenced to get up, hind legs first, as they always do. At this the little lady shrieked with terror and said:

"Oh, Bob, hurry, hurry; he is getting ready to spring at us!"

* * *

Finale

The funeral procession was moving along the village street when Uncle Able stepped out of a store. He hadn't heard the news.

"Sho," said Uncle Abe, "who they buryin' today?"

"Pore old Tite Harrison," said the storekeeper.

"Sho," said Uncle Abe. "Tite Harrison, hey? Is Tite dead?"

"You don't think we're rehearsin' with him, do you?" snapped the storekeeper.

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Cause of Rainfall and How to Increase It

Artificial Pools and Lakes Should Solve the Problems of Overcoming Hot Winds and Drouths

By Isaac Motes

THE re-establishment of swamps, lakes and ponds is the remedy for drouths. The intensive and extensive work of this generation in the line of farming activities has changed climatic conditions to such an extent that the rainfall is annually lessening in volume. The cause for this is easy to understand.

Forty years ago our rivers rose slowly and gradually. Our larger streams required six or eight weeks of slow accumulation to reach flood heights. Today they get to their danger limit in less than one-fourth of that time, and it took the old freshets just as long to subside as it did for them to come to a full head, but they rarely rose as high as they do now.

The reason for that old-time state of things lies in the fact that the hundreds of thousands of square miles of timber lands along the borders of these streams were then untouched, and the soft, spongy humus of those forest lands retained the rainfall and retarded its passage into the streams.

Forests and Swamps Are Gone

ssociated with these woodlands along the water courses was what might be called a regular system of swamps. These were natural reservoirs, which kept the main drainage channels flushed in the summer. These swamps, with their interlacing lagoons and creeks full of water, furnished a source for wonderul evaporation. They were not confined to any certain district, but were scattered all over the prairie lands of the west wherever there was a large creek or river, either large or small.

Forty years have changed all this. The forests have given place to elaborately ditched, properly tiled farms, for it was early learned by the settlers that the most fertile soil was in these swamps. With all the drainage consequent on letting the sunshine into the humus of the woodlands, and hundreds of thousands of miles of ditches and buried drain tile in low, swampy land, what have we accomplished? The most wonderfully productive soil in the world has been put to the severest test, and it has stood the test, but to the cost of reclamation must be added this important change; we have destroyed a source of constant evaporation that was utilized when we most needed rain.

Only One Rainmaker

From the failure of those in the employ of the United States signal service who have been bombarding the atmosphere to knock the rain out of it, as well as making other experiments, we are beginning to learn that there is only one rainmaker. He works in the old-fashioned way. Like all other workers, he must have raw material out of which to fashion his product. He also works according to law. There is method and exactness in all his machinery, and throughout all time he has worked as he works now.

The sun is our rainmaker. His machine is air; the motive power is the sunshine; the raw material is the water on the earth's surface, and the finished product is rain or snow. The air carries water vapor in direct proportion to the amount of heat it bears. At the time growing crops need moisture nearly all our rains come from the south. The winds are chiefly in that direction at that time, and they come freighted with watery vapor that has been evaporated from the Gulf of Mexico and the lagoons, swamps and streams along the routes of these winds.

If these air currents are loaded nearly to capacity it follows that if the loads be increased by reinforcing evaporation the carrying capacity will be overcome and the current will drop its burden in the form of rain. On the other hand, if the carrying capacity be increased by the intense heat radiating from the surface of a sun-burned region, the air can retain its load and carry it to more favored regions. This machine which is used by the rainmaker works like those in any other well regulated factory. The more sunshine, the more raw material for evaporation, the more rain is produced, and inversely.

In our greed for more and better lands we have invaded the old store houses of the rainmaker where his raw material was kept and have drained them. This condition is not confined to any one state, or to the Mississippi valley; it is nation wide. The remedy, though drastic, is a simple one. But no one state can do much to help itself. A good deal has been said and written about changing drouth conditions by reclamation of forests and timber lands and the cultivation of trees in prairie districts. The preservation of the forests is all right as far as it goes, but today the forests of twenty years ago will not compensate for our swamp and prairie drainage.

Storage of Winter Moisture Necessary

The remedy is to save the winter rainfall by natural and artificial storage. It is a national work, and to accomplish it the nation must assert its eminent domain. Prosperous farms occupying old-time swamp lands must be condemned, paid for and converted into reservoirs for evaporation. Artificial lakes must be built by retaining dams among the sand hills, especially of the west, for the like purpose, and wherever these facilities for evaporation exist in the now sparsely settled districts of the country, as those of the southwest, they should be held sacred by the government as waste places for the general good.

In the state of Kansas during the last summer the people have awakened to the importance of natural and artificial pools and lakes, to the drilling of artesian wells and the damming up of deep creeks, canyons and other small streams by means of concrete dams. Every acre of land converted into a pond will be exempt from taxation in that state. There are also thousands of places in very hilly sections where the land is too rough or steep to make cultivation practicable, and here dams and retaining walls can be built which will form ponds and small lakes to add to the evaporation in summer, without making it necessary to utilize fine, level farming land as sites for ponds.

Also in every dry western state there can be found tens of thousands of sites for damming up small, usually dry, streams having deep gullies, and tens of thousands of such gullies full of water will certainly add to the amount of moisture always held in the air, and thus increase the chances for rain, besides furnishing an abundance of water for stock and other purposes. Where the country is level and streams run slowly a short, thick concrete dam will hold back millions of gallons of water, for the ground being almost level, the water will extend back up the streams perhaps a mile or more without inundating the fertile land on either side.

Concrete Dams Important Factors

A concrete dam can be built across a narrow, deep creek very cheaply, especially if a great many rocks are conveniently near, for the dam can be built largely of rock and bound together with good cement. Nine-tenths of the dam may be of rough rock, in small or large pieces, laid upon the dam layer after layer, and the concrete poured in upon it to form a solid mass. Letting the ends of the dam extend back into the hard clay bank at either side of the stream eight or ten feet will make it practically impossible for any kind of freshet to wash it away; but if the country is almost level there will be no danger of this, and the dam will stand perhaps 500 years in as good condition as on the day it was finished.

Even if the creek is spring fed and runs throughout the summer, it is still easy to construct these concrete dams across it, since it is now easy to make concrete "set" under water; but the dam can be built across a dry creek in summer by anyone at all familiar with concrete construction, and if plenty of rock is near the site the work can be done cheaply by any farmer and his sons or hired men. So a stream which goes dry in summer can be more easily and cheaply dammed than a spring-fed creek which runs all the time, but in which there are not many large standing holes of water for stock and for increasing the amount of surface moisture for evaporation. The mere fact that the dry creek is dry makes it all the more urgent that it be dammed and filled with water, not only for the purpose of increasing the amount of moisture in the air, but for furnishing water for stock in a dry region.

Two Hundred Dams in Twenty Miles

A creek twenty miles long running through any thickly settled western county could be dammed in 200 different places, wherever it flows through or by a farm, all in one county, and if every small stream in every county in every western state were thus treated an enormous amount of water would be stored up for all the purposes for which it might be needed;

(CONTINUED ON PAGE SIXTEEN)

Hog Cholera---Prevention and Treatment

V--Sanitary and Other Measures that Should Be Taken When There is Cholera in the Neighborhood

SANITATION and sanitary rules and regulations we regard as being probably the greatest club to be used in the fight to gain the upper hand of hog cholera. Let us get our minds away from hog cholera for a moment and see what sanitation has done in other matters. All of us remember the terrible dread the people of this country, and in particular the southern part, used to have of yellow fever and its fatal results. We didn't have a serum for protection from this terrible disease or a virus to carry immunity, but it is practically wiped out. How? Just by strict sanitary laws, first rigidly enforced by the government and then gradually adopted by the people, until now it is not a hard matter at all to keep out this disease.

Let us think of smallpox and diphtheria in the human family in connection with hog cholera. For smallpox we have a reliable vaccine and for diphtheria a potent serum, yet what is the first thing the physician does when he finds a case of either of these diseases? He immediately places a quarantine on the premises and requires a thorough cleaning up. If this is so necessary in the treatment of these two human diseases, it is certainly necessary for the proper and successful fight against hog cholera. What the physician desires and tries to do is not to let the disease spread from the premises on which it is first discovered.

What Quarantine Has Done

Foot and mouth disease was but a few years ago a serious menace to our live stock, but strict sanitary measures and quarantine regulations gained a supremacy over the disease.

Consider what has been done for the cattle interests in the country in the fight against Texas fever. Close quarantine and strict sanitary rules requiring dipping and cleaning up have practically eliminated the disease from many of our southern states and materially changed the quarantine line in the last few years.

How about glanders? When a case of this disease is discovered the animal is at once killed, the carcass either burned or buried deeply, and everything that has come in contact with the animal or its carcass is thoroughly disinfected or burned. Why should we not take more precaution than we do when we come in contact with hog cholera?

Quarantine Regulations

Let us here suggest some sanitary and quarantine rules and regulations that should be adopted by the Live Stock Sanitary Board.

First, when sick hogs are first noticed on the premises the owner of these hogs must immediately notify the farm demonstrator, if there be one in the county, and if not, he must notify the state veterinarian. He must also notify each hog owner on all the farms adjoining his that he has sick hogs. The rules should require that the carcasses of all hogs that die must be burned within twenty-four hours, and under no circumstances allow one to be buried. The carcasses of all other animals that die should be burned or buried not less than four feet under ground within twenty-four hours.

Sick hogs should not be allowed to be hauled in wagons or driven on public highways. Notice to the general public that sick hogs are on this place should be given by posting, at the road or roads leading from the public highway to the premises on which is located the cholera-infested herd, a notice, printed in large type, substantially as follows:

> **HOG CHOLERA—KEEP OUT!**
> You must not go near the hog lots on these premises. Parties living on these premises must not go near the hog lots on any other farm.
> (Signed) STATE VETERINARIAN.

We have spoken of the farm demonstrator and the assistance he may give us in this work. We believe that the farm demonstrator should have a complete record of the hogs in his county, the owner's name, his location, the number of hogs he owns and raises and his losses, if any. In case of an outbreak of cholera on any farm in his territory, the farm demonstrator should be immediately notified. It should be his duty to notify at once the authority having charge of the field men doing hog cholera work. This authority should at once send a man to these premises, post the notice to the general public, as above suggested, and proceed to do the things necessary to confine the outbreak, if possible, to this particular herd.

All hogs hopelessly sick should be killed and the carcasses burned at once. Temperatures should be taken of each animal in the herd, and all animals showing more than 104 degrees should be given the serum-alone treatment. Hogs showing less than 104 degrees, we believe, should be given the serum-simultaneous treatment. We would take from the main herd all hogs showing visible signs of the disease. The hogs should be as closely confined as possible that they may be more easily and closely watched.

Close Confinement and Absolute Cleanliness About the Premises and Feeding Are Cheap Farm Insurance

Premises Littered with Old Cobs and Never Cleaned Up Are Especially Dangerous When There is Cholera in the Neighborhood

Hogs on Adjoining Farms

There is a wide difference of opinion among our best authorities as to what should be done with the hogs on farms adjoining the one on which the outbreak occurs. Some recommend the serum-alone treatment for all hogs on adjoining farms, while others would use the serum-simultaneous treatment. In speaking of protection against hog cholera, Dr. Dorsett, before the Missouri Valley Veterinary Medical Association, says: "Personally, I do not feel that the work has been sufficiently extensive to warrant our decision irrevocably in favor of one process or the other."

Our investigations have brought us to the conclusion that if we had a herd on a farm adjoining one on which there was an outbreak of the disease we would give our hogs a treatment of serum alone. We would carefully watch the herd in which the outbreak occurred, and if the disease was not checked at the end of three weeks we would treat the hogs with the serum-simultaneous treatment, being careful, if possible, to get both serum and virus that had been tested. In future issues we will take up and discuss the manufacture and sale of serum and virus, testing, regulations, etc.

Cleaning Up After Cholera

Every precaution must be taken in cleaning up the premises. First, we would thoroughly rake all the ground on which were confined the sick hogs; burn every stick, cob and board possible. If the feeding troughs used in feeding these hogs were of wood, we would burn all of them; if of metal, thoroughly immerse in fresh slaked lime while it is hot. As soon as possible after the yards have been thoroughly raked and the trash burned plow the ground as deeply as you can.

We believe there is no more thorough disinfectant for fences and buildings than fresh slaked lime, applied hot. This may be done with a whitewash brush or a broom, and on the inside of your hog houses with a spray pump. True, you will burn out the plunger in your pump and the rubber hose, but the small expense in replacing is of little consequence compared with the importance of the matter of disinfecting the premises. See that no crack or crevice escapes a dose of the lime. First, thoroughly clean the floors; scrape them with a hoe. Burn everything that can possibly be burned. Then, while the slaked lime is hot, pour it on the floor so that every particle will be covered and the fluid drips between the cracks. A second application a few days later will not hurt and is certainly feasible. If dirt floors are used in your hog house, give them a thorough coating of fresh air-slaked lime. Ten days or two weeks after this application, to be safe, take about six inches of the dirt out and scatter it on the field. Then fill in this floor with fresh dirt in which you are sure no cholera germs lurk.

Free Hogs from Lice

Taking all the precautions you can as above outlined, there are two common enemies of the hog which the owner of every herd has to combat, and which, if not properly combatted, will

leave his hogs in such condition that they can't withstand the disease should they come in contact with it. These two enemies are lice and worms. A very prominent veterinarian, and one who has had a large practice in the treatment of hog cholera, stated that during the last winter he never saw a hog sick of cholera that did not have lice. We are not vouching for the truth of this statement, but it is something that is worthy of serious consideration. Lice, we know, are not easy to combat. However, every hog raiser has this pest to deal with, and should adopt such methods as he may think best for the cleaning up and keeping clean of his hogs as far as lice are concerned.

Dipping is a splendid method to be pursued, using some of the well known disinfectants strong enough to do the work, or crude petroleum, which is very effective. In using crude petroleum care should be taken not to use it too strong. An inch and a half or two inches of oil on the water is sufficient. If you are not in a position to dip the hogs about every three to four weeks, get them into the hog house or closed pen and thoroughly spray them, using some of the well known disinfectants or crude petroleum.

Rubbing machines or posts, properly handled, we believe, are very effective in helping to keep down lice in the herd. These machines or posts are automatically supplied with oil or grease. They are conveniently placed in the lot, and the hog soon finds out what they are for and makes use of them as he needs them. Lice are easily detected, but are often overlooked in our rush of other work. Do not forget that they weaken your hogs materially, and do not neglect to be on the lookout for them twelve months in the year. At little neglect along this line is liable to cause you a big loss.

Worms are also to be taken into consideration. Even suckling pigs are sometimes affected with worms badly enough to cause serious losses. To be reasonably certain that you are not going to sustain a loss from this source, we advise the use of some reliable worm killer in the herd every three to four weeks continuously.

Santonin is a worm killer on which you can rely. For a hundred-pound shoat give five or six grains. Santonin is hard to dissolve. To do this thoroughly use 250 parts of boiling water to one of santonin. Before giving it hogs should be taken off feed for at least twelve hours, and then after giving the remedy only about half a feed should be given. Repeat this each day for three days and follow with a good dose of glauber salts. There are many commercial worm killers on the market which may be used with good results.

Keeping them free from worms and lice is very important from more than one standpoint. Without question, their presence reduces the vitality of the hogs, making them more susceptible to contagious diseases, and, further than that, even on a grown hog being fattened for the market, satisfactory gains cannot be made when these enemies are present. Thousands of dollars are wasted annually on our farms through feed consumed by our hogs that are covered with lice or are affected with worms, and the feed going to supply the needs of these parasites. We can't urge too strongly upon our readers the importance of carefully looking after these two pests.

Pumpkins as Feed Crop for Live Stock

THE pumpkin is one of the most profitable crops to grow, when expense of producing the crop and its feeding advantages with most farm animals are considered. Years ago the pumpkin was made a part of the corn crop in the eastern states, being planted with it, as it often is yet, and the feeding value was estimated as worth consideration. In recent years there has not been much attention given to growing the pumpkin in the western corn-belt country. This is partly due to the more scientific methods adopted in corn cultivation, the changed system and conditions of both cultivation and harvesting of the crop.

The value of the pumpkin crop as a feed has not changed. It is yet of recognized worth by those who have raised and fed pumpkins to both fat stock and young, growing animals. But to grow the field crop of pumpkins to greatest advantage demands a separate piece of ground; the pumpkin field should be one by itself. The pumpkin grows rapidly, and does not require or permit of much cultivation. When the plants are small they require careful attention, but as soon as they commence to vine the work of cultivation is at an end. They shade the ground quickly, and with reasonable moisture will produce a good yield.

New land, breaking even, has been known to produce pumpkins of the best size and quality when good growing conditions prevailed throughout the season. Large crops of pumpkins have been grown on breaking and backsetting years ago, and practically all over the Missouri valley country wherever planted, and without any expense except planting the seed. The idea of a demand for root depth in a well prepared seed bed for the pumpkin is without foundation when applied to the soil of the prairie country of the west and northwest. The pumpkin will grow almost any place in good soil where it gets a fair start, and it requires a pretty vigorous quality of weed to get ahead of it or crowd it out.

The pumpkin is objected to by some persons, claiming that the seed is injurious to stock and therefore troublesome to feed. Pumpkins have been fed to hogs, cattle and sheep by being hauled out on clean grass pastures and thrown out for the stock to feed on at will, and no bad results followed where the animals had been gradually introduced to the pumpkin diet. The usual season of feeding is as soon in the early autumn as the pumpkins commence ripening, and a regular feed may be given once a day until the supply is exhausted. Some eastern farmers store the pumpkin crop in the basement of their bank barns, thus protecting them from freezing, and feed them far into the winter.

The feeding value has not been tested in the experience of the old-time farmer feeder more than the general thrift their use has been observed to induce with all kinds of stock. Where pumpkins are used they are fed in conjunction with other feed to fattening animals or on pasture to the cattle and general stock of the farm, the object being mainly to get a cheap, easily produced crop of a succulent character to feed with corn during the late autumn and early winter seasons. The pumpkin supplies this satisfactorily, and might be profitably utilized in the same way with the small farmer of the corn-belt district.

In planting the pumpkin the best feeding and keeping varieties should be selected. Pumpkin raisers practice the clipping of the tips of the vines when they have gotten a sufficient growth. This makes them produce better and more pumpkins. A well prepared piece of ground, carefully and systematically planted to pumpkins and cultivated carefully, will produce a paying crop when used as feed for the general stock of the farm. It is safe to estimate the pumpkin crop a saving of the grain and fodder feed through the autumn season, an economy that is worth observing.

Providing Competent Judges for Fairs

THE vital feature of success with the agricultural fair, whether it be county, district or state fair, is in the proper management of all contests. The exhibitors and exhibits make the fair, and the spirit of competition is induced by the prizes offered as a general rule; therefore the urgency for the large sums of money that are demanded in making up a fair premium list. If these features are so influential in stimulating contests among producers, manufacturers and growers of articles used in display at these fairs, then the competency and accuracy in judgment in the awarding of these prizes is surely of paramount importance.

Persons become, in a sense, experts in certain lines of work and business in which they are continuously engaged for years. This is only natural, and the person who acquires expert knowledge of a business or occupation merits recognition and honor from the public, and usually is accorded this. The great diversity in classification of articles exhibited at fairs often taxes the judgment and ingenuity of fair managers to get sutable persons to serve as judges in some departments.

In the matter of live stock, there should be a recommended list of judges selected and endorsed by state and national breeders' associations, from which fairs and live stock shows may select with some assurance of getting a competent and honorable judge of the various kinds of stock. The breeders of the country deserve this in defense of their own interests and in defense of the breed or classification of animals they represent.

Every breeders' association of state or national character should put itself on record as holding up and defending the interests and reputation of the breed they champion by each year at their annual meeting giving endorsement to certain persons as possessing the qualifications for expert judges of their particular breed of stock. This would give fair managers and live stock show promoters the advantage of recognized expert judgment and assure exhibitors, breeders and fair visitors that these exhibitions are conducted in the interest of fairness, impartiality and the upbuilding of the live stock industry of the whole country. independent of selfishness or personal aggrandizement.

It is generally believed that fair managers design to give their exhibitors a square deal in the matter of the award of premiums and that they make an effort to select good and competent judges to pass on the merits of the animals competing. But here is the difficulty—they are too often dependent upon the recommendation of some individual as to the judge for the various classes of animals. This recommendation is too frequently hear-say evidence as to the competency or qualifications of the proposed judge. Breeders' associations should take hold of this matter as a duty they owe their own membership and supply a recommended list, to be revised each year at their annual meeting. Some associations now do this. It is not good policy for a fair or stock show to use the same judge

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TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Are you watching the gophers in the alfalfa field? If not, you are making a mistake. A little vigilance, coupled with a piece of potato and a lot of strychnine, will accomplish the desired result.

Hog men who contemplate showing their hogs at the Nebraska State Fair this year should note the premiums offered on barrows. We are in favor of the barrow show. The best hog for the pork barrel is the one we want to grow. Bring some of your good barrows along this fall and help to encourage the offering of premiums for this class of hogs.

Charles Tellier, the inventor of cold storage, died in Paris recently, at the age of 85. He was alone, except for a servant, and his death was brought on by cold and hunger. Members of a cold storage firm brought him financial aid, but it came too late to save him. This is the old, old story of the men whose inventions and labors have revolutionized the world's work. Few are the exceptions who, like Edison, reap the rewards of their genius.

That Nebraska is rapidly growing in milk production and coming to the front as one of the leading dairy states is indicated by the fact that it has been necessary to double the capacity of the cream receiving docks at the Union Station in Omaha to accommodate the shipments of cream to the local creameries. The railroads state that the increase in shipments during the last year has been greater than in any one previous year in the history of the state.

Co-operation and Middlemen

In a recent issue of a prominent farm journal we find the following neatly veiled slap at the co-operative movement among farmers:

> The smooth-tongued organizer can more easily start a co-operative movement than keep it going. No business will run very long on hot air. So the Colorado apple growers found out who joined the Apple Growers' Exchange of Denver.
>
> The plan was to establish apple stores in some of the larger Colorado cities and deal directly with the customers. The organization failed because the apple stores failed to sell the fruit.
>
> It takes special training in mercantile lines to make a success of marketing, and any effort to eliminate the trained middleman will fail unless trained men be put in his stead. There is a legitimate work and place for most middlemen, but there is no excuse for their becoming robbers. Most of them are honest and efficient. The trouble is that the producers and consumers fail to see all the risks, and envy the middleman his supposed profits, or feel that he is a robber. When they try it themselves they learn by experience that they do not know the game, and it were better that the middlemen get a fair profit for taking the risks than to lose all in an attempt to oust him.

The peculiar thing about this little item is that it is almost true. With the change of only half a dozen words here and there it would be entirely true. Nothing is more certain than that co-operative organizations are frequently formed which fail because of lack of executive ability on the part of the manager. A competent manager and loyalty to the organization are absolutely necessary for the success of any such association. It does take special training in mercantile lines to make the manager competent, and such managers should always be secured and well paid.

There is legitimate place and work, under our present system, for many middlemen, but not for "most" of them. The legitimate middleman has a right to a fair profit, including enough to insure him against risks taken with perishable products, but where one or two middlemen could easily handle products from producer to consumer, why should four or five insist on each taking their profit, as we know they do? In how many cities, for instance, is it possible for the farmer to sell direct to the retail grocer, without the interference of some produce association? As long as the middleman takes but a fair profit, and there are not too many middlemen, we are not opposed to them. We believe in the necessary middleman at this stage of the game, but not in the unnecessary middleman, and there are many of these. Co-operation, under intelligent management and by intelligent methods, seems to us to be in a fair way to solve this problem.

In an article in one of the eastern newspapers the situation regarding unnecessary middlemen is well summed up. It is not only that the farmer gets too small a proportion of the money paid by the consumer for his products, but he also pays too much for his manufactured goods in proportion to what the workman who makes them gets. The farmer and the workman are the producers. How many distributers they support is shown by the following, clipped from this newspaper article:

> A poor Jewish widow made what are called "hickory" shirts, which farmers wear in the fields. For this work she was paid 35 cents a dozen, furnishing her own thread. The farmer paid 50 cents apiece for the shirts. The poor woman paid 9 cents a quart for milk which the farmer sold for 2½ cents. To get one quart of milk the woman must make three shirts. To get one shirt the farmer must sell twenty quarts of milk.

Farm Products by Parcel Post

Now and then a really good and useful point was winnowed out of the great superabundance of chaff that came from the threshing floor of the so-called national conference on marketing and farm credits recently held in Chicago.

Colonel Leroy T. Steward had told something about the useful agency of the parcel post in bringing the farmer producer to the city and even the country consumer. He mentioned the large number of parcels poorly wrapped and addressed. The perishable is put out of sight and smell, but there is one floor, eighty feet front and 190 feet deep, part of which is taken up by the storage of articles for which it has been impossible to find an owner, the insecurely attached tag having been lost. He mentioned one case of a fine dressed turkey that never reached its consignee because there was no address; neither was the name of the sender attached, so it was impossible to communicate with him and thus find the proper address.

A farmer at the conference brought out the fact that hundreds of farmer shippers by parcel post would use more care in packing if they knew where to buy the best containers, many of which are now being made of corrugated paper.

More and more farmers are making use of the parcel post to reach consumers, and a greater variety of packing cases are being made to meet the demand.

Give the suckling a good start. It never pays to stint any kind of farm animals. A thrifty, good-paying animal is one that is kept growing from birth until it leaves the farm.

How Many Trees Will Live?

There are being planted thousands of trees, both fruit and shade, this spring in every state throughout the western prairie section. This statement will in fact apply to every state in the United States, no matter what its condition of tree growth by nature may be. How many of these trees will receive the attention necessary to secure a reasonable prospect of successful growth? How many will be planted properly, and, after planting, receive any cultivation or help in moisture supply more than what falls naturally on them by the rains? This kind of treatment would not grow corn or any cultivated crop. Yet the tree is taken up, its roots exposed to the sun and air, the drying influences of the wind very often given a chance to damage them in the process of transplanting, and all loss charged up to bad stock when they fail to grow.

The importance of giving the tree, be it fruit or shade, the advantage of cultivation and moisture until it is well started in growth is a necessity if good results are expected. The trained or skilled orchardist gives his trees after planting as much attention as the housewife does the house plant when it is transplanted. It means the life or death of the tree in many instances, and the matter of a little labor should not stand in the way of preventing an almost certain loss.

How often do we see a mound of dirt thrown up around the newly planted tree, which serves to turn the rainfall away from the roots of the tree instead of securing this moisture? The mistake of not putting the tree deeper into the ground and leaving a basin or depression about the trunk so that the moisture may be turned directly to the roots, is apparent. All the natural moisture that falls should be directed to the roots of the tree as far as practicable.

In the matter of cultivation, there cannot be too much urged with all the trees that have been planted this spring. It sometimes happens that trees are set out in lawns or grass plots where a space of sod is removed, and the ground spaded out to a proper depth, and the tree set in. This is one of the cases where the cultivation must be made to suit the occasion. A deep, wide hole should be made, and when the tree is set and the work completed the tree should be watered often enough to keep the ground moist. The establishing of a root system in this new home is quite a task for the tree. It cannot be done unless the soil conditions favor it. It is within the power of the tree planter to provide these conditions—moisture and cultivation are the requisites. Will it pay to neglect these newly planted trees and let them die?

A tree well grown the first year is a long way on the road to a successful life. A weak, stunted tree at the end of the first year in the orchard or grove promises failure and death.

The Educated Farmer

There is some discussion as to the value of education to the farmer. The farmer with a high school education is believed by many to be better fitted for the successful management and operation of the farm than the man with less school training. The habit of study and investigation acquired by application in school and class work fits the farmer for carrying on his investigations and labors on the farm, and therefore aids in developing an inclination for scientific agriculture, which must prevail sooner or later.

The extension work of the agricultural college, with the farm demonstrator and the various helps that will be added to the opportunities of farm training through this means of education, will all be available to the farmer within a very short time. The trend of education is now toward getting a knowledge of the land and the growing of its crops. The educated farmer need have no fears of being handicappd through the influence of his superior school training, unless he has delayed too long in taking up the work of farming. The best farmers are those that took up the work in their young manhood or boyhood and have given careful attention to the acquiring of a knowledge of right principles and the enforcement of this in all their farm operations.

Making Money on the Farm

Making money on the farm is made possible more by farm management than any qualities of soil or location of land. It is true that the quality of the land and the advantage of good, all-year markets have their influence and contribute greatly to the profitable operation of farming. All persons engaged in similar occupations are not money makers. The faculty of money making or business management is strongly developed in one person, while in another it may be scarcely perceptible.

This feature of adaptability to occupation, or lack of it, is a most pronounced condition in western farm life today, because of the land ownership craze that has prompted persons of all classes of education and training to become land occupants, through the inducements of homesteading the cheap government lands, and the very rapid advance in farm land values over the western farming country. There is nothing now so desirable in the estimation of the man of average intelligence as to be the owner of land, the owner of a good farm.

Thousands of persons have in recent years become land owners and land operators, assumed the occupation and management of farms without ever having had any farm training or experience in the management of farms, and are not making the farm pay. While this is true, there are other persons who use the farm as a basis of trading and dealing operations, and by shrewd management in this line of work are making money. The farmer who can see a bargain in what others produce and avail himself of opportunities of buying and developing, has an opportunity independent of the usual producing advantages of farm stock breeding.

We often hear of the young farmer who goes around among his neighbors and buys up a bunch of calves during the autumn season and winters them through on his cheap feed, strawstacks, fodder, winter pasture, a little hay, etc., and in the spring has a fine lot of yearlings that have attained, at little expense, 200 pounds or more of growth, and sold at a big profit. This is one of the ways that some of the farm business sense of a dealer is used in making the farm pay off other people's production. The farmer who is always on the lookout for something to buy in the line of live stock at a bargain is in the line of his opportunity of making money on the farm.

Buyer of Tubercular Cattle is Loser

Tuberculosis in cattle has been lately called to our attention through the daily papers making mention of the fact that Dr. L. C. Kigin, state veterinarian of Nebraska, has placed in quarantine more than 200 cattle recently shipped into Nebraska from Illinois and Wisconsin. This is going to be a serious loss to more than one party in this transaction.

The facts are, there are downright crooks engaged in the shipping and selling of dairy cattle. These parties go to the extreme of furnishing fraudulent charts with the animal, signed by some veterinarian as crooked as the dealer.

We want to warn our readers to be on the lookout. If you contemplate the purchase of dairy cattle, especially to any extent, we would advise you to take the matter up with your state veterinarian. He has the names of many of these crooked dealers, and may be able to save you a considerable sum of money and lots of trouble.

You may buy cows having a clean bill of health, shown by a certificate properly signed. This does not prevent the state veterinarian from quarantining and testing these cows, and you can rest assured he will do it if they are purchased from any of these crooked dealers as soon as he knows they are in the state.

There are many reputable dealers in dairy cows doing business. It will pay you to know positively with whom you are dealing before you part with with your money.

Tuberculosis in cattle is a serious menace to public health and should be given more attention by both state and municipal authorities than has been given. It has been repeatedly shown that cows having tuberculosis have transmitted this disease, through the milk, to human beings. Cases have been called to our attention where the little babe was fed on milk from the family cow, which, on being tested, proved to have tuberculosis. Some cities and villages have taken the advanced step of requiring all cows from which milk is used in the corporation to be tested.

Many of our cattle owners have the erroneous opinion that all cows reacting under the test are valueless and the carcasses must be destroyed. The facts are that the flesh of a large per cent of cows reacting is all right for food and is passed by the government inspectors who examine the carcass at the packing house.

Inspection of cattle made by a government inspector is regarded as reliable. It has happened, however, that government certificate blanks were stolen and the name of the inspector forged. Protect yourself by knowing the certificate is genuine, especially if you are not sure of the reliability of the man from whom you are buying.

We regard it as highly important that all cows from which milk is used be tested. If you own a cow and she reacts to the test, have her sent to the packing house at once. If the disease is in the first stages, the examination of the carcass will show it, and you will be paid for your cow at the market value. You can't afford to assume the risk of using the milk from any cow without first knowing her to be clear of this disease.

This paper believes that tuberculosis in cattle is something that is going to be given much more attention by our authorities, and it should be given much more attention by the man owning the family cow. Have her tested; it doesn't cost much. Don't buy a new cow unless you know she is healthy, being proven so by having been tested by a thoroughly reliable man.

Alfalfa as a Soil Doctor

An exchange, pointing out the virtues of alfalfa as a fertilizer for the soil, observes that it adds humus, increases milk flow and makes the best of hog pastures.

In listing the virtues of alfalfa folks often forget that few blossoms surpass alfalfa blooms in the production of honey. That is an accepted fact in Colorado and California, where the honey-bee business has come to rank among the leading industries.

But just now, with the meat supply dwindling, one of the strongest appeals alfalfa can make is as the best and cheapest feed for live stock. It not only yields from two to three times as much in volume as clover or timothy, surpassing them in comparative value, but outclasses both as feed. A plant crop of prime excellence for live stock and at the same time a unique soil doctor, is an asset of highest value.

Stock Laws of the State

Every state in the union that is making the breeding, growing and handling of live stock an important feature of its agricultural interests should have its laws pertaining to live stock gathered into book form and published for the benefit of its citizens, whose interests are centered in this line of industry. There is no other way in which persons may become familiar with the live stock laws governing in their own states than by having access to such a compiled means of information.

Colorado has had in publication a live stock book, known as "The Stockmen's Official Green Book of Colorado," containing all the laws relating to live stock passed prior to the last legislature. This had proven of incalculable benefit to stock owners and prospective stock owners. The present demand is the issuing of a supplement which will contain everything enacted and repealed at the last session of the legislature. The last legislature was especially active in the interest of more and better laws for the stockman and the controlling of stock in the interest of the settler. Ignorance of law is no protection to the owner of live stock, and courts of justice assume that the trespasser, as well as the person injured, should know his liability and seek to avoid trespasser violation.

Such a publication should be authorized by the live stock associations of the several states, and the distribution be by sale through these associations. It is a matter of special interest, information and advantage to live stock owners and handlers. There are many features of law regulation pertaining to live stock in all states that are not generally known. It should contain the full text of the law creating state sanitary boards, the laws governing the regulation of contagious animal disease, etc.; in fact, a complete synopsis of the operation and text of the laws.

The Lamb Crop Good

From almost every direction where sheep are kept come reports of a large per cent of lambs saved. The generally mild weather covering the lambing period has been in favor of the new-born lamb. Warm and reasonably dry weather through the next six weeks will finish the best season experienced for many years for the flock owner. The flocks are generally turned onto the pastures by the first of May, and sunshine and shower are the ideal conditions for a good flock increase.

Commencing down in Texas, New Mexico and Arizona, lamb crops are exceptionally large, according to reports. The mountain range is good, and a fine summer growth throughout the western states is anticipated. The wool has pretty generally been sold, and while seemingly low, it has had a good growth, and better fleeces are reported. The tendency everywhere is to breed a better sheep in both fleece and carcass, and thus help to make up for the loss the tariff has forced onto the American sheep owner.

EXTRAORDINARY OFFER—30 days one month's free trial on this finest of bicycles—the *"Ranger."* We will ship it to you on approval, *freight prepaid*, without a cent deposit in advance. This offer is *absolutely genuine.*

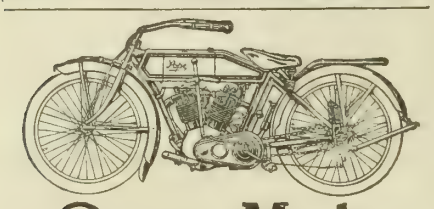
WRITE TODAY for our big catalog showing our full line of bicycles for men and women, boys and girls at *prices never before equaled* for like quality. It is a cyclopedia of bicycles, sundries and useful bicycle information. **It's free.**

TIRES, COASTER-BRAKE rear wheels, inner tubes, lamps, cyclometers, equipment and parts for all bicycles at **half usual prices.** A limited number of second hand bicycles taken in trade will be closed out at once, at $3 to $8 each.

RIDER AGENTS wanted in each town to ride and exhibit a sample 1914 model **Ranger** furnished by us.

It Costs You Nothing to learn what we offer you and how we can do it. You will be astonished and convinced. **Do not buy** a bicycle, tires or sundries until you get our catalog and new special offers. **Write today.**

MEAD CYCLE CO., Dept. S 186 CHICAGO, ILL.



Pope Motor Cycles

Model L-14 Price $250

The famous Pope Twin—the greyhound of the road—the world's greatest stock motorcycle.

Why? The Pope valve in the head motor develops 15.4 H. P. and delivers 13.9 H. P. at the rear wheel, where power counts. Rider absolutely insulated from road shocks. Double stem handlebars. Mechanical oiler. Low saddle position and perfect balance. Holds road like a 6-cylinder automobile. Pope foot boards. Double operating brake. Stock models are breaking world's records.

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A Boyles College Scholarship, any course, for sale at a liberal discount.

Apply to or address

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Bargain Day on Cuts.....

You can buy any cut in the Twentieth Century Farmer for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as we have only one of each kind. Address,

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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

The Children in Cloudland

They say there's a country in one of the stars
Where the children all have their own way.
There's no one to tell them they "mustn't" or "must,"
So they do as they choose all day.

Rich plum cake and candy and all sorts of sweets
They may eat to their small hearts' delight,
Can wear their best clothes every day in the week,
And sit up till all hours of the night.

They don't have to see that their faces are clean,
Or have snarls taken out of their hair,
For grown folks don't live in that far-away star,
So, of course, there is no one to care.

You'd think that those children of Cloudland would be
Just as happy as birds in the spring;
But, queer to relate, they are just the reverse,
And seem not to be pleased with a thing.

They get into trouble, as all children do,
Who have no one to tell them what's right,
And often, through having their very own way,
Find themselves in a terrible plight.

And somehow they've heard of the Earth boys and girls
Who have love and the tenderest care,
And so they are crying because they don't have
Any fathers and mothers up there.

—M Gibson, in Mothers' Magazine.

What Made Rose Cry

"What was Rose crying for?" asked the children's mother, as she hurried out on the porch one evening.

"A June bug hit her in the eye," said Harry. "Uncle Jack has gone with her to help her wash out her eye and then he's coming to tell us about June bugs, the stupid things!"

"She's all right, sis," said Uncle Jack, coming around the corner of the house, with Rose clinging to his hand. "It doesn't hurt any more."

"Now tell us about the June bugs," said Rose, climbing onto his lap and curling herself up there, while Harry, sitting on the steps, leaned against one of the porch posts and watched the June bugs hurling themselves against the window, behind which a lamp was burning.

"Some people call them May beetles," said Uncle Jack. "You can take your choice of names for them. Still others call them lachnosterna fusca, but you won't care for that name. They sleep all day, but get busy at night, eating the leaves of the fruit trees and bumping little girls in the eye and getting tangled in long curls," he continued, pulling an excited beetle out of Rose's hair. "They lay eggs among the grass roots, all done up in little balls of earth. Here the eggs stay for two years or more—I don't know just how many—but finally they hatch and a little white worm comes out. This little worm is the white grub that ate all the roots off the strawberries two years ago."

"I remember," said Harry, "and it ate the grass roots in the pasture so we could roll the sod up like the parlor rug."

"And the crows like 'em," added Rose, sleepily. "They ate thousands when papa plowed the pasture up."

"Can't anything be done to kill them?" asked Harry.

"Sometimes, when they get especially bad, people take big tubs of water, with a little kerosene to form a scum on top, and set them about, fastening lanterns above them. The bugs come blundering into the lanterns, fall into the water and are drowned. Numbers of them may be caught in this way. This ought to be done early, before they lay their eggs."

"Can we get that tub out in the barn and do that tomorrow night, Uncle Jack?"

"Why, yes; probably it would be a good idea," said Uncle Jack.

"Where do the worms stay all winter?" asked Harry after a minute's silence.

"They dig themselves little cellars in the ground and sleep until spring, when they come up with wings grown out on them and fly about as they are tonight. Open the door for me, will you, Harry? I must carry this sleepy little girl up to bed." HOME EDITOR.

(Prize Story)

The Wolf and the Deer

By Forest Mosier, Aged 11, Oral, South Dakota.

Once upon a time there was a deer. She lived in the forest down in Africa. She had a little fawn, which was very cute. The deer's mate would go out to watch and see if anybody was near, while the little fawn would run and play wherever it pleased.

One day, while it was lying by its mother's side, a wolf sprang out from behind the trees. The mother jumped up and looked around to see if her mate was anywhere in sight, but he was not. The mother did not know what to do, but she jumped between the wolf and her little fawn. Just as the wolf started to spring upon the little fawn the father deer appeared upon the scene, and he hit the wolf with one of the prongs of his horns and stabbed him in the heart, and that was the last of the wolf.

While all this was happening I was behind a tree and saw all that was going on. One of the wolf's claws hit the mother deer in the forehead and left a big scar.

Three or four months after that I saw the same deer running with her little fawn right at her heels, and that was the last I ever saw of them.

(Honorable Mention)

The Last Day of School

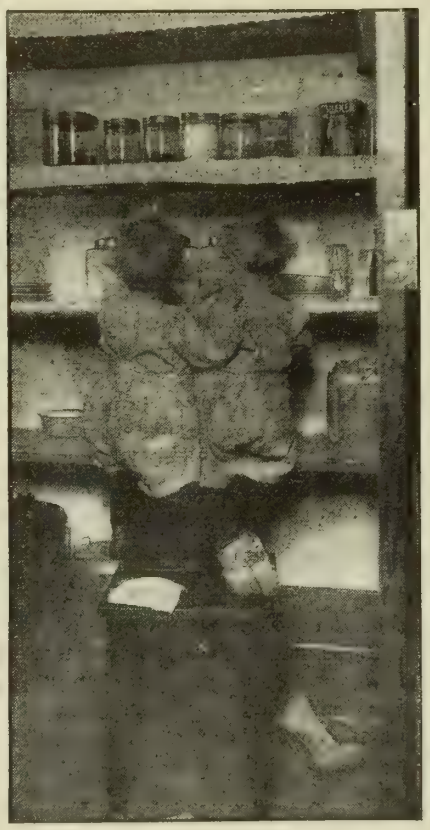
By Martha Riddle, Aged 12, Centerview, Mo.

We had been planning for the last day of school for a long time. Our school was to be out on Thursday, and late Wednesday evening we decided on a basket dinner. Wednesday was a nice day, and we all worked hard for it. It was our last day of study.

In the morning when we woke up it was raining, and we all felt very blue, but it slackened some, and we all went to the school house. We tidied up the school house ready for company and made a fire, as it was very cool. Our teacher, Miss B., then

(CONTINUED ON PAGE SIXTEEN)

Picture Contest No. 13



Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it bright and original. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than May 30. Answers to contest No. 12 will appear in the next issue.

CAUSE AND EFFECT
Good Digestion Follows Right Food

Indigestion and the attendant discomforts of mind and body are certain to follow continued use of improper food.

Those who are still young and robust are likely to overlook the fact that, as dropping water will wear a stone away at last, so will the use of heavy, greasy, rich food finally cause loss of appetite and indigestion.

Fortunately, many are thoughtful enough to study themselves and note the principle of cause and effect in their dairy food. A N. Y. young woman writes her experience thus:

"Sometime ago I had a lot of trouble from indigestion, caused by too rich food. I got so I was unable to digest scarcely anything, and medicines seemed useless.

"A friend advised me to try Grape-Nuts food, praising it highly, and as a last resort I tried it. I am thankful to say that Grape-Nuts not only relieved me of my trouble, but built me up and strengthened my digestive organs so that I can now eat anything I desire. But I stick to Grape-Nuts."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Of Interest to Our Women Readers

Peach Blossom Time

Peach blossom time! And laden trees,
And fleecy clouds and honey bees;
Roads reaching to the distance dim,
And boys, impatient for a swim,
Stooping on footing insecure
To reach and try the temperature
Of wimpling lake or creek or pond;
And over all, and far beyond,
Small, fleecy clouds and cobalt sky,
And little winds that whisper by.

Birds that wing upward out of sight
And, bathing in the morn's first light,
Shake the night's dew from each glad wing
And swell their little throats and sing
Songs that drip back to me and you
As sweet and clear as honey dew;
Till we stand, faces raised, and eyes
That search the blue deeps of the skies,
And wonder what the wild bird sees
To wake him to such ecstacies.

And noon sunbeams like yellow gold,
And green shoots parting garden mold,
And children's faces scrubbed and clean;
Old men and women, cheeks aglow
With thoughts on a fair long ago;
And dreaming that peach blossoms swing,
And that the wild birds mount and sing
As wild birds sang and blossoms swung
In the far days when they were young.

Peach blossom time! And mornings cool
As mornings when they went to school
With childhood's chums, and paused to look
From the low bridge into the stream,
To watch the minnows dart and gleam;
Then turn and rush to school pellmell
At the first ringing of the bell.
Peach blossom time! Glad season when
Old earth renews her youth again.

—Judd Mortimer Lewis.

Our Home Chat

"You say the home department is for the readers," writes a woman who signs herself "Your Constant Reader," "and that all are invited to write and ask questions through the paper, but I would like to know whether you could answer personally, if it would not be too much trouble. I would enclose a stamped envelope." The Twentieth Century Farmer is always glad to write personal answers to any inquiries of its subscribers, no matter in what department. Inquiries addressed to the home editor will receive prompt replies, but they must always be signed. If you do not desire to have your name published, say so, but always sign your letter anyhow, so that we may know to whom we are writing. If there is any information that you want secured for you through this department, write us. We are glad to serve you at any time in this way.

***

Next summer, with the opening of the fair season, interest in the baby health contests will awaken again. Omaha has recently had a baby health contest, in which over 400 babies were entered. There is some prejudice against these contests, fear being expressed by a few mothers that the excitement is not good for the babies; and, besides, they say, "What good do they do?" One baby at this Omaha show, a winner in his class, was entered at the Nebraska State Fair last summer, and, while he got a fairly good score, he was not a winner. The mother took him home after the fair, studied his card, noted the defects, and set herself to remedy them. The winning of this prize shows that she succeeded. Here was one case in which the contests did some good. Attention was called to slight defects that might have become serious if unchecked, but that have now been remedied.

What seems to prejudice people against these contests more than any other thing is the way some of the babies scream and shriek while they are being examined. It is noticeable, however, that the children who mind their parents unquestioningly and have perfect confidence when told they are not going to be hurt usually come through the examination not only without crying, but in many cases actually seeming to enjoy it.

***

Be sure to read the letter on this page about consolidation, you mothers of school children. There is one peculiar thing that we have noticed in all the discussions on consolidated schools that we have followed in the in the press or heard in the meetings that we have attended. Where the mothers have not had experience with such schools they are very much inclined to be opposed to them and to see the dangers. Where they have had experience with them they are strongly in favor of them. Then, there is another thing to be said for consolidated schools—the teachers are almost unanimous in favoring them, and one would think that the teacher should know under what conditions she can do her best work.

HOME EDITOR.

A Summer House

Many women on the farm enjoy less the beauties of the outdoors than their city sisters. Often the shade trees are not near the house, and the bare, hot surroundings are not inviting. Where shade is not convenient to the house, the summer house should be a fixture on the farm. If we cannot have a rustic house we can at least have a quickly thrown-up summer resort, which should be securely roofed from sun, where we can enjoy the fresh air and the attractions of surrounding landscape.

The hardy, climbing, ever-blooming roses make splendid vines for covering the summer house, but if we do not wish to wait for these there are many rapid-growing vines we can grow from seeds.

The best vine I have found for covering an arbor or porch is the clematis paniculata, which grows readily from seeds, or small, well-rooted plants can be purchased for 10 or 15 cents each. This vine is covered in August and September with a sheet of clustered, snow-white bloom of the most delicious fragrance. It is perfectly hardy and grows rapidly.

A summer house is a delight to the mother and children, and will lead them out of doors when all other attractions fail. There seems to be a certain uniformity in the construction of all rustic summer houses, but we can discover multitudinous forms, simple and picturesque, within our means, and we will find it one of the greatest blessings on the farm.

J. W.

Missouri.

Consolidation Successful

As the rural school question seems to be one-sided in regard to consolidation, I feel that I would like to give a little of my experience, as I am the mother of five children of school age, and, being in a consolidated district for our fourth year now, I think I know whereof I speak. We are sending our five to a consolidated school, five and one-half miles from here. They leave home at 7:30 to 7:50 in the morning and get back from 4:20 to 4:40 p. m., according to roads and weather.

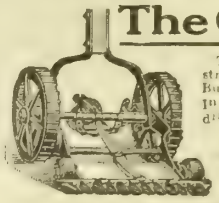
Replying to a few of Mrs. Havens' objections in the issue of March 21: She says if money is not an object, use it. It is our greatest difficulty, as many of our land owners object to using so much money for school purposes. Second, as to someone being close to call if a child is hurt, we have telephones to call us when needed. One of my children had his

DAISY FLY KILLER

placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by dealers or sent prepaid for $1.

HAROLD SOMERS, 150 DeKalb Ave., Brooklyn, N. Y.

The CLIPPER



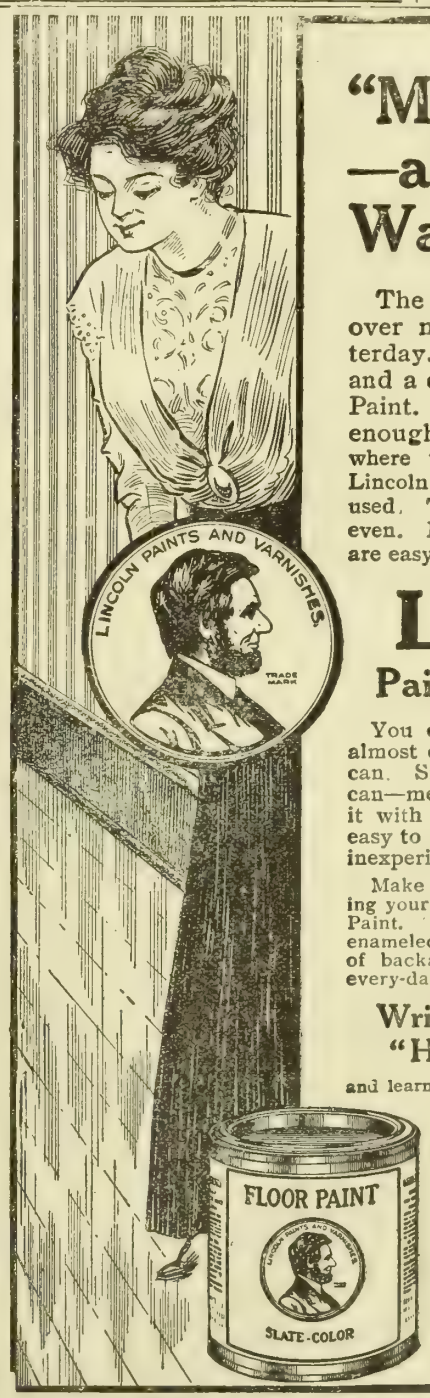
There are three things that destroy your lawns—Dandelions, Buck Plantain and Crab Grass. In one season the Clipper will drive them out.

If your dealers do not keep them, let us know and we will send circulars and prices.

Clipper Lawn Mower Co., Dixon, Illinois.

BEES It pays to keep bees right and raise your own honey. Send today for Free catalog of BEE SUPPLIES and sample copy of the AMERICAN BEE JOURNAL; oldest bee paper in America and indispensable to the beekeeper.

DADANT & SONS, Box 8, Hamilton, Ill.



"My New Floor —and the Work Was So Easy!"

The old floor was made new over night. It was painted yesterday. One hour with a brush and a quart can of Lincoln Floor Paint. This morning it's dry enough to walk on. In the corner where the boards had pulled apart, Lincoln Crack and Crevice Filler was used. The result—a floor smooth and even. Floors that you can be proud of are easy to have with the use of

Lincoln
Paints and Varnishes

You can get Lincoln Floor Paint in almost every color and almost any size can. Simple directions go with every can—merely stir the paint up and apply it with an ordinary paint brush. So easy to do that almost anyone—even if inexperienced—can get excellent results.

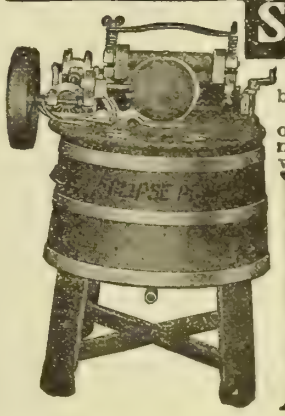
Make your housekeeping easier by painting your floors and woodwork with Lincoln Paint. Lincoln painted, varnished and enameled surfaces take a wonderful amount of backache out of house-cleaning—also every-day housework.

Write us for our Booklet "Home Painting Jobs"

and learn about the many easy ways in which you can make your home more cheerful. There's a Lincoln Paint, Varnish, Stain, Enamel or Finish for every surface, new or old, indoors or out. Lincoln Climatic Paint is made especially to give the most satisfactory wear in your climate. Write today for booklet and name of the Lincoln dealer nearest to you. Address

Lincoln Paint and Color Co.
Dept. 86
Lincoln, Neb. Dallas, Tex.

This Power Washer Is Made For YOU
Simple and Easy to Operate.



This "Eclipse" Power Washer has a large, substantially built cypress tub which is practically indestructible All metal parts subject to any strain whatever are made of malleable iron. Fitted to this is one of our famous metal frame, ball bearing wringers, absolutely the best wringer ever made. The pulley is 10¾ inches in diameter with a 2-inch face which will run at 150 to 160 revolutions per minute.

FAIRBANKS-MORSE & CO.,
Reputation - Back of It.

Remember this machine has the same quality reputation as all Fairbanks-Morse products.

Fairbanks-Morse Co., - Omaha, Neb.

collar bone broken, and he went to the doctor's office and had it adjusted and then called his mother by telephone and said, "The doctor said I could come home in the hack all right." Much better than when the little fellow was at the country school a half mile away—he was sent on an errand in another direction and had his leg broken; he was carried about sixty rods, then rode a mile in a buggy and waited an hour for a doctor when he got home.

In the third place, our hack drivers are not irresponsible men, nor the lowest bidders, but competent men to handle the teams and children. The drivers are given control the same as the teachers, with the superintendent to back them. Fourth, every child who is on a public highway is called for at his own door. Fifth, there are from seventeen to twenty-one in our hack. While it is true they scrap and tease some, the same as they do in the country school, the hack driver looks after that.

Sixth, no teacher can teach eight or nine grades and do them justice. Just count the classes she will have and think what the little folks will be doing while she is devoting her time to the other seven grades. I have started two primary pupils and not a day was missed on account of bad days or roads. I have one boy in high school, who gets his manual training, drafting, agriculture, etc., and is at home every night, helps to do the chores or perhaps goes to the field and takes his father's team until night.

Wishing you success and hoping this will change some of your readers' views on consolidation.

Iowa. MRS. A. X. Y.

Preventing Divorce

It has been quite generally announced that Kansas has a new proposition to place before its people as a plausible and very reasonable solution for the divorce evil. Lack of knowledge of household duties and accomplishments, such as all girls should possess before entering upon the responsibilities of the making and care of a home, is the cause of more divorce litigation than all other influences combined. The tendency of the present time is to overlook the home training, the education that qualifies the girl for her married life. The care, supervision and making of a home, such as all womankind in married life should possess, whether or not their life's work and circumstances call for it or demand it, is a qualification that many girls of marriageable age have overlooked or omitted in their schooling, leaving this as the last thing to be considered or taken up. Possibly they think their married circumstances will not demand it.

The broadening out in the teaching and instruction in domestic science, household economics and all that pertains to a good, practical knowledge and understanding of homemaking, is announced as the Kansas motto in qualifying against the divorce courts. Of the 427 young women in Kansas who have availed themselves of the knowledge and training embodied in the course of domestic science as taught in that department at the Kansas Agricultural College, and are married, only four have been divorced. Upon this basis of statistical information, Kansas feels warranted in setting up a standard of marriage qualification and will urge that increased emphasis be placed upon the domestic science courses in their extension work, with the purpose of instructing as many young women as possible in the art of homemaking.

It is pointed out that in former generations the mothers were more persistent in instructing their daughters in the affairs of housekeeping and homemaking. The public school and society, with their amusements and entertainments, now take up practically all the girls' time, and housekeeping is a side issue in the study and training of the girl, if, indeed, it receives any consideration at all. This neglect and lack of disposition and knowledge in homemaking is assigned as the main reason why so many young men prefer the life of the bachelor rather than to encounter the hazards of an unorganized home life.

Every household must have its head and director, and how can it have this under conditions of ignorance and total lack of training in the art and science of home management? Kansas has undertaken a noble work, and the boosting of its domestic science training under the head, "A Cure for the Divorce Evil," will give it distinct prominence as a promoter of a reform long since urgently appealing to the intelligence of public sentiment.

Nebraska. G. W. H.

Simplified Breakfasts

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Post Toasties

fill a bowl and add cream or milk.

Then, with some fruit, a cup of **Instant Postum**, and a poached egg or two if you like, you have a simple breakfast that is wholesome and satisfying.

Toasties are bits of corn carefully cooked, delicately seasoned, and toasted to an appetizing "brown" without being touched by hand. They look good, taste good, and

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Everywhere!

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6655 — Ladies' Shirt-Waist Dressing Sacque—This plain, tailored sacque has short tucks to yoke depth in front and regulation closing with box plait. The neck may be finished with a band or with a turnover collar as shown. Full-length sleeves are finished with a cuff, and there is a short peplum below the belt. The pattern No. 6655 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2⅜ yards of 36-inch material.

6182—Ladies' House Dress—Many women prefer the house dress to a kimono or wrapper, and here is an excellent pattern for making such a garment. The dress closes at the front and is made with short sleeves and a sailor collar. The pattern provides for a dust cap. The pattern No. 6182 is cut in sizes 34 to 42 inches bust measure. Medium size requires 5¾ yards of 36-inch material and ⅞ yard of 27-inch contrasting goods.

6672—Ladies' Waist—This model shows one of the new type shirt-waists. It has a closing diagonally arranged in front and a handsome collar, with sleeves long or short, set in at the regulation armhole. If the sleeves be shortened to the elbow a very pretty and novel cuff arrangement is provided as shown. These waists are made of crepe de chine, messaline, taffetas, cotton and silk novelties of many kinds. The pattern No. 6672 is cut in sizes 34 to 44 inches bust measure. Medium size requires two yards of 36-inch material.

6659—Girls' Dress — This smart little frock has a very low drop shoulder and a side-front closing, with a tab extending below the belt. The neck has a collar of moderate size in front, forming a deep point in the back, and the skirt is a three-piece model. The hat is also to be made by hand and the pattern gives the pieces needed in making it. The pattern No. 6659 is cut in sizes 6, 8, 10, 12 and 14 years. Medium size requires 3½ yards of 30-inch figured material and ⅞ yard of 30-inch plain goods, or 3¼ yards of 36-inch material if all of one material.

6657—Child's Rompers—These are in the new and popular Dutch style. The blouse has quite a long opening in front, through which a shield is visible, the outside hooking to it. A small collar trims the neck, and cuffs finish the sleeves. The bloomers are in one piece, closing at the sides. These suits usually have white for the blouse and a color for the bloomers. The pattern No. 6657 is cut in sizes 2, 4 and 6 years. Medium size requires one yard of 36-inch material of light goods and 1½ yards of 36-inch dark goods.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

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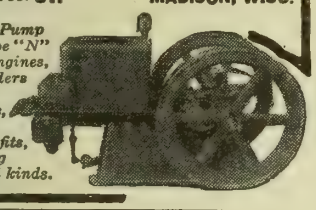

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

FIRST comes the diarrhea from a few causes, chief of which is white diarrhea. Close to this comes the big head lice; these get in their work from five days to any time after; these are a sheer case of neglect. Next is indigestion, another case of not trying to know what and how to feed. Next is leg weakness—sometimes hereditary from overfed stock, sometimes from the chicks being fed into a heavier body than the leg bones can bear, oftener the fault of the floor or ground; if roosting ground be cement, or filthy, wet ground, then it is a case of genuine rheumatism, resulting in great suffering. If the floor be board and baking hot, then we have another kind of leg weakness. The toes turn under or up; cramps pull the legs backward; the toes get sore, often come off. For the first, give a warm, dry floor; for the last, let them out much of the time on a damp floor; for both, give baking soda in fresh buttermilk; but, while you give it often, not too much at a time.

The next menace is gapes. Plenty of lime on the feeding grounds reduces these, feeding on boards, keeping up until over 4 weeks old. A few drops of turpentine each day in the drinking water, or a lump of camphor in the drinking water, with onions and garlic in the feed every day, will be found very effective. If the chicks get the double-headed, blood-sucking worm in the windpipe, then learn to take it, or them, out with a good gape extractor. Anyone can learn how. After the chick gets to be from 4 to 8 weeks old it has the strength to sneeze them out itself. After this it may take cold, and have the sniffles and maybe sore eyes, but now its chief menace is rats, cats, crows, etc.

The Life of a Chick

When the egg is infertile it remains clear indefinitely. If it has a germ, though not set to develop, it soon rots and the egg gets in an addled, dark condition.

One day after it is put to brood life is discernible. The yolk bag shows blood vessels on the second day; on the third day the heart appears; on the fourth the pupil of the eye appears, and the lungs are beginning to form on the fifth day, while on the sixth you can distinguish the gall bladder. By the seventh day you can distinguish the bill; the next day the wings and thighs begin to appear, and on the eleventh the arteries begin to show. On the fifteenth day the feathers are well developed; on the nineteenth the chick makes its first sound from the lungs, which, in the twelfth day, you saw in their strange perfection of veinous and arterial circulation in the membrane surrounding the white of the egg.

It is an interesting study to break a hatching egg each day and minutely study the growth of the chick up to the date when the chick, heavier than the fresh egg, steps out of its discarded shell. Surely the influence of heat is the master influence in producing all life in this world.

Poultry Paragraphs

The day-old chick business does not stop when the average breeding time is over; it continues until later.

***

It isn't too late yet by any means to buy that setting of eggs from which to secure your next year's roosters. Don't begrudge a good price, either. Remember how much cheaper a setting of eggs is than buying the roosters fully grown.

***

Don't throw out spoiled meat of any kind to chickens. Many a case of "limber neck" has been caused by a spoonful of bad meat.

***

If you want to tempt cats to eat young chicks, just toss in their way all the dead chicks you come across.

***

If you want to bring back crows every few hours, just throw the eggs that have not hatched out on the ground anywhere.

***

Select high, dry spots for your brood coops and face them to the south until the very hot nights and days come, then to the north.

***

An old paint brush is just the tool for painting roosts with coal oil. Paint them often with the pure stuff.

***

When you say a hen lays best in her first year, which is not always true, remember the first year doesn't begin until she is 6 months old.

***

If the young chick refuses to eat after 3 days old, as some will do, feed it by hand. Many a chick is made strong in this way.

***

Never leave soft feed lying until it sours in the feeding coop for young chickens. To do so means death for more than one.

Quick-Acting Remedy for White Diarrhea

When I ordered the remedy I had 125 chicks in the brooder and they were dying fast from white diarrhea. After the sixth dose they stopped dying and I haven't lost any since.

I have another lot of 125 chicks just hatched. I am giving your remedy and have not lost any so far. I am nearly out of the Abbott's Remedy now. I want you to send me two large boxes.

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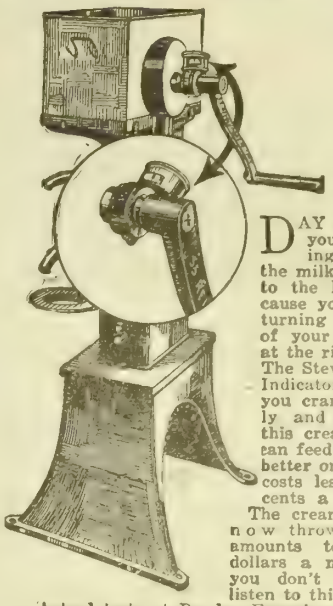

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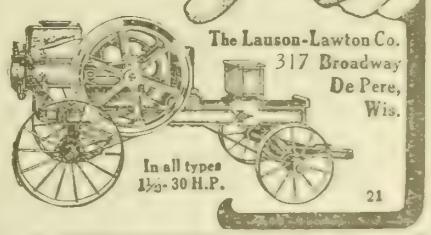

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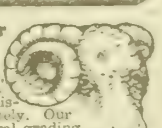

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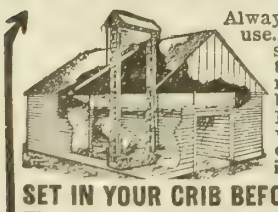

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Oldest City of South America Reached by Rail

By Frank G. Carpenter

CUZCO, Peru—I am in Cuzco, once the famed capital of the Incas, and now by all odds the most interesting city of modern Peru. It lies here in the heart of the Andean plateau, about 500 miles by rail from the Pacific ocean at the port of Mollendo, and so far inland that with the changes of trains, it takes almost four days to reach it. The cars cross the Andes at a pass that is several hundred feet higher than the top of Pike's peak, and then drops down to a plateau that has the same altitude as the snows which kiss the sky on the summit of Fujiyama, the sacred mountain of Japan. You travel over this plateau for about 200 miles, and then enter a beautiful valley about 1,000 feet lower. The plateau is covered with grass, and is spotted with the thatched mud huts of countless Indians of the Incas' descendants. It has good pastures, and upon it are feeding tens of thousands of sheep and great flocks of alpacas and llamas. It has small cultivated patches here and there, but its general aspect is dreary and bleak.

Valley a Garden of Eden

The valley has a different appearance. It seems like a Garden of Eden as you descend from the pampas. There are great fields of grain and acres of potatoes and beans. There are patches of quinua and tracts of green barley; which just now are sprinkled with the yellow blossoms of the mustard that has grown up among it. This land belongs to the haciendados, or the white or half-breed Peruvians. It has some large houses, but everywhere scattered through the farms are Indian villages with their mud huts, the home of the laborers. Some of the fields are surrounded by low fences of stone or mud walls, and many of them are in terraces that rise, step by step, from the valley, high up the slopes of the mountains. There are some pastures, and everywhere are beautiful wild flowers. The whole country looks fertile, rich and well kept. There are cattle and sheep and alpacas, all eating together as they are watched over by Indian herdsmen, the whole forming a picture of prosperity that is accentuated by the poverty of the highlands from which you have dropped.

It is at the head of this beautiful valley that Cuzco is situated. It lies on the slope of the mountains, and as you stand above it on the site of the old fortifications built by the Incas this great fertile tract is spread out before you.

Where the "Golden Rod" Descended

It is probable that it was this sight that made the first Inca king, Manco Capac, choose Cuzco as the capital of his nation. He saw it, hundreds of years before Columbus discovered America, and the empire he founded was already from four to six centuries old, when it was conquered and destroyed by the Spaniard, Pizarro. According to tradition it had been found by a race that was descended from a child of the sun, and placed by him on an island in Lake Titicaca. A prince and princess of this race were given a golden rod by the sun god and told to go forth and civilize the savages which then inhabited the high plateau of the Andes. They were told to select as the site of their city where that rod should sink into the earth. As the story goes, they traveled across the pampas over much the same route that I came by the railroad, and when they reached here the golden rod fell and dissappeared in the ground.

On that spot they outlined the chief plaza and about it grew up ancient Cuzco. Whether this story be true or not, it is certain that here the Incas built a great city and that for generations this was the capital of their empire that reached two or three thousand miles north and south. The Inca dominions took in what is now the city of Quito, in Ecudor, and extended to far below where now stands Santiago, the capital of Chile

Cuzco itself then contained over two hundred thousand inhabitants and the people ruled from it were numbered by the tens of millions. They were by far

In the Church of the Mercedes in Cuzco. My Guide Was a Young Priest

the most civilized of all South America, and it is a question whether they were not more advanced than the Aztecs. They constructed wonderful buildings with temples and palaces and great fortifications, the ruins of which I shall describe later on.

Knew How to Mine

The Incas knew how to mine gold and silver and were skillful in the smelting and refining of copper and lead. They had copper tools and they were expert goldsmiths and silversmiths. They took the wild llamas and alpacas of the pampas and tamed them. They made the llamas their beasts of burden, and from the wool of the alpaca they wove all sorts of garments and beautiful blankets. They made hats and shoes and were skilled in the dyeing of fabrics.

These Incas, whose ancestors date back almost to the time of Christ's birth, knew something of astronomy. They observed the equinoxes and the eclipses of the moon and the sun. They had a land system and were skilled in the building of roads. They knew something of arithmetic and made calculations by means of knots and strings of different colors. They had musical instruments like some that their descendants play upon today, and it is said that they had songs of love-making, and even plays and a drama.

The Incas cultivated first the valley of Cuzco, and from there spread their farms out until they included a vast part of the high Andes. They swarmed over the plateaus, and today you can see the terraces they made not only here and there, but all through the wide valley that lies between these lofty mountains from Ecuador far down into Peru. They cultivated tens of thousands of square miles on the high mountain slopes, that have since gone to waste, but which are marked by the stone walls they built to hold in the earth. It is on the site of the ancient capital of this nation that I am writing this letter.

Much Like Ancient Spanish Cities

The Cuzco of today is not more than one-tenth the size it was when Pizarro first saw it. It has now about 20,000, and it is more like a city of old Spain built during the days of Columbus than the magnificent capital of Atahualpa, the Inca king. The town is made of one, two and three-story buildings of stone or adobe, covered with plaster. It has roofs of light red tiles that sparkle under the blue sky and bright sun of the Andes. Its houses have walls of bright colors; they are all close to the sidewalks, running along narrow streets paved with rough cobbles. The streets are not more than twenty or thirty feet wide, and from above you see nothing but this terra cotta expanse of ridged roofs rising and falling with the slopes of the city, and crossed here and there by streaks of bright blue marking the streets.

High above the houses, however, and all over the city rise the domes and spires of the great churches and convents built by the Spaniards, when they had grown rich by enslaving the Indians and taking the vast hoards of silver and gold they found in their capital. Cuzco has a church for every 1,000 inhabitants, and some of them are so magnificent that they would attract attention in any country of Europe. Right in the center of the town is a beautiful plaza cut out of what was once the chief central square of the Incas. Its area is now not more than four or five acres, but five churches face upon it, including the cathedral of Cuzco, which itself covers several acres. That building has a church on one side, and just across the way is the great structure of La Compania, which was built by the Jesuits as their house of worship. Adjoining this building is the old Jesuit convent, a magnificent structure, where the monks worked and taught. This was taken by the government when it drove the Jesuits out, and it has been turned into a university. The great patio about which the holy fathers strolled is now used as a tennis court, and I saw the students there playing, driving the ball over the net, when I passed through. Another great church is La Merced, whose interior is one mass of carving, including fluted stone columns, and a ceiling of cedar in panels, exquisitely done. Here my guide was a young priest, whom I photographed in the cloisters. And then there are the church of Santo Domingo, that stands on the foundation of the old Temple of the Incas, and that of San Francisco, whose choir is a mass of rich carving. The little chapel of San Blas has the finest wood pulpit known in the world. It is one mass of carving done by the descendants of the Incas, and is so beautiful that $25,000 was recently offered for it.

The Cathedral of Cuzco

The Cathedral of Cuzco is perhaps the richest of all the Catholic churches on the South American continent. It is a vast museum of carvings plated with gold, of wonderful paintings, some of which are made by the old masters, and of chapels whose altars are solid silver, and whose woodwork is plated with gold. Some of the paintings are forty feet high and twenty feet wide and there is a painting of the Last Supper that measures about thirty by forty feet in size. Several are by Murillo, one is by Vandyck and several are by Domenichino. One of the altars was presented by Charles V of Spain and some of the paintings were given by Philip II.

I went into the sacristy. This is a museum of antique carving and painting, and in one of the walls is a vault filled with treasures, including gold, silver and precious stones. The total value is said to be more than $1,000,000, and a larger part of this is made up by what is known as the custodia, a box that contains the sacrament at the times of processions. This box is solid gold. It weighs thirty-six pounds and it was made of gold plates that were taken from the Inca Temple of the Sun. The diamonds and emeralds upon it are worth more than the gold itself. These treasures are stored away in a closet with a door of wrought iron so rude that it could be opened by any safe-breaker or common United States burglar. It is perhaps the reverence of the people and the fear of damnation that preserve it from theft.

As I stood in the cathedral, mass was being celebrated. Two hundred women, dressed all in black, with black shawls over their heads, knelt on the stone floor. There were perhaps twenty men scattered over the church, and through them all were patches of color made by the Indians who wore ponchos of red, blue or yellow and whose bare feet were turned up to the roof as they muttered their prayers. There were also Indian women in short skirts and red shawls,

some of whom had packs on their backs and not a few of whom had babies.

A Stroll Through the City

Leaving the cathedral, I took a stroll through the city. I first visited the portales or stores selling Indian goods. These run along the opposite sides of the plaza facing the cathedral. They take up the ground floors of a block of two-story houses, the upper stories of which extend out over the street and are upheld by stone columns, forming an arcade, where the gayly clad customers walk or stand as they shop. The stores are like caves or holes in the wall. The doorways look as though they were cut out with a crosscut saw. They are of rectangular shape and are flush with the street. The night I arrived in Cuzco was one of the saint's days, and the stores were shut by thick slabs of wood that come together like the folding doors of a barn. Indeed they look more like stable doors than those of a store. Some of them are four inches thick. All are closed, and kept so with great padlocks of wrought iron, centuries old. Single locks weigh ten or twenty pounds, and they are so constructed that one must use a half dozen keys to open them.

The next day as I again strolled through these arcades I saw that all of the storekeepers are women. They are fat Cholos who wear very full skirts and who keep their shawls and hats on while attending to business. Many of them have some manufacturing, in addition to their selling. They have little hand sewing machines which they rest upon boxes or chairs, and, kneeling or sitting on the floor, make the garments that the Indians use.

Ancient Fountain of the Incas

From these cavelike shops I walked around the corner and up a narrow street walled with merchandising establishments of a better class. Here the stores are larger, but they have the same cave-like entrances and are of much the same character. One block is called Coca street, because every shop on each side of it has bales of coca leaves among its wares. I watched the Indians shopping and noticed that each of them bought coca, although the most of them had at the time quids of these leaves in their cheeks.

Going onward, I passed the ancient fountain built by the Incas and watched the pongo or Indian man house servant filling his jars. This fountain represents a young girl with a figure like a chrysanthemum over her head, on the top of which is a cross. The figure is nude and out of the breasts pour two continuous streams of pure water.

A little further on I stopped to look at the market. This is held in a plaza about half of which is covered with long galvanized iron sheds upheld by posts. Under the sheds are zinc counters upon which the meat is laid out for sale, and farther over are sheds for vegetables, where the Indian and Cholo women sit on the stones with their wares piled around them. Still further over are sheds for fruits, and in the wide, open spaces out in the sun, they are selling fuel consisting of wood, llama droppings and charcoal. There are other peddlers here and there, and scattered about are cook shops, where the Quicha Indians are eating soup and fried stuffs cooked over clay or sheet iron stoves while you wait.

Guess at Weight of Meat

In the shed part of the market the women have stalls, each about five feet square. I asked as to the prices and found that eggs are now selling at 24 cents a dozen. Beef costs 7½ cents a pound and mutton 10 cents, whether it be lamb or old ram. The part of the animal from which the cut comes makes no difference. You pay the same for a steak cut from the loin or the neck. The butcher women have no scales and they guess at the weight.

Vegetables are not sold by measure, but in piles, and the usual price per pile is 5 cents, or 2½ cents American. Here is a woman selling red peppers. She has a cloth covered with piles of ten each. They sell for 5 cents per pile. In the next stall are green beans, each containing a handful, and beside them cakes of native cheese the size of a biscuit that you can buy for a nickel.

A little farther over they are selling quinua. This is a grain as big as the head of a pin that the Indians use to make mush. The piles are half a pint each and they cost 2 or 3 cents. The same woman has corn in piles of ten nubbins as long as your finger, and also hominy in a cloth looking like a dirty dish rag. The hominy grains are as big as my thumb nail, and about half as thick as my thumb.

Natural Home of Potatoes

I am interested in the potatoes. This is their natural home. The great-great-great grandfathers and mothers of all our potatoes were born on this high plateau of the Andes. The tubers are of all colors and sizes; some as big as my fist, others the size of a thimble. Some are bright red, others yellow, others black, and some little ones are as pink as the toes of your baby, and not much bigger around. The pink ones are used to make scup.

The corn also is of many colors and of different varieties. Here is a pile as black as your boots. A little further over is one of bright yellow and the next pile is dark red. The same woman has white chuno for sale. By this I mean frozen potatoes which have been put over night in the water and then prinkled and frozen and dried. They will then last for years without spoiling, and are a favorite dish of the Indians.

It is interesting to watch the market women. Some of them are Cholos, as you can tell by their straw hats, and their complexions, which not not so dark as those of the Indians. They wear hats and shawls, and have skirts which come almost to the ankles. The Indian women have hats like a piepan with upturned brims and low crowns. They also wear shawls of red, blue, yellow or black. They have on embroidered waists and voluminous skirts. A single woman may wear a half dozen skirts, so that her dress stands out as did those of our girls in the days of wire petticoats.

People Somber and Gentle

There are Indian men by the hundreds walking about through the market. They are buying and selling, and there are Indian women going about with bundles on their backs and babies on the tops of the bundles. The men have flat round hats with brims turned up all around, and under the hats are knit caps of bright colors with ear flaps, which hang down to their necks. Some of the Indians are driving in llamas, loaded with goods, and some carry great packs on their shoulders containing vegetables and other wares which they have brought in from far away in the country. The whole scene is one of bright colors, but it is quiet, and the people are gentle and somber. They talk in low tones, and they seem very timid. When I point my camera at them the women hide their faces and the children howl and go off on the run.

One of the odd sights of the market, and also of the streets throughout Cuzco, is the traffic and the way freight is carried. Everything comes in from the country on donkeys, or mules, or on llamas, or upon the backs of men and women. There is not a carriage in the whole city, and when one goes out to ride he must go horseback, or muleback. In coming in on the train I had the station master with me. He had been instructed by the superintendent of the road to see that I got to my hotel, and as I have a great lot of baggage I told him he had better hire a carriage. He replied that there were no carriages in Cuzco, but that he might take the street car and that my tpye-writer and trunks could be carried on the backs of Indian cargadores. I found the street car to be a long box resting on wheels, with a team of four shaggy mules as the motor. There were half a dozen such cars, each with its separate team, and they were so crowded that I was barely able to get standing room. The cars run only to the trains, and these arrive and depart three times a week, so that if you can get a car ride a day you are lucky. It is about a mile and a half from the railroad depot to the main plaza, and our mules went on the gallop.

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This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Killing Off the Flies

O. H. G., Nebraska: I have just read with some satisfaction the article by Robert K. Sampson, "How a Farmer Got Rid of Flies." He gives some good pointers in regard to cleaning up. I wish more people would follow his example. It has been estimated that one-half the feed consumed by live stock during July and August goes toward fighting the flies, and besides, they cause the death of thousands of babies. So let's get them out for keeps.

Commends Hog Cholera Articles

S. R. McM., Nebraska: I am writing you these few lines as a "mite" of encouragement in what might be called this hog cholera war. It has got to be a war of extermination against this hog cholera germ. I have believed for years that this disease could be completely stamped out by quarantine methods, but it will be much easier now with vaccination and quarantine, too.

I like the stand the Twentieth Century Farmer is taking on this matter, and I hope you will keep hammering on the question. Of course, the aim is completely to eradicate the cholera ultimately, and I believe it will only take a few years.

Personally, I am very much interested, as I have raised from 200 to 300 head of hogs a year for years and have eighty brood sows this year and expect to raise close to 500 pigs.

From Sheep Herder to Farmer

W. S., Wyoming: In the Farmer of March 28 I saw an article headed "Advice from a Hired Man." Evidently our hired brother is working for some eastern farmer, which pleasure I have never experienced, having always worked in the stock territory of Nebraska, Montana and Wyoming. I herded cattle when a boy, then came to Wyoming and became a noble shepherd. The wages were better and the life was grand. Sometimes I saw a man once in fifteen days, sometimes once in thirty. They say a sheep herder goes crazy once in seven years. If that is the case, I am due for a second attack. I resolved to save my money and go into something for myself. I did. I would save up six months or a year and go to town and invest in lots—lots of booze. In about a week I would go back, determined to do better. Three or four winters ago we had two bad winters for stock and sheep, and there were more herders than sheep. It was my lot to be let out last August, when the boss shipped his sheep.

I had two fair saddle horses, and it took most of my money to pay my board bill for the year before, when I was out of work. I struck a contractor for a job at $2 per day and board. Now, brother over in Iowa, if you think you are having such a hard time with your boss, try that kind of work for a while. I did some thinking, too. I found I could do hard work and go to town without having to spend so much money for booze. I took my money and put it in the bank, but soon I got sick and my money melted away. When I was able to work I got a job hauling hay. It is great for your muscular system, putting 150-pound bales of alfalfa into cars. I was determined to get to work for myself.

About this time I got acquainted with a husky young fellow with a wife and two children. He was out of a job and very down-hearted. We decided to rent a place together. We found a place with about forty-five acres under ditch, and figured one could work the place and the other could work out and keep things going. We had very little money and only my two horses. I went to the banker and told our plan, and he let me have $100, and I went out and rented the ranch. We bought five sows for $50, an old horse for $20, two sets of harness for $13 and $20, a wagon for $35, three dozen chickens for $24, and gave my note to the same bank. We made a deal for another old horse for $30, which I could work out. The store would carry us for grub, and I borrowed another $100 for seed. Anyone can figure out how much we had to start with. By fall I hope to earn enough to pay off our indebtedness and have our crop left, if we have any. I have a place to go to, and next spring we both hope to work on our own land.

I am not lamenting about the hardships of working out. I am going to try to get something of my own to work with, and you can do the same, brother. Don't try to change the farmer's way of using his hired men. Get out and work for yourself. If you are worth $25 to him you ought to be worth $25 to yourself. Be honest and straightforward, energetic and ambitious, and you will get there, I believe. The farmer is conceded to be the backbone of the nation. Be a joint in this great backbone, brother, and you won't have to try to revise the methods of the people who hire help.

Another Slap at Single Tax

S. T. S., Iowa: In your issue of May 2, J. H. of Nebraska states that we who have written opposing the single tax have not offered any remedy to correct the evils of land speculation. Neither have we found a remedy for the evil of murder, yet I presume if J. H. and other single tax enthusiasts were asked to suggest a remedy they would advise half the population kill the other half. He says land values are too high and that land should sell at a low price and that all farmers who own their land bought it years ago when land was cheap. These things are true only in a small per cent. If land were selling for $2 per acre it would still be high for some people. It was harder to get $40 twenty-five years ago to pay for an acre of land than it is to get $150 now to pay for the same acre.

Because some people choose to lie to the tax collector and hide their personal property, thereby robbing the state, is no reason that all personal property should be exempt from taxation. This is a point that has not been explained by any single taxer. Also, they all advocate taxing land to a point that would absorb all the income therefrom, thereby reducing the value of the land; yet they pretend to think that it would help the farmers, especially renters. Now, if there was a tax levied on land high enough to reduce the value of the land, it would be higher than the present rental, so the renter would be paying more for the privilege of owning the land than he does now for renting it.

If we abolish land values, what effect would this have on the financial world? When we consider the fact that we have no realty values except land, what could we establish as a realty basis for all values? It must be something of intrinsic value, something that cannot be destroyed by fire or other means, something immovable, something that will not decrease, but rather increase in value with time. With a little thought we see that there is nothing that will take the place of land. You will have taken from us the only realty on which to base our values. You could neither loan nor borrow money, for you would have no realty values for security. This would, to a certain extent, destroy the value of money. How do we know that a dollar of our money is worth a dollar? Because it will buy a dollar's worth of realty value, which we can have and hold until such time as we may desire to exchange it for stocks, bonds or mortgages, all of which have for their basis of value

hat we have come to recognize as real operty.

J. H. claims the farmer is paying more an his share of the taxes now, which true, but suppose he had to pay one-lf of all he made on his farm for xes, which would be necessary if the lue of land were reduced to any great tent, which they claim is necessary. ey have been trying to make the sin-e tax proposition look good to every-e, but it is going to be a hard matter make the land owner believe that by tting off his nose he will improve his oks.

lfalfa for Brood Mares and Sows

E. J. M., Kansas: I want to ask you out feeding alfalfa to brood mares and ws. I was told if you let a mare run alfalfa pasture she would not get ith foal. Now, I feed lots of alfalfa, d would like to know about it. Will eding alfalfa hay make any difference? had three nice mares that I bred last ar when the colts were nine days old d bred several times after that, and ey never had any colts. I would like ry much to know so that I can avoid this year. I have four mares I bred is spring and am feeding prairie hay w, but will have to feed alfalfa hay on. Have plenty of alfalfa hay. The an I am renting from came out from ansas City in his auto Sunday and said at the men that were running the eeding barns in Kansas City and In-pendence won't breed a mare that is nning on alfalfa pasture. They say ere is no use. I have never pastured rses or cattle on alfalfa pasture, but I ve fed lots of it and I did not get any lts, so to make certain I made the in-iry.

Last fall I had three sows heavy with g and I turned them in the alfalfa eld and they lost their pigs. I have stured lots of hogs, and think alfalfa the only feed there is. I find that corn the best grain to feed with alfalfa. horse can't stand as hard work when d oats with alfalfa as when fed corn. can take good alfalfa hay that is red right with corn and I'd like to see e hay of any other kind that the rse can do as good work on. If it esn't hurt brood mares, it has got the rld beaten on roughness.

What is the best height to cut alfalfa ery close or moderately long?

I notice your articles on hog cholera d think them very good, and I think ur paper is getting better every issue. can see a vast improvement since I mmenced to take it. We take five farm papers and we consider the Twentieth Century the best now published in the west. There is one journal published that has a department that they call a mechanical department. They will answer all questions on any kind of machinery, automobiles included. I think it is a great help to the farmer.

I believe if every farmer would have his pigs immuned at weaning time they would never be bothered with hog cholera. I have all mine immunized when they are weaned and I keep them where a hundred head died the fall and winter before and I haven't lost one for two years, and they eat and sleep in the same place and run and root in the same ground where the cholera-infected hogs were buried. I have only forty head now on account of shortage of feed. I did not raise anything last year but some alfalfa, and for two months that was all they got but water.

Answer—We have never heard that alfalfa caused sterility in mares. Care should, however, be taken in feeding alfalfa hay. Don't feed when musty and don't overfeed. Would be glad to hear from any of our readers who have had any experience in feeding alfalfa hay to brood mares.

Regarding the sows, fifteen years of experience in pasturing hogs of all kinds on alfalfa and feeding them alfalfa hay has proven to us that there is nothing in the idea that alfalfa is the cause of abortion in sows. There is evidently some other condition present that causes this trouble.

Don't cut your alfalfa too short. Raise your shoes a couple of inches and perhaps tilt the bar a little.

We do not run a mechanical department, but are in position to get such information for our readers at any time. If we are told what make of machine the reader has and the trouble is carefully explained, we will be glad to secure such information. We are very glad that the Twentieth Century Farmer is fulfilling the needs of its readers, as this is our purpose.

Would advise following the rules of sanitation more carefully in regard to the cholera hogs. If there are cholera germs present, and yon should happen to get hold of serum that is not potent, you would have another outbreak of cholera. The only safe way is to burn all carcasses and thoroughly disinfect after cholera.

Suggestions and Reminders

WATCH carefully how your cultivator shovels are set. Don't go through the field and leave a fringe of weeds along the row. Tear up or cover all the ground.

***

Take an hour off once in a while, and, with one horse and a small cultivator, help the good wife cultivate the garden. You can do more in an hour in this way than she can in a day. Be sure, she will appreciate it, and you will actually think more of yourself if you will do this.

***

You like a pinch of salt in your soup, on your potatoes and meat. Don't you think the hogs would like the slop a little better if you would put in just enough salt to season it? Try it.

***

If you haven't attended to getting that self-waterer for your hogs in shape, don't delay it another day. Hogs must have good, clear, pure, water to do well.

***

The hogs will soon all be in the pasture. Don't neglect to clean up the yards, pens, etc. Rake up all the cobs, sticks and boards and burn them. Plow up as deeply as you can all the yards, and sow some rye, oats, rape or most anything. You can just as well be getting some feed off these yards while you are disinfecting them. If you are fixed so you can keep the hogs out of these yards, try planting some pumpkins. With good care it will surprise you how much feed you can produce from a little patch.

***

It won't be long until the weeds along the fence on the public highway need mowing. Mow them while they are young and tender. An extra mowing or two during the summer doesn't take much time, and your place will be benefited in more ways than one and to an extent much greater than the outlay.

***

Haying time will soon be here. The first rainy day you had better look over the mower; see that all the sections on the sickle are tight; get the sickles all ground; examine the plates on the guards and see that they are tight. If the plates are dull, sharpen them; you can't get a decent job with dull plates. The rake should be gone over; see to it that all the bolts are in place and tight. If it is short any teeth, don't wait to put in new ones until the day you are ready to cut. Look the stacker over carefully; see if your rope is all there and in good shape. You know how hard it is on your temper to start stacking and then have the old rope pull in two the first load. Alfalfa is too high, and the work of getting it in the stack at the right time is too important, to put these matters off until the day we begin to hay.

***

Don't expect your colt to do his best if you don't feed him well. Have a separate feed box in the barn, where he can get a good feed of oats. You will find the well-fed colt the money maker.

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The above is an actual photograph taken at the Weitzen Farms, Rosetown, Canada. It shows the Hansmann Binder Hitch in use.

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The lamb, in order to be a profitable feature of business enterprise, should be well born, coming of vigorous, strong, well developed parents. It will be observed that this means not only good blood and breeding, but well kept, under proper conditions of care and feeding. The ewe, through all her period of gestation, should be in good, healthy form—active, vigorous, well fed and able to contribute to her unborn offspring all that nature intends her to. This places the flockmaster under the most favorable circumstances for a pleasant and successful lambing season.

The young lambs over the western country are usually held back for May as the most favorable lambing season. The cold winds of April, and not infrequently snow storms, are then past, and many lambs are thus saved that would otherwise readily fall the victims of exposure to cold and wet. The May start of pasture and the increasing mild temperature are the means of saving scores of lambs in all the large flocks that otherwise would perish from neglect or the lack of proper attention at the critical moment. The lamb flock should be carefully looked after, even when they are turned out with their mothers and supposed to be able to take care of themselves.

Docking and castration are necessities for the wellbeing and market advantage of the produce. With the careful, well trained flockmaster these flock duties should not be deferred until the lambs are several weeks old, but worked off each day or two, as fast as the lambs get straightened up and get to sucking properly and able to follow the ewe. Lambs taken when a few days old do not seem to suffer from the knife of the surgeon. They bleed but little and heal readily; seldom are they any trouble after operation. It is always best, however, to keep a careful lookout for any uneasiness that would indicate worms getting started in the wound. A little pine tar, lard and turpentine made into a salve and slightly smeared over the wound will keep the flies from troubling the lamb and will readily relieve when they have started.

Most flocks, large or small, will have some ewes that are light sucklers and need some help in raising their lambs, especially if they have twins. This is most easily accomplished by the use of the milk bottle and nipple. The stinted lamb will quickly learn to come for its feed. It is astonishing how rapid is the improvement under this little help. The good shepherd is always on the lookout for any little ailment or appearance of unthriftiness in the flock, and can detect these at a glance, so accurate has become his sense of observation in symptoms of disease.

The secret of successful sheep farming or management of the flock is to be able to grow a good crop of lambs. The sheep owner or shepherd who can produce a strong, well developed lot of lambs up to weaning time has attained the foundation of a good flock and a profitable business. If the lamb is not well started in the spring season it will be a stunted weakling throughout the summer, and this kind of a lamb comes up to weaning time looking bad and usually showing evidence of disease. This sort of lamb usually is infested with worms—stomach, intestinal or lung worms. It is a bad subject to start into the winter with. It is on the decline, and usually no amount of feed will do it much good unless it is cured of the ailments. Such lambs usually die about the beginning of winter or by the middle at least. The skillful sheep handler can get rid of this ailment, but a stunted lamb never fails in making a stunted old sheep, and there is no money made in buying this class of invalids, much less in creating them.

There is no better treatment for the flock than feeding a little turpentine. This may be done by giving some on the salt, or it can be given in teaspoonful doses, half and half raw linseed oil and turpentine once a day occasionally. This will be found sufficient unless they are coughing and weak. In this case they should be treated once a day for three days and this repeated in a week. It is quite important to secure the best of turpentine. There is considerable complaint of poor quality, adulterated turpentine that is not fit for this use.

Keep the ewes and lambs on good pasture where they have access to water at all times. Remember the old adage, "A change of pasture is good for sheep." This will apply equally well to all other varieties of animals, but especially are the sheep imposed upon because they are close grazers, and thin, closely-eaten pastures are regarded by some to mean just what they desire. This is a mistake. They do much better on full, fresh pastures.

Our Young People

(CONTINUED FROM PAGE EIGHT)

called school, and we ciphered and spelled down until nearly noon. By that time our mothers and friends had begun to arrive with the dinner.

We have a nice hall upstairs, so we spread the dinner on two long tables, and what a good dinner it was! We enjoyed it, I tell you. As our teacher said, even our shoes were tight when we got through. At the close of the dinner Miss B. treated all to fine oranges. Then we played drop the handkerchief until we were tired.

It had cleared by that time until we thought it was light enough to take some pictures, so we all went downstairs and got our pictures taken in a group. Then it was "goodbye" and go home. But wh a happy day it had been!

Where She Hid

By Minnie Kujath, Aged 11, Fa bury, Neb.

When I was only about 5 yea old my cousins came to see m There were three of them. We we playing hide and go seek and I w the seeker. I had them all exce one and we couldn't find her. W looked all over the yard, a mamma even went over to the neig bor's, but in vain. At last I thoug of the bedroom. We looked arou and saw a cloak lying on the floo I went to put it in its place, a what do you think I saw? My litt cousin fast asleep. She laughed a said she had hidden there while w were playing and gone to sleep. A ter having eaten their supper th went home, but we have never fo gotten the place she hid and I don think we ever will.

Additional Stories

Leslie Fusselman, Schuyler, Ne Emily Gould, Sidney, Neb.; Blanche To rey, Fairbury, Neb.; June Temperley, I vington, Neb.; Irene Gibson, Clar Neb.; Daisy Gruber, Avoca, Neb.; Fe Flowerdew, Enders Lake, Neb.; An Nunaber, Lindsay, Neb.; Madge Robert Rose Hill, Ia.; Myrtle Wolery, Whitin Ia.; Opal Pilser, Griswold, Ia.; Letha Dunaway, Chillicothe, Mo.; Goldia Pre ton, Centerview, Mo.; Vivian Cart Halstead, Kan.; Gerald Smith, Sterlin Kan.; Bessie Cheser, Fulton, S. D Claudine Moore, Ardmore, Okl.; Isabe Ward, Fowler, Cal.; Evadene Reed Brigham City, Utah.

Cause of Rainfall

(CONTINUED FROM PAGE THREE)

but its greatest usefulness would co sist in the fact that this vast amount surface water would increase the rai fall over the whole western half of t United States. By this means not a s gle acre of good farm land would be lo to cultivation, because none of the dams would fill the streams so full to make them seriously overflow the banks for any considerable period time.

With all this water stored up in creek and small streams, the ditching sloughs and lagoons, and the reclaim ing of swamp land, would not have su an injurious effect upon the climat since we would have almost or quite mucn surface water as we had for years ago, before so much of the swam land was placed in cultivation. It wou be better for the nation that the rainfa be increased, if possible, without givin up all our available swamp lands, whic are the most fertile in the country an which yield the most certain crops in dr years.

Providing Competent Judge

(CONTINUED FROM PAGE FIVE)

too many years in succession. Preju dices will arise often among exhibitor and the best of judges may become th target for criticism, be they ever s careful and honest in their decision Aim to get the best expert judgment fo your fairs in every department, no ma ter how trivial and unimportant this de partment may seem. If it is worth re ognition, give it the best skill obtain able, and it will develop into an attrac tion for many visitors.

Some states announce that their agri cultural college and extension divisio have arranged to furnish expert judge for their state, district and county fair and solicit this work for their represen tatives. This is all right, and no doub will prove of great service to the small fairs, but for the state fair, in its liv stock departments especially, the de mands are quite generally for outsid talent. These exhibits are open to th world, and stock from a dozen or mo states may be present, and local judge unless of national reputation and know ability, do not add to the influence an importance of the fair as a stock sho

A Sure Cure for the Mange

ABOUT this season of the year many farmers seem to have trouble with mange among the horses and mules, and to these we offer the following remedy ne with which we effected a cure so mplete on our own stock that the dis-se never has returned:

Shave a pound bar of soap (or use me-made soft soap) in a gallon of ter, preferably rain water, and boil the soap is thoroughly dissolved. To s add one quart of kerosene (coal oil) d one gill (one-fourth pint) of crude rbolic acid. Place these ingredients in churn, or any vessel with a closed top, d churn or shake it from ten to fif-n minutes—till it grows a sort of lky color.

Pour a pint of this mixture into about teen or twenty quarts of water, the ength of the solution being gauged ac-rding to the age of the animal and the ge of the disease. With a sponge or a cloth apply this mixture to the affected parts of the animals, working it well into the skin. One must be thorough in the application, and it should be repeated every day, or at least every other day, till all scales, pimples and mange have disappeared.

Keep all affected animals away from the other stock, as the disease is extremely contagious and quickly spreads through an entire herd; also be very sure that none of those treated for the ailment are left out in the damp or rainy weather. Again, the liberal and frequent use of some effective disinfectant around the stable stalls will greatly assist in checking the spread of the disease. Still another good point in favor of using this solution is the fact that it is a most effective fly repellant, and will amply pay for itself by protecting the horses from these troublesome pests.

M. COVERDELL.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

A. R. Barnes' Durocs

. R. Barnes of Petersburg, Neb., has head of Duroc-Jersey spring pigs at s writing, sired by Belle's Crimson nder, B. & L's Wonder, Belle's Big nder, Colonel Chief, Golden Model and others. He also has nine fall s and twelve fall boars all sired by grand champion, Belle's Crimson nder. Mr. Barnes will show some of se fall boars, and he also has several d ones that he is pricing worth the ney at this time. About fifty head the spring pigs are of March farrow. l the balance are of April and early y. Mr. Barnes has the reputation of ting the size and bone on his pigs we have no doubt but what he will e something mighty good to show spective buyers by the time they are dy to buy. The date of his fall sale October 14, and his winter sale is ruary 11. We will have something say regarding this herd from time to e, and we trust our readers will watch se columns for further announcents, and also write him when in need anything in his line.

Two Hundred Young Durocs

W. Lamb of Albion, Neb., has 200 d of young Durocs this season. Ninety d of these were farrowed from the to the 15th of March, and the balance to the middle of April. These 200 pigs re farrowed by twenty-nine sows, so will be seen that they are of the big er kind. The larger per cent of the s are sired by Riverview Wonder, a of Wallace's Wonder, out of a eeda Crimson Wonder dam. Mr. mb considers this boar one of the best eding boars he has ever had in his d. The balance of the spring pigs are B. & L's Wonder, Belle's Crimson nder, Queen's Wonder 2d, Red Chief nder 2d, Crimson Gano and others. Lamb will be found in the game at ncoln this fall and will have a line of ff to show that will be worth keeping mind. If everything goes well with pigs, he will certainly have a good e-up to offer his old and new custom-during the coming season. Keep his d in mind and watch these columns further announcements.

A Splendid Lot of Durocs

. P. Peterson of Genoa, Neb., has 125 d of Duroc-Jersey spring pigs this ar, and they they are one of the best s we have seen so far in our travels. . Peterson has a reputation for pro-ing the good ones, and from present ications, he is going to have the goods ain this year. About fifty head of his p of spring pigs are sired by Model tic, a splendid son of Critic B. Five ers are by Crimson Gano, a son of lonel Gano. The pigs sired by this ar are among the very best to be seen this farm. There are three litters by grand old sire, Red Chief Wonder, l one litter by the Nebraska champ-n, Medoc Junior. In Model Critic we nk that Mr. Peterson has quite a boar. is a big, smooth fellow with a strong, hed back, good even side lines and ssessing plenty of quality and style. is boar will probably be seen at the ows this fall. If you are looking for big, smooth kind that will go out d make good, keep this herd in mind for future reference. Also watch these columns for further particulars concerning this herd.

F. A. Lemmerman's Durocs

We called on F. A. Lemmerman of Creston, Neb., last week and spent a short time in looking over his Duroc-Jersey prospects. Mr. Lemmerman has been in the breeding business for some time and has succeeded in establishing a herd that is second to none in northern Nebraska. At this time he has 100 head of spring pigs, sixty-five of which are sired by Crimson Critic by Critic B, nine by Select Chief, seven by King the Colonel, six by Colonel Chief and eight by Golden Model 31st. Mr. Lemmerman will have a fall sale and also a winter sale, the date of which will be announced through these columns. He has a splendid line-up of pigs and has ample facilities for taking care of them and growing them out as they should be grown. With plenty of alfalfa and range and the exercising of good judgment in their care and feeding he is always able to show up a splendid lot of pigs for sale time. Keep this herd in mind and watch these columns for further information regarding what he will have to sell from time to time.

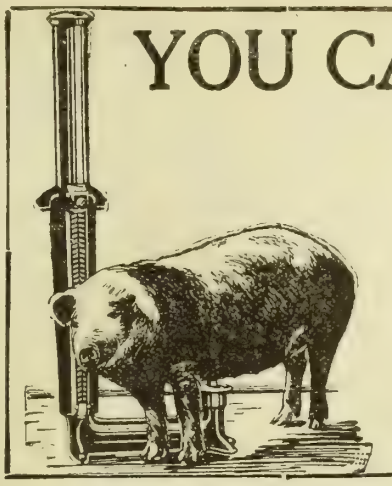
Kuzel's Durocs

We called on L. J. Kuzel of Clarkson, Neb., last week and found him having a round with the grip, but still able to sit up and talk interestingly about his herd of Duroc-Jerseys. He has about 125 head of spring pigs this year, sired by Lucy's Select, he by G. N. C's. Chief by Chief Select; Proud Wonder Junior, Colonel Sensation, Chief's Model, Wonder Lad, Beemer Model 2d and others. About 100 head of these are March pigs and twenty-five head are of April farrow. We want to say right here that they are one of the best bunches we have seen so far this year. Mr. Kuzel has eight fall boars to sell at this time. These boars are sired by Proud Wonder Junior. There are several good ones among them, and he is pricing them worth the money. We will have more to say regarding this herd in a later issue. In the meantime if you are in the market for something in the line of a fall boar, write Mr. Kuzel, mentioning the Twentieth Century Farmer.

Cedar Has the Goods

P. P. Cedar, the well known breeder of Duroc Jerseys at Genoa, Neb., has one of the best line-ups of Durocs we have seen on his farm for a good while. There are about ninety head of spring pigs of March and early April farrow. The sire of two-thirds of these pigs is Cedar's Critic 2d by Cedar's Critic by the champion Critic B., and out of a Red Chief Wonder dam. The balance are by B. V. Boy, a son of R. C. W.'s Topper. The pigs are very uniform throughout and are in a good, healthy, thrifty condition. If they keep coming along as they give promise of doing at this time, they will be worth keeping in mind if you are going to be in the market for something really first class a little later on. As an evidence of the character of stuff Mr. Cedar is producing, it is only necessary to point to a few of his winnings at the live stock show at Denver during the last winter. Here is a list of some of the winnings his herd made at that show: First and second on boars over 12 and under 18 months; fourth on boar over 6 and under 12 months; first on sow 2 years and over; first on sow over 18 and under 24 months; third on sow over 12 and under 18 months; first and second on sow pig over 6 and under 12 months; first on get of sire on Cedar's Critic and his two litter sisters; also champion sow. Mr. Cedar bought the champion boar at this show. This is Commodore Eustis, a son of Commodore Lad, and out of Wonder Queen by Red Wonder. This boar is a big, strong, smooth, heavy-boned, strong-

(CONTINUED ON PAGE EIGHTEEN)



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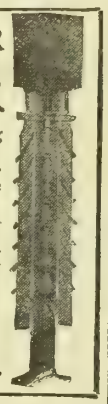

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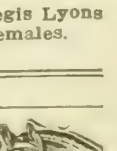

FRED CHANDLER, R. 7, Chariton, Ia.

Review of Live Stock Market

By A. C. Davenport

PRICES of cattle, hogs and sheep at present are very little different from this time last year. When the volume of receipts at the various markets is taken into consideration, the natural inference would be that prices would be higher, since there has been a steady decrease in the supplies of both cattle and hogs, although this has been in a measure offset by a moderate increase in the supply of mutton. The six leading western markets for the month of April show an aggregate decrease of 88,000 cattle and 182,000 hogs, as compared with April, 1913, while there has been an increase for the same month of about 116,000 sheep. For the four months at the same points the decrease in cattle amounts to 227,000 head and in hogs to 387,000 head, while for sheep there was an increase for the same period of 567,000 head. On the face of the returns it appears that the supply of beef and pork is decreasing, while mutton is becoming more popular as an article of diet. Indications are that the receipts of cattle in the west will fall short of any previous year for the last fifteen years at least, while dealers are generally looking for a slight improvement in hog supplies from now on, as well as a letup in the marketing of sheep.

Cows and Heifers High

A feature of the cattle market for the last three or four months has been the unprecedented demand and the exceptionally high prices paid for cows and heifers. This arises from the fact that cattle are scarce in the country and farmers and ranchmen are holding back their she stock for breeding purposes. For the last three or four months cows and heifers have made up considerably less than a quarter of the total receipts, and while this condition of affairs is rather favorable for the general cattle industry, it has disarranged market conditions to such an extent that prices for butcher stock have been relatively higher than for beef steers all spring. Cow stuff in previous years has in a large measure satisfied the popular demand for the cheaper grades of beef, and this demand recently has been intensified by reason of the high cost of living, so that the butcher has practically been caught between the upper and the nether millstones and has been forced to pay the highest prices for the cheaper grades of killing stock.

Along about the latter part of May or the early part of June, however, there is a promise of relief from this situation in liberal receipts of Texas grass cattle. These take the place of native cow stuff and as soon as the Texans begin running freely there is usually a sharp break in the price of native stock. The scarcity of veal calves also has been a hard blow to local butchers, since prices have been exceptionally high and at that they have been unable to meet the demand. It is hardly possible that very many Texas calves will be marketed this spring, as a calf is about the most valuable thing that grows on the Texas ranch. At all events, while prices for cows and heifers this spring have been the highest on record, the market is due for a break inside of the next fortnight.

Hog Situation Puzzling

The hog situation this spring has been a puzzle from every point of view. As usual, the big packers have been very bearish and have insisted that they would be unable or unwilling to put away very much product in their cellars unless the hogs could be bought around 8 cents or under. Notwithstanding this bearish attitude, however, the stocks of provisions have been accumulating in their cellars until they are larger than a year ago in spite of the smaller receipts, and this is explained by the disappointing home consumption of pork and the smaller exports. During the greater part of the winter and spring months the packers have been operating on a hand-to-mouth basis. That is, they have been taking care of their fresh meat trade and only packing away a convenient amount of stock They have been disappointed in the supply of hogs available, since most of them figure that the inroads by disease last fall seriously cut down the available supply. That the decrease since the first of the year has only amounted to about a third of a million head has been more or less of a surprise to everyone in the trade. Just at present sentiment is largely bearish, since advices from all parts of the central west indicate a big, healthy pig crop, with every prospect that the discoveries of science will enable farmers to carry through a large percentage of these pigs to maturity.

Beef Producers' Day

Nebraska stockmen are invited to attend the second annual beef producers' day at the Agricultural College on May 22. Figures will be ready on an experiment in feeding 2-year-old steers which was started December 12. Rations fed are as follows:

Lot 1—Corn and alfalfa

Lot 2—Corn, alfalfa and straw.

Lot 3—Corn, alfalfa and light feed of silage.

Lot 4—Corn, alfalfa and a medium feed of silage.

Lot 5—Corn, alfalfa and a heavy feed of silage.

Lot 6—Corn, alfalfa, heavy feed of silage at beginning, tapering off toward the close of the feeding period.

Lot 7—Corn, alfalfa, medium feed of silage and cold, pressed cottonseed cake.

Lot 8—Corn, corn silage and cold, pressed cottonseed cake.

Did you ever try whitewashing the inside of the horse barn, the mangers, stalls, sides and ceilings? If not, why not just try it and see how you like it?

Breeders' Notes

(CONTINUED FROM PAGE SEVENTEEN)

footed individual and if he keeps on coming as he should will no doubt be a factor in the shows this fall. Mr. Cedar will be out with practically a full show herd, so just keep him in mind when you are in the market for anything in his line.

Widle & Son's Durocs

While in the vicinity of Genoa, Neb., last week, we called on R. Widle & Son of that place and found them with a splendid lineup of Duroc-Jersey spring pigs. They have better than 190 head at this writing, and they are certainly a splendid lot, strong, thrifty, rugged little fellows, coming along in splendid form. About 100 head of these are sired by the champion, Critic B, and it takes only a casual glance to show the visitor that this boar is making good as a breeder of the big, strong, heavy boned, desirable kind. About fifty head are sired by Dusty Colonel, a splendid son of King of Colonels, and twenty-five by Critic C, a son of Critic B. Other litters are by Queen of Colonels 2d; Prince Muncie Colonel, a son of Crimson Wonder 10th, and others. Besides the spring pigs, they have about sixty head of fall gilts that are just simply hummers. Fifty of these are sired by Critic B, and ten by Valley Colonel by Prince of Colonels. This firm has as good a lineup as we have ever seen them have at this time of the year. They will have two sales during the coming year, the fall sale being on October 13 and the winter sale on February 8. In the fall sale they will sell about eighty head, consisting of approximately thirty head of spring boars, thirty fall gilts and ten spring gilts, and about ten fall boars. They will also have a full show herd for the fairs this fall, if all goes well. Keep this herd in mind and watch for further announcements through these columns from time to time.

Hinkle's Durocs

S. M. Hinkle of Genoa, Neb., has about fifty head of young Durocs at this time coming along in good form. Mr. Hinkle is one of the younger breeders, who has been taking a lively interest in the business during the last few years and who is establishing a herd that is on a par with those of many who have been in the breeding business longer than he. His pigs this year are a strong, even, growthy lot, and if all goes well, he will have a good lineup for his customers during the coming season. The pigs are sired by Crimson Wonder 10th, Colonel Tippy, Krueger's Golden Model and Hinkle's Colonel. One of the choice litters is by Crimson Wonder 10th and out of a dam by Uneeda Crimson Wonder. There are ten in this litter, and they are good ones. Another especially good litter of seven is sired by Colonel Tippy and out of a dam by B. & L.'s Wonder. In Hinkle's Colonel Mr. Hinkle has a very valuable young boar. He is a yearling and was sired by Crusader Colonel and is out of a Golden Model bred dam. He is a big, strong, rugged, smooth fellow and we believe he will prove a valuable acquisition to Mr. Hinkle's herd. Mr. Hinkle has at this time a couple of fall boars for sale, sired by Crimson Wonder 10th, and they are really first-class propositions. We have no hesitation in recommending him to someone wanting something in this line. If you are interested, write him for further particulars, mentioning The Twentieth Century Farmer.

F. B. Nelson's Durocs

We called on F. B. Nelson of Lindsey, Neb., last week and spent some time in looking over his herd of Durocs. Fred has about 108 head of little fellows at this time, and they certainly are coming along in fine shape. Along with these he has about forty-five head of fall gilts that are especially good. The fall gilts are practically all by the great show and breeding boar, Valley King. Two litters of the spring pigs are also sired by this boar. There is also one litter by Golden Model 4th, with nine good ones. Also two good litters by Chief Select, one of five and one of six. He also has a litter of nine good ones by Perfection by Uneeda Crimson Wonder, and one litter by Long Gano, and one by Invincible Chief. Mr. Nelson has recently purchased a new herd boar, Crimson Gano, a son of Colonel Gano. Here is a boar that will surely be heard from in the future if nothing happens to him. He will have the size, and as he has the quality to go with it, we predict that he will make somebody sit up and take notice at the shows this fall if he is brought along in proper form. Mr. Nelson will have two sales during the coming year, his fall date being September 30, and his winter sale, February 9. Keep this herd in mind and watch these columns for further announcements.

SANITARY MILK HOUSE

A concrete milk house helps the dairyman to keep his milk clean and sweet. Concrete is easily cleaned—does not absorb liquids which sour and contaminate the milk with odors. You can save money by using

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ASH GROVE LIME & PORTLAND CEMENT CO. PORTLAND ASH GROVE CEMENT GENERAL OFFICES KANSAS CITY, U.S.A.

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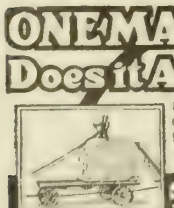
Self loading hay-rack. As essential to cheap and easy hay making as the hay loader. No one owning a loader can afford to be without it. Load car first and when car is full trip and car



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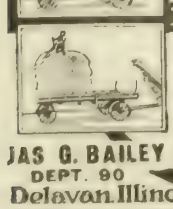

travels to front leaving rear half ready to load. Saves half of labor in loading and unloading as hay is divided in the center. When not haying car can be removed leaving rack for other uses. Pays for itself each season. Send for circular

JAS G. BAILEY DEPT. 90 Delavan Illinois.

Twentieth Century Farmer will not knowingly accept for publication any advertisement that is meant to deceive or mislead its readers in any way. Kindly inform us of any advertiser who does not do as he advertises.

THE MARKET PLACE

POULTRY—Baby Chicks

WHITE ROCK BABY CHICKS, each. Houdan and White Rock eggs, per setting, $5 per 100. George J. W cott, Central City, Neb.

BABY CHICKS—TEN VARIETIE Annual incubator capacity, 100,000. Eg for hatching from vigorous, farm-rang birds. Write your wants. Maplewo Farm, Exeter, Neb.

Bantams

GOLDEN SEABRIGHT BANTAM Eggs from prize-winning mating, 15 eg $2. Harold R. Hufford, Wayne, Neb.

BUFF COCHIN BANTAMS — FI little fellows, $2 per pair. Also Buff W andottes; eggs, $1 per 15. Satisfacti guaranteed. Order today. P. A. Th bald, Wayne, Neb.

Ducks

INDIAN RUNNER AND BUFF O pington duck eggs; also Light Brahm Circular free. Frank Healy, Bedford,

FAWN AND WHITE INDIAN RU ner duck eggs, $1 per 12. Heavy layi strain. E. Dooley, Selma, Ia.

Leghorns

EGGS FOR HATCHING — SINGL Comb White Leghorns, Rhode Isla Reds, White Holland turkeys and Ind Runner ducks. Chas. Cross, Sextonvil Wis.

SINGLE-COMB WHITE LEGHO eggs, 3½c each. Will Rockwell, H bard, Neb.

SINGLE-COMB BROWN LEGHO Eggs—$4, 100; $2.50, 50; $1, 15; from 200 year-old hens, mated with cockerels sc ing 93¾. Edward Dooley, Selma, Ia.

EGGS — ROSE-COMB BROWN LE horns, 15 for $1; 50, $3. Also cocker White Wyandottes, 15, $1. Geo. A. Ri ards, Route 2, Kearney, Neb.

SINGLE-COMB WHITE LEGHO eggs from trap-nested, high-record l ers, $1, 15. F. Strahan, Linwood, Neb.

Langshans

BLACK LANGSHAN EGGS—CIRC lar. Jake Hetrick, Wahoo, Neb.

EXTRA BIG-BONED, SCOR Black Langshans and eggs. H. Ost foss Farm, Hedrick, Ia.

Light Brahmas

LIGHT BRAHMA EGGS—15, $1; $2.50; 100, $5. Fair hatch guaranteed another order half price. Frank John, Bedford, Ia.

LIGHT BRAHMA EGGS—15, $1; $2.50; 100, $5. Mrs. M. Wall, Eddyvi Neb.

BLACK LANGSHANS AND HO land turkey eggs. Mrs. J. W. Johns Loup City, Neb.

Minorcas

BLACK MINORCA EGGS—FRANK Agnew, South Omaha, Neb.

Orpingtons

EGGS FOR HATCHING — SINGL Comb Buff Orpingtons, Toulouse gee Indian Runner ducks. Mating list fr Peter Brehm, Harvard, Neb.

EGGS FOR HATCHING FRO thoroughbred Buff and White Orpi tons; $1 per 15, $5 per 100. Chas. Le man, Wayne, Neb.

BUFF ORPINGTONS—FINE, FRE range flock; eggs, $4, 100; $2.50, 50; $1, Frank Kaiser, Daykin, Neb.

PRIZE-WINNING BUFF ORPIN ton eggs. Mrs. Cook, Eddyville, Neb.

ORPINGTONS—BUFF OR WHIT Eggs, cockerels. List free. Frank Lev Gibbon, Neb.

PURE-BRED, LARGE BUFF O pington chickens; best cold weather l ers, laying when all other breeds q eggs, 100, $5. G. Stewart, Henderson,

Plymouth Rocks

BARRED PLYMOUTH ROCK EG both matings. Pens 1, 5, $5 per 15; p 2, 3, 4, $2.50, 15; $4.50, 30; farm range, 15; $5, 100. Circular free. G. W. Feu stein, Fremont, Neb.

WHITE ROCKS — LARGE, GRE laying strain; eggs, 15, $1; 100, $4. G. Clauson, Mead, Neb.

BARRED ROCK EGGS FOR HATC ing, $5 per 100, $2.75 per 50, $1.50 per Fertility and safe delivery guarante Fred Kroeger, Carroll, Ia.

BARRED ROCK EGGS FOR HATC ing, 60c per 15, $3 per 100. Mrs. An Eklund, Waterloo, Neb.

PRIZE-WINNING BARRED RO Eggs—Cockerel matings, $2, 15; fa range, $1, 15; $5, 100; baby chicks, 12 each. Mrs. Geo. W. Schulz, Yutan, N

BIG REDUCTION — BARRED RO eggs, famous "Ringlet" strain fr Thompson's $10 matings—$1 per 15, per 100. Mrs. B. Taft, Norfolk, Neb.

CHOICE BARRED ROCK EGGS reduced prices for May. George Fra lin, Axtell, Neb.

BARRED PLYMOUTH ROCKS E clusively; choice, pure-bred stock; lected eggs, 100, $5; 50, $3. Safe deliv guaranteed. Adam A. Weir, Clay Cent Neb.

RATE—Five cents per word per issue. Cash must be sent with all orders

Count every word, initial and numeral, including the address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred five thousand farmers are regular paid-in-advance subscribers to TWENTIETH CENTURY FARMER. If you have any wants or if you have anything to sell, insert an ad. in this department.

POULTRY—Plymouth Rocks

WHITE ROCK EGGS—EXTRA GOOD laying strain. George Hellbusch, Belgrade, Neb.

Rhode Island Reds

SINGLE-COMB REDS—AFTER APRIL first eggs from prize-winning pens, $3, 15; $5, 30. Scott Covalt, Box O, Council Bluffs, Ia.

SINGLE-COMB RHODE ISLAND RED eggs, $1 per 15 eggs, $5 per 100. Delmer McCann, Arlington, Neb.

ROSE-COMB RED EGGS FROM EXhibition and utility stock. Free catalogue. George Ainsworth, Fremont, Neb

SINGLE-COMB REDS AT PIONEER Home—Large, dark red; heavy layers. Pens, $1.50 per 15; utility, $4 per 100. Mrs. John Hall, Valley, Neb.

SINGLE-COMB RHODE ISLAND RED eggs from pure-bred stock—$1 per 15, $5 per 100. Mrs. Chas. Kellett, Waterloo, Neb.

EGGS FOR HATCHING FROM SINgle-Comb Rhode Island Reds, $1, fifteen; $5 hundred. Mrs. N. Brodahl, Box 3, Wahoo, Neb.

SINGLE-COMB RHODE ISLAND Red eggs from prize-winning strain; $1 per 15, $4 per 100. R. A. HOOKS, Blair, Neb.

MOUSER'S REDS (BOTH COMBS)—Half price now for eggs and fancy breeding stock; baby chicks half price. W. I. Mouser, Red Oak, Ia. Route 5.

Wyandottes

WHITE WYANDOTTES—EGGS HALF price. Best strains in America. White Wyandotte Farm, Oscar L. Bock, Prop., Council Bluffs, Ia.

EXPRESS PREPAID ON OUR HIGHquality White Wyandotte and Indian Runner duck eggs. Cedar Lawn Poultry and Stock Farm, Fairfield, Neb.

WHITE WYANDOTTE EGGS—15 FOR $1. A. M. Neidig, Madison, Neb.

BUFF WYANDOTTE EGGS FOR setting. Mrs. Chas. Hough, Weston, Ia.

THOROUGHBRED WHITE WYANdottes—Eggs for hatching, $1.50 per 15. B. Carl Petersen, Avoca, Ia.

Miscellaneous Poultry

EGGS! EGGS! FROM THOROUGHbred turkeys, geese, Pekin, Rouen, Muscovy and Runner ducks, Pearl and White guineas, Bantams, Rhode Island Reds, Houdans, Games, White and Brown Leghorns, Hamburgs, White and Buff Orpingtons, White and Silver-Laced Wyandottes, Buff, White, Barred Plymouth Rocks, Cochins, Langshans. Hen eggs, 15 for $1. Also dogs, rabbits, fancy pigeons. Free circular. D. L. Bruen, Platte Center, Neb.

EGGS! EGGS! EGGS! THIRTYthree pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

ROTTEN EGGS—WE SELL NICE, fresh eggs from 26 varieties of chickens. Catalogue free. Aye Bros., Box 3, Blair, Neb.

EGGS—BARRED, WHITE, BUFF Rocks, Buff Orpingtons, Rhode Island Reds, White, Brown Leghorns, Black Langshans. Mrs. Frank Davis, Holbrook, Neb.

WYANDOTTES, LEGHORNS, ROCKS, Reds, Orpingtons, water fowls. Free catalogue. C. W. Brehm, Harvard, Neb.

LICE KILLER, BALANCED EGG Ration, Crate Fattening Ration. Formulas free with our monthly poultry magazine at 25 cents the year. American Poultry Instructor, 238 Campau Bldg., Grand Rapids, Mich.

EGGS FOR HATCHING—ALL VARIeties of Plymouth Rocks, Wyandottes, Rhode Island Reds, Orpingtons, Leghorns, Hamburgs, Brahmas, Langshans, Minorcas, Campines and Bantams; also ducks, geese and turkeys. Write for catalogue No. 11. Logan Valley Poultry Farm, Wayne, Neb.

SEEDS

ALFALFA SEED—DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

I AM IN THE MARKET FOR CLOver, timothy, alfalfa, cane and millet seed. Send samples. I have 1912 crop seed corn grown in Washington county, Nebraska. Werter DeVaughn, 1914 Harney St., Omaha, Neb.

FETERITA—HOME-GROWN, TESTED seed, re-cleaned, sacked. Greatest drouth-resisting crop. Matures in 75 days. Pamphlet telling how to grow—$2.75 single bushel, $4.50 per hundred. H. M. Hill, Sycamore, Kan. Route 1.

200 SWEET POTATO, 50 TOMATO, 50 cabbage plants sent prepaid for $1. Chas. Vanstrom, Edgar Greenhouse, Edgar, Neb.

LANDS—Arkansas

160-ACRE RICH CREEK IMPROVED farm; 60 cultivation, balance timbered—$20 acre. Sessions Co., Winthrop, Ark.

Colorado

WANTED—GOOD, LIVE REAL ESTate agents to co-operate with us in colonizing a 20,000-acre tract of good farm land in eastern Colorado near Platte river in the Shallow Water district, where the crop pays for the land in two years. Good commission to live agents. Write at once for literature. Platte River Valley Land Co., Omaha State Bank Bldg., Omaha. Neb.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

AM IN TOUCH WITH EASTERN buyers for farms and ranches. Send details with legal description and best cash price in first letter, allowing 2 per cent commission. Thomas Campbell, 530-32 State Bank Bldg., Omaha, Neb.

CASH FOR YOUR FARM OR BUSIness. I bring buyers and sellers together. Write me. Established 1881. Frank P. Cleveland, 1315 Adams Express Building, Chicago, Ill.

FARMS WANTED—WE HAVE DIrect buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

Florida.

YOU CAN SETTLE A COLONY OF your friends in Florida and make a fortune in two years. We have many large tracts suited to the purpose at a very low price and easy terms. A resident of Florida from Nebraska. Write for particulars. Address C, care Twentieth Century Farmer.

For Exchange

FOR EXCHANGE—RANCH NEAR Fairfax of 1,218 acres; fair improvements; 150 acres in cultivation, balance in hay and pasture. All good, hard land. Price, $30 per acre. Encumbrance, $18,000, 6 per cent, long time. Want income or small farm for equity. L. B. Scott & Son, 526 City National Bank Bldg., Omaha, Neb.

Kansas

WE OWN 13,600 ACRES IN FERTILE Pawnee valley, smooth as a floor; best alfalfa and wheat land on earth; five sets of improvements; shallow water; will sell 80 acres or more. Frizell & Ely, Larned, Kan.

320-ACRE FARM IN THE SHALLOW water belt of Scott county, Kansas. Improvements cost $3,500; half mile from railroad town with three elevators; all tillable; 170 acres in cultivation; black loam soil two feet deep; 120 acres now in winter wheat. Rented for half crop delivered. Price, $25 per acre; $2,000 cash handles it. We have cut the price $2,000 to sell it quick. L. B. Scott & Son, 526 City National Bank Bldg., Omaha, Neb.

Miscellaneous Lands

GOVERNMENT LAND SCRIP FOR Sale—Soldiers' additional land scrip in 40, 80 and 120-acre assignments. Can be located on vacant government land. No residence or cultivation required. Address Fred D. Mason, Security Mutual Life Bldg., Lincoln, Neb.

Minnesota

NORTHERN MINNESOTA—THE greatest natural cattle section; no drouths; alfalfa, clover, corn and potatoes are principal crops. Prairie or timber. Free information. We have no land for sale. Write W. R. Mackenzie, 904 Palace Bldg., Minneapolis, Minn.

100 CHOICE FARMS IN THE GARden spot of southern Minnesota, where corn is king. Price, $75 per acre and up Prices advancing rapidly. Come now. Free list. The Paffrath-Schmit Company, Springfield, Minn.

TODD—COUNTY OF CREAMERIES, corn and clover. For information write Van Dyke & Van Dyke, Main St., Long Prairie, Minn.

200 FARMS IN THE FAMOUS PARK region and Red River Valley district, Otter Tail and Wilkin counties. Level or rolling prairie land. Timber land. Any size farm you want from $30 to $80 per acre. Easy terms. Otter Tail county has never had a crop failure; 50,000 acres of corn last year, making from 30 to 70 bushels per acre. Natural clover and alfalfa country. Write for free booklet and lists. Park Region Land and Loan Co., Fergus Falls, Minn.

LANDS—Minnesota

CORN AND CLOVER LANDS IN central Minnesota. Low prices. Reasonable terms. Write Murray, Wadena, Minn.

Missouri

FOR SALE—BIG SHORTAGE CATtle—Big profit raising them. We offer exceptional bargains in Ozark county, Missouri, ranches. Cheap land; good grazing; plenty pure spring water; 40 to 50 inches rainfall. Tell us how many acres you want and we will send you particulars. Price, $6 to $8 per acre. Easy terms. Must not be undervalued because we do not overcharge for it. SCHREI & READ, 30 N. LaSalle St., Chicago.

Nebraska

FARM LOANS WANTED — QUICK sales, exchanges; large property list. Write John L. Maurer, Omaha, Neb.

GO WEST—FOR SALE, A 14,000-ACRE colonization tract. Will retail $12.50 to $25 per acre. This tract is scattered with fine farms, homes and showing splendid crops which we raise in that territory. This is a bargain for eastern real estate colonization agents or speculators—$8 per acre. Write for terms. Will split tract to suit. 522 State Bank Bldg., Omaha. Neb.

CHOICE 80-ACRE FARM, WITH $3,000 improvements, one mile from town, within 30 minutes of Lincoln. Easy terms. German neighborhood. Sickness cause. John L. Maurer, Omaha, Neb.

North Dakota

NORTH DAKOTA LANDS DIRECT to Purchaser—We have listed with us to sell several hundred thousand acres of choice North Dakota lands. In order to obtain settlers along our 1,200 miles of track in North Dakota we will sell these lands at cost. Prices are about one-fifth those asked in Iowa or Illinois and agricultural possibilities are just as great. Roads, schools, churches, railroads all established. Very low excursion rates. For literature and full particulars write J. S. Murphy, Immigration Agt., Soo Line Railway, Minneapolis, Minn.

NORTH DAKOTA, LAMOURE county, champion corn county of the state. Rich lands, yet low in price. We are owners. Tracts any size to suit. Easy terms. Catalogue of improved and unimproved prairie lands sent free. Special snaps for early buyers. Write Sheils & Weaver, Drawer F, Edgeley, North Dakota.

Oregon

DAIRYING AND HOG RAISING ARE the very greatest money makers. The feed grown around Ontario has the greatest nourishment. There's an abundant water supply for every use, and the very best. Butter-fat brings 5c per pound more than elsewhere. No diseases to attack either cows or hogs. The remarkably fertile soil, the ideal climate, the wonderful transportation facilities and fine local markets are superior points of merit worth careful consideration. Excursions first and third Tuesdays of each month. Fine illustrated folder free. Oregon & Western Col. Co., 536 Paxton Block, Omaha, Neb.

OREGON STATE PUBLICATIONS Free—Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions; they will have painstaking answers. We have nothing to sell. Address Room 94, Portland Commercial Club, Portland, Oregon.

South Dakota

BARGAINS—GOOD DEEDED INDIAN land—160 acres in Bennette county and 80 acres in Tripp county, South Dakota. Owner, Luther S. Bear, care Hicks, Fuller & Pierson, Sioux City, Ia.

Wisconsin

UPPER WISCONSIN—BEST DAIRY and general crop state in the union. Settlers wanted; lands for sale at low prices, on easy terms. Ask for booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

78-ACRE LAKE SHORE FARM with stock, tools, machinery, crops and household goods, at only $4,000. Clay loam soil, level surface, 6½ miles from town. Good buildings and field. Frame house 16x30 and 12x12, frame barn 16x48, with silo; 2 horses, 10 head of cattle. One mile from school, creamery and store. Fine farm at low price for quick sale. Come at once. Martin Yde, Milltown, Wis.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

U. S. GOVERNMENT JOBS OPEN to men and women. Over 15,000 appointments coming; $75 to $150 month. Life jobs. Pleasant work. Short hours. Vacations. Common-sense education sufficient. Full directions telling how to get position free. Franklin Institute, Dept. G-93, Rochester, N. Y.

WANTED—A MAN TO SOLICIT SUBscriptions for Twentieth Century Farmer; salary $42 a week. Address Circulation Manager, Twentieth Century Farmer, Omaha, Neb.

THE AUTOMOBILE BUSINESS PAYS $25 to $50 wekly. We teach you how Write for our free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

BOYS, EVERYWHERE—$1 TO $10 week after school; 2c stamp for samples and particulars. Card Novelty Co., 312 W. 23d St., New York, N. Y.

GOVERNMENT FARMERS WANTED—Make $125 monthly. Free living quarters. Write Ozment, 39 F, St. Louis, Mo.

YOUNG MAN, WOULD YOU ACCEPT and wear a fine tailor-made suit just for showing it to your friends? Or a slip-on rain coat free? Could you use $5 a day for a little spare time? Perhaps we can offer you a steady job. Write at once and get beautiful samples, styles and this wonderful offer. Banner Tailoring Co., Dept. 731, Chicago.

WANTED — RESPONSIBLE PARTY to take charge of our business in each county handling sale of Automatic Combination Tool, a combined wire fence stretcher, post puller, lifting jack, etc. Lifts or pulls 3 tons, weighs 21 pounds. Sells readily to farmers, shops, contractors, etc. No experience necessary. Descriptive catalogue, prices and terms free upon request. Harrah Mfg. Co., Drawer O., Bloomfield, Ind.

MISCELLANEOUS

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

FREE FOR SIX MONTHS—MY SPEcial offer to introduce my magazine, "Investing for Profit." It is worth $10 a copy to anyone who has been getting poorer while the rich richer. It demonstrates the real earning power of money and shows how anyone, no matter how poor, can acquire riches. "Investing for Profit" is the only progressive financial journal published. It shows how $100 grows to $2,200. Write now and I'll send it six months free. H. L. Barber, 472, 28 W. Jackson Blvd., Chicago.

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

FENCE POSTS AND LUMBER Direct to consumer. C. J. Coleman, Sand Point, Idaho.

DAIRY FARM CO., 1201 FARNAM, Omaha, makes big inducements to practical farmers who believe in corn—silo—milk pail—hog—route for sure money in farming.

ANY FILM DEVELOPED, 10c PER roll; prints, 2c to 5c. Cameras and supplies. Photo Craft Shop, 4160 Bee Building, Omaha.

HARNESS AND SADDLE BUSINESS, county-seat town, Wyoming; stock about $5,000; brick store—$3,900. Profits about $4,000 a year; no competition; will bear investigation. G. W., care this paper.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex. $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Kan.

HOLSTEIN FRIESIAN BULL CALF for sale. J. C. Schmucker, Swanton, Neb.

DOGS

FOR SALE—SCOTCH COLLIE PUPS, $5 and $6. Eugene Burkett, Herman, Neb., Washington Co.

FOR SALE—COLLIE pure-bred Collie pups of size and quality. Satisfaction guaranteed. Justus Johnson, Loomis, Neb.

SCOTCH COLLIE PUPS—THE KIND that make good. Clarence Allen, Dawson, Neb.

Great Singers Must be "Tobacco Wise"

Tuxedo is the Tobacco Chosen by Opera Stars

MEN who depend upon their voices come to know tobacco as the ordinary smoker never knows it. A sensitive throat or mouth feels the slightest sting, bite or scorch of tobacco.

Tuxedo is *the one* tobacco which singers, actors, public speakers—all men who guard their throats zealously — can smoke with pleasure and safety.

Tuxeco tobacco *cannot* sting, bite or irritate the delicate membranes of the mouth or throat.

CARL GANTVOORT

Carl Gantvoort, who has a leading role in the revival of the Smith-DeKoven opera, "Robin Hood," says:

"I always fill my pipe with Tuxedo. Tuxedo and I are firm friends."

Carl Gantvoort

DONALD BRIAN

Starring in the "Marriage Market," says:

"I have found that the use of Tuxedo does not interfere with my singing. On the contrary, I've never indulged in a more satisfying, more really beneficial smoke."

Donald Brian

Tuxedo

The Perfect Pipe Tobacco

Tuxedo tobacco has made thousands of men converts to the pipe, because it has made pipe smoking possible for them. Under the famous "Tuxedo Process" the mild, tender leaves of the highest grade Burley tobacco are so skillfully treated that Tuxedo burns slowly and affords a cool, mild, thoroughly enjoyable pipe smoke.

Leading men in all walks of life—well-known doctors, lawyers, ministers, lecturers, etc.—smoke Tuxedo and testify to its soothing influence on the throat.

YOU CAN BUY TUXEDO EVERYWHERE

Famous green tin with gold lettering, curved to fit the pocket **10c**

Convenient pouch, *inner-lined* with moisture-proof paper . . . **5c**

In Glass Humidors, 50c and 90c

THE AMERICAN TOBACCO COMPANY

Illustrations are about one-half size of real packages.

GEORGE LYDECKER

George Lydecker, who contributed much to the success of "The Girl from Montmartre," at the Criterion Theatre, says:

"My voice derives real benefit after a pipeful of Tuxedo. Its soothing qualities are undeniable and its very mildness removes all chance of harmful effects."

George Lydecker

FORREST HUFF

Forrest Huff, who played one of the chief roles in "The Merry Countess," at the Casino Theatre, says:

"Tuxedo is miles ahead of any other tobacco I've ever tried. I prescribe Tuxedo any time as a throat-soother."

Forrest Huff

JACK HENDERSON

Jack Henderson, the clever singer who appeared in the "Pink Lady" production, says:

"Loud cheers for Tuxedo. My favorite—always. I put new zest into my singing after a pipeful of Tuxedo. I find Tuxedo a real voice help."

Jack Henderson

J. HUMBIRD DUFFEY

J. Humbird Duffey, who plays the Hero role in Werba and Luescher's production of "The Rose Maid," says:

"Tuxedo surely is the singer's smoke. Cool and smooth, it helps the voice, and it's a wonderful nerve rest. I recommend Tuxedo highly to all singers."

J. Humbird Duffey

TWENTIETH CENTURY FARMER

A·MAGAZINE·FOR·THE·MEN·AND·WOMEN·OF·THE·FARM·

Five Cents the Copy | Omaha, May 23, 1914 | Number 702

Prattle of the Youngsters

Like Mother

Mother—Helen, little girls must not talk all the time at the table.

Helen—When will I be old enough to, mother?

Hard on Kitty

Grannie—Why should I take another chair, Gerald? Don't you think I'm comfortable here?

Gerald—Yes, gran'ma, but I'm afraid my little kitten isn't; she's there, too.

Had a Good Excuse

Mother—Tommy, if you're pretending to be an automobile, I wish you'd run over to the store and get me some butter."

Tommy—I'm awful sorry, mother, but I'm all out of gasoline.—Judge.

In Their Steps

"Look here, now, Harold," said a father to his little son, who was naughty, "if you don't say your prayers you won't go to heaven."

"I don't want to go to heaven," sobbed the boy; "I want to go with you and mother."

Comforting

It was after the distribution of prizes at a Sunday school.

"Well, did you get a prize?" asked Johnny's mother.

"No," answered Johnny, "but I got 'horrible mention.'"—Ladies' World.

His Devotional Attitude

Eight-year-old Donald was usually restless in church, so his mother was doubly gratified one Sunday morning to see him sitting with clasped hands and bowed head throughout a lengthy prayer. When later she expressed appreciation of his attentive manner, the boy's face softened with a pleasant memory. "That fly," he chuckled, "walked in and out of my hands exactly 270 times!"—Harper's Magazine.

Starting Over

A well known preacher was making a pedestrian excursion in Connemara. Feeling rather hungry, he looked at his watch to see if it was nearly dinner time, but found the watch was stopped. Just then, happening to meet with a country boy, he asked him:

"What time is it, my boy?"

"Just 12, sir."

"Only 12," said the minister. "I thought it was more."

"It never is more 'round these parts," said the boy, simply. "It begins again at 1."

She Was No Easy Mark

Martha is 7, and has shown more than the ordinary childish aversion to learning lessons, being washed, and having curls made smooth and shining, and less than the average delight in fairy tales. One day, upon her return from Sunday school, she was questioned as to what she had learned from her nice teacher this time. She cried out with flashing eyes and an indignant toss of her pretty head, "Why, mamma, my teacher told me today that story about the children of Israel walking across the Red sea and not getting theirselves wet one single bit—and she expected me to believe it!"—Lippincott's.

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Does the Silo Really Pay?

NOW and then we hear someone say that the silo is a grand thing as a selling proposition, but that it doesn't put good money into the pockets of anyone but the manufacturer and salesmen. Still others contend that a modern farm cannot be properly run, on a strictly business basis, without the use of the silo. Which of these classes of people is right? The farmer and feeder has a right to know the true value of the silo before he invests.

Being deeply interested in this question, we have been making an investigation as to just how must the silo pays its owner on his investment, what crops are best to raise for silage, and other questions relating to the silo and silage. Our method of investigation has been much the same as pursued in looking into the matter of hog cholera. We have sent a man, who has had practical experience of many years' standing in farming and feeding live stock, out onto the farms of Nebraska, Iowa and Kansas. He has talked to the silo owners and got their views and experiences. He has not chosen certain silo owners, but has gone from place to place, talking with the owners of silos of many kinds and learning what these men think of them. He has listened to some very interesting experiences and obtained some figures that ought to make live stock feeders sit up and take notice.

In the next issue we will run the first of this series of articles. They will appear thereafter during the summer, not in every issue, but from time to time, and we believe they will prove of great value to our readers.

Bright and Breezy

As One Who Knows

Figg—Does your grocer sell his apples by the barrel?

Fogg—Well, they come in barrels, but what he sells them by is the top layer.

Time's Changes

The big fly and the little fly were promenading across an expansive bald head, and the big fly remarked to the little fly: "See this fine, wide boulevard here? I can remember when it was nothing but a narrow cowpath."

Circumstances Alter

When father drove old Dobbin he sat upon his load and frowned on every chauffeur who wanted half the road. When father got an auto his feelings seemed to switch; he glared at every horse he met unless it took the ditch.

Oh, Never Mind

Mrs. Schoppen—Blackberry jam, 30 cents a jar! My, isn't that jam jear?"

Mr. Sands—Isn't it what?

Mrs. Schoppen—I say, isn't that dam jear—er—I mean, isn't that dam dear. Oh, never mind!"

Important Role

"We want your little girl to take part in a patriotic spectacle. The children will dress in red, white and blue, and form a human United States flag."

"Can my child take a leading part?"

"Sure; she can be one of the stars."

Hunting Him Up

Senator William P. Frye of Maine and Senator Charles Curtis of Kansas had been having a long and somewhat heated discussion as to the authorship of some of the works attributed to Shakespeare.

"Well," said Senator Frye, with finality, "when I die and go to heaven I will hunt up Shakespeare and ask him about it."

"Suppose you do not happen to find Shakespeare there?" suggested Senator Curtis.

"Then you can ask him," answered the Maine senator as he passed quickly out of hearing.

Reversing the Code

"What do you mane by writing me that my Jimmie can't pass into the next grade?" stormed an irate female, bursting into the principal's room. "An' after him doin' such grand work all the year."

"Why, Mrs. Flaherty," replied the teacher, "you must know better than that. I've sent you his report cards every month and you know that his marks have been nearly all 'Ds'."

"Indade they have, and yit you say he can't pass. I don't understand it, mum."

"I am afraid you don't understand our system of marking. D means deficient, you know."

"Sure, I don't know phat that may be, mum, but Jimmie told me all about the letters. Sure 'D' is dandy, 'C' is corking, 'B' is bum an' 'A' is awful—an' he's got 'Cs' an' 'Ds' ivery month."—Harper's Monthly.

THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

"Back to the Soil"---The Slogan for Suckers

What Happens to the City Man Who Tries Farming in Texas Without Money or Experience

By Chester T. Crowell

THE editor of an agricultural journal receives an enormous amount of printed matter (commonly called "literchure"), each article under the caption of "Back to the Soil." He can go out any road from his office and meet a score or more of the victims of that sort of buncombe before he has traveled fifty miles.

For instance, southwest Texas is littered up with ex-school teachers, ex-salesmen, printers, clerks, bookkeepers, and the Lord only knows what all, who have invested their money in the first payment on land. They are now trying to learn to farm before the next note falls due. Sometimes I think it is funny and sometimes I could cry over it. If all the homeseekers who have come to Texas in the last ten years were yet in Texas, New York would have to sit back and wait for returns from this state before knowing who was elected president.

The population of this part of the state is growing at a tremendous rate, but that does not alter the fact that every year thousands of "back-to-the-soil" victims lose all they have and return to the cities to go to work.

Capital and Experience Needed

As a business proposition for a man of small means and small experience I think a small farm does not come anywhere near equaling 4 per cent from a savings bank and the same old job in the city. As an investment for $100,000 or $1,000,000, the farm has no equal upon the earth. I cannot understand why active men with large fortunes are willing to accept the small returns they get out of railroad stocks and bonds or other good securities when they could make the same investment in farm properties in the south or southwest and get 10 per cent to 12 per cent on their money. They could live in New York just the same as though clipping coupons or receiving dividends.

In the matter of requiring capital, a farm is just like any other business. A man with a large sum to invest would, in the first place, buy a ranch at ranch prices—$5 to $15 an acre. The small farmer would buy a small piece of a ranch from the land company selling it and he would pay $65 to $250 an acre; not according to the value of the land, but according to how much "back-to-the-soil" dope he had absorbed.

The large investor would have every modern improvement and convenience, together with the scientific instruments that a man owning a small farm cannot afford. And, above everything else, the large investor would have the services of salaried experts, both in the producing and selling end of the business.

The man in charge of the selling end would sound out the markets, make his forecasts, and tell the producing expert which crops to grow or what live stock to feed, just as the market dictates the activities of a manufacturing plant. The small farmer plants cotton until he gets a low price, and then plants corn, when as a matter of fact another cotton crop might have been the very wisest selection in spite of last year's disaster. But he has not the information on which to act; it costs too much. He goes by guess or by such childish rules that the buyers know just what he is doing or is going to do without even asking him a question, while he never knows what they have, or what they need, or what they can afford to pay. The government tells the buyers what the farmers are doing, but the buyers sit tight, and, like Bre'r Fox, "don' say nuthin'."

Buying a Job

The principle of "let the buyer beware" p-plies to land today in no less a degree than it applied in the stone age. Honest representation as to conditions or values should never be expected from a man selling farm land, no matter what may be his moral standards along other lines. And of all the outrageous insults to intelligence I know of it seems to me there is nothing worse than the currently accepted proposition that if land will return a net profit of $20 a year it is worth $200 an acre. Multiply the net returns in a good year by ten and you have what is supposed to be the value of land. No wonder people have gone to the cities!

The man who intends to farm sixty to 150 acres of land is merely buying himself a job. He may employ some help, but he, too, must work. His work is not to be figured in. He is then in one of the most uncertain businesses in the world—exposed to the elements, the insects, not to mention the fungi, and constantly menaced by the law of supply and demand. Yet he must pay for this job, with its uncertain returns, a sum ten times the annual income to be expected provided everything goes all right. On that basis the city man drawing a salary of $2,400 a year ought to be required to invest $24,000 in the business in order to get his job. And even then he would have the better of it, because there might be a dividend on the stock, while the land owner sees the increased value of his property only in the form of increased taxes until he sells the land.

Land Values Too High

It is my firm opinion that this whole country has an exaggerated notion of the value of land. There is more than we can use for a quarter of a century even with unabated immigration, and yet the market is always bullish—except when one tries to get a money lender to advance funds needed for improvements. In my part of Texas 10 per cent is the accepted rate of interest for farm loans, and money is frequently so scarce that the farmer will pay from 2 to 10 per cent more for brokerage, or to get some person whose credit is better than his to sign the note with him.

One of the commonest selling talks for the semi-tropical belt of southwest Texas, where anything can be grown twelve months a year under irrigation, goes something like this: "When you get this land cleared and leveled and your ditches dug you can get a crop of onions that will return net $500 an acre. One crop will pay for the land. The price is $150 an acre."

Now, the fact of the matter is that the land has been selling for $5 or less an acre ever since I was born, and the ranchmen used to beg people to take it at 50 cents an acre. A lot of the titles were clouded at one time because it wasn't worth paying taxes on. But if you will pay $15 to $25 an acre to get the mesquite brush off it; if you will bore a well or install a pumping plant on the river, or pay $6 to $10 an acre a year for water forever, and then locate a tank—which is no good if it happens to be at the wrong end of the farm, as thousands of them are—and if you will run ditches, for the elevations of which surveyors charge money; if you will level the land so the water will run over it properly, and, in short, put that land through fifty years of history, lifting it out of the ante-bellum days into the twentieth century you can get a crop of the finest onions in the world off that land. But why should you pay $150 an acre for the privilege?

Then, if the market is all right, you will net back $500 an acre. But for two years the market has not been all right, and estimates vary as to how many hundreds of thousands or millions of dollars were lost in those years. Many of those who lost are now back in Kansas City and Chicago and other places. If they had the capital to go on through two failures, good prices for their stuff would offset bad seasons and the average annual profit for ten years would be anywhere from 10 to 20 per cent. But the little fellow with notes to pay on his place cannot stand a bad season (to which he is especially liable because he lacks experience), and he has been misinformed as to cost of getting his land into shape for crops. Whenever he has a good season he needs the money to pay debts or buy machinery or build a barn or something. If the crop or the market fails he is ruined or falls into the hands of the loan sharks, and after that nothing but success at a roulette wheel can wipe out his debts.

This applies in a fairly general way, I think, to all parts of the United States, where the "back-to-the-soil suckers" are landed by the trainload and invited to ask questions of the "farmers" thereabouts, who are renting automobiles to the land agents at $25 a day.

Brains Needed to Farm

It would be well, indeed, if more of the population were back on the farm; but the conditions are too onerous. A friend of mine, J. C. Minus of Asherton, Tex., formerly an army officer, now president of the Southern Texas Truck Growers' Association, recently said to me: "When I came out of West Point I thought I knew a few things, and after several years of active service in the army, during which I chased some Filipinos, I was convinced I did

(CONTINUED ON PAGE SIXTEEN)

Pure Milk for Home and Sale Purposes

Review of a Few Facts Generally Known, but Not so Generally Observed

By D. C. Clarke

SOLID food materials can be washed: milk cannot, yet milk often contains many impurities because little care is taken in handling it. Most of the impurities in milk get into it before it is taken from the stable. They may come from the cow, the milker or the air. A cow gets more or less dirty whether kept on a pasture or in a feed lot. Caked dirt on the udder, loosened by the milker, falls into the milk, increasing the likelihood of disease from its use. Dairy employes should be healthy, as unhealthy persons working in a dairy are likely to transmit diseases to users of the milk. Moldy bedding may cause unwholesome milk.

It is impossible to get clean milk from dirty cows. Fill up the mud holes in the pasture and in the cow lot. Remove all injurious plants and never pile garbage where the cows can get at it. The udder and the lower part of the body of every cow need a thorough cleansing before every milking. This can be done easily and quickly with a good brush and a damp cloth. Milkers should wear clean clothes and milk with clean, dry hands. In many good dairies the milkers' suits are kept in or near the dairy barn and are worn only while milking. Dairy uniforms need frequent washing.

Keeping Germs from Milk

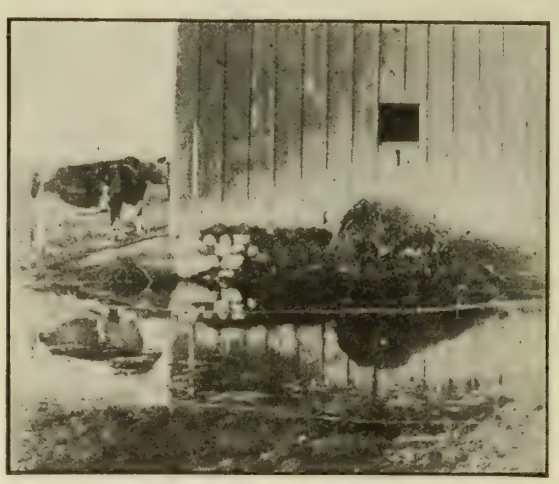
The cow barn should be well lighted and well ventilated. If the air in a stable is full of dust and germs, more or less of them will get into the milk. To avoid them, never feed dry, dusty feed immediately before milking, and keep the floors, walls and ceilings of the barn clean and dust tight. In dry, hot weather the floor may be sprinkled to keep down the dust and the temperature.

Good ventilation helps keep the cows healthy, and plenty of windows allow the sunshine, so fatal to disease germs, access to the stable. A good dairy barn must be well drained. The floors must be smooth and impervious, with wide but shallow gutters just behind the stalls. Feed should be kept in a bin away from the stable.

Things that Affect Milk Flow

Few healthy cows produce unhealthy milk. Such foods as garlic, sour ensilage, green rye or wheat or turnips may cause disagreeable odors in milk. Excitement affects both quality and quantity of dairy cows' products. These animals are easily excited, and brutal treatment greatly decreases the milk flow. Lack of care causes undesirable changes in the character and amount of milk given. Leaving cows out in a bad storm decreases the amount. Allowing the cows to be worried by dogs has the same effect. Change of feed affects the amount slightly.

Pure water and lots of it is essential on the dairy farm. Tests for tuberculosis should be made every two years or oftener by a skilled veterinarian. Always give the dairy cow plenty of good, easily digested food, but do not feed too much at a time.



Stagnant Pool, Breeding Mosquitoes and Disease Germs

Cooling and Straining

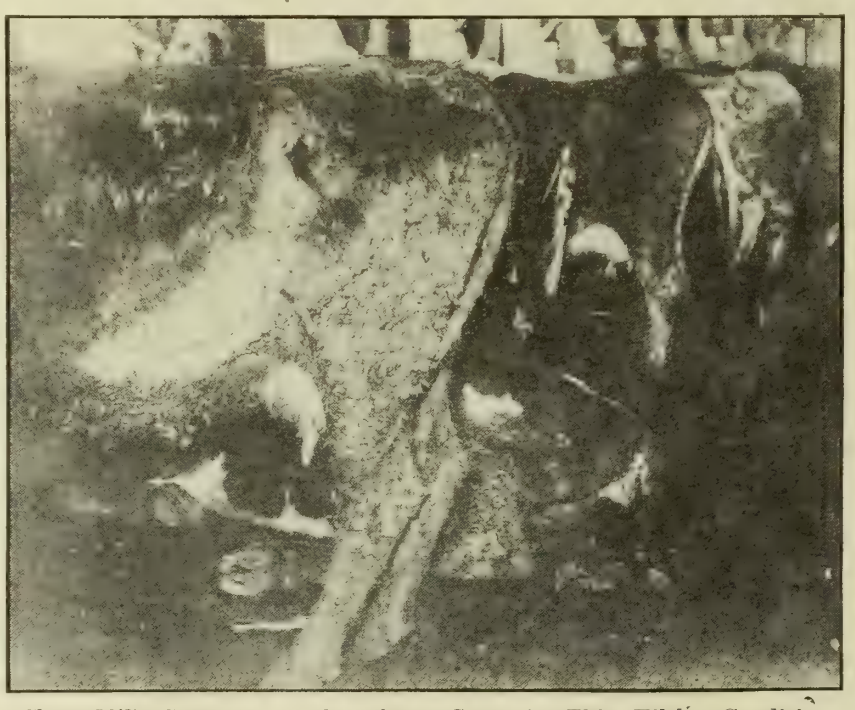
Milk when first secreted is sterile, but some bacteria get into it before it is drawn. Usually the first few streams contain large numbers of germs. For this reason many dairymen discard the first four streams from every teat. Milk should be strained, removed from the stable and cooled as soon as drawn. Prompt cooling keeps down the number of bacteria, and if bottled as soon as cooled an even distribution of the butter-fat in the milk is obtained.

The milk strainers should be made of brass wire and have about fifty meshes to the inch. The wire strainer should be supplemented with two or three thicknesses of cotton or wool cloth. The cloth will remove practically all fine dirt and some of the bacteria. Strainer cloths need careful cleaning and new ones need to be supplied often. If milk is exposed to fresh, pure air while being cooled, most of the disagreeable odors will disappear. Many coolers and aerators are on the market, some of which accomplish this purpose well.

Proper Milking Vessels

Milk pails should have small tops. Milkers soon learn to use such pails, and the small tops, one-third to one-half covered with visors, keep out lots of dirt.

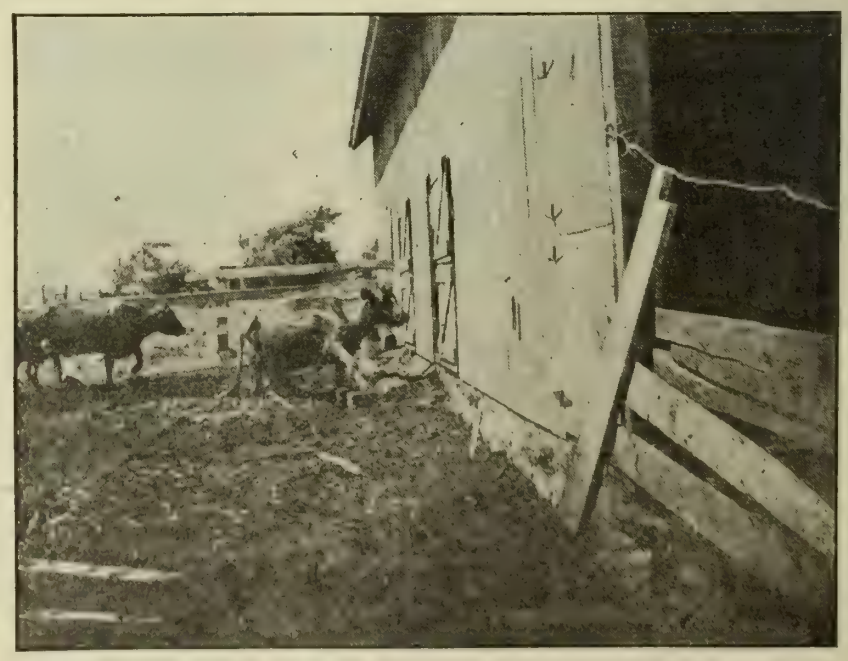
Seams in milk vessels should be avoided; they are dirttraps. Heavily-tinned vessels, rinsed with lukewarm water immediately after the removal of the milk, washed with hot water and soap or cleaning powder, rinsed with hot water, and exposed to steam for a minute or two, and then to sunlight for two or three hours will never harbor harmful germs. With this treatment they will keep bright in appearance, if steamed until thoroughly hot and hung so that they will drain well and dry quickly.



Clean Milk Cannot Be Taken from Cows in This Filthy Condition

Photographs by courtesy of U. S. bureau of animal industry.

Milk Cans Stored with Paint and Oils Carry the Odors, Which Are Absorbed by the Milk, Causing an Unpleasant Flavor



Dirty Barnyard Wasteful of Manure and Increasing Expense of Keeping Cows Clean

Hog Cholera---Prevention and Treatment

VI---County Demonstrators and Special Veterinarians Employed by State May Offer Valuable Aid

IN PREVIOUS articles we have spoken of some needed sanitary and quarantine rules and regulations. Penalties should be provided for violation of any of these rules, and it must be made known that the rule means what it says. We believe the farm demonstrator should be given authority to look after their enforcement in his county. He has the signed pledge of the farmer who belongs to the anti-hog cholera club and would be in position to do more with this man to get him to do the necessary things than any other person.

In the enforcement of these rules and regulations force should not be used except when it would be absolutely necessary. We believe that if the hog raiser could be shown the necessity of strictly obeying these rules and the advantage not only to himself, but to his neighbors as well, very little trouble would be experienced in their enforcement. It is no disgrace for anyone to have hog cholera on his premises, but it is a disgrace to be a means of communicating it to your neighbor's herd.

What Kind of Demonstrator

A word here about the farm demonstrator. He should be farm raised and should have had experience in handling hogs and other stock on the farm. If possible, he should have some ability as a speaker, be thoroughly conversant with his subject and ready and able to answer questions that may be asked him at the meetings. He should be a man well trained in the treatment of hog cholera, know how and when to use both serum and virus and be able to give instruction in its use. He must be courteous and accommodating and never be a man who carries the "I-know-it-all" way with him. A man who thinks it is his only duty to impart knowledge is sure to fail.

The cleaning-up process after the disease is one of the very important things to do. To see that this is properly done, and show the farmer how to do it, should be one of the duties of the farm demonstrator. Many an outbreak of cholera has been caused because of slack methods in the cleaning-up process.

Shipping from Infected Premises

Under no circumstances should a hog be shipped for breeding purposes from a cholera-infected herd until at least thirty days from the time the premises are thoroughly cleansed and disinfected after the disease is wiped out, and then such hog to be shipped should be dipped or well sprayed, and the crate disinfected. The party receiving a new hog into his herd should never fail to put the pig received in quarantine for at least three weeks. Always thoroughly disinfect the crate and burn all the bedding or litter that may come in the crate. By keeping the hog in quarantine we do not mean just in a separate pen in the lot where your hogs may be running, but put it in a distant part of the farm where none of your own hogs can get near it during the three weeks' time. Animals shipped from well herds often come in contact with diseased animals in being transported on the railway trains, and many an outbreak of cholera is caused in this way.

A word to our breeders who are showing their hogs at the fairs: Before leaving home arrange a quarantine for the hogs you have at the fair. Don't bring hogs home from any fair and put them back into the herd without a three weeks' quarantine.

Many of these things are known to our hog men and farmers, but they have many matters to think about and to forget. The farm demonstrator can make himself valuable by having these things all in mind and by giving timely reminders to the farmers and hog men.

In connection with the work of education and sanitary measures, this paper advocated the adoption of the plan for the live stock sanitary board to employ, on yearly salary, one or more competent veterinarians, who shall be under the direction of the board, through the state veterinarian. The work of these men should be to go into any locality where there is an outbreak of cholera and give the matter careful attention. It should be their business to assist the farmer in treating this herd and to take such measures as are necessary to confine the outbreak to this particular herd. We advocate the employment of none but competent men, men who have been especially trained along this line, men who will work and try to better train and equip themselves that they may the better assist in the work in hand. What we said in a former article about the state veterinarian is applicable to these special men. They should be paid according to their ability, and be men with ability enough to command a good salary. These men should work with the farm demonstrator at the school house meetings in instructing the farmers. When they go into any locality where there is an outbreak of hog cholera, let them arrange a meeting of the farmers of the locality at the school house and, in conjunction with the farm demonstrator, explain that there is an outbreak of hog cholera, talk the matter over and tell the farmers what is best to do to keep the disease from spreading and assist them in doing it.

These men, being under the authority of the live stock sanitary board, should know that their job does not depend on any political situation whatever; that it does not make any difference to them, as far as their position is concerned, who is elected governor or who is elected to any other office. The thing that will make them secure in their position is efficiency, and if they are competent enough to grow in the position there might be an increase in salary.

What Will It Cost?

Some of our readers will take a pessimistic view of this work, looking at it from the expense or tax side. We quite agree with these people that "What will it cost?" should be looked after. We must also look at the subject from the side of the benefit to be derived.

The United States loses many millions of dollars each year on account of hog cholera. The methods now being used in the treatment of the disease are in a fair way to be successful. With the prospects we have for success, should we not cheerfully pay the cost, let it be what it may?

One of the great hindrances to the more successful carrying on of this work has been the lack of funds. You must not expect your live stock sanitary board and other officials dealing with this particular work to accomplish miracles. They must have funds. Our farmers should, by this time at least, begin to realize the importance of this work, and should make their wants known to the members of the legislature, and make them known in such a way that the request for sufficient funds will not be denied.

Making Use of a Dust Mulch in the Ozarks

By M. Coverdell

AN ANCIENT native of the Ozark region in south-central Missouri told me the following story of a piece of corn he and his sons raised during a drouth. I give the story as nearly as possible in his own words:

It turned dry and hot—awful hot—along just after we began to cultivate the corn. We went over the field a couple of times, scratching along as best we could, but it was so dry you could hardly tell where we had plowed.

Finally, it just got so hot the boys came to the house and said:

"Pap, there ain't any use in plowing that corn any more. We've got all the weeds knocked a-skalluyutin, and we don't plow enough fresh dirt up against the corn for a cutworm to wiggle in."

"Well," says I, "there is nothing to do in particular, so you just go ahead and make the best you can of the cultivating; you'll do no harm, that's sure, and you may do a power of good. Go ahead, boys," says I; "maybe it'll rain one of these days."

But it didn't rain, and the boys kept right on plowing that piece of corn till in early July. The soil had been a little damp when broke out in the spring, and the clods never had been crushed just right, so you may know that we didn't make much of a showing. Why, we couldn't tell which rows we'd plowed and which we hadn't, except by just keeping our eyes on the next row as we turned 'round.

Well, we laid that piece of corn by along in July, and it really looked as though we had thrown our summer's work away. A good deal of fun was poked at us by the neighbors about our dust-and-clod crop, but we laughed the matter off as best we could, and allowed maybe the soil would be in pretty good shape for next season's crop if we didn't get pay for our work that season. Still, I could see a right smart difference in our corn and the neighbors'. They had quit plowing about the second time they worked their corn, and I noticed that it wilted and rolled up a lot more during the day than ours did, and that it didn't straighten up much during the night, while our corn would be revived up and as bright as a honeysuckle every morning, staying that way, too, till almost mid-forenoon.

Well, sir, nobody expected anything from their corn that year but second-grade fodder, especially the fellows that had stopped cultivating so early, but we got a few little showers just after the boys and I laid our corn by—about the time it began to shoot—and I thought maybe we'd have a few nubbins for the old sows and pigs on our field after all. Other work claimed our attention, and the first thing we knew it was fodder-cutting time. The neighbors had begun to notice the difference in their corn and ours by that time, and I could, too, especially when we got into it with the corn knife, for there actually seemed to be some pretty good ears on the stalks. When we husked the fodder out a little later we found that our field had turned off between thirty and forty bushels to the acre—just common, average ground, too, mind you. I called that pretty good, considering the season, and we never have quit cultivating during a dry spell since that time.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

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Seasonable showers and an excellent condition of soil for spring seeding is the report from the agricultural centers throughout the country. A better condition of crop outlook for May is beyond the memory of the oldest citizens in the Missouri valley country.

One of the very best and most profitable feed crops that the small farmer can produce is sorghum, sown any time in June, broadcast or drilled at the rate of four to five pecks per acre. There is no fodder crop that will equal it for calves and colts, and there is not an animal on the farm that does not crave it.

The present moisture supply is well distributed. It is abundant for all crop demands and not so excessive as to retard or keep back crop work. The country generally is well along in preparation for all spring planting and sowing. The acreage to be devoted to tame grasses is fully up to the average. Alfalfa will exceed all others combined in the Missouri valley states.

A tractor demonstration has been staged recently at Sacramento, under the auspices of a California farm paper. We have not seen a detailed report of this three-day demonstration, but from preliminary reports judge that a number of the prominent tractor firms were present with their machines, both large and small. This demonstration was along the lines of that held at Fremont, Neb., last year. And, speaking of the Fremont demonstration, don't forget that the date for the 1914 show will be August 17 to 22.

Nail Down the Corn Belt

The farmers of the central western states are hereby admonished to nail down the corn belt before it gets away. For behold a bulletin issued by the Southern Settlement and Development organization aiming to instigate an effort to move the corn belt to the south. This is to be done by systematic fertilization of the soil of southern states, whose average acre yield, we are assured, could be trebled under proper treatment, together with a similar assurance that the corn belt never equaled, and never can equal, the possible yield of corn in the south when soil limitations are removed.

But in farming, as in other avocations, it is the survival of the fittest, and if the south can be made a corn country by modernizing its methods of soil culture, we may, by improving our methods, still continue to enhance the fertility and productiveness of our land, which has all these years challenged competition. The south may raise corn successfully and in plenty, but it cannot carry away the corn belt without our consent, and that consent will come only when it is found that our soil and climate can be made to serve us better for some other purpose.

Hogging Down Corn

There is a growing inclination among western farmers and dealers in live stock to the practice of turning hogs and sheep into the cornfields in the autumn season to gather the crop, independent of hand picking or husking. This practice is not altogether a new one, but prevailed to a limited extent more than fifty years ago, back in the old eastern states. Farmers who were large hog raisers and corn raisers quite frequently used this plan of gathering a portion of their corn crop. Dealers in hogs adopted the same means of fattening the thin and immature hogs they had on hand. There was no disease then among the few hogs produced, and the fattening of the hogs on the mast gathered in the timber and the open run to a few acres of standing corn soon produced a fine quality of pork.

The idea that there will be a great waste from turning hogs into the standing corn is not well founded, as all persons having had experience will readily attest. Neither will a flock of sheep waste a grain of corn when given the range of the cornfield. The old-time method was to give the hogs the privilege of a pasture or clover field in conjunction with the cornfield. Sometimes forest or woodland was a part of the range, and in this way both crops, acorns and corn with pasture, constituted the ration for the hogs, with plenty of exercise. This was not only very healthy, but very cheap, from the standpoint of expense and labor in pork-making.

The practice of feeding sheep in the cornfield is of western origin, developing from a desire to get the weeds and undergrowth out of the way for easier husking. The turning of a bunch of lambs into a cornfield seldom damages the corn, but results in getting the lower foliage of the cornstalk nicely trimmed off, the weeds and grass removed and the lambs wonderfully improved with very little expense of corn. The older sheep and the hogs can then be turned in to make a general cleanup of the crop if desired.

The expense of handling the corn crop has become a matter of consideration in recent years, and the ultimate disposal of the corn crop on most of the western farms being through live stock of some kind, the big farmer and hog raiser has naturally turned to figuring how he can beat letting the hog do the harvesting or do the self-feeding act in what is termed "hogging down the corn." The fodder, of course, is sacrificed in this method of feeding, being of practically no account as a pasture for other stock.

Where the crop is planted with a view to "hogging down" there is usually some other crop sown in following the last cultivation; rape, cowpeas and soy beans are sometimes used. There is some difference of opinion as to when the hogs should be turned into the corn. Those practicing the early turning in get their hogs used to the green corn diet by a few days on snapped corn before giving them the run of the cornfield.

Poisoning the Birds

At this season of the year the birds of field and forest are of special advantage in gathering for their food insects that if undisturbed by these birds would prove of inestimable injury to field crops, fruits and vegetation in general. These little friends of humanity are practically unobserved by us in their work of holding in check the insect pests that are constantly engaged in destruction from early spring to late in the autumn season.

Every effort should be put forth by man, woman and child to protect and preserve these active workers. There is often great destruction of birds by putting out poison for rodents, not securely protected from field birds. This is careless and uncalled for, and such poison should be kept from the birds in the interest of the great work they are doing for agriculture, horticulture and conservation in general.

The clover-leaf weevil, first cousin of the alfalfa-leaf weevil, has put in an appearance in Idaho, and a certain bacterium which causes a disease among the weevils is being imported for the purpose of fighting them.

Barn Air in Milk

While dairying is on the increase, especially in this corn-belt territory, there would be more people going into this line were it not that milk is such a perishable product. In other words, the difficulty with milk is that it must be given the very best of care, and it must be done without delay. Good hired help being scarce and expensive, ingenious men have set themselves to inventing ways of obtaining and caring for milk by mechanical means. One of the first and most important inventions along this line was the mechanical milker, which has recently taken its place as one of the necessities in a well managed dairy of any size.

The South Dakota Experiment Station has been making tests of milking machines and has published a preliminary report of these tests, in which attention is called to the fact that, while the milker made good in every other respect, it was found that a large amount of impurities were sucked into the milk with the barn air. Inquiry into the matter revealed the fact that only one make of machine was used in making this test, and that make is not one that is sold to any extent in this territory. Since some of the other makes of machine operate under entirely different principles and claim to have overcome this difficulty, this report seems scarcely fair to them. That no injustice was intended, however, is evident from the fact that the South Dakota station is at the present time making further tests, using several of the different makes, and will publish a complete report when this series of tests is completed, giving detailed statements that will entirely overcome any unfavorable impression that may have been created by this preliminary report.

The vacuum milk can is the latest invention for the transportation of milk in hot or cold weather. It is made of heavy metal and built double, the air between the cans being exhausted on the same principle as in the thermos bottle. Milk or cream placed in these cans will not freeze or deteriorate from heat within twenty-four hours. So far as we know, these cans have not as yet been reduced to a practical price and placed on the market, but the possibility is there.

There seems to be more inquiry about seed and cultivation of fodder and forage crops than formerly. Farmers are becoming more and more interested in the growing of stock, especially cattle and sheep, and the cheap varieties of cultivated feeds are becoming a matter of interest. Kafir, sorghum, alfalfa and other big yielding feed crops very naturally command the attention of the prospective cattle grower. High-priced cattle and cheap feed make a very interesting combination for the land owner to figure with. This is the time of year to get in line with these big-yielding crops. They can all be converted into silage if desired, or fed with profit in their fodder and hay-cured condition.

A Change in Front

A few years ago the beef cattle advocates were inclined to scoff at the dual-purpose cow or at any suggestion that there should be more attention paid to the milking qualities or dairy qualities of the beef breeds of cattle. These same people are now advocating more milk, and when they find a cow of large milking capacity she is paraded in the front ranks on every exhibition occasion as being not only a good beef animal, but a big milker—a cow that can raise her own calf.

The demand for more milk with the beef breeds has caused breeders of beef cattle to stop and think where they are drifting in intensifying the beef qualities at the expense of the milking qualities. They were not long in a hesitating attitude. They saw the position in which all beef and no milk would place them with the general demand of the cattle-raising public, and the lost ground was soon retrieved by a little effort and attention in breeding.

The inquirer for big milking qualities in almost any breed of cattle can now be accommodated to an extent at least. The double-purpose idea has been developed so that a reasonably good flow of good quality milk can be obtained with the big Shorthorn, the Hereford, Angus or Galloway cow. This is just as it should be. It enhances the value of all these breeds and makes cattle raising more comfortable and more profitable all around.

Better Live Stock

State live stock improvers' associations and state breeders' associations of all kinds of pure-bred stock should be more aggressive in their campaign of improvement of the breeds and kind of stock they each represent. The organization of state associations of breeders is all right, and should be made a great advertising proposition for the state, the breed, and the breeders the association stands for. The getting together once a year is not enough to keep the spirit of organization up to the proper temperature. There should be more publicity and more advertising, not in the interest of live stock journals and agricultural publications, but in the interest of the breeds, in the interest of the associations that represent these breeds, in the interest of the membership that constitutes these association, and ultimately in the interet of the general public who are incidentally benefited by every influence that tends to the upbuilding of community, district and state-wide progress and improvement.

It is not enough that these breeders' associations get together once a year and read a few papers, discuss a few timely topics, elect officers and then remain dormant for one whole year so far as association, thought, stimulus and inspiration is concerned. All stock breeders' associations of the state should hold semi-annual meetings during the week of their state fair. They should be liberal contributors in making up a state breeders' purse for their particular breed as an extra inducement for improvement. They should have secretaries who could keep up an active campaign of publication in the interest of their particular breed.

The importance of conducting a publicity campaign in the interest of a breed or breeds of any kind of stock has been clearly set forth by the very able and interesting manner in which the Shorthorn and Hereford breeds have been presented to the public in the Chicago Live Stock World during the last year by prominent and able writers. The extent of benefit these breeds have acquired through this means of persistent and all-year publication cannot be measured now.

Getting a weed in time saves more than nine. An average plant of wild mustard, for instance, will produce 15,000 seeds in a season. Don't let them go to seed.

Turning Straw Into Manure

The big wheat crop in prospect indicates one of the greatest crops of straw ever produced in this country. Straw is not to any great extent a commercial product. The great bulk of this portion of the small grain crops remains on the farm, where the product is either fed to the stock or becomes a waste product. It remains in the stack until it is burned to get it out of the way. It is well to take this part of the wheat, oats and other small grain crops into account now before the crop is grown and arrange for a more economical disposition of the straw. The straw should, as far as possible, be fed to stock and used for bedding, thus converting as much as possible of it into fertilizer—barnyard or stock-lot manure. This use of the straw is the best purpose to which it can be turned. The strawstack should be built to afford protection from damage by wet weather if the purpose is to use it as a feed. By no means burn the strawstack; devise some means of making fertilizer out of it. The farm needs it back on the soil, and every particle of fertilizer that can be produced besides.

Idaho is making a directory of its herds of pure-bred animals. So far 425 pure-bred herds are known to be owned in the state, and the experiment station at Moscow is trying to find out if there are others. This directory should prove of great value to the stock-raising industry of the state.

No-Rim-Cut Tires
Dropped 28%

During 1913 No-Rim-Cut tire prices dropped 28 per cent. They dropped so fast, so far, that 16 makers have declined to follow.

Now comes this situation:

Sixteen makes of tires are selling higher than Goodyear prices. Some are nearly one-half higher. Higher, mark you, than No-Rim-Cut tires—the tires which once cost one-fifth more than other standard tires.

The Reason Is—Mammoth Production

The difference lies in quantity. In this new factory with its new equipment we are building up to 10,000 motor tires per day. Perhaps twice as many as the largest rival plant.

Factory cost has dropped immensely as our output multiplied. And every saving goes to you. Last year our profit averaged only 6½ per cent.

Those are the only reasons why we undersell sixteen other makes.

Extra Features

In fabric and rubber we give you in Goodyears the best tire men know how to build. Our experts have tried a thousand ways to lower cost per mile, and they say that these tires mark the present-day limit in low cost per mile. It is simply unthinkable that any maker has learned a better way to build tires.

We give you in addition four great features found in no other tire.

We give you the No-Rim-Cut feature, which we control, and which has ended rim-cutting completely.

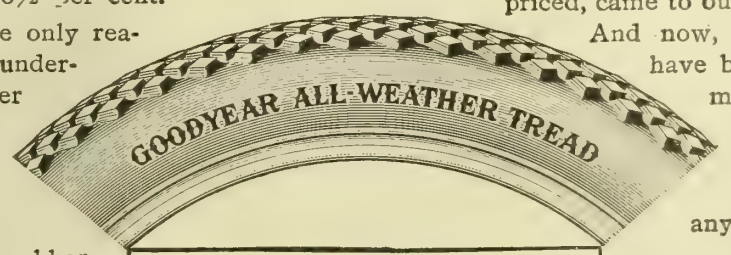
We give you the "On-Air" cure, which saves the countless blow-outs due to wrinkled fabric. This one extra process adds to our tire cost $1,500 daily.

We give you a method—controlled by patent—which lessens by 60 per cent the risk of loose treads. And we give you the double-thick All-Weather tread, the one anti-skid which runs like a plain tread—which is flat and smooth and regular.

No-Rim-Cut Popularity

No-Rim-Cut tires, even when high-priced, came to outsell any other. And now, after millions have been put to the mileage test, we are selling 55 per cent more tires than in any previous year.

They offer you the utmost in a tire at the lowest price possible now. At a lower price than 16 other makes.



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Bargain Day on Cuts.....

You can buy any cut in the Twentieth Century Farmer for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as we have only one of each kind. Address,

Twentieth Century Farmer
Omaha, Neb.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Kinemadventure

"Come, sit by my side, and listen well,"
Said the old, old man to the little lad;
"There's many a tale that I can tell
Of thrilling adventures that I have had.
I mind how I paddled many a mile
Where the tide of the mighty Congo flows—"
"I know," said the lad, with a beaming smile,
"I've seen that stream at the movie shows."

"I paddled long and I paddled far,
And far tramped I o'er the jungle sod,
Where wildest spots of Africa are
And white man's foot has but seldom trod.
I saw the buffalo plunge and snort
In the miry fords of the upper Nile—"
"Yes," cried the boy, "I know that sport;
It's been in the movies quite a while."

"And once, where the big Zambesi roars,
As all of its water, downward hurled,
Into a mighty chasm pours,
A fall so vast that it shakes the world,
I stood amazed as I watched the sight;
No greater moment I hope to know—"
"Yes," said the boy, "'Twas just last night
I saw those falls at the movie show.

"Ahem," said the old, old man, "no doubt
It would seem impressive to you to learn
That I have followed the North Star out
To lands where the red auroras burn;
Where the world stands wan in the icy air
I have stricken the kingly white bear low—"
"Yes," said the lad, "it's great up there;
I've seen such hunts at the picture show."

"Now woe is me!" said the gaffer old.
"The world of adventure, with all its scenes,
Today on a reel of film is rolled
And flashed to life on the movie screens.
My day is past, and it seems no place
Save heaven remains, where they do not go—"
"I saw," cried the lad, with shining face,
"A heaven film at the movie show."

—Dean Collins in Life.

The Editor's Corner

If you want to enter the story or picture contests, just send in a story or verse, carefully observing and following the directions given; that is all that is necessary. We have received a number of letters from different boys and girls asking what it is necessary to do to enter the contests. One little girl even asked us if there was any admission fee to pay. There is nothing to pay and nothing to do except to follow directions, and we are glad to have you all come in. We have not the time to answer all the letters personally. One story was accompanied by a letter that said: "Even if my story is not good enough to print for the children to read, I know that our editor will read it anyhow." And she did read it and enjoyed it ever so much. Unfortunately, there are ever so many good and interesting stories that we do not have room to print, but these stories are read and enjoyed by your editor. Remember that, you who seem to be so afraid of the waste basket.

HOME EDITOR.

(Prize Story)

My Pet Lambs

By Bernice Viles, Aged 9, Warrensburg, Mo.

I have two pet lambs. Their names are Cottontail and Beauty. They are as white as snow, only Beauty has a black head. They are twins, but Beauty is the largest. Their mother died when they were tiny babies and we brought them to the house and fed them on milk. I was afraid they were going to die, but I was careful and fed them often. Papa found them one day last winter over in the pasture, and they were so cold they were shaking. They will soon be 5 months old. They eat grass and bran, but I am going to feed them milk till they get older.

One day a man came and wanted to buy them, but I wouldn't sell them. Sometimes when they are playing they act like little children. I take pains teaching them to be nice. Sometimes they are naughty and jump over their fence and eat the leaves off our rose bush, which mamma doesn't like very well, but she never whips them.

They will play hide and go seek and peek-a-boo with me. I really don't know which I love the best, but I think Cottontail is the naughtiest.

(Honorable Mention)

The Story of a Dog

By Eula Downey, Aged 10, Springtown, Ark.

Once upon a time my dog and I went to the mail box. We have to go a quarter of a mile to our mail box and on the way my dog caught me a nice young rabbit. I ran all the rest of the way home to tell mother, and she cooked it for me. I sure do enjoy eating them. I guess my dog has caught about 200 rabbits and squirrels this winter.

My dog is a Scotch collie. Her age is 5 years, and she sure is a fine dog. She has three puppies; their names are Fido, Pedro and Cutie. They are white, brown and black and are very pretty.

The other day papa and I were going to town and our dog followed us. We were nearly there when I looked back and she was right behind us. Her name is Shep, and she is the most friendly dog, I think, I have ever seen. Her color is white with light brown spots on her side. She likes to go with me to the pig pen. She had rather bark at the pigs than drink milk. We have five hogs and two little red pigs, and she likes to go with me to the neighbors' houses and play with the dogs.

This is a true story about my dog and me.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

Picture Contest No. 13

Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it bright and original. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than May 30.

(Honorable Mention)

A Summer Journey

By Mildred Anthony, Aged 10, Sidney, Neb.

One day last summer Grace and I wanted to go flower picking. It was a warm day. We asked our mother and she said yes, if we didn't get hurt. We got our lunch ready and started out. Grace said we would go through Mrs. Brown's meadow, and when we got across it we saw another one and went to that. When we got about in the middle we saw a creek; then Grace and I took off our shoes and stockings and got in. The water was warm and we had lots of fun. We waded on till noon and then got out and ate our dinner and started on again.

On the way Grace saw a big fish. We tried to catch it, but couldn't. We walked up the creek till it was about 4 o'clock and then got out and looked for flowers. We found a big bunch. We got so tired that we sat down on the grass. Then after a while we went to sleep and when we woke up it was about dark. We got up and started. We did not walk in the creek, but cut across. We came to two paths and took the one on the right. After we had gone a good way we came to a herd of cattle and went around them. Not very far from them was a house, and it turned out to be Mrs. Brown's house. They had a little girl the size of me. We asked Mrs. Brown to take us home and she did. Our mother was so glad to see us she took us in her arms and kissed us and put us to bed.

Additional Stories

Dora Iberg, Elgin, Neb.; Gladys Diez, Verdigre, Neb.; Hannah Nyquist, Gross, Neb.; Ruth Keim, Johnstown, Neb.; Ray Thompson, Simeon, Neb.; Viola Rossbach, Akron, Ia.; John, Ethel and Garnie Gray, Little Sioux, Ia.; Isadore Powell, Neola, Kan.; Oneta Ginder, Canton, Kan.; Winifred M. Allison, Cavour, S. D.; Thomas Coleman, Junction, Colo.; Gladys McDonald, Holyoke, Colo.; Violet and Belva Smelser, Julesburg, Colo.; Lena Tarravell, Shreveport, La.; Nannie May Glasscock, Holtville, Cal.

Of Interest to Our Women Readers

It Isn't the Thing You Do

It isn't the thing you do, dear;
It's the thing you leave undone
That gives you a bit of a heartache
At the setting of the sun.
The tender word forgotten,
The letter you did not write,
The flower you did not send, dear,
Are your haunting ghosts tonight.

The stones you might have lifted
Out of a brother's way,
The bit of a heartsome counsel
You were hurried too much to say;
The loving touch of the hand, dear,
The gentle, winning tone,
Which you had no time nor thought for
With troubles of your own.

Those little acts of kindness
So easily out of mind,
Those chances to be angels
Which we poor mortals find;
They come in night and silence,
Each sad reproachful wraith,
When hope is faint and flagging
And a chill has fallen on faith.

For life is all too short, dear,
And sorrow is all too great,
To suffer our slow compassion
That tarries until too late;
And it isn't the thing you do, dear;
It's the thing you leave undone
Which gives you a bit of heartache
At the setting of the sun.

—Margaret E. Sangster.

Paper Shopping

"Work is made so easy for you city women," sighed the country woman, cutting an apple into the pie crust. She was spending a few days with a schoolmate in the city, and they were doing up the morning work on the screened porch, with the birds singing their housekeeping songs outside and the vines casting a grateful shade, just speckled here and there with sunlight. The city woman was doing the weekly ironing, with her electric iron attached to a fixture she had had placed on the porch for just that purpose.

"This ironing by electricity is what I particularly envy you. I have to run back and forth from hot range to ironing board, risking dropping a hot iron on my foot when I change the handle too carelessly. I can't go onto the cool porch, because it would take so much time to go back and forth."

"Don't they have some kind of self-heating irons," asked the city woman, "other than electric? It seems to me I have seen them advertised somewhere."

The country woman laughed. "I had a charcoal iron once," she confessed; "bought it of a peddler; and, by the way, I believe buying of peddlers is what prejudices so many women against modern inventions; their things generally turn out the same way. Anyhow, after the whole family had spent most of the morning lighting up this iron it would smoke and smoke and nearly smother me, and even if it didn't it was too heavy to push around. The junk man got it at last."

"There must be something satisfactory of the kind on the market now," insisted the city woman, carefully polishing the folds of her best tablecloth. "When we women long for a thing a good while someone is sure to invent it for us. I'll just bet you anything you like there is something of the kind on the market now. The trouble with women is, we don't show our appreciation of things when they are invented for us."

"I'll appreciate that alright, if you can find it for me," said the country woman. "Suppose we make a round of all the shops when we go downtown tomorrow and see what we can find."

"That takes too long," said the city woman. "I always hunt over the advertising pages of the magazines first when I want any particular thing. If I find it there, I know just what to ask for at the stores when I go down. I'm a real paper shopper, and that is one place where you can't say we have any advantage over you. It is the best part of shopping and can be done in the country just as well as here."

HOME EDITOR.

When Work is Drudgery

Dear Editor: I will write a few lines in response to one of the letters that I read in the Twentieth Century Farmer written by Mrs. J. C. Indoe called "The One Woman." Though I am only a girl, I know something of the work on the farm, as I have lived on a farm all my life, and would not live in the city. The work the farmer's wife has to do may be called drudgery.

The first thing she has to do in the morning is to get breakfast for ten or twelve persons; after breakfast she has to milk, and if she has a little baby she has to leave it in the house crying with the older children. You have to do this when you depend on the butter and cream making your living and buying the clothing. You have to be pretty saving; and then, talking about hiring a girl or getting something to make your housework easier, you cannot do it. As for hiring girls, you can get lots of them, but none of them that will milk, tend the chickens and do odd jobs like that. The farmers' wives and daughters have to do all that.

I think that all girls should learn housekeeping and go to school and get an education, so if they have to make a living themselves they can. The daughter may be allowed so much work to do, but if the men come into the house and say that the cattle are out, you go get them in, you have to go. There are lots of girls and women that go right out into the field with a four-horse team and work day after day in the fields by the side of father and brothers.

The women have to get the meals on time and most of them are left in the morning to get their own fuel. They have no coal; they have to chop wood, and that is enough to kill most any woman. There are lots of men that go off to town early in the morning, leaving their wives and daughters to do the chores, and stay all day, and when they get home at night they expect to find the chores all done and a smile from the wife and the children in good humor.

As for voting, I think every woman in the United States should have a right to vote and say what laws her children should be bound by, as well as the father. I think woman's suffrage is all right. I do not mean any particular women, but the average, where I live.

Nebraska. M. P.

Note—A woman who cannot manage her husband and household better than the ones of whose lives this is supposed to be a description is certainly not intelligent enough to vote. Why should the woman be forced to do the housework, the farm work and bear and bring up the children, while the men loaf in town all day? Suppose the woman refused to do the chores and would not cook the meals unless the fuel were provided. If she had a little backbone in the beginning she would soon teach the man whom she married that the customs of the Indians and their squaws are not the kind that govern the lives of the American people of today. It is not a woman's work to milk cows, chop wood or chase cattle. If the men refuse to do it, let it go undone. Women are not fitted for such heavy manual labor and should refuse to do it. Of course, after the wife has a half dozen children she is bound by them and it is too late to make such a stand, but she might do it in the first place. As for poverty, what can you expect if the men do not work, but expect their wives to support them?

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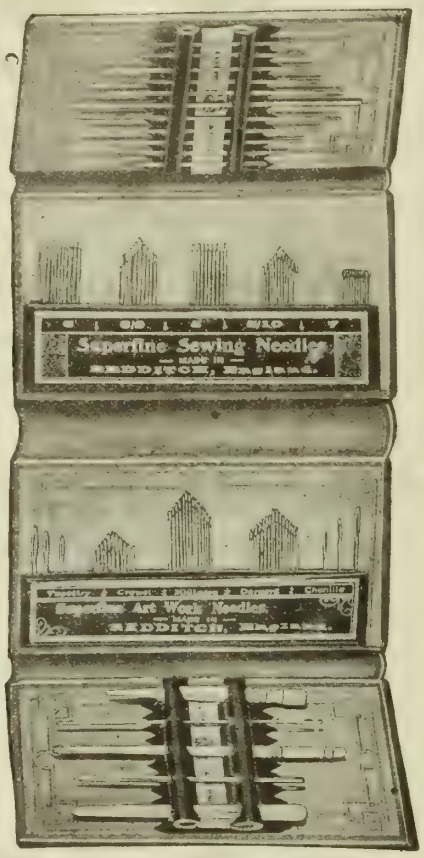

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Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6653—Ladies' Shirt-Waist—In this model we have one of the later styles, showing a sleeve which extends to the neck edge and produces the yoke effect. The fronts are quite full and gathered where attached to the front edge of the sleeve extensions. The collar is of unusual shape and the sleeve is finished with a handsome cuff. These waists are made of chiffon, voile, batiste and many other semi-sheer fabrics. The pattern No. 6653 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2¼ yards of 36-inch material.

6643—Ladies' Waist—The plain waist is so much worn that it is all but indispensable. In this model we have a small front yoke formed by extending the back of the waist over the shoulder. The sleeve is set in very low on the arm and the closing is in front. The waist is finished with a short, circular peplum. The pattern No. 6645 is cut in sizes 34 to 44 inches bust measure. Medium size requires two yards of 40-inch material.

6642—Girls' Dress—Quite a novelty in every way, this little frock has no regular opening, but is slipped on over the head, the fastening being placed at one side of the deep yoke or vest. The drop shoulder is used, and a sleeve which has a deep cuff or a band finish, as preferred. The pattern No. 6642 is cut in sizes 6, 8, 10, 12 and 14 years. Medium size requires 1⅞ yards of 44-inch material.

6550—Ladies' Apron—This apron is cut on sacque lines, plain from shoulder to hem. It may have the neck high, round or square. The full sleeves may be shortened as desired and the pockets omitted if preferred. The closing is in the back. Gingham, calico and other wash materials are used for aprons, but if worn without a dress brilliantine is perhaps better, as it will also wash. The pattern No. 6550 is cut in sizes small, medium and large. Medium size requires 4⅛ yards of 36-inch material.

6656—Girls' Dress—This pretty frock may be made of plain cheviot or of other plaid materials, as well as plain gingham, serge, cotton, crepe, ratine and the like. The closing is in front and the skirt has three pieces. Collar, cuffs and belt are of contrasting material. Combinations of material are the newest effect in dresses, but plain goods are also used with merely a plaid sash to trim. The pattern No. 6656 is cut in sizes 4, 6, 8, 10, 12 and 14 years. Medium size requires 2¼ yards of 36-inch plaid material, with ⅞ yard of 27-inch goods to trim.

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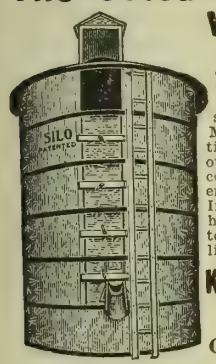

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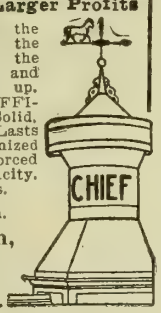

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

TOO often poultry on the farm is merely a side line. Has the farmer heard this until he is tired of hearing it? Well, all right; it is true just the same. For some years combinations of great poultry raisers have been hinted, not to form a trust or stifle competition, but to put poultry raising on a scientific basis, and by so doing help out the great body of consumers who do not raise poultry. Such a firm is now in progress and was listed to start in this co-operative business May 1. Breeders of White Rocks know of U. R. Fishel of Hope, Ind., who owns one of the largest and best known White Rock farms in the world. White Wyandotte breeders know of his brother, J. C. Fishel of the same neighborhood, besides various breeders on large scale of Barred Rocks, Rhode Island Reds, etc. In this company is also listed the famous Cook firm of Scotch Plains, N. J. The owners of this firm are sons of the late William Cook of England, originator of the Orpington varieties and the Orpington buff duck. The helpfulness of such co-operation can be seen, in that with eastern, western and middle-state offices, one who wants some new variety put out by any company could get it through the office nearest home. For instance, a desirable new variety of Orpington is now put out by the Cooks. Parties so far from Scotch Plains as even Nebraska hesitate to send so far for eggs or live stock of this variety.

Liver Trouble

A poultry editor so often, especially in the spring, gets such a question as this: "Have had a few hens die in this way—the fowl lingers some days or even a couple of weeks, gets thin, comb first pale, then very dark; the bird moves slowly, scarcely eats or drinks at all; toward the last droppings are a whitish yellow, often quite yellow, sometimes tinged with green or blood." When you have such a case you may safely conclude that the hens are dying of liver disease. When a fowl dies suddenly, something besides plain, old-fashioned liver trouble is the matter with it. The causes for this liver trouble are various, but the chief ones are overfeeding and lack of exercise, grit and green stuff. It is a disease that is seldom cured, though it is worth while trying when you find the fowl first inclined to hide away by itself. There is nothing better to begin with than a good physic of some kind—a couple of grains of calomel preferred—after which follow with some good liver tonic, such as you would take for yourself. Peruvian bark, one ounce; black cherry bark, one-half ounce; mandrake and poke root, one-quarter of an ounce; all well pulverized and covered with one pint of grape wine or brandy, will, if given in half teaspoonful doses, save many a fowl suffering with liver trouble if given in time. It restores the appetite almost immediately.

Small Matters About Poultry Yard

A writer in the American Poultry Advocate says: "Beware of feeding weed seeds to the small chicks." There are weed seeds that are not hurtful. Mustard seed is good for them, but then mustard may not be a weed. Cockleburr seeds, I know, are not good for chicks; these are poisonous. Too much cheat also in the wheat is not a good feed; cheat acts much upon a chicken or any animal as opium will—keeps them asleep much of the time.

***

Be careful about feeding cornmeal wet up. It is all right as a change as the chick grows, but not as a steady diet—too heating and constipating.

***

All manner of new poultry inventions made of galvanized iron are arriving. Now a new fireless hover; but this hover has a top into which you pour hot water by way of a hole, over which is fitted a tight screw top.

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A couple of grains of permanganate of potash in a couple of quarts of water will kill disease germs in it. This permanganate will at first turn the water red. It is fine for roup or colds; also it kills all that low animal life that makes slime and green scum on the bottom and sides of the drinking vessels.

***

Be very sure the hens have plenty of water. Hens in full laying require more than twice as much water every day as do the sitting hens, and, of course, as the heat of the days increase this fact, too, makes the need of fresh water in quantities necessary.

***

Nature provides food for the chicks the first forty-eight hours of their lives. Some poultry keepers supplement this with some fine grit and fresh water.

***

It is never best to full feed poultry in the morning. Now that the nice days have come, with plenty of grass for the hens on range, give them merely enough to satisfy their first hunger of the early morning, and this will send them out foraging. Always leave plenty of room for more in the crop as the day goes on, but see that it is full when evening comes.

***

The guinea fowl is credited with three senses of extreme acuteness over the same senses in other domestic fowls—hearing, seeing and smell which are said to be so acute that it can hear the moving of birds of prey and see them long before heard and seen by other fowls; and it lets all around know about it also; while its smell is acute enough to smell that a human hand has been in its nest—this last not being so well authenticated as the first two.

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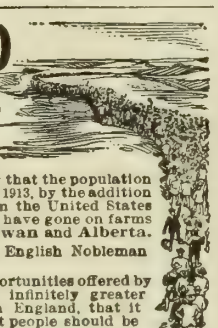

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In the Footsteps of Most Civilized of Red Race

By Frank G. Carpenter

CUZCO, Peru—Come with me this bright Sunday morning and take a look at the site of the ancient capital of the Incas, that wonderful family of kings who ruled the most of western South America about 600 years ago. Like the ruling dynasties of Japan and China and almost every other great empire on earth, they believed themselves to be descended from the gods. They thought they were the offspring of the sun and they called themselves the sun's children. They had a tradition as to how they sprang into existence on one of the islands of Lake Titicaca, and from there marched out onto the Andean plateau and subdued and civilized the then savages. They came here to Cuzco, at the head of a beautiful valley in the heart of the Andes, and established a capital. They gradually conquered the regions about until their empire extended far beyond Quito, in Ecuador, which is 600 or 700 miles south of the Panama canal, to below where the capital of Chile now stands. They had subjects all along the eastern slopes of the Amazon, and the western limits of their rule were the shores of the mighty Pacific. At the time that Columbus came to America, or a little later, when Pizarro, the brutal Spanish butcher general, came to Peru and conquered them, they governed a country as long as the distance between the Arctic ocean and the shores of Lake Erie, a country which was larger than all of the United States east of the Mississippi valley, and which, had it been dropped down in Europe, would have more than covered Germany and France, Norway and Sweden, Denmark and Switzerland, Austria-Hungary and the Spanish peninsula.

Devoted, Pious and Peaceful

At the time they were overthrown by the Spaniards the Incas had divided this country into provinces. They had viceroys and subordinate officials and they had tens of millions of subjects. They had not only subdued the savages, but had civilized them.

The subjects of the Incas were a nation of farmers, mechanics and artisans. They had a religion that recognized the sun as the lord of the world, and their emperor as his ruler on earth. They had temples to the sun, some of which were plated with gold and within which was an image of the sun of pure gold.

The people believed in this religion and they were pious and peaceful. They gave a part of their time to the work for the church and a part for the sick and the widows and orphans. They worked also for the government, and, last of all, for themselves and their families. They worked well, too. They conquered the land; they irrigated the desert, and today you may see the remains of their aqueducts of stone slabs, neatly fitted together, which carried the water over millions of acres. They had one aqueduct that was 500 miles long. Their irrigating canals ran not only along the sides of the mountains, but they cut tunnels through them, and as I rode to Cuzco, along the high plateau, I saw thousands of acres of terraces, now gone to ruin and almost a desert, which these people had made to blossom like the rose. Such terraces are seen on the sides of the mountains above almost every Peruvian valley of the plateau and along the west coast. They run up the slopes like so many steps, the earth being held back by stone walls.

Shepherds, Potters and Artisans

The subjects of the Incas were a nation of shepherds. They had millions of alpacas and llamas and they also used the wool of the vicunas, which they trapped or shot in the mountains. They were a nation of potters; they made beautiful vessels of clay, and they were also skilled in the working of copper, silver and gold. I have seen here some of the tools which they used in erecting their buildings. They had a way of tempering an alloy of copper and tin so that the tools made of it had an edge like a razor and could work the hardest of stone. Further on in this letter I will describe some of their wonderful walls, which still stand. They are more accurately cut than those of the great buildings at Washington, and blocks weighing tons are fitted together like a mosiac. I have seen stones that are solid blocks twice as high as a man upon horseback and twelve feet in thickness, and have examined buildings that are put together without mortar and fitted more evenly than were the tombs of the Egyptian kings found in the pyramids.

Showing How the Incas Built

Some of the Remains in Cuzco

But it would take a large book to describe the wonders of the Inca rule and the many phases of its civilization. In this letter I can show you only some of the remains as they exist here in the city of Cuzco. This city today has only about 20,000 inhabitants. It runs up and down hill at the head of a beautiful valley, situated more than two miles above the sea level in the heart of the Andes. It is at the head of the valley, and, standing upon the hills above it, you can look over a vast expanse of cultivated fields and of irrigated farms. The town is one of two and three-story houses, with walls of bright colors and roofs of red tiles. It has plazas and gardens, a great market and many comfortable homes.

Its population is made up of Indians and whites and a mixture, the offspring of the two races. It is a Latin-American city, with many Catholic churches and with a civilization much like that of Spain some generations ago. It is nothing like the Cuzco of the past, and you will have to put on the thinking cap of your imagination to realize the difference between the capital of the Incas and the town of today. In the first place, the present Cuzco does not cover one-tenth of the area of the ancient Inca city. The latter contained several hundred thousand inhabitants, and at the height of its fame it may have been as large as the city of Washington.

They are still finding ruins of the ancient buildings far out in the valley, and the remains of some of the structures in Cuzco upon which buildings now stand are of enormous extent. Take the Temple of the Sun, which I visited this afternoon. This covered the whole square now occupied by the church and convent of Santo Domingo. The foundation of the church is the old walls of that temple. In places it extends twenty or thirty feet from the ground. I was taken through the buildings by one of the fathers and shown how the great blocks had been laid by the Incas, one upon the other, fitted together so closely, and that without mortar or cement or union of any description, that I could not push the point of a needle into the cracks. This temple must have covered more than an acre. The western wall of it was concave, and the curves are as regular as those of a circle. A great part of this building was plated with gold. There was a great golden plate of oval form, which represented the sun, making one think of the silver mirrors of the Shinto religion that are still to be seen in Japan. In the temple burned also the sacred flame that was supposed never to go out, reminding one of the fire worshipers of Persia, who do that to this day. This flame was tended by the virgins of the sun, who had their vast convent not far away. When the Spaniards conquered the Incas they robbed this temple of its gold. They melted up the images and vessels used for worship and tore from the walls the gold plates. From some of those plates was made the custodia, a great golden box which is now preserved in the vault of the Cuzco cathedral.

No Doubt as to Religious Nature

There is no doubt about the religious nature of these people of the high Andes. The Quichas, who are the descendants of the subjects of the Incas, are the chief church-goers of Peru. They are largely the support of the priesthood, and, although in the direst poverty, they give a large proportion of what they make to the support of the church. In traveling through the country one sees a little wooden cross rising above the thatched roof of every Indian hut, and in the services at the cathedral here and there are more Indians than whites. Mixed with their worship of Christ and the madonna, they have still much of the ancient ceremonies and beliefs of the Incas. They pray facing the sun, and they cross themselves when they approach Cuzco, the sacred city of their ancestors.

I am told that there were temples of the sun at many other places in Peru, and that in certain centers the virgins of the sun had their convents. These people had an idea of a supreme being, who was represented by the sun. It was this being who created the world and who in the future would reward or punish them. They had a Lord's prayer, which was somewhat as follows:

"O conquering and ever-present Creator, Thou who gavest life and strength to mankind, saying let this be a man and let this be a woman; Thou who gavest life and who vouchsafest that man shall live in health and peace; Thou who dwelleth in the heights, in the storm clouds and in the thunder, hear us and have us in Thy keeping; Thou who art without equal unto the ends of the earth, grant us eternal life and keep us free from danger."

Abodes of Virgins of the Sun

Leaving the Temple of the Sun, I strolled up the narrow street to where the virgins of the sun had their establishment. These young women, in addition to their religious duties are supposed to have formed a kind of harem for the Incas. They lived in enormous structures, scattered over the empire, and some of their convents are said to have had a thousand inmates. The one in Cuzco must have covered eight acres, and the walls, which are still in existence, run around the greater part of a square, forming the foundations of many homes, which are on the second story of the structure. Much of the first story has been turned into stores. The granite walls have been cut away and cave-like vaults made in which all sorts of house industry goes on. I saw a saddler sewing on a harness in one cave in the wall, a shoemaker pegging away in a second, and a carpenter sawing and planing in a third. The blocks of this building are of great size and they will apparently last for ages.

Other interesting remains were the walls of the palaces which formed the homes of the Incas. Take that of Pachacutec, which stood not far from where the great cathedral of Cuzco now is. The street upon which it faces is not more than fifteen feet wide, and the original walls of the palace are still preserved to the height of the first story. From there to the second story the building is colonial. It now forms a fine residence, occupied by Tomas Gonzales, one of the rich men of Cuzco. The Inca walls begin with the street and extend for perhaps 300 feet, including the greater part of the block. The stones

are granite blocks, of different sizes, beautifully chiseled, and joined with unions so fine that it is impossible to put in a knife blade between them. Some of the stones have many angles and one great block of granite about four feet square and weighing several tons has twelve angles in it.

It is said that these blocks were cut out at the quarries from original patterns and designs given by the architects. They are joined together like a mosaic, and, although I went carefully over them, I could not find one place in which I could put my knife blade into the cracks. The unions are without mortar and the stones are as firm and regular today as when they were made. Nevertheless, the builders knew nothing of iron or steel. They had evidently no knowledge of cement or mortar, although it is said that gold and silver were sometimes placed between the joints as a bedding material. I saw no evidence of this in my investigation.

Fortifications of Sachsahuaman

Some of the most remarkable buildings of ancient Cuzco were the fortifications of Sachsahuaman, which crowned the top of a hill just back of the city. This hill rises precipitously from the level where Cuzco stands to a height of 700 or 800 feet. It is so steep that one has to wind about to go up it. I rode upon horseback a part of the way and then left my horses and climbed up the walls of the fort upon foot. On the lower slopes of the hill, facing a great garden made in two terraces, perhaps 500 feet above Cuzco, stood the palace of Manco Capac, the first great Inca ruler. This was right under the fortifications and it commanded a magnificent view of the city and valley. On the first terrace now stands a church which was erected there in the days of the inquisition, and outside it, in what you might call the churchyard, are some great stone instruments of torture that were used to bring the Indians and heretics to the Christian religion. Some of these stones were made in the shape of a keyhole, the round part of the hole being nearest the ground, the remainder of the keyhole being in the form of a capital T. The hole was just large enough so that the man's head could be squeezed through it, his neck lying as it were on the stone. He was put into this position on his belly, and after his head was put through the hole his legs were bent up over his back and his feet thrust through the T part of the key, bending his body, as it were, in a knot. The torture was such that it often caused death. I had my stenographer get down and put his head through the hole to illustrate how it was done. I also tried to induce him to let me put his legs through the T, but this he refused.

Palace of Manco Capac

The palace of Manco Capac must have been a magnificent home. Its garden covered acres, the main part standing upon a terrace, which was twelve feet above the church I have described. This terrace is made of these wonderful walls into which were fitted sentinel boxes.

Walking through the garden, which is now filled with eucalyptus trees and beautiful roses, I came to the ruins of the building itself. It was made of black granite, the blocks being very thick at the bottom and lessening in size from there to the top. I went around to the opposite side of the structure, where some of the stones had been torn away. Here I could see that the thick walls were double. They had two separate walls of granite, which were filled in with stones and mud. I took a sheet of paper from my note book and tried to fit it in between the cracks, but found it impossible. Manco Capac's palace and its grounds are now the property of Mr. Caesar Lomelini. He has planted the garden to flowers, and the trees which have grown in it now almost hide the city below.

Leaving the palace and climbing up to the fort, I found an enormous structure surrounding many acres, and inclosing the whole top of the hill. The walls of the fortification are in terraces rising one over the other. They are made of enormous blocks of granite, some of which weigh many tons. There is no stone of the same nature nearby, and the stone must have been brought from a great distance. No one knows exactly where it came from, nor how it was carried up this precipitous hill, which is almost 1,000 feet from the plain. It is supposed that roads were made for the purpose and that hundreds of men had to work together to move a single stone. The fort was built long before the time of Columbus, and some of its walls are in perfect condition today. Each section of the wall has its hole for drainage, and the whole structure is almost as smoothly cut as the palaces. I measured some stones which were fifteen feet tall, and, riding on horseback close to the wall beside one great block, I stood up in my stirrups and tried to reach to its top. The distance from my hand to the ground was only half way up. That stone, I venture, weighed 100 tons.

From these fortifications I rode over the hills and plains in the rear. They are covered with the remains of the Incas. Much of the rock consists of mighty boulders, some as big as a haystack, which the Incas had cut into all sorts of shapes. One is supposed to have been the scene of an open-air court and is known as the Inca throne. The original granite has been cut in ledges or steps, rising to a low table or bed, upon which the Inca is supposed to have lain upon a couch of furs or alpaca skins, with his officials sitting cross-legged on each side of him. I sat down on the throne and posed as a king.

Where Ancient Rulers were Amused

Not far from this place is what is called the concert hall or amusement ground of these ancient rulers. It consists of an open-air court, covering acres, which is surrounded by great rocks, out of which seats have been cut. On one side of it is a rocky hill which is covered with such seats and under which is a tunnel which is supposed to have communicated with the Temple of the Sun, down in Cuzco, perhaps three miles away. This tunnel has now been closed up, because the students of the Cuzco University recently got lost inside it while hunting for treasures and had a narrow escape with their lives.

Another formation right near the Inca amusement ground is known as the rodadero. This consists of granite blocks, which look as though they had flowed in ridges down the mountain. The rocks are as smooth as glass, and their slopes are in waves much like those of a roller coaster. They are grooved, and are so formed that one can seat himself at the top in one of the grooves and have a toboggan slide of hundreds of feet, rising and falling as he goes down to the bottom. It is the greatest shoot-the-chute exhibition I have ever seen, and if it could be lifted from the top of the Andes to Coney Island it would surely make the fortune of the man who owned it.

(Copyright, 1914, by Frank G. Carpenter)

Contagious Abortion

Recent bulletins from state experiment stations have reported at least two remedies that seem to be specifics against contagious abortion in cattle, and the prospect is hopeful for the intelligent breeder and dairyman who will apply either of these remedies with persistent thoroughness when his herd is threatened by this disastrous disease. In our opinion, the success of the best possible remedy for abortion, tuberculosis or any other of the ills that beset our cattle, depends in large measure upon the faithfulness and common sense of the men who have the care of the afflicted animals. Moreover, we believe that if our live stock were properly fed and cared for from the beginning, medicine would be seldom, if ever, needed. Owners of herds are more generally inclined to adapt the needs of the animals to their own comfort or convenience rather than the contrary. We are convinced that scrupulous conformation to the rules of right living for our dairy herds would eventually solve the whole vexatious problem of tuberculosis and contagious abortion and would pay big dividends to their owners.—Holstein-Friesian Register.

There are 50,527,000 cattle on United States farms.

America's Telephones Lead the World Service Best—Cost Lowest

from London "Daily Mail"

Why is it that Government ownership and management of the telephones is practically always a failure?

Why is it that throughout the length and breadth of Great Britain and the Continent hardly a single efficient long-distance service is to be found? Why is it that in New York one ... delicate ... Office working can inflict. But his rage, ... bubbles.

from "Electrical Industries" (London)

THERE is a certain amount of satisfaction in the fact that Mr. Winston Churchill got so angry over the freaks of the telephone the other day that he flung his receiver on the floor. As a member of the Government which purchased the telephone system, he deserves all the torture that Post

From "Le Petit Phare de Nantes," Paris

"But today I found I had to talk with Saint Malo, and, wishing to be put through quickly, I had my name inscribed on the waiting list first thing in the morning; the operator told me—though very amiably, I must confess—that I would have to wait thirteen hours and ten minutes (you are reading it right) in order to be put through."

Herr Haberland, Deputy, in the Reichstag

"The average time required to get a connection with Berlin is now 1½ hours. Our business life and trade suffer considerably on account of this lack of telephone facilities, which exists not only between Dusseldorf and Berlin and between Berlin and the West, but also between other towns, such as Strassburg, Antwerp, etc."

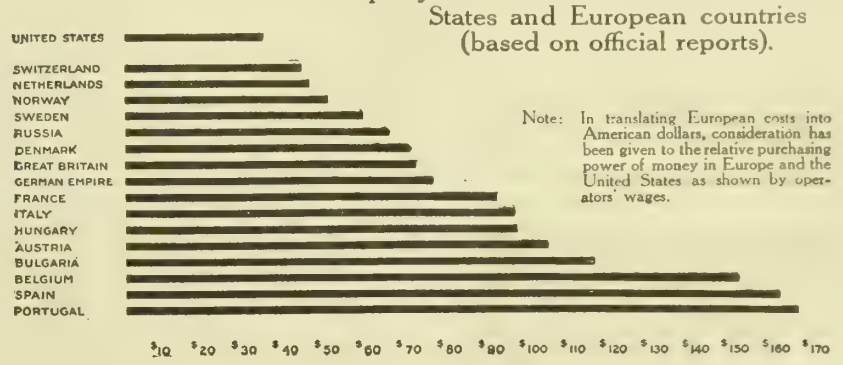
Dr. R. Luther, in the Dresdner Anzeiger

"In the year 1913, 36 years after the discovery of the electro-magnetic telephone, in the age of the beginning of wireless telegraphy, one of the largest cities of Germany, Dresden, with half a million inhabitants, is without adequate telephone facilities."

Herr Wendel, in The German Diet

"I refer here to Freiberg. There the entire telephone service is interrupted at 9 o'clock p. m. Five minutes after 9 o'clock it is impossible to obtain a telephone connection."

Real Average Cost of Telephone Service
per year to a subscriber in the United States and European countries (based on official reports).



Note: In translating European costs into American dollars, consideration has been given to the relative purchasing power of money in Europe and the United States as shown by operators' wages.

These are the reasons why there are twelve times as many telephones for each hundred persons in the United States as in Europe.

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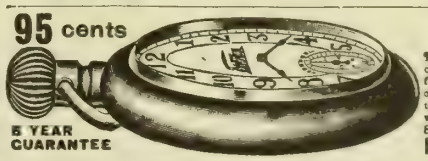

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The Standardized, Reliable Dip and Disinfectant.

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We will send you free a booklet on how to build a hog wallow, which will keep hogs clean and healthy.

We will send you free a booklet on how to keep your hogs free from lice and parasites and disease.

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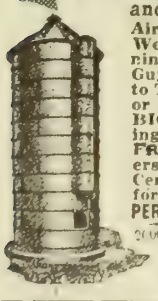

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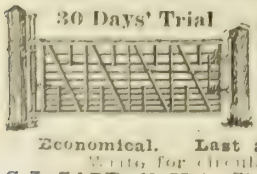

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This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Cheese Cloth Windows

W. D. S., Nebraska: Hog raisers have by this time for the present season had their annual experience with artificial heat in the farrowing pens, some with good success, some with variations of success, but I am persuaded that oftimes in the investigation of a given problem attention is given to the wrong place. Excessive moisture, sudden changes of temperature, and consequent colds, often resulting in pneumonia, are some of the difficulties accompanying the use of artificial heat, with its consequent losses. Back of all these we would look to the construction of the building and the system of air circulation. Glass windows have been the style for all buildings when sunlight is desired, but I would not use glass windows for either hog houses or poultry houses, or for that matter many of them in any kind of buildings for stock of any kind, if I could have them given to me.

Cheap muslin, commonly called "cheese cloth," makes the best window for stock that is obtainable, and in fact I use it in a north window in my bedroom for a supply of fresh air to sleep by, except only when a real gale is blowing.

Scientific investigation of the pure-air problem for school rooms, as reported in a recent issue of the Literary Digest, relates that muslin windows are supplementing the glass, to the great benefit of the pupils for both comfort and health, and, to the surprise of the authorities, even reducing the cost of fuel for heating.

We have a hog house of six pens, the fourth, counting from the west, being used for the stove, the floor of which is eight inches lower than those of the other pens, the floors of the other pens gradually sloping down to this one, with division fences tight to the bottom, except a grating placed near the outside doors, permitting the cold air to flow stoveward from each pen, but not over or about the nests of the pigs. The outside doors are made to swing both ways, hinged at the top, simply using old leather for the hinges; the bottoms of these doors reach within eight inches of the floor, which permits the youngsters to pass without the door striking them when they are small. For farrowing time, a cross board is fitted to close this lower part and at the same time fasten the swinging door, shutting the sow securely within. The other part of the building is on the south side, is boarded up to a height that the hogs cannot reach the top; above that it is all covered with the cheese cloth. The roof and other portions of the building are of boards, with cover of prepared roofing as carefully and tightly put on as if we wanted the building air tight. The floors are some of cement, with no covering except the proper amount of bedding; some are made of No. 5 coal-gas tar and cinders, same as an asphalt road; some are made of inch boards; all with a small amount of dry bedding of wheat straw. Our stove is one of these old-style sheet iron, air-tight heaters, in which fire can be kept over night with any kind of fuel, even with cobs, but we prefer some good, heavy chunks of wood.

Last January—on the 11th—expecting youngsters within two days, we shut the sows in, built up a fire and warmed them up to a very comfortable degree, enough so that they did not care to bunch the nesting, and kept this heat up till on the morning of the 13th, when business was begun, by 8 o'clock at night. From three sows, third litters for each, we had twenty-six pigs, not a dead pig, every fellow husky and strong, all perfectly comfortable. Our fire continued at about the same degree till the middle of the next day, then was let gradually cool down, with just a little over night, and on the day following all was out, and on the day after that the doors were open during the middle of the day and every pig was out in the small pen outside.

Not one drop of moisture showed on the roof, no frost on the walls; everything had a smell of fresh, warm air all the time, no drafts. All continued well and thrifty; all the pigs were raised, and we are convinced by our experience now for two winters with January pigs, with the same good results, that the tight building, absolutely no drafts, but a rich abundance of fresh air through these cheese-cloth windows, is one of the secrets of success with artificial heat. I tell neighbors that it is warmer than glass; they look skeptical; then on a zero day they step into my hog house and try its warmth of pure air and admit its truth. Were I building a $1,000 hog house, the amount of glass used would be so small that it would not be worth noticing.

When to Cut Alfalfa

N. M., Illinois: I hav been a reader of the Twentieth Century Farmer for some time and find some very interesting things in it. I sowed five acres of alfalfa last fall, and have got a very good stand. I am going to ask when is the proper time to cut and put up alfalfa. Should it be cut just before it blooms or just after? I have not had any experience in alfalfa growing before.

Answer—It should be cut when about one-tenth to one-fourth in bloom. By examining the plants at the beginning of the blooming period it will be noticed that new shoots are starting out from the crown. When these are about half an inch long it is time to cut the old growth.

Motors and the Hired Man

F. L. W., Nebraska: In No. 700, on page six, column one, there is a paragraph which looks like a veiled advertisement, while at the same time it seems to express an editorial opinion. It begins with the sentence, "Hired men are hard to get, hard to keep and expensive."

Presuming on your time and patience and trusting to your sense of fairness, I beg you to reconsider that statement. Is it really true that hired men are hard to get? There is no organized effort in restraint. That they are hard to keep on some farms is true—"there's a reason." Do you really believe hired men are expensive? I venture to say, and could show the truth of what I say by a simple calculation, that the hired man is the cheapest motor, animate or mechanical, on any farm where management is not a misnomer.

However, the advice contained in the above mentioned paragraph falls here in barren soil, as far as my boss is concerned. He does not read any farm papers, nor does he do any chores. He owns a sixteen horsepower steam engine, a gasoline engine and a motor installed in an automobile, but lacks the kind of motor that, it may be inferred, will do chores. If there is such a motor, it probably will not show such partiality as to refuse to relieve the hired man. If it can curry horses, feed calves, milk cows, slop the pigs and clean out the barn, I should be grateful to you for information regarding it.

Answer—Why call it a veiled advertisement, when it means exactly what it says? While we are not advocating editorially any particular make of gas or electric engines, yet we believe the gas or electric engine on most farms is more than worth its price. Merely because it is possible to obtain a thing by paying the price is no reason why its use may not be legitimately recommended. We have to pay for most of the good things we get. While the engine will not do all the chores, it will milk cows, pump water, separate milk, grind the feed, and do numbers of other things if its power is properly applied, and these things are all operations that require time and heavy or monotonous labor on the part of some human being unless done by machinery.

We repeat that hired men are hard to get, hard to keep and expensive. Of course, there are personal and local exceptions to this rule, but one of the problems facing the American farmer today is the help problem. Farm labor is hard to get for the reason that the young men of the country seem to prefer to go to the city, while the young men of the city seldom go to the country. It is hard to keep for the reason that the less ambitious men left are not worth the high price it is necessary to pay for them. Statistics show that the wages of farm hands have advanced much more rapidly in the last few years than even the famous "high cost of living." Even were it not for the fact that this condition is generally known and commented on and discussed by the farmers themselves, the letters that have been published in these columns during the last few months on this subject would show these statements are true. The fact that many farmers do not treat their help with consideration may be one of the reasons that hired help is hard to get and hard to keep, but a competent, faithful man, even when well treated, is likely to have ambitions and wish to own his farm.

Lump Jaw

A. F., Wyoming: Will you please let me know if big jaw in a cow is curable? Is there a cure or any drug good for it?

Answer—True lump jaw, where the bone of the jaw is affected, can usually be cured if taken early. Give in the feed, twice a day for two weeks, a heaping teaspoonful of iodide of potash. Stop feeding this for two or three weeks, and then give for another two-week period. Those lumps around the jaw and neck which are loose underneath the skin are not true lump jaw, and can be treated by opening freely and taking the large core out of the center so as to give complete drainage.

There is no time like the present to figure on new harvesting machinery for taking proper care of the coming crops. Old, wornout tools and implements cost more in repairs and loss of time, with breakage in the midst of the harvest, than it would require to be equipped with new, reliable machines. Take an inventory now of the condition of all machinery on the farm and determine its value and certainty for the coming harvest. Time is money when crops are ready to cut, and there is no time to lose. The harvest season, when alfalfa is counted in, might be listed to cover June to September. Harvest is getting to be a big proposition on the central western farm, where live stock is the controlling factor. It means rapid work and involves the help of the best labor-saving machinery.

Boys' and Girls' Short Course

DURING the week of April 27 to May 2 a short course was held at the university farm, Lincoln, Neb., for boys and girls from out over the state. The short course was in charge of Miss Huldah Peterson, assistant state leader of the Boys' and Girls' Club work. The county superintendents in their respective counties selected two boys and two girls to send to this short course. These children were practically all taken from the rural schools, mostly from the eighth grade. A few represented higher classes. However, all of the children were from the country. The average age of those in attendance was 16 years. The total attendance was sixty. There were just about as many girls as boys.

Horse Judging Demonstration at Nebraska Farm

Fourteen counties were represented at this short course by boys and girls from twenty-five different postoffices. Hence one can see that it was quite a representative gathering from out over the state. Representatives from as far west as Dawson county were present. In most instances the county superintendents were able to attend at least one or two days of the short course and see how the children were being taken care of. The girls had rooms at the girls' dormitory at the university farm, while rooms in private families near the university farm were secured for the boys. The cost to the children while in Lincoln proved to be about $4 each, which was quite reasonable, considering that they were in town a whole week and did considerable riding about on the street cars during a part of each afternoon.

The girls' work consisted chiefly of cooking. The girls used the regular laboratories in the home economics building and were permitted to cook various foods each forenoon during their laboratory period. Some time was devoted to sewing, and the latter part of the week O. H. Benson of the United States Agricultural Department, Washington, put on a canning demonstration for the girls. Numerous vegetables and fruits were canned in a manner which was recommended as suitable for the girls in the tomato-growing contest to use. The girls did most of the work during this canning demonstration and in this manner became familiar with everything necessary to conduct the canning work.

The boys were given regular work in agriculture, including farm machinery, soils, field crops, dairying and animal husbandry. The judging pavilion was used for the stock judging classes, and quite a good deal of the time was spent in judging classes of four each of cattle and horses. Considerable laboratory work was given for the boys in the grain room.

Forenoon classes started at 8 o'clock and dismissed at 12 o'clock. The first part of each afternoon was given over to studying, while the latter half was devoted to sight-seeing trips. One afternoon a visit was made to the buildings at the downtown university. Another afternoon was spent going through one of the large creameries and packing plants in the city, and another afternoon was devoted in going through the state penitentiary.

The evenings were well occupied through the week. On Monday evening a reception was given at the farm, at which time the boys and girls met all the members of the faculty who were to teach them during the week, and were given to understand that the university farm was to be at their pleasure while they were there. Tuesday evening the boys were taken to the Young Men's Christian Association, where they were given quite a number of stunts and gymnastic exercises. This was closed with a treat in the swimming pool. The same evening the girls were entertained by the local Young Women's Christian Association. On Wednesday evening Prof. Pugsley gave an illustrated lecture on his trip to Europe. On Thursday evening Mr. Benson of Washington gave a lecture on Boys' and Girls' Club work as he found it over the United States.

The children departed Saturday for their homes, feeling well repaid for their week spent at Lincoln, and doubtless having a much better understanding of agricultural education than they had before coming down.

Among the names of people who will address a national conference to discuss the problems of agriculture and rural life in the near future, we notice there are capitalists, mining men, ambassadors, presidents of women's clubs, editors of farm papers, college presidents, "experts" and a few masters of granges, but not one man or woman whose occupation is given as farmer. If there are any farmers there, they must be men who consider farming as a side line.

There are 8,544 stallions and 681 jacks in Iowa, according to the report of the stallion registration board. Of these stallions 5,952 are pure-breds and 2,592 are grades. Only 103 of the jacks are pure-bred. There were 536 more certificates issued in 1913 than in 1912. Since Iowa's stallion law requires that no animal may be advertised without inserting a copy of the certificate in the advertisement, this report is probably complete.

Do You Know the Ann Arbor Man?

The Ann Arbor man is a big profit maker. He has a hay baling equipment that brings him a mighty good income. He can *bale more hay* in *less time* and at *less expense* than hay balers ordinarily expect.

The Ann Arbor man does *good work* and earns *good pay*. Generally hay is baled at a stated price per ton. Baling profits are the result of having a press that can bale the *most hay* in the least time and at *least expense*. That's the advantage of Ann Arbor construction. And that's why the Ann Arbor man makes *good profits*.

Why not be the Ann Arbor man for your locality? Bale your own hay and your neighbors', too. You will find lots of orders for your work. Ann Arbor work wins preference everywhere because of the smooth, square-cornered bales, with no tails on them. Shippers get full weight in every carload. Ann Arbor work means freedom from expensive, time-eating breakdowns. It means speed and economy of power and crew. This makes Ann Arbor baling profitable for the man who hires your baling outfit as well as yourself.

Get an Ann Arbor press and give yourself a good extra income in your spare time. Write us for the booklet "Making Money from Hay," and learn how easily you can do it.

Ann Arbor

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The Big Profit Maker for Western Balers Especially Designed for Baling Alfalfa

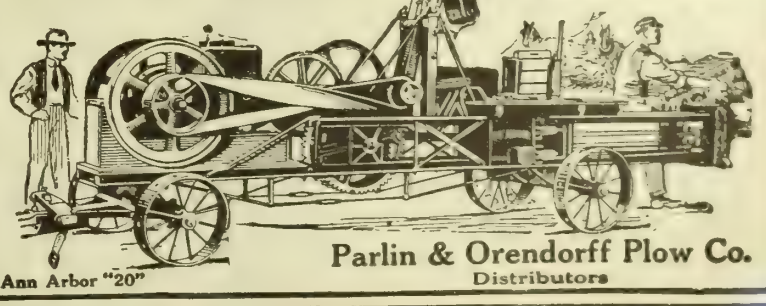
Every Ann Arbor Owner Is Protected by an Individual Guarantee

It's the press that was designed to bale alfalfa without crushing the stems and leaves. Government reports say stems and leaves are the most valuable part of this plant, and that they lose their value when crushed. The Ann Arbor is the ideal baler where such conditions prevail. Just what you need for baling vetch, cowpeas, etc., as well as alfalfa. It has an extra large feed opening, feeding and pressing system that has been carefully designed to give best possible service baling southwestern hay. Fair tests have proved the Ann Arbor feeding device to be the fastest in the world. J. M. Odle of Chapman, Kansas, writes: "Our Ann Arbor hay press has baled 21 tons alfalfa hay in six hours."

Ann Arbor presses also hold the best known record for low upkeep cost. The construction is simple—built extra strong where extra strength is needed. Feeder arm has spring cushion—Chas. E. Hannah writes: "In the two years I ran an Ann Arbor, we never paid a cent for repairs."

Use any engine. If you have none, or cannot get one, ask for our offer on an Ann Arbor horse-power baler. This baler is creating a great sensation in baling circles. Next to Ann Arbor power presses, the Ann Arbor horse press is the best profit maker you can get. Write for literature on Ann Arbor presses. Get our booklet "Making Money from Hay." It carries a mighty valuable and profitable story for you to read. Be the Ann Arbor man for your locality. Address

Ann Arbor Machine Co.,
48 Broadway, Ann Arbor, Mich.



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The day of the old slat-apron silo filler is gone. No wise farmer is going to use one when he can get a money-saving, **grip-hook, force-feed SMALLEY,** that does the work quicker, easier and at less cost. It handles silage, cow peas or alfalfa in a hurry. Cuts it fine and uniform. Packs silage tighter—gives more tonnage.

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A 5 H. P. Engine will run a No. 12 force-feed and our 1914 enclosed carrier. Special alfalfa grinding screen furnished extra, protected by screen patent No. 721,246. Make your own meal.

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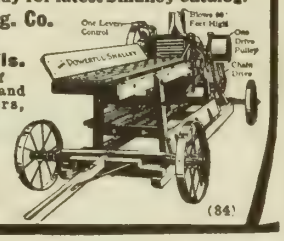
Manufacturers of Ensilage, Alfalfa and Hand Feed Cutters, Combination Ensilage and Snapping Machines, Drag and Circular Saw Machines, Champion Plows, Cob Grinders and Feed Mills.



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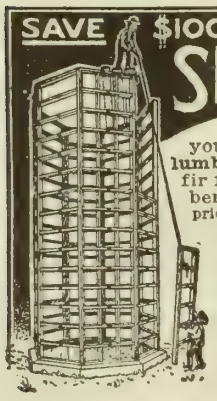

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—has saved thousands of dollars and thousands of horses. The old reliable cure for Spavin, Ringbone, Splint or lameness. For sale at all druggists. Price $1 per bottle, 6 for $5. "Treatise on the Horse" free at druggists or write to **Dr. B. J. KENDALL COMPANY**, Enosburg Falls, Vt., U. S. A.

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Direct from factory, freight prepaid. Over 150 styles for every purpose, all *Double galvanized*. 18c per rod up. New Bargain Catalog and Sample to test, ALL FREE. Mail postal NOW, to
THE BROWN FENCE & WIRE CO.
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Good Fire Dried Seed Corn

From leading varieties — Silver Mine, Reid's Yellow Dent, Yellow Rose and Brown's Choice. For particulars, write **EMORY BROWN, Mitchellville, Iowa.**

Free land information

You can learn the facts

about any section of the country through The Twentieth Century Farmer's Free Land Information Bureau, which is maintained for the benefit of our readers. Let us know what locality you are interested in and we will be glad to tell you of its crops, climate conditions, live stock, government land, etc.—all such facts maye be had if you will simply send postage for reply and address

Land Information Bureau

Twentieth Century Farmer

Omaha, Nebraska.

Over 100,000 farm families read it.

The Problem in Country Life

IN AN ever-increasing number, the people of the farms are moving into the cities and towns. Food production is falling lower and the cost of living going higher. There is a vague unrest, economical and social, on every hand, everywhere. The call of "back to the farm" is unheeded. Swift and silent as the flight of birds of passage, the country youth are leaving the land of their birth and drifting on the passing winds to the cities' deep unknown. The country is suffering a great loss; the cities make only a temporary gain, which must be followed by a serious loss, not only to them, but to all.

This is an age in which education will win, and it is becoming plain that the people who are not educated will be in a great measure subservient to those who are. Since the dawn of civilization there have been schools open to those who had the time and means to visit the seats of learning and pay for instruction. These returned and became the rulers of those who remained at home. Thus for ages we endured monarchies, both absolute and limited. In a government like ours all must be educated for citizenship or we will drift back into a state of dependency.

Our fathers planned well when they laid the foundations of the free public school, open to all until they reached the age of maturity. Inadvertently, their plan has been perverted. Even the rural districts were blind to the effect of centralizing the free public schools in the towns and let it go on unchallenged.

Slowly we are awakening to the fact that all roads to learning lead through the town high schools and that it requires four long years of the child's life—between the ages of 13 and 18—to pass through these grades. With their eighth-grade certificates in their hands, the youth ponder at the forks of the road; the one road turns back to the land and to the home life, which they are yet too young to leave; the other leads up toward the highest halls of learning.

Every prize and ingenious inducement known to the mind of man urges the child to take this latter road. Signboards and pennants point out the way; hope, inspiration and expectation urge them on; voices of the muses whisper invitations; and, lured on by the sirens' songs of the pleasures that are said to be found on the way, many leave the shelter of home and take the road that "leads to fame and fortune." Few who take this road ever return to the land of their birth. Though many paths branch out from this highway, they all lead away, ever away from the farm.

What of those who turn back on the home road, to the home duties and the labor of tilling the soil? They have looked for a time on the rainbow of promise and have drunk at the spring of knowledge. They would gladly go up to the great university of learning if they might reach it by way of the home school. With their eighth-grade certificates in their hands, they knock at the door of that school and beg for one more year's instruction, and their very childhood pleads for them, but they must turn back, hope imprisoned and toil alone set free.

Is this their reward for going "back to the land?" No, this is the penalty. Not only are the doors of the home school closed against them, but all the colleges and universities refuse them admittance. The eighth-grade diploma unlocks only the door of the high school in the town.

We make a lane from the pasture to the clover field, and then wonder why the stock will not remain in the pasture. We make the high schools in the town and cities a lane leading from the rural schools and then wonder why people will leave the farm. By way of the town we may become teachers or preachers, doctors or lawyers, men of business or men of science, men of learning and of culture; we may sit in the high places of state. All this is before us if we will only leave the farm.

If we stay on the farm, neither we nor our children may either teach or preach, or occupy positions of learning. We shall be governed by commissioners and deputy commissioners, watched by wardens and deputy wardens, looked after by inspectors and head inspectors, inoculated and quarantined, cautioned and advised, solicited and exhorted, demonstrated and promoted; all by men and women whose lives and education are foreign to ours, and in whose learning we may have no part, except it be to receive some in a scattered and ineffective way.

We are coming to a day of "carpet-bag" education. We pay to be taught, but may not hope to teach. We pay to be governed, but may not hope to govern. This and more is the penalty we pay for being faithful to the land. This is the price we pay who stay on the farm. We shall have crowded cities and deserted farms. On the farm children will cry for the learning that will make life worth living; in the cities children will cry for bread that they may be able to live.

There is a remedy for all this. Establish schools out on the land within reach of the homes. Do this and you will satisfy the hungry mind; do this and you will check the wanderlust that is fast breaking up the country homes; do this and the social, economic and educational balance will be restored and the whole country prosper as never before.—W. H. Campbell of Clarks, Neb., in Middle-West School Review.

In all the rush of spring work to supply the farm animals with the most appetizing, nutritious and flesh-forming feeds, don't forget the garden. The higher order of animal creation demands just as much attention in this respect as the ox, the ass or the swine. The best selected in variety and quality of all the crops grown on the farm should be the vegetables and fruits that comprise the farmer's garden. This should be the richest acre on the farm, the best cultivated, the center of attraction from the standpoint of home interest.

"Back to the Soil"

(CONTINUED FROM PAGE THREE)

know a few things, but when I tackled farming I discovered that I required a good, working, practical knowledge of gasoline engines, geology, plant heredity, soil analysis, entomology, statics, geometery, surveying, meteorology, blooded stock and their diseases, land laws, finance, and a score or more of other things with long names. After I had sufficiently mastered all of this to make a crop, I bumped into the law of supply and demand, which no one understands, and the result was a loss." My friend Minus was joking, but he usually says something even when he jokes.

The time is right for a drift back to the farm, because there are many opportunities for profitable investment and profitable operation of farm properties. But why a man who has a job paying $100 to $200 a month should sink his little earnings into a first payment on a new job he doesn't know anything about (and obtains from conscienceless liars usually), when all the job is supposed to pay is 10 per cent on the investment, is more than I can understand. Before there can be the sort of movement back to the farm that the printed matter is based upon we must have more $20-an-acre land ready for cultivation. We must remember that the land doesn't grow wheat or corn or cotton or garden truck; it is the farmer who grows the stuff, and it seems to me he is charged too much for the privilege of sweating over the task.

Iowa Hens

Department of Agriculture reports show that Iowa hens lay more than 1,000,000,000 eggs, worth $21,000,000, every year. The department's chicken census of that state foots up a staggering total of 36,092,390, and poultry production each year adds $17,000,000 of value to the $21,000,000 represented by the eggs.

SILO TALK

It is now almost universally admitted that, where the work is properly done, Monolithic Reinforced Concrete Construction makes the **best** SILO—"POLK SYSTEM" is the perfect and economical method. Ask the Government or any experiment station. Twenty-five year tests show that these silos will not crack open, fall, burn or blow down. The walls will not absorb the moisture from the ensilage; neither will the acid eat into the walls. Ensilage will keep perfectly to the very outside edge.

We have gathered a fund of reliable information about silos and silage which is free for the asking, and it's well worth the price.. Send for it; or, if you prefer that we come to see you, ask us.

PLATT & FREES,
State Agents, RED CLOUD, NEBRASKA

Breeders' Notes

Leisey's Duroc Prospects

Those of our readers who are interested in Duroc-Jerseys will be pleased to know that Robert Leisy of Wisner, Neb., has been having especially good success with his crop of spring pigs this year. We called on Mr. Leisy last week and spent some time in looking over his herd. He has 115 head of spring pigs that are the equal, if not the superior, of any bunch we have ever seen on this farm. Thirty per cent of these pigs are sired by Colonel 2d, a son of Proud Colonel Jr., by Proud Colonel and out of a dam by Crimson Wonder Again out of H. A.'s Queen. Other litters are by Golden Model 31st, Colonel Chief, Crimson Wonder 10th, Golden Model 15th and others. These pigs are of early farrow and show a nice, thrifty growing condition at this time. It was conceded by nearly everyone present at his sale last winter that Mr. Leisy put up one of the best offerings of gilts that has been sold in Nebraska for a long time. Along with this, these same gilts have gone out and made good for those who bought them. The lineup for the coming season, no doubt, will be on a par with his last offering, if all goes well. He will have a sale of fall males on October 31, and a bred sow sale at night on February 12, 1915. We trust our readers will keep this well-known herd in mind and watch these columns for further information.

Koehlmoos' Duroc-Jerseys

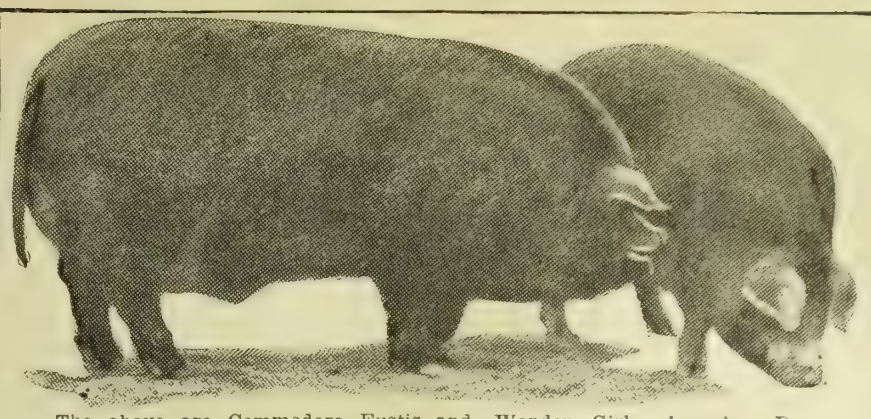
We called on Henry Koehlmoos at Pilger, Neb., last week and spent some time in looking over his Durocs. Mr. Koehlmoos has been breeding Durocs for several years, but has never made much noise about it up to the present time, as the demand for his surplus stock has been sufficient to take everything he had for sale. This year he has 110 spring pigs and will have a sale on Februaary 6, the day following that of Henry Stuthman, also of Pilger, Neb. Mr. Koehlmoos' spring pigs were all farrowed from February 20 to April 15. They are a very even lot and show a desirable type throughout. They are sired by H. K.'s Wonder, he by B. & G.'s Wonder and out of Sweet Rose, 2d, the highest priced sow sold last year. About one-half of the spring pigs are sired by this boar. Others are by Muncie Colonel, by Prince Muncie Colonel; Premier Colonel, by Colonel Tippy; Colonel 2d, Sweet Rose's Wonder and Golden Model 31st. He also has ten fall gilts and the same number of fall boars, sired by Crimson Wonder Select. There is one litter of three gilts and one male among these that are extraordinarily good. They show a wonderful amount of quality and smoothness. This litter will probably be seen at the Nebraska state fair this fall. If you are wanting a fall boar, better write Mr. Koehlmoos, as he has a number of very choice individuals that he is pricing worth the money. Kindly mention the Twentieth Century Farmer when writing.

McGaughey's Durocs

Joseph McGaughey of Wisner, Neb., is one of the new breeders who is coming into prominence among Duroc men in Nebraska. Mr. McGaughey has been buying some very choice individuals for several years and has been quietly building up a herd along lines that should recommend him to those of our readers who are interested in good Durocs. We called on Mr. McGaughey last week, and must say that we were more than pleased to note the advancement he has made in the business. At this time he has a herd that would do credit to many an old breeder. He has 107 head of spring pigs. They are a very strong, even lot and are in splendid growing condition. Along with these he has about fifteen head of extra smooth, growthy, fall gilts that he is bringing along for his bred sow sale next winter. Most of the spring pigs are sired by Van Patton's Chief, he by Invincible Chief. This is one of the good young boars we have seen this year. He is a strong, growthy fellow, smooth, with lots of quality and unusually heavy bone and good pastern. Other litters are sired by Invincible Chief, Goldn Model 15th, Colonel 2d and Colonel Chief. They are nearly all of March farrow, and if they keep on coming, he will have some mighty good stuff for his bred sow sale on February 2, 1915. Keep his herd in mind and watch these columns for further announcements.

Krueger Has the Goods

It is always a pleasure to call on Gus Krueger, breeder of Duroc-Jerseys at Beemer, Neb. Gus is one of the boys that always greets you with a smile and is always able to take an optimistic view of the business. Along with this, when you call on him, you can rest assured that you are going to find something worth while in what he has to show you. He has 119 head of spring pigs, and we want to say, without reservation, that we saw among them some of the best spring pigs we have seen so far in our travels this year. He has twenty-seven head sired by the great breeding boar, Colonel Chief, fourteen by Golden Model, one litter each by Golden Model 4th, Fancy Chief, Clipper Chief, Crimson Wonder 10th, Silver Model, Colonel 2d, Golden Model 31st, Wallace's Sensation, Proud Colonel, Model Gano, I Am a Golden Model 2d, Sweet Rose's Wonder, Chief Invincible and others. Fifty-four of the 119 head were farrowed on March 1 and 2. The balance are mostly of March farrow, with the exception of a few later ones. The best litter that we saw here was sired by Colonel Chief and out of a Red Chief Wonder dam. There are one male and one gilt in this litter that are as good as we have ever seen up to date, and if nothing happens to them and they come on and develop as they give promise of doing at this time, they are bound to cause somebody trouble this fall. Just keep this herd in mind and watch these columns for further particulars from time to time.



The above are Commodore Eustis and Wonder Girl, champion Duroc-Jersey boar and champion Duroc-Jersey sow at Denver Live Stock show, owned by P. P. Cedar, Genoa, Neb.

Wallace's Dependable Durocs

Clarence Wallace, the veteran breeder of Duroc-Jerseys at Wisner, Neb., was among those we called on last week, and we found him optimistic as to the future prospects in the Duroc business. The fact of the matter is, he could not very well feel otherwise with the splendid lineup of stuff he has in stock at this time. He has about seventy head of spring pigs, forty fall gilts and twelve fall boars. The spring pigs are coming along in a very satisfactory manner. They are sired by Colonel 2d, Proud Colonel, Golden Model 32d, Long Wonder, a full brother to Wallace's Wonder, Golden Model 4th, Wallace's Sensation and others. In this connection we want to say a few words about Colonel Chief. This boar is owned jointly by Mr. Wallace and Gus Krueger of Beemer, Neb. He is a line-bred Colonel hog, being sired by Chief Colonel 2d, he by Chief Colonel and out of Helen Blazes. His dam was Lady Prince by Prince of Colonels. He is an extra large hog and possesses an unusual amount of quality, splendid bone and length, strong back, is right up on his feet. In fact, he has an eleven-inch bone. One of the strongest qualities of this hog is his prepotency as a breeder. Some of the very choicest pigs we have seen this year are sired by him, and we are confident he will prove a valuable acquisition to the herds of the men who own him. In regard to the fall males that Mr. Wallace has on hand at this time we wish to say that they are an especially good lot of big, strong, growthy fellows, and among them are several that are good enough to do service in any pure bred herd. Four of them are out of the champion sow at Nebraska last year, Fancy Advance 2d. They are sired by Golden Model 4th. There is also one nice prospect in a boar sired by Golden Model 4th and out of Wonder's Lucy, fourth prize sow at Nebraska. There are also three by Fancy Wonder and two by Sensation Wonder 2d, that are worth looking after by anyone wanting something in this line. Get in touch with Mr. Wallace for further information, mentioning the Twentieth Century Farmer.

George W. Schwab Heard From.

In a letter received early this month from George W. Schwab, the well known breeder of Clay Center, Neb., he says: "Business has been good in all lines of stock we handle, especially in the bred sow line and stallions. We have also been selling and shipping bulls and boars, and the inquiries come as thick as ever. We are glad of this, however, for we have the stock to sell. I have twenty head of fall boars ready for immediate service, all good colors, well built, with good bone and frame, nice heads and ears. Today I am shipping a 19-month-old Red Polled bull to parties in Iowa, but still we have several good ones left that are ready for immediate service—large, strong, growthy fellows with scale and frame built for the most exacting, and good enough to head splendid, purebred herds. They are all our own breeding, and are sold fully guaranteed. In bred sows we have twenty head or more still for sale; they farrow right along now till up in July, and we are breeding others for later farrow. I aim to have a good supply on hand at all times to accommodate the trade in any state. Our business in sows and gilts has been all we could handle, and there are many good prospective sales in sight. Have sold the dapple gray stallion, Sansonnet, weighing 2,000 pounds, for $1,500, and the two black stallions, Rolland and Montevideo, for $4,000. They are of our own breeding and raising. The United States government wanted them, but did not offer the prices for which we sold them. I still have several good black stallions and a ton 3-year-old, all of which are for sale at right prices. Our mares are foaling good, strong colts. I am guaranteeing every animal I sell. I have Red Polls of both sexes, any age and weight."

Dead Hogs or Live Hogs
WHICH DO YOU WANT?
Anti-Hog Cholera Serum
will immune your hogs and prevent them from dying with hog cholera.
WRITE US FOR FREE BOOKLET AND ADVISE US HOW MANY HOGS YOU HAVE.
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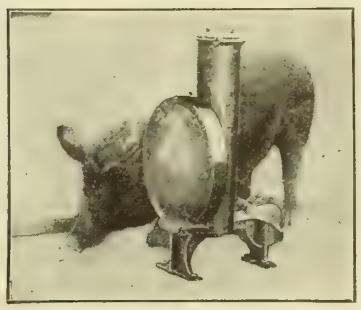
LEARN TO BE AN AUCTIONEER National Auctioneering School of America Box 34, Lincoln, Neb

Anti-Hog Cholera Serum
(U. S. Government License No. 62)
The modern scientific treatment for the prevention of hog cholera.
Endorsed and advocated by the United States Department of Agriculture.
The vaccination of hogs has long passed the experimental stage. This treatmment, where POTENT SERUM has been properly applied, has proved to be just as practical and satisfactory as similar methods used in treating human beings.
The O. K. SERUM CO. recently vaccinated 4,000 head of stock hogs at the U. S. Yards, South Omaha, Neb., with a loss of less than 1 per cent.
The same company has vaccinated thousands of hogs in the country districts with equal results. It is very important that POTENT SERUM be used and the only way to obtain this is by insisting on serum produced by a company operating under a U. S. Government license. WRITE US FOR INFORMATION.
O. K. SERUM CO.,
SOUTH OMAHA, NEB. Office, 255 Exchange Building.



Agents! Wanted Everywhere for the Sherman Hog Greaser
Hog lice, fleas and gnats, positively exterminated. Cures scurvy and wards off contagious diseases. The SHERMAN method is the safest, cheapest and surest.
Hogs are always kept healthy and take on fat rapidly. Best results are certain. Write today for Special Offer.
THE SHERMAN HOG GREASER CO., Dept. O, Peoria, Illinois.
Write for our free copyrighted 16-page booklet on 'How to Keep Hogs Healthy and Raise Them Profitably."

RED POLLED CATTLE
Red Polled Cattle
Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.
W. F. SCHWAB, Clay Center, Nebraska.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE
Quality of production and persistency of milking during long periods are well known characteristics of Holsteins. Dropping her first calf at about 2 years old, the average cow, if well cared for, will produce from 5,000 to 6,000 pounds of milk in ten months, and she will increase the production every year until at 5 years she will give from 7,000 to 9,000 lbs. If fed to their ability to digest and assimilate food, many Holsteins will exceed this production.
Send for FREE Illustrated Descriptive Booklets.
Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro, Vt.

DUROC-JERSEY HOGS
DUROCS AND RED POLLS
25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed.
GEO. W. SCHWAB, Clay Center, Neb.

AYRSHIRE CATTLE
AYRSHIRES THE PERFECT DAIRY COW
The Loveland Farms Company of Omaha, Neb., has the largest herd of the roughbred Ayrshires in the west. Young stock and cows for sale. Two expert Ayrshire and Jersey dairymen assisting to improve their herds. young bulls furnished which need not be paid for until bull is ready for service.

O. I. C. HOGS

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." C. S. BENJAMIN RFD 9 Portland, Mich.

HOLSTEINS AT AUCTION
At a farm near Walton, Neb., 7 miles east of Lincoln, Neb., Tuesday, June 2, '14.
The offering will consist of 75 head of registered and high grade Holsteins, including 30 head of heavy milking cows, 10 bulls and 35 head of two and three-year-old heifers, all safe in calf. T. A. GIERENS, Box 556, Lincoln, Neb.
COL. Z. S. BRANSON, Auct.

FRIESLAND FARM HOLSTEINS
We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.
DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

PERCHERON HORSES
Part from 2400-lb. imported sire and part from 2200-lb. imported sire and imported dams, my 2, 3 and 4-year-old registered Percheron stallions would prove valuable breeders for you. With all their weight and bone they are dressy and straight sound. This is some of the most substantial and most attractive Percheron breeding material in the world. Farm raised and offered at farmer's prices. Just east of Omaha.

FRED CHANDLER, R. 7, Chariton, Ia.

Review of Live Stock Market

By A. C. Davenport

FOR the last two weeks the beef market has been in very unsatisfactory shape, and producers in the west have been at a loss to understand how it comes about that with comparatively moderate supplies of cattle, prices should show weakness at all points. The principal reason for a slumpy cattle market in the west is a demoralized beef market in the east. This demoralization is due to a combination of causes that is likely to disappear inside of the next two or three weeks. In the first place, at this time of the year, eastern butchers are getting a lot of cattle that have been fattened in the east and consequently are not as anxious for western beef as usual. Then, too, there have been fairly liberal receipts of Argentine and Australian beef via London. It seems that the Australian and Argentine packers are able to offer their beef in England, and when they find their market gultted can now reship it to America with very little additional expense.

Another element in the situation that weakens the demand for western grain-fed cattle is the fact that distillery cattle are beginning to run freely and the big barns in Kentucky and Illinois, as well as in sections of Canada, are unloading thousands of slop-fed cattle on the markets. In the east meat is already selling very high and with more or less industrial depression the situation resolves itself into a question more of increased consumption than of decreased supply. By the time the present unusual combination of circumstances is changed there will be a further change in the receipt of grass cattle from the southwest, although there is very little prospect that really cheap beef will be an actuality this summer.

Hog Values Slightly Lower

The hog market has been acting very peculiarly for some time. Ordinarily, with the present comparatively moderate receipts at all markets, there would be a general firming up of values. On the contrary, the trend of values has been lower in spite of present and prospective light marketing. Packers say the provision situation is very unsatisfactory and unprofitable. They are unwilling to put away a great deal of product at the present high basis of prices and yet they find a ready outlet for practically all the fresh pork they are producing. It seems to be a question of future prices and the packers are unwilling to take a chance on disposing of very heavy provision stocks at the present level of prices.

As a consequence they are keeping as close to shore as possible and doing little more than to provide for their immediate necessities. This accounts for the sharp fluctuations in values from day to day. In spite of this uniformally bearish attitude of the packers, however, they seem to be absolutely unable to force values below the $8.00 mark, and even with a large pig crop in sight there is little indication that summer and fall figures for hogs will be very much below the present level.

Lambs Go Up

During the last week or ten days the market for lambs has shot upward at an unusual rate and values are now the highest of the season and fully as high as they were a year ago. Although more lambs were fed throughout the west the last season than ever before, the crop was marketed tolerably early and the middle of May finds supplies comparatively short. The present very high prices, while very satisfactory to those who were fortunate enough to have anything to sell, may perhaps have a very unfavorable influence on the market for feeder lambs this summer. The trade had about come to the conclusion that the only salvation for lamb feeders would be to secure their feeder stock cheaper. A very strong close to the market for corn feds this spring will naturally make intending feeders anxious to stock up in the fall regardless of prices. It is to be hoped, however, that feeder buyers will use more caution than they did last year, in which case a profit is about as certain as in any other branch of the live stock business.

Canada's Live Stock

According to the latest statistics from the Dominion census department Canadian farmers own animals worth $659,000,000, divided as follows: Horses, $420,079,250; milch cows, $115,369,294; other cattle, $86,522,140; sheep, $10,672,803, and swine, $26,664,735.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

E. E. Johnson's Durocs

E. E. Johnson of Genoa, Neb., has 125 head of spring pigs this year that are without doubt the best lot he has ever raised. Along with these he has about twenty-one head of extra choice fall gilts and also eight fall boars. The larger part of the pigs are sired by Carnival Chief by Lincoln Chief. This boar was the first prize boar at Kansas, Missouri and the Denver stock show, and also reserve champion at the latter show. There are also six litters sired by Critic Boy, a son of Critic B. The fall pigs are all by Carnival Chief, with the exception of one litter, these being by I Am a Golden Model 2d. We will have more to say regarding this herd in a later issue. Mr. Johnson will be at the fair this fall with a good lineup of stuff, and will surely have something desirable to offer for sale when the time comes. Keep his herd in mind and watch these columns for further announcements.

Ed Kern's Durocs

Ed Kern of Stanton, Neb., has 110 head of young Duroc spring pigs at this writing, sired by Sensation Wonder 2nd, Prince Muncie Colonel, Golden Model 31st, Cherry Chief, Golden Model 4th, Colonel Chief and others. Mr. Kern also has a number of extra choice fall gilts sired by Lincoln Chief 2d, he by Lincoln Chief. In Sensation Wonder 2d and Prince Muncie Colonel, Mr. Kern has two as good breeding boars as are in any herd in the country. We consider Sensation Wonder 2d to be one of the very best real big boars we have seen in a long time. If there is a thousand-pound boar in Nebraska, it is certainly Sensation Wonder 2d. Along with his immense size, he has plenty of quality and smoothness and stands on as good feet and bone as it is possible to get. We will have more to say regarding Mr. Kern's herd from time to time. Watch these columns for further announcements.

Baeder's Duroc Prospects

Seventy-five head of spring pigs, is the quota found in the herd of John Baeder, the well-known breeder at Scribner, Neb. One-third of these are sired by Baeder's Golden Model, the winner at Nebraska state fair last year. One-third are sired by Echo's Crimson Wonder, and the larger part of the rest are sired by Prince Critic. There is also one good litter by Blue Ribbon Model. These pigs are mostly March and April farrow. One of the choicest litters is out of Premier Fancy Lady and sired by Echo Crimson Wonder. Mr Baeder also has an extra good fall litter out of this sow, sired by Baeder's Golden Model. We also noticed two extra good litters out of Baeder's Golden Model dams and sired by Echo Crimson Wonder. Mr. Baeder has several later litters that are especially good. These are sired by Prince Critic. Mr. Baeder has for sale several extra choice fall males. If you are looking for something of this kind, write him at once, mentioning the Twentieth Century Farmer.

Hekrdle's Durocs

Anton Hekrdle of Stanton, Neb., the well known breeder of Duroc-Jerseys, has 108 head of spring pigs that measure up to the standard of those usually found on his farm We called on Mr. Hekrdle a few days ago and found him busy with his farm operations, but still ready and willing to stop and talk about his herd. One-half of his spring pigs this year are sired by A. A.'s Model, a line-bred Golden Model boar, and a good one. The balance, with the exception of one litter, are sired by Beauty's Wonder, by Proud Wonder, and he by Wallace's Wonder. Besides these, he has one good litter by Crimson Critic, a splendid breeding son of the grand champion, Critic B. Mr. Hekrdle will have a splendid line-up to offer his customers if all goes well with his herd. He is a good caretaker and develops and grows his pigs out in a manner that insures their getting out and making good for those who buy them. In fact, he sells everything with an iron clad guarantee, and they have got to be just as he represents them to you. Keep his herd in mind, and when in need of anything in the line of a Duroc, write him, mentioning the Twentieth Century Farmer.

Dan Kane's Durocs

Dan Kane of Wisner, Neb., has about seventy head of Duroc-Jersey spring pigs this year, carrying the blood lines of the best boars of the breed. Mr. Kane has been a consistent buyer of good stuff and his spring pigs this year are coming along in a very satisfactory manner. Most of the pigs are sired by Wonder Chief by B. & G.'s Wonder. Other litters are by Golden Model's Hope by Golden Model 2d; Chief Invincible by Invincible Chief, and Wonder's Colonel by Proud Colonel, Jr. Another especially good outside litter is by Golden Model 31st and out of a dam by Golden Model 15th. This sow was the highest priced sow in the Herman Toelle sale at West Point last spring. There are eight good pigs in this litter. Mr. Kane will have something further to say through these columns in a later issue. In the meantime, if you are in the market for anything in his line, write him for further information, mentioning the Twentieth Century Farmer.

Henry Stuthman's Durocs

Henry Stuthman of Pilger, Neb., has 135 head of little red fellows this year, that measure up to the usual high standard of the pigs generally to be found at this farm at this time. Mr. Stuthman is one of the younger breeders who has made rapid strides in the business during the last few years. He has done this by the application of good, common sense to his business and his ability to produce and develop the type of hogs that is most in demand at this time. His pigs this year are sired, one-third by Sweet Rose's Wonder, one-third by Chief's Model, some by Crimson Wonder Select, and other litters by Golden Model 31st, Golden Model 4th, Blue Ribbon Model, Colonel Critic by King the Colonel, Model Wonder, Colonel Chief and others. There are about thirty head of fall stuff sired by Crimson Wonder Select, Melina's Wonder, Colonel Tippy, Valley King's Wonder, King the Colonel, and others. Mr. Stuthman will hold his fall sale on October 5 and his bred sow sale on February 5. Keep his herd in mind and watch these columns for further information.

Porter's Berkshires

We called on Mr. George Porter of Stanton, Neb., a few days ago and found him with about sixty head of Berkshire pigs of spring farrow to date. Mr. Porter is one of Nebraska's most substantial Berkshire breeders. He has been in the business a number of years and has always used the very best of breeding animals obtainable to head his herd. The pigs this year are sired mostly by Longfellow's Premier and Autocrat, two boars with plenty of scale and bone, length and quality. Mr. Porter has a number of sows bred to farrow next month, also some extra choice fall gilts that he is keeping over for future trade. He has recently added to his herd the splendid boar, Charmer's College Duke, a son of Charmer's Duke 29th. This boar has plenty of size and stretch, good strong back, and is certainly the correct type. We have no doubt but what he will prove a valuable addition to Mr. Porter's herd. We will have more to say regarding this herd in a later issue. In the meantime, if you are in the market for anything in his line, write him, mentioning the Twentieth Century Farmer.

Colonel McGuire and His Durocs

Colonel R. P. McGuire of Wisner, Neb., has always been one of the strong pushers for a better class of live stock in that community. Coming to Nebraska thirty odd years ago and enduring the hardships of the pioneer, he has seen the country grow from an unbroken prairie to one of the richest farming and stock growing communities in the west. Along with his farming operations, he has engaged in the auction business, and probably no man in that part of Cuming county has a wider acquaintance in the surrounding territory than has Colonel McGuire. Wisner is noted far and wide for the large number of herds of pure bred live stock that are to be found in and around this immediate neighborhood. In his capacity as an auctioneer, Colonel McGuire has been more or less associated with the various herds at sales, etc., for a great many years. For several years he has at various times at the different sales purchased very choice Duroc-Jersey females. Being a booster and seeing the possibilities in breeding Durocs, he has been working to the end of establishing a good herd of this popular breed. At this time he has about 100 head of spring pigs, sired mostly by his own herd boars, B. & K.'s Colonel Gano by Colonel Gano, and Golden Model's Hope by Golden Model 2d. Besides the spring pigs, he has about thirty-five head of extra choice fall pigs sired by Golden Model, a splendid breeding son of Golden Model 15th. B. & K.'s Colonel Gano is a full brother to the well known Iowa winner, King Gano. He is an extra heavy hog of the big, strong, rugged type, and Colonel McGuire has very choice pigs to show, sired by him. On account of having so much of his produce in his herd, he is offering this boar for sale at this time. If you are looking for something in this line, you had better write him at once, mentioning this paper.

Sale Dates

Duroc-Jersey Hogs

September 30—F. B. Nelson, Lindsay, Neb.
October 2—F. A. Lemmerman, Creston, Neb.
October 5—Henry Stuthman, Pilger, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.

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WHITE ROCKS—LARGE, GREAT laying strain; eggs, 15, $1; 100, $4. Geo. Clauson, Mead, Neb.

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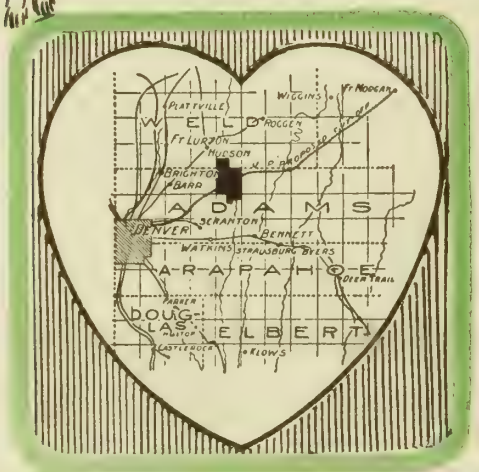
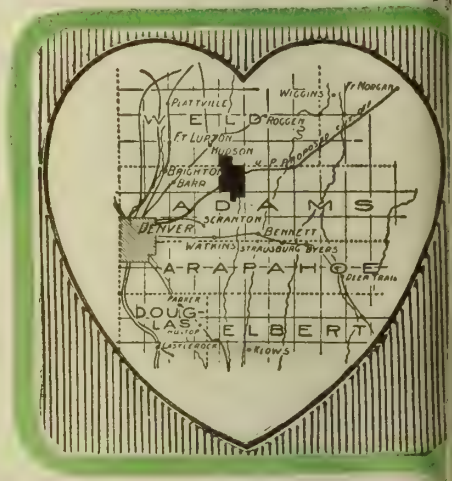
WEST FARMS

In the Heart of Colorado





HERE, more than most anywhere else in the world, nature has assembled her choicest riches, requiring very little labor to grow a crop. The famous climate is so full of sunshine and warmth and the air so pure microbes can't live. Hog cholera is unknown.

The soil that will produce admirably the most bountiful crops of alfalfa, corn, flax, wheat, oats, speltz, barley, with several hundreds of bushels of potatoes per acre and root crops in proportion. In the vicinity, apples have shown a remarkable record, while the small fruits have made more than satisfactory yields. All these crops have more nutriment in them than these same crops grown in states further east. The finest water and an abundance of it.

An ideal locality for dairying, for it has the very best food and water and a climate suited to the work and then the great Denver market, so near and fine, makes it most profitable. Five cows well cared for will support any family and leave a margin. But stock raising of almost all kinds is a wonderful money maker.

The map herewith shows that our lands are on the Union Pacific "cut-off" from Denver to Fort Morgan, thirty miles out, where we are building a postoffice, creamery, store and ranch buildings. Later on we shall establish a station and town there. We are also putting in crop of 1,000 acres this spring.

Listen—most of your neighbors started with practically nothing. They got a tract of land at only a few dollars per acre, kept farming it until the development of the country increased its value from $100 to $150 per acre—a natural increase.

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A number of Iowa and Nebraska farmers have farms adjoining ours in various places, where they have farmed for years. Their crops show what the land will produce, so there is no chance for the buyer to make a mistake in selection.

To really appreciate our lands you must see them. To know more about them you should get our fine illustrated folder which gives a definite and reliable description.

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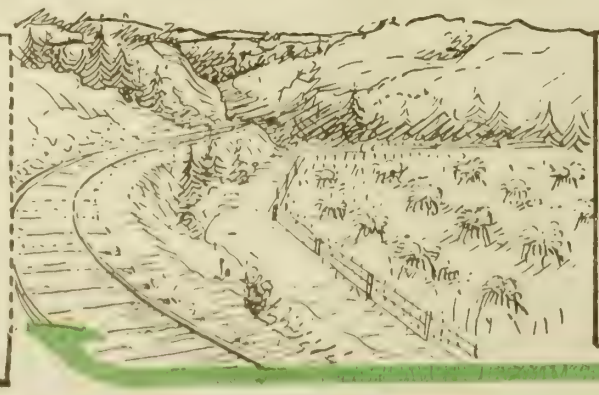

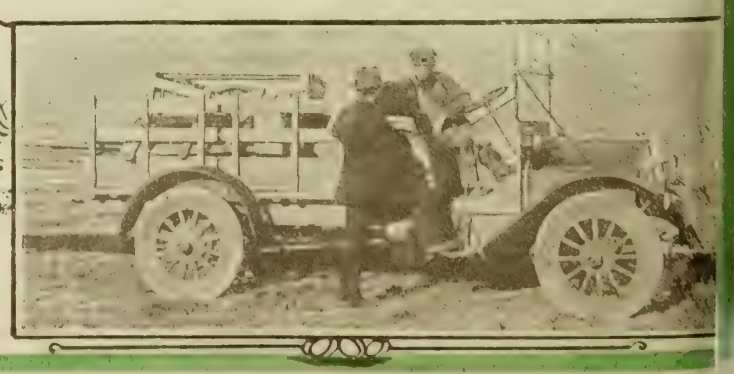

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, May 30, 1914 | Number 703

Prattle of the Youngsters

Trouble Ahead

Johnny—I'll get even with ma for spankin' me.

Tommy—Aw, what'll you do?

Johnny—One o' these days I'll everlastingly whale her grandchildren.

Unselfishness

When little Margaret passed her plate the third time for chicken her mother said:

"My dear, you must not eat so much chicken. I am afraid you'll be ill."

"Well, mother," said Margaret, "I'm not eating this because I want it; I'm collecting the bones for Fido."—Harper's Monthly.

Given Away

"Who gave the bride away?" asked Mrs. Evans of her daughter, who had just returned from the wedding.

"Her little brother," replied the daughter. "He stood up in the middle of the ceremony and yelled, 'Hurrah, Blanche; you've got him at last!' "

Misfits

It was Robert's first visit to the zoo.

"What do you think of the animals?" inquired Uncle Ben.

After a critical inspection of the exhibit, the boy replied:

"I think the kangaroo and the elephant should change tails."

Where It Hurt

A story from the nursery of the German emperors relates the ready, if unconscious wit, of the present Kaiser William when a little fellow. One day his governess punished him by the time-honored method of correction, after which she remarked:

"Believe me, your royal highness, it hurts me as much as it hurts you to do this."

"Ach," replied the weeping prince, "does it hurt you in the same place?"

Useful Guest

The appetite of the guest was a keen one, and he was doing full justice to the excellent dinner provided by his host. The little daughter of the house watched him open-mouthed for a while. Then, finally, she smiled on him brightly and said:

"Oh, I do wish you were here to dinner every day."

The guest beamed with satisfaction.

"Do you, my dear? Why?" he inquired.

"Because," came the unexpected reply, "there won't be anything cold to eat tomorrow."

Smoke Nuisances

The family doctor was paying a semi-social, semi-official visit. As he took a leisurely departure he paused to discuss with Margaret's mother the general health conditions of the city.

"We're not so badly off, comparatively, that is," he said. "For one thing, there are only two uncontrolled, unmitigated smoke nuisances in the town."

From the sofa in the corner Mar-[illegible] piped:

"Yes, doctor, I know," said she; 'papa and Uncle Jim.'"—Delineator.

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Theory Versus Experience

CERTAIN soils are fitted to raise certain crops. No one doubts the truth of that simple statement. The main question, when you own a piece of land is, "What crops are best suited to this land?" One man will tell you to have a chemical analysis made of the soil. Another man will tell you that a chemical analysis is absolutely valueless. Which man is right? Both and neither. If you have had a chemical analysis made of some soil and been told it would raise certain crops, and then have tried to raise those crops and been unable to do so, you will have little confidence in this method of determining the composition of your soil. In our next issue A. C. Hartenbower will explain why analysis and experience do not always harmonize and just in how far you can place confidence in this method of arriving at conclusions as to the adaptability of your soil.

Louise M. Allen contributes a short article explaining the reason for the deterioration of seed in some localities. Miss Allen is the state seed inspector of Nebraska. She has had years of experience in this line of work and knows what sort of seed the seed dealers want to buy and why they find it hard to secure such seed.

The hog cholera article which will appear in the next issue tells how serum and virus are made, and suggests methods of increasing their potency.

Bright and Breezy

Large Order

A woman rushed into a hardware store and said to the man: "Give me a mouse trap, mister, and hurry up. I want to catch a car."

Modern Methods

Old-fashioned Mother—What is this Montessori system of child education that I hear so much about?

Old-fashioned Father—I dunno exactly, but the keynote of it seems to be "votes for children."

Superior Knowledge

The priest had preached a fine sermon on "Married Life and Its Duties." Two old Irish women were heard coming out of church commenting on the address.

"It's a fine sermon his reverence would be after giving us," said one to the other.

"It is, indeed," was the quick reply, "and I wish I knew as little about the matter as he does."

Unreliable Information

A young woman returned to her home in a small Maryland town after a winter in Baltimore, and was told that her old colored laundress had just died after a brief illness. Shortly afterward Aunt Annie appeared, quite alive and looking for work. "Why, Aunt Annie!" said the astonished girl, "I am so glad to see you. I heard you were dead." "Yes, honey," said the old woman, "Ise done hyeard dat, too, but I neber did believe it."

Working Hubby

"Dearie," said the young married man, "I have to go to New York on business. It will only take a day or so, and I hope you won't miss me too much while I'm gone, but—"

"I won't," answered his young wife, positively, "because I'm going with you."

"I wish you could, dear, but it won't be convenient this time. What would you want to go for, anyhow? I'm going to be too busy to be with you, and—"

"I have to go. I need clothes."

"But, darling—you can get all the clothes you want right here."

"Thank you. That's all I wanted."

"Granny's" Tribute

The Rev. Mr. Lawrence had boarded for so long a time with the Granby family that when he was obliged to remove to a new field of labor the family keenly felt his loss.

"The best pastor we've ever had in this town," declared Father Granby, "and so sympathetic if the least thing went wrong."

"He was the easiest man to cook for I ever knew," contributed Aunt Ann. "He was always satisfied with what he had to eat, and he never grumbled."

"He had such a serene disposition," sighed Sister Laura. "He brought an atmosphere of peace whenever he came into the house."

"Granny" Granby, in her corner by the fireplace, shook her head dolefully as she added her tribute of affection.

"I'll miss him dretfully," she mourned. "He was the best hand at ketching meth millers ever I did [illegible]—Youth's Companion.

THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Management and Practical Value of Silos

I—What Crops to Raise and How to Convert Them Into Silage

ABOUT a year ago the Twentieth Century Farmer made quite an extended investigation of silos, looking into the material used, the kind of silo and the cost of construction. This investigation revealed some startling facts, which were given to our readers in a series of articles entitled "The Truth About Silos." These articles were afterward printed in bulletin form. That our readers were anxious to know the truth was fully revealed by the very large call we have had for these bulletins.

The publication of these articles gave the impression to some people that this paper was against the use of the silo and silage. We are inclined to the belief, however, that the false impression was created by those smarting under the truth revealed by this publicity, and spread among those who had not read these articles.

Nothing could be further from the truth than that this paper does not believe the use of the silo and the feeding of silage beneficial to the farmer and stock raiser. It was our aim and object in making this investigation and in publishing these articles to put the farmer on his guard, so that when he did buy a silo he would be getting one that would be sure to give him the service he expected of it and also be getting it at a price that was somewhere near right.

Many men are prone to take hold of a thing of this kind on the spur of the moment and make a purchase without giving the matter the investigation they should. Very often they get "stung" and don't get what they thought they were getting. Results are not what they expected and the outcome is the whole business is discarded as a failure.

Good Silo Indispensable

This paper had all this in mind when we started on the silo investigation last year. We felt that the use of the silo and the feeding of silage was of too great importance to allow our readers to make a mistake if it were possible to avoid it. We felt that a good silo, properly constructed and properly filled with the right kind of feed, would be of lasting benefit to the owner, and once he had one properly put up he would feel that it was a part of the farm equipment he could not dispense with.

In this matter, as in all others, we wanted to be sure of our ground. Our method of knowing the truth was to see and talk to the man who has owned a silo and has fed the silage. A member of our staff has been engaged for several weeks in making this investigation, going into many different parts of Nebraska, Iowa and Kansas, talking to the farmers and stock men who have had silos and fed silage for several years. We have also visited different experiment stations and talked to the men in charge of this particular kind of work at these stations.

We are going to give to our readers the results of our investigations. We believe what we will have to say will be the truth, coming as it does from the men themselves who have used silage and from the men at the experiment stations, giving the matter both practical and scientific investigation. We shall in future issues of this paper give some results obtained by farmers, giving their names and postoffice addresses.

If you conclude to erect a silo, you will soon find it to be indispensable. Give the matter some time and attention. There are many different materials, different kinds made of the same material, etc. Look carefully into them, their cost, utility and adaptability to your climate. If you think of putting in a pit silo, know first you have the right kind of subsoil, one which does not contain water, which would in wet times come into your silo and spoil your silage. Get facts and figures from different manufacturers. We have found men who had some particular kind of silo and said they would have preferred building some other kind, but the price was prohibitive, when in fact the cost of the one they wanted was less than the one they bought. They were simply "worked" by some unscrupulous dealer or agent. Look up all these matters, and when you do build, no matter what kind of silo you get, you will be satisfied and will always be a friend and booster for silage as a feed.

What Silage Is

What is silage? It is the whole plant, either corn, kafir, cane or some legume, cut in the green stage, run through a cutter and finely cut, put into a silo, thoroughly tamped and packed. The plant in this form ferments and comes out for feed containing practically all the qualities it contained when standing in the field. In other words, the man who has silage to feed his animals has practically the same feed he had in the summer or fall when it was in his field.

One of the things to take into consideration after you have built the silo is with what it shall be filled. Generally speaking, we believe that where corn is raised and can generally be depended upon for crop, the answer to the question should be "corn." There is, however, quite a large territory covered by this paper in which corn is not always successfully grown, due to insufficient rainfall. Farmers in these localities, we believe, should give careful consideration to the raising of some kafirs and especially cane.

Use of Cane and Kafir

The Kansas Experiment Station has made some very careful and valuable investigations and experiments in the use of kafir and cane for silage. These investigations have shown that in a great many localities where corn is an uncertain crop, kafir and cane have been successfully grown and made excellent feed when put through the silo. We believe that in localities where corn is generally very successfully grown a little experiment of their own made by the farmers in the raising of some of the quick-maturing kafirs and cane would be very valuable to them. Especially do we believe, from our investigations, that farmers living in the northern half of Nebraska and Iowa should make some investigations and some experiments in cane. There is practically no question but that cane will yield a much greater tonnage than corn, and experiments have shown that the value of the feed in some cases has been equal to that of corn and in some cases better and in some not quite so good. Taking it as a whole, however, acre for acre, we are inclined to the belief that cane put through the silo will make more pounds of gain than will corn. If this is true, it certainly stands our farmers in hand to look carefully into the matter. We would advise trying at least a small part of Early Amber and Kansas Orange cane. Find out for yourself which is the best adapted to your locality and to your use. Some farmers are puting into their silo cane and corn in equal parts. Some are using cane and kafir, equal parts, with good results, claiming they are getting a larger tonnage from the kafir and cane than from the corn, and that in mixing the two they are having very satisfactory results.

Cut at Right Time

A very important matter in getting good silage is to have the plant cut at the right time of its growth. This matter has been carefully looked into. We find some farmers of the opinion that for best results corn should be cut when in the milk; a very large per cent, however, agree that the plant should be as near maturity as possible for best results. The lower leaves on the stalk and the outside shucks on the ear should be turning brown, the grain just out of the dough and beginning to dent.

In using either kafir or cane for silage the plant should be near maturity to make the best feed, as in the case of corn. Experiments made with the cane plant cut before being ripe have been very unsatisfactory. In raising cane for silage the plant should have as much sugar in it as is possible to get for best results. We have talked to some farmers who have planted kafir and cane in central Nebraska with results not satisfactory. We believe, however, in some of these instances at least, the time of planting was too late to give the plant time properly to mature before frost. To get the best silage the plant should be cut at a time when it can be put into the silo as dry as possible to do. Where several neighbors have a cutter in partnership, which is a splendid plan, reducing the investment, you cannot cut the corn for each one just at the period you would prefer. This makes it necessary sometimes to use water. There is no rule by which the amount of water to be put in can be ascertained. It is something the man filling the silo has got to learn by experience. He may possibly make a mistake in filling his silo the first year, but will soon find about how moist the silage should be when cutting.

We have found in talking to many farmers who do not have silos that an erroneous idea is

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Women Winners at the Game of Farming

Some Striking Instances of Success Among the Million Women Farmers of the United States

By Frank G. Moorhead

Mrs. James Watson

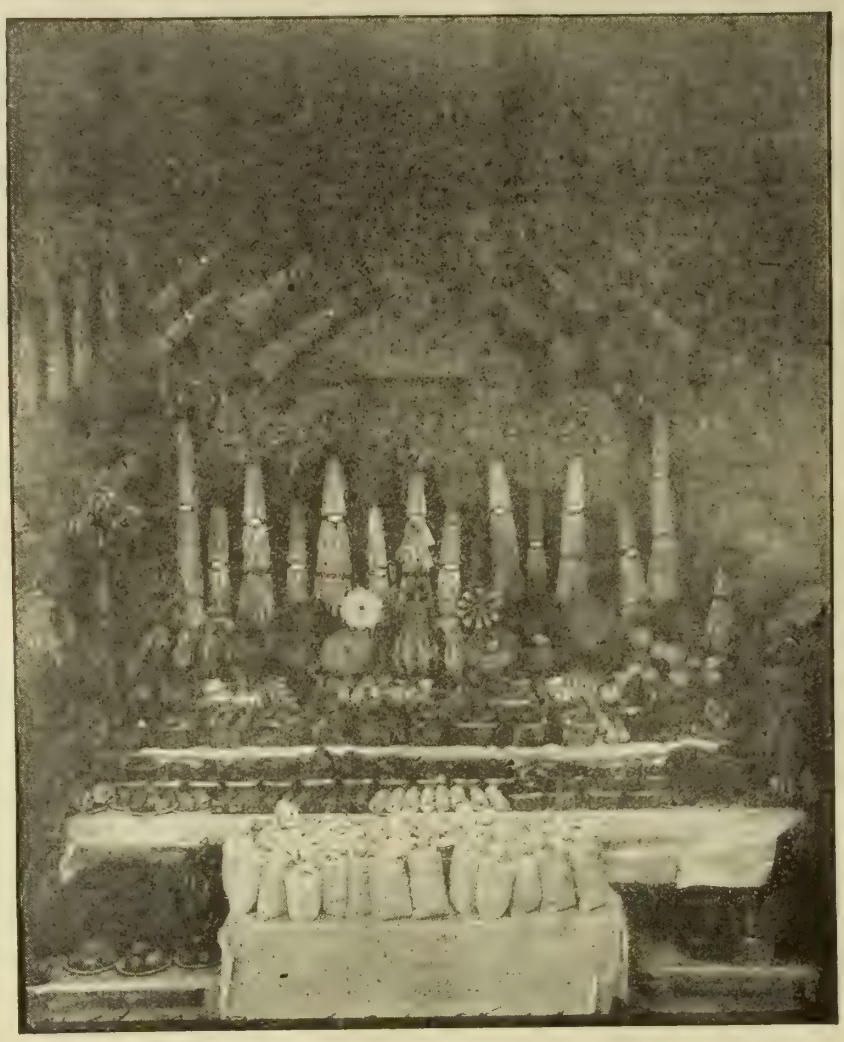

Exhibit of Mrs. Fannie Klinck at Iowa State Fair in 1913

Mrs. Belle Van Dorn Harbert, First President of the Farm Women's International Congress

THE number of women who are making a marked success at farming is surprisingly large. According to the last census, more than a million of the fair sex are following the ancient and honorable profession of tilling the soil, either as farm owners or farm laborers. Among this number it necessarily follows that a few stand out as leaders because of some peculiarly high achievement or unusual honor, or by the sheer strength of their personality.

There is the case, for instance, of Mrs. Fannie Klinck of Clarksville, Ia., who holds the grand champion sweepstakes for the best collective farm exhibit at any state fair. Mrs. Klinck took the products of her sixty-acre farm to Des Moines last fall for the fourth consecutive time and went home with the much coveted purple ribbon pinned to her waist, leaving a score or more of disappointed male competitors to bear their chagrin the best they could.

From Teacher to Farmer

There was no luck in Mrs. Klinck's success; it was a well-earned reward for hard labor. Mrs. Klinck was not born to the farm; she found herself becoming interested in farming through teaching farm boys and girls in the public schools. "I felt that the children ought to be learning more about farming than they were learning in the public schools," she says, "and so I set myself to study the subject. I found that farming has become a scientific study and that one may become an expert by careful study and by experiments and then do a great deal of good by imparting this knowledge to others. I subscribed to books on agriculture from the state traveling library, listened to lectures by state college extension workers and from wanting to know how to teach the children I gradually came to want to know how to apply my theories on my own farm."

Three times Mrs. Klinck tried for the honors at the state fair, only to meet with failure each time. The fourth time she succeeded, taking a wonderful display with her. There were 108 different kinds of field products, thirty-five specimens of fruits, thirty-five exhibits of garden products. From corn to squash, from apples to pumpkins, through such a maze of varieties and families as would make any except an expert lose his or her head, the Klinck exhibit was a wonderful testimony to the perseverence and pluck of a woman farmer.

Farmer, Inventor and Mother

Take the case of another Iowa woman, Mrs. Mary A. Gibbons of Walnut, who has made a signal success by tilling a 1,000-acre farm herself, and in addition inventing a corn harvester and baler which promises to revolutionize the tiring and expensive process of harvesting. Mrs. Gibbons was born on a farm, married a farmer, and since his death, several years ago, has had the sole management of the 1,000-acre farm, seven times the size of the average Iowa farm operated by the average Iowa male farmer. She has reared a family of nine children, each and every one of whom is now living upon the farm, so that it is doubtful if any other woman in America has done more—through the triple influence of her own farming, her inventive genius and the work of her children—to advance practical farming than has this modest, unassuming Iowa woman.

Winner of International Honors

Consider still a third woman from this same state, which leads all others in the value of its farm output—Iowa. The first woman to be honored by election to the presidency of the International Congress of Farm Women was born on a farm near Des Moines and now resides on a cherry orchard in Colorado—Mrs. Belle Van Dorn Harbert. She sat with delegates from a score of countries in Belgium last summer, and because she was a practical farm woman, who had pruned a thousand cherry trees with her own hands just before she left home, and because she made a speech which showed her heart and soul in sympathy with the average farm woman, she was honored as no other farm woman had ever been honored. The president of France took her for a wonderful ride across France in his own motor car and down to the wonderful rose fields of Seville, the perfumers' paradise. After which this truly typical American farm woman returned home to her Colorado ranch and resumed her housework and ranch-work as modest and unassuming as ever.

"I do not remember ever having a dollar given to me," she says. She has worked for everything she possesses, and now, with a large cherry orchard, 160 acres in alfalfa, and as comfortable a farm home as can be found in many a day's journey, she is inspiring her sisters to follow her example. She is immensely proud of the fact that she won an award at at the St. Louis exposition, where she sent a crate of cherries; also another prize at the International Apple show in Denver for making the best crabapple jelly and marmalade; which latter act shows that she is considerable of a housewife, in addition to being a remarkable farmer.

They Come from Missouri, Too

Then there is the case of the Missouri farm woman, Mrs. James Watson of Dearborn, who not only operates a large farm profitably, but makes herself a still greater force in the community by publishing a rattling good newspaper, which she edits herself. "To succeed in farming women must not be afraid of getting their hands soiled," is her sage advice. "Cold cream comes cheap. Get into the work, then use the cosmetics if necessary, because I think no woman should neglect her personal appearance."

Nor would the list of feminine major generals in the million-strong army of women farmers be complete without the name of Mrs. Charles W. Kelley of North Dakota, who operates a 1,000-acre ranch and does it so successfully that she was elected vice president of the International Dry Farming Congress at its meeting in Tulsa, Okl., last fall. "Doing, not talking," is the motto of Mrs. Kelley, and the fact that she has not only operated her 1,000 acres profitably for some years past, but has improved the ranch by planting 45,000 trees and shown herself superior to her male neighbors by winning prizes at the Pure Seed show in Fargo, the Corn and Clover show in Grand Forks and the Mid-Winter Fair in Devil's Lake, shows that she practices what she preaches.

West is Full of Them

The Texas woman, who reaps a net profit of $400 an acre each year from her 135-acre onion ranch; the Wyoming sheep queen, who was an

(CONTINUED ON PAGE SIXTEEN)

Hog Cholera---Prevention and Treatment

VII—How Are We to Know Whether Serum is Potent and Virus Virulent?

IN THE general plan for combating hog cholera we placed co-operation, education and organization first, to be followed by sanitary and quarantine rules and regulations. Next, we have placed the general subject of serum and virus. We shall now take up the part of this work dealing with its manufacture, its testing and sale, and its application.

Probably the most important factor in dealing with the prevention of hog cholera by the serum treatment is clean and potent serum, and when the serum-simultaneous treatment is used clean and virulent virus as well. There is no question but that hog cholera was spread in a great many herds during the last year by using the serum-simultaneous treatment in which serum was used that was not potent, therefore offering no protection to the herd. There is no known way now by which the potency of the serum can be proved except by actual test. The one important duty of the government and the different states in this connection, we believe, is to know as far as possible that no serum that is not potent is being sent out to anyone.

Most of the states in the corn belt now have state plants manufacturing this product. Generally these plants are located at the agricultural college and under the control of the chief veterinarian at the college. At different points in the different states are located many plants manufacturing the product and selling it to farmers and others as any other commercial product is sold. Let it be understood that no serum manufacturer can do interstate business without first obtaining a government license. It must also be understood that a government license is not necessary where interstate business is not carried on; or, in other words, a government license is not necessary to the plant that confines its business to the state in which it is locaed.

Licensing Commercial Plants

The question of licensing the commercial plants is one that is of the utmost importance. Some of our states have no regulation at all for these plants. At their January meeting the State Live Stock Sanitary Board of Nebraska passed a rule requiring the manufacturers of serum in the state to have either a government license or permit from the Live Stock Sanitary Board before doing business. Up to the present time this rule has been a dead letter, due to the inactivity of the board.

In Iowa, before a plant may do business in the state, a permit must be obtained from the director of the laboratory at the agricultural college, and such manufacturers must give a bond in the sum of $1,000, for which a charge of $25 per year is made. If it is ascertained that any serum kept for sale or sold by any manufacturer within the state is not of the degree of potency as prescribed by the director of the laboratory, such manuacturer shall forfeit $500. The inspection of the serum sent out by any manufacturer in that state is left entirely with the director of the laboratory. He may obtain serum sent out by the manufacturers from any source he may deem advisable. In Missouri there is no law or rule on this very important matter.

In Kansas, according to the state law, it is unlawful for any person or corporation to sell or offer for sale within the state any anti-hog cholera serum for the purpose of preventing or controlling hog cholera or swine plague without first registering such serum with the director of the experiment station of the agricultural college at Manhattan and obtaining from said director a permit or certificate to sell such serum within the state. The fee for this permit is $10. The permit thus granted may be cancelled at any time by said director at his discretion. Taking the above as a basis, the Kansas authorities have ruled that in order to receive such a permit it will be necessary for a plant producing such serum to be first in possession of a license from the government, whether the plant is located within or without the state.

No Uniform Rule

It can be plainly seen that no uniform rule or regulation has been adopted by the different states. In one of our former articles we called particular attention to the need of the close co-operation between the states and the government in the manufacture and sale of serum and virus. There can be no question but that the standardizing of serum is something much to be desired in the general work along this line. By one state having one rule and another some other rule or requirement the necessary headway cannot be made in getting a standard serum.

This paper believes that there should be some head authority and some uniform rule or regulation for the manufacture and sale of this product. We are firmly of the belief that until this is done the best results will not be obtained. To obtain the desired result all states should require a manufacturer of serum to obtain a government license before being allowed to do business in the state. If this is done we will know that a uniform requirement will be had, and thus be able to standardize serum offered for sale.

A government license is regarded by many as a guarantee to the purchaser that the serum from the plant holding such license has been tested by the government, and that, therefore, it is good. This is a mistake. Dr. Dorset, before the Missouri Valley Veterinary Association at its recent meeting at Kansas City, made this matter plain when he made the statement that the fact that a plant had a government license carried with it practically no protection. The possession of a government license simply means that the holder of this license has come up to the requirements of the government in the equipment of his factory; that he can make a good product if the right methods are pursued in its manufacture. To have the necessary equipment with which to manufacture the product is one thing, and to make and sell a product that will stand the test is another. What the farmer and hog raiser want to know, and must know, is: "Is the product I am buying good, and will it accomplish what it is intended to accomplish?" We are satisfied that if the serum is potent, and where the serum-simultaneous method is used the virus virulent, and it is properly administered, it will do what it is intended to do.

Is the Serum Potent?

Now comes the question, "How are we to know that the serum we buy is potent?" We will answer that we can't know except by actual test. How, then, should this test be made and by whom? We have explained the importance of having all plants licensed by the government, and our reasons for the same. If all plants are under government license, we believe that the government should go farther and say to the manufacturer, "You must not sell any of your product until we have tested it." We fully realize that this is something of a job, and that it is going to cost something to do this testing; but again we say its importance justifies the outlay. We shall not go into detail as to how this testing should be done. All that we want is for the farmer positively to know that when he buys a lot of serum he is buying potent serum, and that he will get protection when he uses it.

A large number of our commercial plants are now testing their serum. In buying the product on the strength of this test we are relying absolutely on the honesty of the serum manufacturer. We don't want to convey the idea that we claim manufacturers of this product are dishonest, but we do state that if there are no dishonest men engaged in the business it is the first business we have known with which every man connected is honest.

To look the matter squarely in the face, the situation is this: There is a strong incentive for the dishonest man to sell a poor product. He may have on hand a lot of serum that has not been tested, or it may have been tested and show a low potency. Business is good and the money coming in accompanying the orders. Is he not likely to "take a shot" at it and send the serum? What may be the result? This lot of serum may go to some farmer who has practically all his means tied up in his bunch of hogs, and if it is no good he may be financially ruined. There is an incentive for the man under government employ carefully and properly to test the product, for on the reliability of the product on which he places his O. K. will depend his job.

Iowa Plan Not Satisfactory

We have stated the plan followed in Iowa. The director of the laboratory at the agricultural college is empowered to test serum at any time. Under this system and with the amount of money they have to carry on this work, they don't cover the ground as it should be covered. It is possible for any manufacturer in that state to send out great quantities of poor serum before he would be caught, so the foreiture of the $500 on his bond would not amount to much to him as compared to what he may have received from the sale of the product. True, his license would be revoked. He may, however, be intending to go out of business. No one knows how many thousands of dollars may be lost to the farmers who might buy this product before the unscrupulous dealer is caught. What we want is to have such requirements that this can't happen.

We want to call particular attention to the difference between inspection and testing. Don't get confused and think that because a plant is inspected the product is tested. Inspection means only that the necessary machinery is installed and that the premises are sanitary, while testing means that the product has been tested on susceptible hogs and found to be good.

Let Us So Live

THAT our enemies will say: "Personally, he's all right."

That nonpartisan combinations will keep pestering us to run for office.

That people who know us well will try to mention the fact modestly.

That when we sicken our relatives who have had to live with us will be as alarmed as our friends who have merely played with us.

That our death will be harder on our community than on our creditors.

That the recording angel will have to put down no black mark against the person who writes our obituary.

That our great-grandchildren will mention us among their most brilliant accomplishments.—Collier's.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

France has appropriated $150,000 for fighting field mice.

Government reports state that forest and prairie fires, while apparently not injuring the land, in reality greatly impoverish it by robbing it of humus or vegetable matter.

John N. Willys, president of a large automobile concern, goes on record as being in favor of an increase in freight rates as granted by the Interstate Commerce Commission. This is peculiar enough to be worthy of notice.

Termites, commonly called white ants, seem to be giving some trouble in many parts of the country. They eat wood and paper, doing a great deal of damage to libraries and to telephone poles and fence posts, buildings and furniture.

The government Agricultural Department is doing excellent work in excluding pests from this country. No Egyptian cottonseed is now allowed to be imported, as the pink bollworm is prevalent in Egypt and there is danger of introducing it into this country in the seed.

A cheap method of road improvement discovered by a farmer is to fill the ruts with five inches of concrete, the top of the filling being about eight inches wide and slightly hollowed to accommodate the wheels. The cost is not great and it is claimed that these rut-paved roads are entirely practicable in both wet and dry weather.

Another Supposed Hog Cholera Cure

The people and the press are always being exploited in the interests of patent medicine concerns that try to sell 4 or 5 cents worth of alcohol or opium, mixed with a little coloring matter, at a dollar or more per bottle. Since the campaign against harmful patent medicines waged by all the first-class magazines, headed by Collier's, has exposed the formulas of these medicines to the public, sales have fallen off and it is becoming harder for these manufacturers to dispose of their goods. Pure medicine laws are making it more difficult for them to sell alcohol and drugs, and the patent medicines of today are many of them perfectly harmless. One much advertised "nerve tonic," recommended by really well known men, is found on analysis to be composed of cottage cheese, with the addition of a few phosphates. It does absolutely no harm; in fact, the cottage cheese and the phosphates are probably both rather beneficial, but why pay a dollar for a package when the materials contained in it could be purchased at a grocery store for 8 cents?

One of the latest schemes that a proprietary concern is trying to "put over" is a hog cholera cure. It is sending around typewritten reports, dated Washington, telling of a chemical that is supposed to be a sure cure for hog cholera. The circular is cleverly worded to make it appear that this is the discovery of one of the large state universities and is being taken up by the government authorities. Investigation of this chemical proved that it was a patented germicidal preparation, no doubt of value in its own field, but capable of doing great injury if used as advised in place of the serum treatment. Statistics are cited in this circular that are entirely misleading and impossible claims are made for the drug.

The drug manufacturer that puts out such literature is not to be trusted. He may have something of value. If he has, it will be quickly taken up by the authorities and given all the prominence he can desire. The fact that he resorts to deception in his advertising is not likely to make for confidence on the part of the people whom he is trying to impress.

Good Animals Mean Care

It is one thing to admire, buy and own good animals, but an entirely different thing to maintain this quality in the produce or even in the original purchase. It is one thing to be a fancier and admirer of live stock, but a different thing to be a breeder, a skillful producer. Out of the thousands of the former class there will develop only a few of the latter. Breeders are not made; they are born. A stock fancier and owner is not always at fault because he does not possess the faculty of becoming a skilled and scientific mater of sires and dams, thereby producing a continuous ascending in quality and desirability of produce over ancestors.

Again, too many live stock fanciers stop at the purchase of the animals they so much admired and fail to realize that the finish, the condition and the finely developed, robust form owe much to the care, feed and attention that the animals have had. Well bred, well cared for and well fed animals are attractive, a pleasure to look at. The artificial conditions surrounding them may have great influence in creating their attractive qualities, and these conditions must not be removed too far or to an extent that will impoverish growth, health, vigor, thrift and general development or the enterprise will suffer.

It is possible to buy good, well-bred animals and gradually change their method of living and care and yet retain good breeding results. It is too frequently the case, however, that the highly finished animal in condition is so revolutionized in its manner and method of living that decline is introduced.

The policy of every owner and producer of live stock should be to improve each year. One of the essential influences in live stock improvement is good care. Introduce this first, then add to it good animals, keeping in mind that the change from a high condition of feed and care should be made gradually, and that it will pay to maintain a condition of thrift and vigor in all breeding animals.

Spineless Cactus as Food

The spineless cactus as a stock food is being offered for sale to the farmers of the central western states. It is said to have been invented by Luther Burbank, the so-called "plant wizard," and its cheapness and nutritive value are being extolled by the men interested in its sale. Prof. C. E. Bessey of the Nebraska University has been looking into the matter and declared in a public address recently that, while Luther Burbank may have invented a spineless cactus, he himself has found many spineless cacti growing in Arizona, where they are well known. He says, furthermore, that while half-starved desert animals may eat them, they are not the kind of forage that a self-respecting Nebraska animal would relish. Moreover, being desert plants, they would be winter killed by the frosts of the corn-belt states. He warns the live stock men of Nebraska not to be misled into investing in the spineless cactus as a stock food.

Names for Animals

What's in a name? Many times a great deal more than we think. Particularly is this true of the sire, only for the reason that the name of the sire is used much more often than is the name of the dam. In our breeding experience we have seen a good sire, from a first-class line of breeding, named when recorded some ridiculous name, the owner losing in advertising the prestige gained by having a well-bred animal.

In all kinds of live stock we have lines of breeding carried along for many generations, animals of this breeding having proven themselves great both in the show ring and the breeding pen. If you have such an animal in your herd it will be of material advantage to you to give this animal some name which at a glance will show the up-to-date man you have something well bred. If the animal is as good as his breeding, the sale is much more easily made.

Cases have come to our personal knowledge where sales have been lost on account of the sire or dam having some ridiculous name, the prospective purchaser realizing the importance of having animals carrying a line of names which show to some extent at least the breeding of the animal.

When you send in for record the next pedigree put in a little time in getting a suitable name for the animal to be recorded. If such animal be a good sire, give him some name which will call attention to his line of breeding. Don't name him Rats, Pete, Teaser, Jack or Jim. It's only a little matter, but an important one.

In selecting a name don't make it too long. If you do, it will be abbreviated and its value lost to some extent. Two words are much better than three or four.

Politics and Preachers

The Farmers' Union of Texas recently passed resolutions opposing agitation of the liquor question and asking for constructive legislation. In so doing it called forth the wrath of certain prohibition preachers, who fiercely attacked the union. In its reply to these attacks it brings forth statistics to show that the farmers of Texas support 75 per cent of the churches of the state, showing that they believe in churches and religion. It states that most preachers are worthy and attend to their own affairs, such as preaching and comforting the afflicted, but that there are black sheep in the pulpit who are in politics. Politics and religion, it declares, in no uncertain language, cannot work together. The preacher is innocent and confiding, the politician full of wiles. There is too much truth in these statements. Religion has too long and with too many people been divorced from every-day life. If there were more religion in politics and business and more politics and business in the church,—the right kind of politics and business—would it not be better for all concerned?

Worms in Weanling Pigs

Weaning time for the pigs is at hand, and with this season come problems to be given attention. When the pig is taken from the mother and deprived of the mother's milk there are some conditions we must face which before that time did not bother us.

Generally speaking, little pigs sucking the dam are not bothered with worms. There are times, however, when the suckling pig is seriously affected. This is a season of the year when the farmer and hog raiser is busy on the farm with many things and too often is the pig overlooked, especially the suckling.

How many times do we see a run-down bunch of pigs looking unthrifty, yet eating their rations well. In a very great number of these cases the cause of the unthrifty condition is nothing but worms. Too often does the hog raiser give his bunch of hogs one dose of some remedy and think he has completed the job, when the facts are he has just started it.

The job of keeping your hogs clear of worms is everlasting, especially so until the animal is a year old or more. To be sure of your ground your hogs should be treated for worms every four to six weeks. Often there is an outbreak of disease in a herd resulting in a serious loss. The owner finds his hogs are affected with worms and claims his loss occasioned by worms, when in fact they have hog cholera, the germ getting a hold in his herd due to the weakened condition of the hogs, made so by the owner not ridding them of these worms.

What should be fed for worms? Santonin is a good worm killer when properly fed. There are also many commercial worm killers on the market of proven efficiency. It does not cost you much to keep your hogs clear of worms, but it may cost you a good, big sum if you neglect it. If you are not prepared to care for your hogs in this respect, don't put it off any longer.

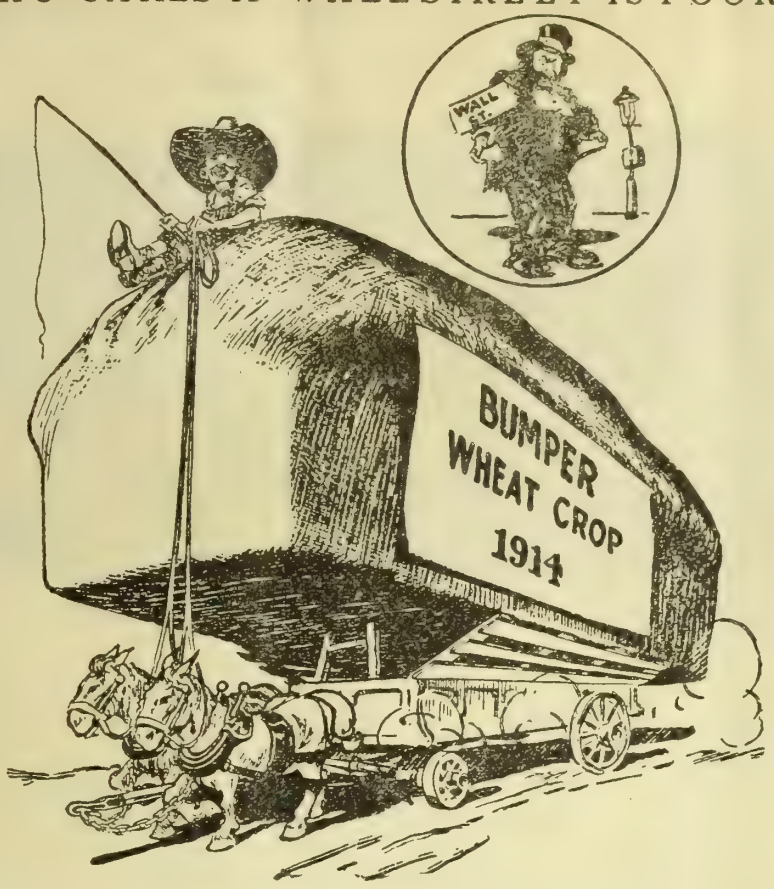
Increasing Demand for Corn

The expansion in corn demand in recent years has placed the corn raiser among the most favored and independent of producers. The diversity of manufacture in corn products has become so great that the uses of corn can scarcely be enumerated. The wonderful development in the utility feature of this cereal which has taken place in a comparatively few years, and which will probably be greatly increased in the years to come, has established corn growing as the surest money-making branch of grain crop work that the farmer can engage in.

The present demand for the corn supply of the country, and the strong demand that must continue to exist and must be filled, owing to the greatly diversified uses of this cereal as a food product, to say nothing of the feed demand, places corn prices for some time to come at a highly remunerative figure. The corn grower has an encouraging field before him. The export demand will increase, our home feeding demand is increasing and will steadily continue to grow. The demand for manufacturing into food products is increasing, as are also the new demands arising from mechanical uses.

The growing of more corn and the growing of better corn should be the purpose of the farmers in the great corn belt of America. Corn has made this middle western country what it is. The present agricultural standing of the Missouri and Mississippi valley districts is due to the successful cultivation of corn, and the profit in this crop is an agricultural certainty.

WHO CARES IF WALL-STREET IS POOR!



—Thresherman's Review and Power Farming.

Stamping Out Dourine

Sixteen veterinarians are at work in eastern Montana under the direction of the bureau of animal industry waging war to stamp out dourine among horses. The plan of campaign contemplates the testing of every mare and stallion in the state. State Veterinarian W. J. Butler is co-operating with the government in this work. This campaign was made possible through an appropriation of $100,000, which is included in the $600,000 appropriated by congress for the eradication of hog cholera.

Because of the hearty co-operation of the stockmen of eastern Montana it is possible to carry on the campaign to eradicate dourine without quarantine in that section. In districts where stockmen do not co-operate the situation will be handled through local quarantine.

This is in line with what this paper has been advocating. We believe that many of the hardships placed upon the live stock industry through quarantine rules and regulations can be eliminated through the right kind of co-operation between stockmen and veterinarians.

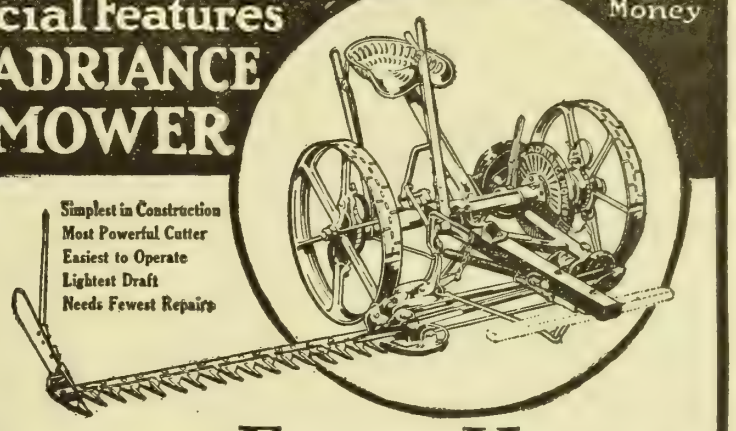
Money in Fattening Horses

Fatten the horse that you offer for sale. Why not? All other kinds of live stock produced on the farm are fattened up to the limit of finish before being offered for sale, if there is feed on the place to do it. Why discriminate against the old, run-down horse or the young, overworked and under-fed horse? Everything in way of live stock sells best when in good flesh. They look better, have the appearance of good health and please the eye of the buyer much better than when thin, gaunt and presenting that tired feeling so often referred to nowadays.

The average horse buyer wants an animal that looks thrifty, and is willing to pay for this flesh and attention in putting it on the horse. There is just as much or more made in putting flesh on the horse offered for sale as there is in putting flesh on the steer. It is reasonable to believe that the fattening up of thin and run-down horses is a much better money-making proposition than the feeding of cattle. As much as five and a third pounds per day for a period of fifty days has been put on a horse, thus showing that when right conditions are observed the fattening of the horse is a profitable industry, and is now practiced by the professional horse dealer to a considerable extent.

Examine the many Special Features of the ADRIANCE MOWER

Saves Time Horses and Money



"Simplest—Easiest Managed —Most Durable"

The Verdict of the User—Read These Letters

I have an Adriance Mower that has been run for 30 years. It cut 25 acres the past season and is still in good shape. It runs easy and cuts grass no matter how heavy.
E. V. Link.
Shepherdstown, W. Va.

I have used the Adriance Mower made at Poughkeepsie, N. Y. for the last 19 years and consider the No. 8 Adriance, the simplest, easiest managed and most durable machine I have ever seen, and I have used several makes.
Harrison Philbrick.
Rich Hill, Mo.

The Adriance Mower Will Save You Money

Haying season is short and every hour is worth gold dollars. If your mower is old or not wholly reliable, don't trust it and have it "lay down" right in the midst of the busy haying season.

The one mower that gives faultless service, every hour of the day, year after year, is the **Adriance.**

No other mower is so simple in construction; no other mower is so well made—no other mower has the record of so many years of hard service with so little expense for repairs.

Flexible Cutter Bar—The **Adriance** Cutter Bar follows uneven land. The coupling frame hinges are in exact line and swing like a door—no binding. The bar can be folded over the tongue when not in use.

Knife Starts Instantly—The clutch is on the high speed shaft—thus starting the knife instantly and avoiding clogging.

Visible Driving Pawls—In plain sight where you can always see them work. No danger of spoiling a whole wheel as with the enclosed kind.

Automatic Spring Draft—Prevents the driver, team and mower from being injured when striking an obstruction.

Runs Easy—Roller Bearings on the main axle, and the level crank shaft with bronze composition bearings make the **Adriance** run easy and last long.

Complete machines and full stocks of repairs carried by our Branch Houses in all principal cities and dealers everywhere. Any Flying Dutchman Dealer can show you the **Adriance**—ask him. Write us for FREE BOOKLET on Flying Dutchman Hay Tools.

MOLINE PLOW CO.
Dept. 17 MOLINE, ILL.

EXTRAORDINARY OFFER - *30 days* one month's free trial on this finest of bicycles—the *"Ranger."* We will ship it to you on approval, *freight prepaid*, without a cent deposit in advance. This offer is *absolutely genuine*.

WRITE TODAY for our big catalog showing our full line of bicycles for men and women, boys and girls at *prices never before equaled* for like quality. It is a cyclopedia of bicycles, sundries and useful bicycle information. **It's free.**

TIRES, COASTER-BRAKE rear wheels, inner tubes, lamps, cyclometers, equipment and parts for all bicycles at **half usual prices.** A limited number of second hand bicycles taken in trade will be closed out at once, at $3 to $8 each.

RIDER AGENTS wanted in each town to ride and exhibit a sample 1914 model ***Ranger*** furnished by us.

It Costs You Nothing to learn what we offer you and how we can do it. You will be astonished and convinced. **Do not buy** a bicycle, tires or sundries until you get our catalog and new special offers. **Write today.**

MEAD CYCLE CO., Dept. S 186 CHICAGO, ILL.

GO TO

WESTERN CANADA NOW

The opportunity of securing **free homesteads of 160 acres** each, and the low priced lands of **Manitoba, Saskatchewan** and **Alberta,** will soon have passed.

Canada offers a hearty welcome to the Settler, to the man with a family looking for a home; to the farmers son, to the renter, to all who wish to live under better conditions.

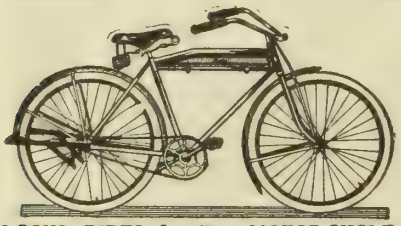
Canada's grain yield in 1913 is the talk of the world. Luxuriant Grasses give cheap fodder for large herds; cost of raising and fattening for market is a trifle.

The sum realized for Beef, Butter, Milk and Cheese **will pay fifty per cent on the investment.**

Write for literature and particulars as to reduced railway rates to Superintendent of Immigration, Ottawa, Canada, or to Canadian Government Agent.

W. V. Bennett, Room 4, Bee Building, Omaha, Neb.

160 ACRE FARMS IN WESTERN CANADA FREE



LOOKS—RIDES—Just like a MOTOR CYCLE
The cleverest bicycle idea in 36 years. Has all the comfort, class and racy lines of the famous Pope Motor Cycles. If you see the

Pope Motobike

You will want one. Double top bar frame, with tank fitted in between — new Pope Truss Fork — long handlebars with Rough Rider grips — large, easy, spring saddle—folding stand—mud guards at front and rear—Motorcycle pedals—all following original Pope ideas as to bicycle building along motorcycle lines. See them at your dealers.

Pope Bicycles, 50 Models. Pope Motorcycles, 5 Models
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A Boyles College Scholarship, any course, for sale at a liberal discount.

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Omaha, Neb.

Bargain Day on Cuts.....

You can buy any cut in the Twentieth Century Farmer for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as we have only one of each kind. Address,

Twentieth Century Farmer
Omaha, Neb.

Our Young People :

A Department Devoted to the Interests of the Boys and Girls of the Farm

The Dolls' Hospital

We had a hospital one day,
Beneath the apple trees;
It is the very nicest play
For summer days like these

The dollies all were very ill
With mumps and chickenpox,
And Dr. Tom gave each a pill
Out of a little box.

He took each pulse and temp'rature
And told us what to do,
And said they'd be all right quite sure
In just a day or two.

We were the nurses, May and I,
And tucked them up in bed,
And told each dollie not to cry,
But do as doctor said.

We never knew 'twas time for tea
Until we heard the bell;
Then we were hungry as could be,
And every doll was well.

Watching an Emperor

"See the lovely butterfly, Uncle Jack," called Rose, stopping before a bush, on the topmost, slender twig of which was perched an enormous moth, waving its great brown wings slowly in the sunshine; "and it's hanging upside down."

"I know what that is," said Harry, running up; "it is the kind that makes the big, green worms you are so afraid of."

"Is it, Uncle Jack?" asked Rose.

"Yes," said Uncle Jack; "that is what we call the emperor moth. It has just come from its cocoon now and is drying its wings in the sunshine; then it will fly away and lay 200 or 300 eggs on the under side of some leaf, and these will hatch out into your favorite great green worms."

"Kill it quick," said Rose, with a shudder.

"No, wait," said Uncle Jack. "You know how the worm spins itself up into a big, silky brown cocoon in the fall? There it lies quietly sleeping all winter, and in the spring it begins to stir about. It tears and scrapes at the paper-like tissues with its feet, and softens them with a fluid that comes from its mouth, and finally crawls out—a fat bug with tiny wings. Then it hangs itself upside down like this and begins to wave its little wings, and they grow and grow until, in about an hour, they are full grown."

"Oh, I do believe our butterfly's wings have grown since we found it," said Rose, stooping down to look closer. "Yes, they have."

"And they will grow some more," said Uncle Jack. "Sometimes they grow to be six or seven inches across. See the lovely red shadings, and the black and white bands, and the blue spot like an eye near each tip."

"When will the worms begin to come out of the eggs?" asked Harry.

"In a little over a week. You won't notice them at first, they are so small and black, but they eat and eat until their skins are too tight for them, and they burst the skins, and then they eat until they are too fat for their skins again and burst out, and so on, changing skins each time, until finally they appear as green worms as big around as my thumb, with beautiful blue and red and yellow dots on their backs and sides."

"They ate all the leaves off the elms and apples and boxelders one year," said Harry, "and some of the trees died. Father and I knocked them off the branches with sticks and squashed them under stones. Rose was afraid."

"I wasn't," said Rose, "but I don't like the horrid things."

"Neither do I," said Uncle Jack, "and we will kill at least 200 of them right now. See, the moth is getting ready to fly away."

He took a little bottle of liquid out of his pocket and dropped two drops on the insect's head. The wings fluttered a moment and were still; then, while the children watched with breathless interest, he drew out a little pocket rule and measured the wings; they were six and five-eighths inches from tip to tip.

"An unusually fine specimen," said Uncle Jack. "You children had better start a collection of moths with this. Come and let me help you label it." HOME EDITOR.

(Prize Story)

A Prairie Fire

By Walter Hall, Aged 13, Cody, Neb.

One day when we were at school a storm started. It was lightening and thundering, when a woman who lived near by came to tell the teacher that there was a prairie fire over south and to ask if her boy might be excused so he could go and see where it was. The teacher said he might, so he went to the barn, got his horse and went to see where it was. He got about half a mile when he saw the flames. He rode back to school and told the teacher. The teacher said that we might go and fight the fire.

The woman's boy and I started horseback, I riding behind him. We took an old sack and an old rug and didn't wet them, for we thought there would be water over there. We went on a gallop all the way and were soon there. There was a man there fighting the fire, so we all fought together with dry rags, because the man was the only one there, and he was horseback, too.

We had been fighting about an hour, when my father came in a buggy with some water. We sure did drink water. Then we all got in with him and went to the other side of the fire, for there was another one coming right behind us. When we got to the other side we saw a lot of people fighting fire. When we first started it was about 10 o'clock, and now it was about 1 o'clock. We fought for six hours and then were out of danger, for the railroad stopped it.

Way up north we saw another fire,

(CONTINUED ON PAGE SIXTEEN)

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

DID THE WORK
Grew Strong on Right Food

You can't grow strong by merely exercising. You must have food—the kind you can digest and assimilate.

Unless the food you eat is digested it adds to the burden the digestive organs have naturally to carry. This often means a nervous breakdown.

"About a year ago," writes a Mass. lady, "I had quite a serious nervous breakdown, caused, as I believed, by overwork and worry. I also suffered untold misery from dyspepsia.

"First I gave up my position, then I tried to find a remedy for my troubles, something that would make me well and strong, something to rest my tired stomach and build up my worn-out nerves and brain.

"I tried one kind of medicine after another, but nothing seemed to help me.

"Finally a friend suggested change of food and recommended Grape-Nuts. With little or no faith in it, I tried a package. That was eight months ago, and I have never been without it since.

"Grape-Nuts did the work. It helped me grow strong and well. Grape-Nuts put new life into me, built up my whole system and made another woman of me."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Of Interest to Our Women Readers

Memorial Day

Gather the garlands rare today,
Snow white roses and roses red;
Gather the fairest flowers of May,
Heap them up on the heaps of clay,
Gladden the graves of the noble dead.

Pile them high as the soldiers were
Piled on the fields where they fought and fell;
They will rejoice in their new place there
Today, as they walk where the fragrant air
Is sweet with the scent of the asphodel.

Many a time I've heard it said
They fell so thick where the battles were
Their hot blood rippled and, running red,
Ran out like the rill from the drifted dead,
Staining the heath and the daisies there.

This day the friends of the soldiers keep,
And they will keep it through all the years;
To the silent city where soldiers sleep
Will come with flowers to watch and weep
And water the garlands with their tears.

—Cy Warman.

Memorial Day

All year the little cemetery is alone, except for the tiny wild creatures that dart in and out among the tombstones, the happy birds that have their nests among the branches of the trees and bushes, and the old caretaker who works about, as silent as the occupants of the graves themselves. There are occasional visitors. Sometimes there are men with spades, followed the next day by a long, black funeral train, and still afterward by other workmen, who add one more to the rows of white stones; sometimes a lone mourner comes and plants a flower beside some loved one's grave, or a pair of young people stroll through in the moonlight; sometimes the children come and play. But almost always the little cemetery is alone. The sunshine of summer and the snows of winter fall unnoted over the graves of those who are gone.

And then one day in spring there comes a change. The roll of drums is heard and the call of the fife. The birds are still, and all the wild things peep fearfully from hiding places at the line of white-haired veterans who stand so solemnly, hats in hand, beside the graves of departed comrades, and the white-clad children who scatter flowers. There are prayers, and song, and patriotic speeches. All day the little cemetry overflows with human life. The exercises of the morning over, lunches are produced and eaten under the trees; neighbors visit with one another; children shout and play, and the dead are once again forgotten.

As the afternoon wears on carriages and autos are loaded up again and driven, one by one, out of the gate. The last one goes and the little cemetery is again alone, its fallen heroes forgotten until another Memorial day shall have rolled around —forgotten by all except their few old comrades, who know that when that next Memorial day comes they may perhaps be lying in the flower-decorated graves.

HOME EDITOR.

Raised on a Farm

The editor's answer to Mrs. M. T.'s letter in the Readers' Exchange in the May 2 issue is positively right. The law does not make men better. More and more is the world realizing that certain olden philosophy is right and that growth and betterment of mankind does not so much depend on law as on what is within us. I believe in suffrage for woman, but not to the extent that it is to be a panacea for all that is wrong. If it were so, wise men long ago would have forced it upon the world of men as well as women. Colorado has had woman's suffrage for many a year, and yet witness the miserable troubles in that state of late. And so with law for the farm woman. Make all the laws you please in her behalf—though I do not grant she needs any—and she will go on doing just the same work she pleases to do, and in her own way and time. I do not speak from hearsay. I was born of agricultural people, was raised on a farm, and have lived close to rural life all the years since.

I agree with Mrs. Indoe in all she said, except where she gives a mere name as authority for the prevalence of insanity—at any time among farm women. Government investigation unearths no facts for the statement. Asylum experts declare there is more in the city woman's average social life to make her insane than in any farm condition that ever existed, even back to pioneer times. Mine is not a sentimental outbreak. I know country life. In some neighborhoods where a foreign element predominates woman may do much outside work. While doing it she saves herself greatly by neglecting housework, and the children do much in the house anyhow.

Work is work wherever it be. It is no more drudgery for a farmer's wife to cook, wash, iron, bake, sweep, dust, etc., than for the city woman to do the same; it is her duty. It may be work to churn and raise chickens, but it is not drudgery. The average farm woman is glad she has work of this kind to do. It gives her health and long life. Take the statistics yourself from old-time, hard-working communities.

I have cooked many a "dollar-a-plate" meal. I have helped get threshing and harvest dinners, and in days when much time was devoted to such farm work. It never hurt me or my foremothers. There were pioneer women yet in my young days. Strange, but nearly all outlived their husbands; in fact, some died just of late months or years. These women raised some mighty good and smart children; some are farmers, some congressmen, some all the other professions. Unless a farmer has other irons in the fire and owns much land, he does not require many farmhands all of the time. One farmhand is mainly the limit for all the year around, and in many cases he lives in a tenant house on the farm, and his own wife cooks for him. The wives of most farmers, renters and farmhands, patronize country and village dressmakers. Mail-order houses are favored by these also. Creameries take up much of the milk on many farms—and this is to the displeasure of the villagers, who now miss their good country butter. I have never known farm women to cook for berry pickers. These are paid by the quart and bring their dinners from home. If there be such farms, then they are exceptions and do not stand good for the great farming communities. Farmers now go into threshing companies, and the farm women now merely cook for the machine hands. The other workers bring dinner from home. This did not always go this way, but when it did not the neighbor women helped each other get the threshing meals.

In reading M. P.'s letter in the May 23 issue I was astonished to hear of one woman doing all that work for twelve in the family. Where is that community where this exists as a rule? Twelve and often more sat at the table of my parents for some years, but eight of these were us children. By the time we came to that number some of the eight were helping get breakfast and all other meals. Some of the eight did the milking, the churning, carried in the wood, picked up chips. Getting one's own wood on the farm is quite an uncommon thing, but in a stress of farm work some of us were not averse to splitting up a little kindling now and then, but the rule is for the farmer to get up plenty of wood at stated times. Remember that exceptions but prove a rule.

Isn't this example of some woman's work on the farm merely an exception? Could there be, even in a foreign community, such a set of men—lazy loafers, with fool wives? Must the hundreds of self-respecting, industrious farmers to one that is not suffer criticism because of the one or few? Wasn't it just such letters from some women from off the farm that started the government's pity for the whole push of farmers' wives? I think so.

IDA M. SHEPLER.

For Children's Parties

Dainty wafer sandwiches are made by adding chopped nuts to a rather soft-boiled frosting and spreading between graham crackers. Be sure the crackers are fresh. English walnuts, mixed nuts, butternuts, hickory nuts or even peanuts can be used.

Kisses—Make a nice layer jelly cake (three layers will be plenty); cut in slices, as usual, and frost the top of each slice. Tinting the frosting pink is pretty.

Snowballs—Make a nice, white cake, baked in a shallow, square pan. After it is baked and cool, cut out round cakes with the smallest size baking powder can; frost the top and sides and sprinkle dessicated cocoanut on them.

Dominos—Make a sponge or yellow cake in the same kind of shallow, square pan. When cold cut with

Toastie Flavour A Winner

Every day many are finding out that

Post Toasties

are different from other "ready to eat" foods. It's in the making.

Toasties are carefully cooked bits of choicest Indian corn toasted to an appetizing, golden-brown crispness.

Care and time in toasting and the delicate flavoring make this crisp corn-food delightful.

Post Toasties—ready to eat direct from the sealed package, with cream and sugar to taste.

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Connect the "Eclipse" Power Washer with your gasoline engine. Fill the tub two-thirds full of water, throw in the clothes, close down the lid with the clamps—turn on the power and the dreaded washday is turned into a pleasure. The "Eclipse" Power Washer runs easy because it is constructed right. Equipped with ball-bearing wringer and everything tested carefully before it is sent out. The Power Washer with a reputation back of it.

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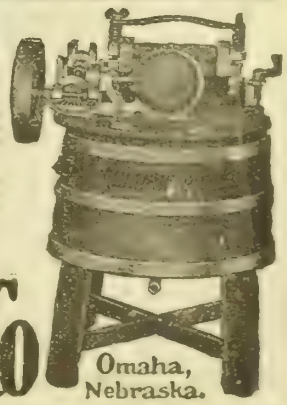

Fairbanks-Morse Co Omaha, Nebraska.

a knife into large dominos. Frost the top with white frosting, and when it has become firm take a large, blunt toothpick and mark them like dominos with melted chocolate.

I very seldom serve coffee to children at their parties. Cocoa is much better, and if ice cream is served water is plenty to go with it. In summer lemonade is fine. Homemade crackerjack is an enjoyable finish for the lunch, and can either be placed on the plate at the same time as the other refreshments or passed around afterward.

Crackerjack—After popping enough corn to fill a large dripping pan, put in a bright tin or graniteware basin nearly two cupfuls of white sugar and three-fourths of a cupful of cooking molasses, one tablespoonful of vinegar and one of butter. Cook until it will thread well from the spoon when dropped into cold water; it will make a soft, compact ball. Before taking from the stove add a good quarter of a teaspoonful of soda, stirring until it all becomes yellow. Stir this by degrees into the corn, mixing thoroughly. A chopping bowl is the best dish to mix in, as it can be chopped fine, if preferred, before turning into the dripping pan, which must be well buttered. Press it down well with your hands, after which pound it down firmly all around with a wooden potato masher or a clean, flat stick of wood. Let it cool and cut into cakes.

MADGE MILLAR.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6676—Ladies' Shirt-Waist — This novel waist has a one-piece yoke, with drop shoulder and very full front and back. A wide collar trims the open neck and plain or fancy cuffs are used for the short or long sleeves. The pattern 6676 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2¼ yards of 40-inch material, three yards of edging and three-fourths yard of ribbon.

6677—Ladies' Skirt—This skirt has a two-piece foundation, with a sectional tunic and raised or regulation waistline. Either or both sections of the tunic may be omitted if desired. Printed cotton crepe, voile, taffetas, serge and some of the novelty cotton fabrics are suitable for this model. The pattern 6677 is cut in sizes 22 to 32 inches waist measure. Medium size requires 3⅝ yards of 44-inch material.

6705—Ladies' Waist—Practical and pretty, this shirt-waist can be made of silk, crepe, voile or wash materials. It has the yoke and sleeves in one piece and below the yoke the material is quite plain, with only a trifle of fullness above the belt. A pretty collar finishes the neck, and the sleeves are three-quarter length. The pattern 6705 is cut in sizes 34 to 44 inches bust measure. Medium size requires two yards of 36-inch material.

6674—Children's Dress—Any of the pretty printed materials can be used to make this dress with the belt of a contrasting material. The dress closes at the back and is made with the yoke and sleeves in one. The pattern 6674 is cut in sizes 2, 4, 6 and 8 years. Age 6 years requires 2¼ yards of 40-inch material and one-half yard of 27-inch contrasting goods.

6696—Ladies' Kimono—Even in the kimono we find the new sleeves, which, while cut in one with the body, have a seam down the outer arm in the prevailing mode. In this model the closing is diagonal and there is a handsome collar at the sides and back of the open neck. The pattern 6696 is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 5¼ yards of 40-inch material.

6678—Girls' Dress—Linen or gingham can be used to make this dress, with the collar, cuffs and belt of contrasting material. The dress can be made with either the long or short sleeves. The skirt is cut in one piece and has a straight lower edge. The pattern 6678 is cut in sizes 2, 4, 6, 8, 10, 12 and 14 years. Age 8 years requires 2¼ yards of 36-inch material and three-eighths yard of 27-inch contrasting goods.

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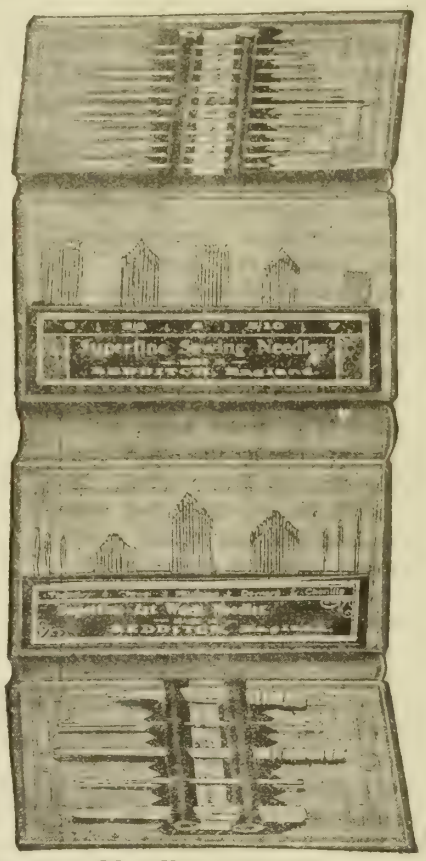

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

POULT troubles are many. First is weakness inherited from long inbred stock, next weakness from a parentage of blackhead, for often the germs of blackhead are in the parent stock getting ready to destroy them. Next is dampness and feeding. The poult responds briskly to a roomy, warm house on bad days; it droops if kept in a chilly atmosphere.

Look out for lice at all times, but especially if the wings droop. If lice are not the cause of drooping wings, and the wing feathers are merely growing too fast for the weak wings, clip the wings. Sometimes indigestion causes the wings to droop. Sometimes it is weakness for lack of animal food. Spare them each day some bits of fresh meat. A little fresh lard each day is considered fine for oiling up the digestive apparatus.

Beware of too many hard-boiled eggs, too much clabber cheese, with nothing to offset, and positively beware of too much cornmeal dough. It often sours in the crop, refuses to move out, and the poult drops dead of acute indigestion.

Move the poult coops often from the dirty spot to a clean one, and when this one may be harboring lice move it on again. Keep watching the roosting places until the poult is begging for a roosting pole, and then remember that the roosting poles of turkeys can harbor turkey lice. How the huxters hate to get this kind on them!

Gapes

The yard that had gapes last year will have them this year—perhaps not so bad if you have re-graveled the bare places, filled up the water holes, limed or sprinkled lots of sulphuric acid about the place, but where gapeworms grow there will always be more or less of these pests. Old chip yards and rotting logs were once supposed to be their main harbor, but sods of bluegrass, far afield, brought in and placed in brooder houses, where the chicks were allowed no other chance at gapeworms, have filled many of their windpipes with these worms.

Camphor or a few drops of turpentine in their drinking water or onions and garlic in the feed are all a help toward killing them in the crop, as it is from the crop first cases usually crawl back into the windpipe. After they get in the windpipe anything dropped into it usually kills the chick instantly. They must be taken from the windpipe by some kind of a gape extractor.

If the chicks can be kept from taking in the gapeworm or its eggs too young, then the danger is not so great, for, as the gapeworms grow to maturity, which takes about nine days before they pull apart and die, the eggs by this means being discharged in the windpipe, their constant irritation causes the chicks to sneeze, cough and by every means dislodge them, which they often do. The very young chick seems given no strength to do this.

Bacteria in Eggs

The three-year investigation made at the Storrs Agricultural College as to the danger of bacteria-infected eggs has proven that eggs laid and kept under ordinary cleanly conditions do not show bacteria infection passing inside from the shell. While air can pass through the shell, it cannot to any extent carry infection with it. This is more strictly true if the eggs have never been touched by water enough to wash out the mucilage-like substance covering the pores of the egg shell. This is why market orders are: "Wash no eggs." One shipper says: "I'll take them dirty rather than cleanly washed; they can be washed the last thing before selling and will yet be fresh and safe inside if used soon."

Experiments were made in analysis of thousands upon thousands of eggs at this station, laid in trap nests or under all conditions that eggs can be laid, and in all cases nearly, with the exception of eggs infected with bacilliary white diarrhea—and these are infected before the shell goes on—the bulk of all eggs are perfectly sterile inside.

They are free from bacteria and will stay in this way a reasonable time unless kept in a damp place or under any conditions that remove the gelatine from the egg and thus let in mould bacterium and in time other bacteria. Some of the conclusions of this long test are:

The contents of normal, fresh eggs as a rule are sterile.

Eggs that have been artificially incubated for three weeks are relatively free from bacterium if they were put in the incubator clean and fresh .

Under normal conditions the shell is bacterium proof, but moisture lessens its impervious power.

Present investigation gives no proof that fertilized eggs undergo decomposition sooner than unfertilized under good keeping conditions.

Unfertilized eggs set in an incubator when good and fresh show no change in taste or odor, after three weeks' heat, from a fresh egg. The white has simply taken in a little more water, perhaps.

Eggs set under hens, if unhatched at the end of three weeks, show bacterial invasion, some being very foul. The moisture of the hen's body opens the pores of the shells, and whatever bacteria she carries to the nest on her body, or whatever infest the nest material and its surroundings, enter the eggs.

The yolk of a fresh egg cannot be examined for any signs of possible germs of white diarrhea in the flock. The eggs must be brooded from five to six days before these can be seen under the microscope, and then the yolk is often found teeming with these bacteria.

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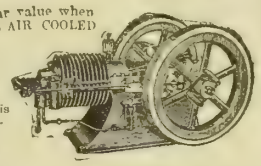

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Seeing the Differenee

BETWEEN THE

DE LAVAL

AND OTHER

Cream Separators

IT DOESN'T TAKE AN EXPERT KNOWLEDGE OF MECHANics or a long working test to tell the difference between the De Laval and other cream separators.

ON THE CONTRARY, WITH A 1914 DE LAVAL MACHINE placed beside any other separator the difference is apparent at first sight to the man who never saw a separator before.

IF HE WILL THEN TAKE FIVE minutes to compare the separating bowl construction; the size, material and finish of the working parts, particularly those subject to wear and requiring to be occasionally taken apart and put together; the manner of oiling, and everything which enters into the design and construction of a separator as a simple durable machine, he will still further see the difference.

IF HE WILL GO A step farther and turn the cranks of the two machines side by side for half an hour, particularly running milk or water through the bowl, he will see still more difference.

AND IF HE WILL take the two machines home, as every De Laval agent will be glad to have him do, and run them side by side in practical use, the De Laval one day and the other machine the next, for a couple of weeks, he will see still greater difference in everything that enters into cream separator practicability and usefulness.

THE MAN WHO TAKES EVEN THE FIRST STEP INDICATED in seeing for himself the difference between the De Laval and other cream separators doesn't put his money into any other machine one time in a thousand.

THE COMPARATIVELY FEW BUYERS OF OTHER SEPARAtors are those who merely read printed matter claims or listen to the argument of some dealer working for a commission, and who do not think it worth while to see the difference for themselves.

THE WISE BUYER OF A CREAM SEPARATOR TODAY DOES see this difference when buying his first separator, while the unwise or careless one usually finds it worth while to do so when he comes to buy a second separator a year or two later.

EVERY DE LAVAL AGENT CONSIDERS IT A PRIVILEGE to show the difference between the De Laval and other separators and to afford every prospective buyer the opportunity to try out and prove the difference to his own satisfaction, if on first examination he feels the slightest doubt about it.

THAT'S THE REASON WHY FOUR BUYERS OUT OF FIVE are buying De Laval Cream Separators in 1914 and why the use of De Laval machines will, before long, be nearly as universal on the farm as already is the creamery and milk plant use of power or factory separators.

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And Save Your Thresh Bill

S. E. Brady and three other farmers of Deering, North Dakota, say: "We want nothing but the Red River Special to thresh for us. It saves our thresh bills." Instead of expecting the grain to *drop* out of the straw, the Red River Special *beats* it out just as you would with a pitchfork. The saving is more than enough to pay your thresh bill. Hire a Red River Special this year and keep your profits out of the straw pile.
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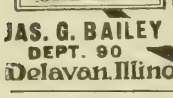

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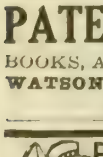

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Life and Work Among the Andean Indians

By Frank G. Carpenter

CUZCO, Peru, May 24.—For the last month I have spent the great part of my time on this high plateau of the Andes, a mighty valley which in places is 100 miles wide, running north and south from Ecuador to Bolivia. The valley is walled by snow-capped mountains. It has many peaks that are three or four miles above the sea, mighty volcanoes that have poured out rampants of lava that has congealed, as it were, in its flow. This great valley winds in and out.

The most of it is over 12,000 feet above the sea, but there are great depressions here and there in which the land slopes down to the altitude of a thousand feet, giving it all the crops of the tropics and the temperate zone.

Strangest People of New World

This plateau is one of the most thickly populated parts of South America, and it has some of the strangest people of the new world. The majority of them are Indians, and several millions are the descendants of the Quichuas, the subjects or slaves of the Incas. The Inca empire extended from beyond Quito to far down into Chile, and its people were in many respects more civilized than the Spaniards who conquered and enslaved them. When Pizarro came they were numbered by millions, and it is said that there were 8,000,000 of them in Peru alone. They were civilized and industrious. They were excellent farmers and they irrigated vast tracts which under the Spaniards soon went to waste. It is of the descendants of these people that I write you today. By terrible oppressions their number has been cut down to at least one-third of what it was in the past, but there are still in Peru perhaps 2,000,000 of them, nearly all of whom live on this high plateau of the mountains.

I saw the Quichuas first in the northern part of the Andes. They populate the high valleys of Ecuador and are still to be found all the way from there south to Bolivia, where the Aymara Indians begin. Right here at Cuzco I am in the heart of their ancient empire, and in the center of the population of today.

Quichaus Numerous in Every Town

I have seen the Quichuas by hundreds in every town at which I have stopped and I have photographed their little huts, scattered over the pampas; I have seen them toiling along the trails with enormous loads on their backs, or going barefooted, driving their llamas and donkeys loaded with the crops of their masters to the markets of the cities. I have watched them as they sat on the stone floors of the plazas with their little stores of vegetables, grain or fruit spread out before them, and have observed them in the streets carrying great barrels of water and other burdens from house to house as the servants of the Cholos and whites. These Indians, who were formerly among the most civilized peoples of the world outside of Europe, are now about the most degraded and miserable of any on earth. Since the Spaniards came they have been practically the servants of the whites and the half-breeds. Their intelligence has been ground out of them, and through generations of abuses and of exploitation on the part of their masters, added to the use of alchol and coca, they have become nearer pure animals than any race now borne as a burden on the shoulders of white men.

In the short time I have been in South America I do not pretend to pass judgment as to the present status of the Quichua civilization. The above opinions are the gist of those I have gathered from men who have lived in South America for many years. Some of the views come from natives, and some from foreigners who have been long in the country. Let me give you a few of the talks I have had on this subject. The first is from a mining operator who is it the head of the company which in the last decade had operated quartz mines here in the Andes, yielding more than $7,000,000 in gold. He is a man of close observation and a large employer of Indians. He is, moreover, open-minded and fair. He really believes what he says.

"The Quichuas of today appear to lack

An Old Quichua Man

ordinary intelligence. You tell a man to fetch you a broom and he will bring you a shovel. You send him for a hatchet, and like as not, he will come back with a glass of water. If you knock him over and make him go back he may bring you what you have asked. The shock starts his brain to working and is only then that he understands. I believe that the cause of the deterioration of the Quichua is due somewhat to the oppression he has had on the part of the whites, but more to the alcohol and coca, with which his brain is soaked from the time he reaches young manhood until the day of his death. The chewing of the coca leaf begins almost at birth, and boys and girls, young men and young women, as well as the old must have so much coca per day. The Indians expect to be supplied with a certain amount of coca in addition to their wages. They mix the leaves with the ashes of a certain tree and chew them. The ashes furnish the alkali that loosens the alkaloid of the coca, giving them the full effect of the cocaine. These ashes are made up in blocks and are sold in the market. Every Indian carries his coca pouch with him and he chews all the time. When his jaws stop you can see his cud, the size of a walnut, bulging through one of his cheeks. The coca takes away hunger and enables him to endure fatigue, but it also dries up the brain. As to alcohol, both men and women drink great quantities of aguardiente, or sugar brandy. This has an alcohol grade of about 52 per cent.

Boys Bright Until Fifteen

Another American who is a large mine operator in Bolivia tells me that the Indian boys are bright until the age of 15 years. Up to that time they have plenty of coca, but their brains have not been sodden with liquor. One reason for this is that their parents want the liquor themselves. It is only after 16 years of age, when they begin to work independently of their parents, that they can get alcohol in any great quantity. After that their brains materially deteriorate, and they are on the downgrade for the rest of their lives.

A native Peruvian of Spanish descent said to me: "The Quichuas have but little ambition, and they live from hand to mouth. They seem to have no spirit and their brains appear to be atrophied."

As to alcohol, the extent to which it is used among the Indians is beyond conception. You may see drunken men and women by scores at any feast, and at the railroad stations, and in every part of the country there are Indians who go reeling along with red faces and bleared eyes. During my stay in Cuzco I have gone into some of the alcohol stores, and I am astonished at the vast quantities sold. There is a wholesale and retail liquor establishment just opposite my hotel in the heart of this city. It consists of a number of large rooms running around a patio. The storeroom facing the street is walled with tin tanks, each twice as high as a man, and as big around as the boiler of a 100-ton locomotive. I counted twelve of these tanks standing upon platforms against the wall of that room. Each was marked as containing 2,000 liters of alcohol, and when I tapped upon them with my knife I found they were full. There were 24,000 quarts of that terrible brandy in this one room alone. Every tank had its faucet, and the brandy was drawn out by the gallon, the liter or bottle.

Liquor Dealer Boasts of Business

As I looked the store keeper came up and I asked him some questions. He seemed proud of his business and told me that he made 1,500,000 pounds of the liquor each year. He sells it to the Indians at about $10 per quintal or 100 pounds, shipping it not only to the city of Cuzco, but to other towns throughout the province. He describes his estate where the brandy is made. It is called the Hacienda Pachachaca and it consists of four great farms, and it takes from 800 to 1,000 Indian families to run it. The owner took me into the court upon which the liquor store faced and showed me how the stuff is brought in from the plantation. It is packed in goatskins containing 100 pounds each and is carried ninety miles upon mules to Cuzco. He opened one of the skins and gave me a taste of the liquor. It went down my throat like liquid fire, and he took an alcohol gauge and showed me that the stuff was 53 per cent fine.

I saw other alcohol stores, though not so large, in Sicuani. There are scores of them in Arequipa and in almost all the towns of the mountainous districts. The alcohol sells for about 10 cents a quart. The Indians usually buy it by the bottle. a number getting together and treating each other. The women drink quite as freely as the men, and on saints' days both sexes get together and have a grand spree, at which time there is music and dancing and love making, irrespective of the marriage relation. Sometimes an Indian will drink a whole bottle right down and his limit is generally guaged by the amount he is able to purchase.

Drink Beer Made of Corn

In addition to alcohol, the Indian men, women and children drink chicha, a beer made of corn. This is to be found everywhere in the mountains of Peru from one end of it to the other. The ordinary way of making chicha is to take the grains of ripe corn and throw them into tanks in the earth. The grain is then covered with straw and sprinkled with water. It is kept wet until it swells and sprouts, after which it is taken out and boiled for a season. When set aside, so the liquor begins to ferment, and within a short time it is beer.

In some villages I am told the old custom of making chicha still prevails. In that case the fermentation is started first in the mouth. The girls come together and have chewing matches. They shell off the ripe grains, and grind them to powder between their teeth, working their jaws until the saliva flows freely. In the midst of the party is a great wooden trough, in which from time to time each girl spits out her mixture of saliva-soaked meal. The spittle brings about fermentation, and after a short time the mush, with some water added, has turned to a beer that will make the drunk come. I am told this is the best form of chicha yet known, and that its manufacture dates back to the days of the Incas.

Coca Leaf Used as "Dope"

The use of the coca leaf, which contains the active principle of cocaine, is universal. It is chewed every day and there are certain fixed times during the laboring hours when all stop for a recess, during which they chew coca. The farmer gives his Indians a handful of coca leaves every morning, and the mine

owner has to supply a fixed amount of coca in addition to the ordinary wages. The coca takes away hunger and it keeps out the cold. It enables one to breathe better in the high altitudes of the Andes and it is claimed that its use enables the Indians to work longer and endure more fatigue. It also deadens the brain, destroys the will power and takes away all forms of intellectual activity.

The Indian not only chews the coca, but he makes a tea of it. It is said to be good for the stomach and the chewing of it keeps the teeth white, and I am told it preserves them. Nearly all of the Indians I see have white teeth, and it is said they seldom have toothache, this fact being attributed to coca.

Coca leaves are sold in all of the stores here in Cuzco. They come from a shrub which is cultivated and which grows from four to six feet in height. The leaves are much like a rose leaf or like our wintergreen. They are picked green, dried and put up in packages of twenty-five pounds each. Such a package sells for $2.50. I bought 10 cents' worth today and took it home in order to try it. The senorita who managed the store brought out a pair of old brass scales, balanced on the end of a beam, and weighed me out a full pound. I chewed some, but it had no perceptible effect, probably because I had not the ashes or lime to go with it. I then made some into a tea. It tasted like a concoction of hay, and made me feel good.

Some Excuse for "Dope" and Booze

As I see how the Indians live and work on these cold highlands of the Andes, I do not wonder that they are driven to coca and alcohol to keep off the blues. Let me describe some of their houses, scattered over the pampas. They are huts made of mud, so rude and squalid that they would hardly be fit for a hog or as a stable for a good American cow. The typical dwelling is about eight or ten feet in width and perhaps ten or fifteen feet long. It is so low that as you stand outside it your head reaches above where the thatched roof begins. This building has walls made of sod or mud, and its roof is straw, tied to poles or canes. It has no windows and the only door is a hole in the wall, so low that you have to stoop down to go in. In some of the huts there is a framework at the back, upon which the family sleep at night, but in the most of them both grown-ups and children lie down on the ground and huddle together to keep themselves warm. There is no furniture to be seen except a few llama skins, which are spread on the floor. The people sleep in the same clothing that they wear in the daytime, and they cover themselves with their ponchos or with the coarse blankets the women weave for the purpose.

The cooking is done on a little clay stove in one corner of the hut, and the fuel is the droppings of llamas and cattle, which are gathered up and dried for the purpose. Sometimes a kind of peat is used, and sometimes the stunted vegetation of the pampas is chopped out and burnt. The stove has no chimney and the smoke blackens the roof of the hut and gets out through the door. There is no sign of comfort about such a home. There are no tables or chairs. It is, in fact, about as bad as any dog kennel or pioneer stable we have in America.

Indian Children Are Often Bright Until They Are About Fifteen

Indeed, it is difficult to believe that hundreds of thousands of human being are born, live and die in these squalid huts of the Quichuas. Their dwellings are the same now that they have been for generations, and the only difference of conditions among them is that some families have several houses, while others have only one. Where a man is rich he may have an extra hut to store his produce and his implements for the farm, but as a rule he has no more comforts than the poor.

Many of the huts on the pampas have small corrals, made of stone or mud, about them, into which the sheep, llamas and donkeys are driven at night. Some have little patches of potatoes and barley and quinua nearby. Quinua is a kind of a grain about as big as the head of a pin, that is grown to make mush or gruel. It is a second cousin of the ordinary pigweed of the United States, and our Department of Agriculture expects to experiment with it, as a staple American plant.

Food of the Indians

And this brings me to the food of the Indians. They live very simply, their diet consisting of mutton or llama meat and potatoes, barley and corn, which they soak and mash and cook in a stew. They have also cholona, which is frozen mutton, so dried that it will last for years. Now and then they have a chicken to eat, and sometimes beef and pork. In most cases the chickens and sometimes the pigs sleep in the hut with the family. The Americans who employ large numbers of Indians at Cerro de Pasco and furnish quarters for them at low rent have to order a general cleaning out of the hogs from the huts every few weeks, in order to keep the dwellings sanitary.

Another food that is used largely by the Quichuas is chuno, or frozen potatoes. Chuno looks like bits of bleached bones, but it is really potatoes which have been frozen and dried so that they can be kept for years without spoiling. The potatoes so used are a special variety of about the size of a base ball. They are first soaked in water. This is done at night. Early in the morning before the sun rises they are taken out and they freeze. They are then covered with straw to keep off the sun. The next night they are soaked again and allowed to freeze. This process is continued from night to night. After a time they grow very soft, and the skins are trodden off with bare feet. They are now white as snow, and after being dried will keep a long time. They have to be soaked before cooking and are usually served as a soup or a stew. Sometimes they are sliced and eaten with cheese between the slices in the form of a sandwich.

Living Statues of Middle Ages

I wish I could show you these Indians as I see them by the hundreds about me. They look as though they had stepped out of the middle ages. The men wear low-crowned hats with brims that turn up. They have on bright-colored ponchos or shawls, with their heads stuck through a hole in the middle. Below the ponchos you can see the short breeches. These extend to the middle of the calf and are slit up at one side as far as the knee. The Indians are either barefooted or have untanned cowskin sandals. Some are without ponchos and you can see that their vests are gayly embroidered. Not a few have a kind of a nightcap of red, blue or white wool under their hats, and this has flaps that so fit down over the ears that they look as if they were really the ears of the owners.

The women are even more queer. They all wear hats of homespun of the shape of a pie pan turned up round the rim. Their hats are of bright colors and there is a fringe on each side the pie pan that hangs down over the ears. The women have long, black hair, often worn in two long braids down the back, or it may be twisted into a score of fine braids. They have bright-colored shawls, gay bodices and very full skirts that reach almost to the ankles, but which sometimes are cut off at the middle of the calf. These skirts are of bright colors, and one woman may have a half dozen or more, the inner ones being shorter than those without. The women spin and weave the cloth for these skirts and make them at home. They wear no stockings or other underclothing, and go barefooted and barelegged.

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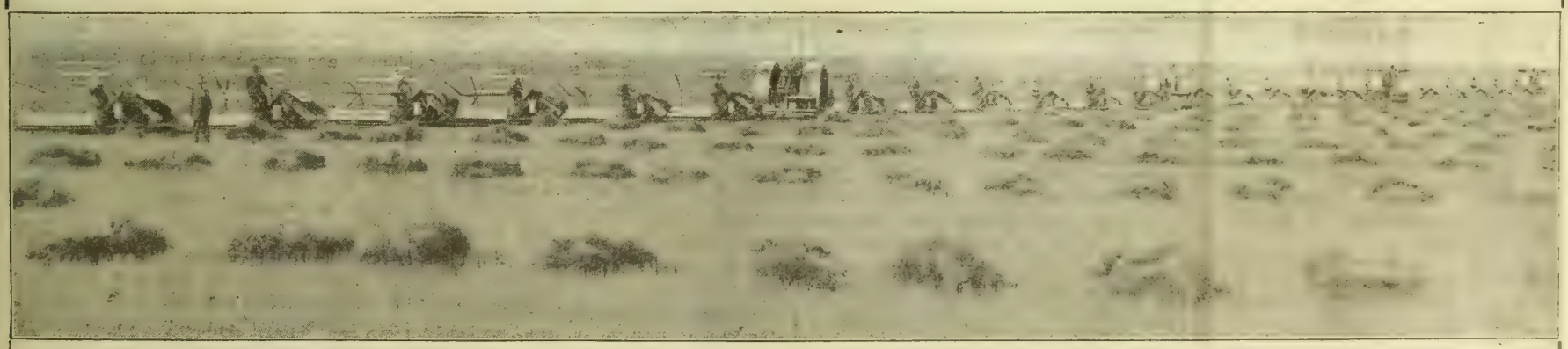

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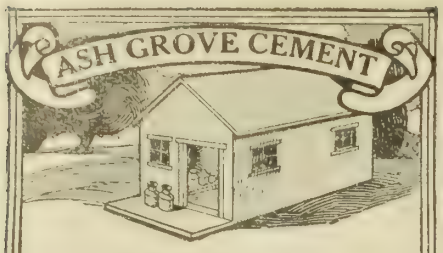

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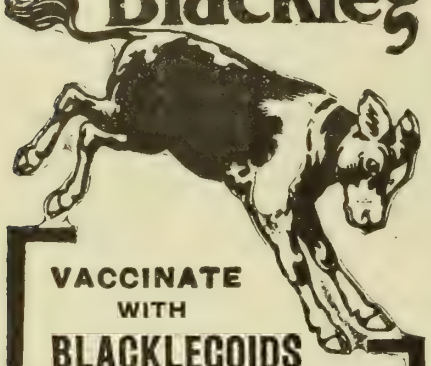

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Spraying for Apple Worms

H. L. C., Nebraska: I wish to be informed, through the columns of your paper, how to spray apple trees for the worms that usually bother first in the spring, or some people call them caterpillars. When is the proper time to spray? The apple trees are in bloom at present. I would be pleased to know what to use and how to use it. I have all apple trees.

Answer — Just after the petals have fallen, but before the calyx cups close, spray heavily, until the trees drip, with one-third pound of paris-green to fifty gallons of water or one and one-half pounds of lead arsenate to fifty gallons of water. Spray again in about three weeks, and perhaps again in August, if the tent caterpillars are present. This spraying will control the worms, but will not control scale, aphids, etc., if these are present. Orchardists are now spraying four times a year, the first spraying being in the spring, before the blossoms open. They use the Bordeaux mixture, as well as the poison, thus controlling both the worms and the scale and aphids.

Carbolic Acid for Abortion

A. M., Nebraska: Will you please publish that remedy to stop cows aborting? I am losing my calves by premature birth. I read in your paper of a carbolic acid cure, but have misplaced the paper now and cannot find it.

Answer—We are glad to reprint this cure. Take small ears of corn and dig holes in the ends, down into the pulp. Into each ear drop eight drops of carbolic acid. The acid will be absorbed into the pulp of the ear. Feed one of these ears once per day for three days, then omit three days, and feed again three days. After this give one once or twice per week until the birth of the calf. Some stockmen mix from one-half to one ounce of the acid in the water in the drinking tank to which the cows have access. We believe, however, feeding in corn gives better results, as one can then tell just how much each cow is getting. We are sorry that this subscriber forgot to give his address in writing, and, since the envelope with the postmark was misplaced, we were unable to write him a personal letter. Had we been able to do so, he might have received this information a week earlier than h can through the colu of the paper.

For School and Home

Mrs. G. H. A., California: I think that my subscription to your magazine has almost expired, but keep on sending it and I will send in my subscription just as soon as I can get to town. I have been sick and have not been able to attend to sending it in. I live some little way out in the country and don't get in town very often. I did not receive the issue of April 25. If you have any on hand will you kindly mail me one. I cannot afford to miss one copy. My little boy is taking the agricultural course in the high school and uses your magazine for reference, and he stands very high in his class. Your magazine should be in all schools and homes, and it shall be in my home. I save all the issues and have them to refer to. Wishing you a prosperous year.

Note—Thank you. We appreciate this kind of letters from our subscribers.

Can't Get Good Hands

A. E., Nebraska: I have read with interest the letters from hired hands and employers, and it seems as if they had been from the extremes on both sides. One thing I cannot understand is why a man looking for work should look for a ranch, where as a rule they are overrun with people looking for work, and have to sleep, as one correspondent says, with a horse. I never heard of any small farmer in Nebraska treating his hired hand that way.

Now, I am going to tell my story as a hired hand and also as an employer. I started work on a farm in Nebraska in '8 for $15 a month; had 50 cents in my pocket and was $50 in debt. I was told I would not stay long, as the man could not keep help, but I stayed while others came and went. I stayed two years, getting $20 most of the time, and was offered $23 for the third year. I know I never told him what I would or would not do, or that I would not milk cows, and when he left home he did not ask if the chores would be done, but he knew they would be. I lost one day in two years.

Next year I started on my own account, renting and other ways. Six years ago I got sick and hired a 15-year-old city boy for $25. He soon asked for higher wages and I let him go. The next man I hired for the winter for $20. He went to town and got drunk and lost a load of lumber on the road and abused the team, and was paid off the next day. The next man I hired for $25 and driving team kept free. He worked thirteen days out of the month, and was paid off, and I resolved to get along without a man.

I am now owner of two 160-acre farms in eastern Nebraska. I have a renter on one that has been treated right, and I have been treated right in return, and I think some day this farm will be for rent also, as you must have help when you get your crop in the ground and must sometimes pay wages above reason or be left alone.

"The Best Breed of Sheep"

This Distinction is Claimed for Dozen Breeds

THERE are about a dozen breeds of sheep now holding positions of more or less prominence among the sheep breeders of the United States, whose advocates claim for them the distinction of being "the best breed of sheep." This is the most encouraging aspect at the present time for the upbuilding of the sheep industry of the country. The fact that sheep fanciers and sheep breeders have not centered their judgments and ambitions upon one and the same breed means a little friendly strife, a little competition. "Competition is the life of trade" is a very old saying, and applies to a greater or less degree in the ranks of the breeders of all classes of animals coming into competition in the sale of the breeding stock.

How can such an expression as "the best breed of sheep" be consistently used in this relation when there are so many standard breeds recognized as the choice of intelligent sheep men, breeders of experience and of close discrimination in sheep quality? It simply illustrates the difference of opinion among men of study and observation. All these breeds must be conceded meritorious, as they are bought, bred, fed and sold for years by the same breeders, with no disposition generally for a change to another breed. Their owners are proud in the belief that theirs are the best when all the distinctive qualities are considered; some may excel in one respect, while the other or others exceed in some other quality. Thus it goes, and the representative of each breed stands fast to the belief that for his purposes he has "the best breed of sheep."

There are two prime factors in the money-making qualities of the sheep, mutton and wool. (Observe it is reversed; it used to be wool and mutton). In later years the consumption of mutton has increased wonderfully. This is mainly because the people have learned to eat mutton, gotten rid of their old prejudices, have really cultivated a taste for it, and the very high prices of beef and pork, because of a general meat shortage, have caused this change, and many persons now use mutton as a matter of economy.

There are three distinct types or qualities of sheep, classified from the wool standpoint as a basis—long wools, medium wools and fine wools. The long wools are the Cotswold, Lincolns and Leicesters. These produce a very long staple, but not so dense on the sheep as the other kinds.

The Shropshire, Oxford, Hampshire, Southdown, Dorset and Cheviot are the leading breeds in the middle wool class. The first four are quite frequently spoken of as the black-faced sheep, or smutty faces. These are quite popular in this country as mutton breeds and are extensively used now as a cross on fine wools for mutton lamb production, bringing a lamb that has good mutton quality as well as a good, big fleece of medium-length staple.

The fine wool sheep has now properly but two classes—the American or Spanish merino and the French o Rambouillet merino. The American merino has had for many generations three types or styles of sheep —smooth, medium smooth and wrinkly—but all of the same Spanish merino origin. These sheep are all valuable wool sheep, having a dense, compact, fine fiber of fleece, usually two to four inches in length in a full year's growth.

The Rambouillet or French merino is a little larger sheep and usually heavier-boned, and has had a great reputation as a successful range sheep over the western part of the United States. In recent years they have been the recognized basis

of the best range flocks, breeders of all other breeds having used them more or less as a cross in the hope of gaining in wool and herding qualities. In this effort to produce a better combined wool and mutton sheep for the big flock industry which the range country represents, they have not been a disappointment. The merino sheep possess a natural, inherent disposition to flock or herd together. Where one goes the others will follow.

They are the most timid of all the breeds of sheep, are more sensitive to fear of their natural enemies—dogs, wolves and predatory animals in general. The mutton breeds are more self-reliant, not as excitable and easily frightened, inclined more to defend themselves and graze around over the pasture in a more scattered and less compact body. They are not guided in the general movement of the flock much more than cattle, get into little bunches and groups and feel perfectly at home. It is very seldom that a cross of merino of any of the families with mutton breeds proves unsatisfactory from the standpoint of mutton-making.

"The best breed of sheep" resolves itself into a matter of fancy. Men of equal experience will differ, and the market opportunities are so liberal that any person may be accommodated. There are said to be thirty different and distinct breeds, and certainly a dozen or more of these that are practical money-makers when in the hands of sheep handlers or persons having a fancy for sheep. Remember that the best breed of sheep for you is the breed that you most admire and fancy. This breed will enlist your sympathy, care and attention, and as a result do its best under your guidance. If you are a beginner in the sheep business, then study breeds by visiting good breeders; become familiar to a good degree with their care, habits and requirements.

In making your selection choose from the popular breeds, those that are well known, those that prevail at the big live stock shows. It will not satisfy the ambition of any progressive breeder to experiment with a breed that is not popular. You want buyers for the surplus of your flock. Public opinion is a stubborn, uncompromising quality in human nature; best try to please it rather than convince it of its wrongs. There is money in raising sheep on farm and range when properly handled.

Tagging the Ewes

Trim out the wool on the inside of the legs and thighs of the ewes that have lambs; trim so there can no filth gather and disturb the lamb in nursing. This wool need not be lost; it can be thrown into a tub and washed, and be sold with fleece wool as tags. As soon as the ewes are shorn the entire flock, including the lambs, should be dipped in some good sheep dip to destroy sheep lice or ticks, if there be any. It is possible to get rid of these pests and keep rid of them. When buying any sheep examine for the tick, and, if any are found, dip the sheep purchased before letting them in with the home sheep. It does not pay to feed ticks; besides, they are constantly reducing the condition and thrift of all the sheep of the flock.

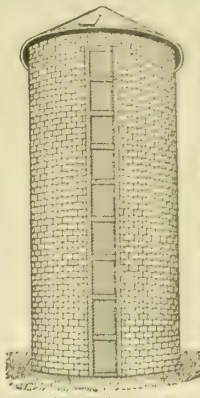
To Pacify Sheep Men

The unsatisfactory situation among sheep and wool producers throughout the United States on the wool tariff action, under the present administration, has caused no small amount of alarm lest the sheep industry shrink, to the general detriment of the country in both wool and mutton supply.

The fact that the secretary of agriculture is interested in smoothing over the breach between tariff and no tariff, between the sheep man and democratic legislation, is a feature that merits some commendation as to his tact in the part he is now volunteering for the aid of the sheep and wool producer. He has discovered that all that was the matter with the wool industry of the United States was that it was not properly handled in its shearing and preparation for market, lack of grading and standardization of the wool clip, etc. These present methods of handling cause it to sell for less than its true value and it suffers a heavy percentage of loss compared with foreign wools. He also suggests that there must be a stop put to the damage done to the sheep industry by dogs and predatory animals. This one feature of reform, he asserts, would soon be the means of doubling the sheep population of the United States.

In conclusion, Secretary Houston has designated June 2, 3 and 4 as the dates on which he invites those citizens of the United States who are interested in the sheep industry to meet at Washington, D. C., for the purpose of getting this much damaged and neglected industry upon a basis of conservation and economy that will make up for the lost tariff and put the sheep farmer and the ranchman in a better frame of mind.

THE "EVERLASTING" SILO



We build your silo of material that [illegible] Buy a permanent SILO, one that is fireproof; one that will not [illegible] out; one that needs no painting [illegible] to pay wire [illegible] a wood [illegible] and durable [illegible] will last a life time. Buy a silo that has the above features [illegible] you will not regret your purchase later on. Our

"EVERLASTING"

silo is built of [illegible] vitrified clay blocks, with channel steel [illegible] frame. It is [illegible] one of its kind, it is easy to erect, you have a dead air [illegible] blocks, and they are made strong enough to place a water tank on top of silo, thus providing fire protection as well as water pressure anywhere you want. The value of this cannot be over-estimated

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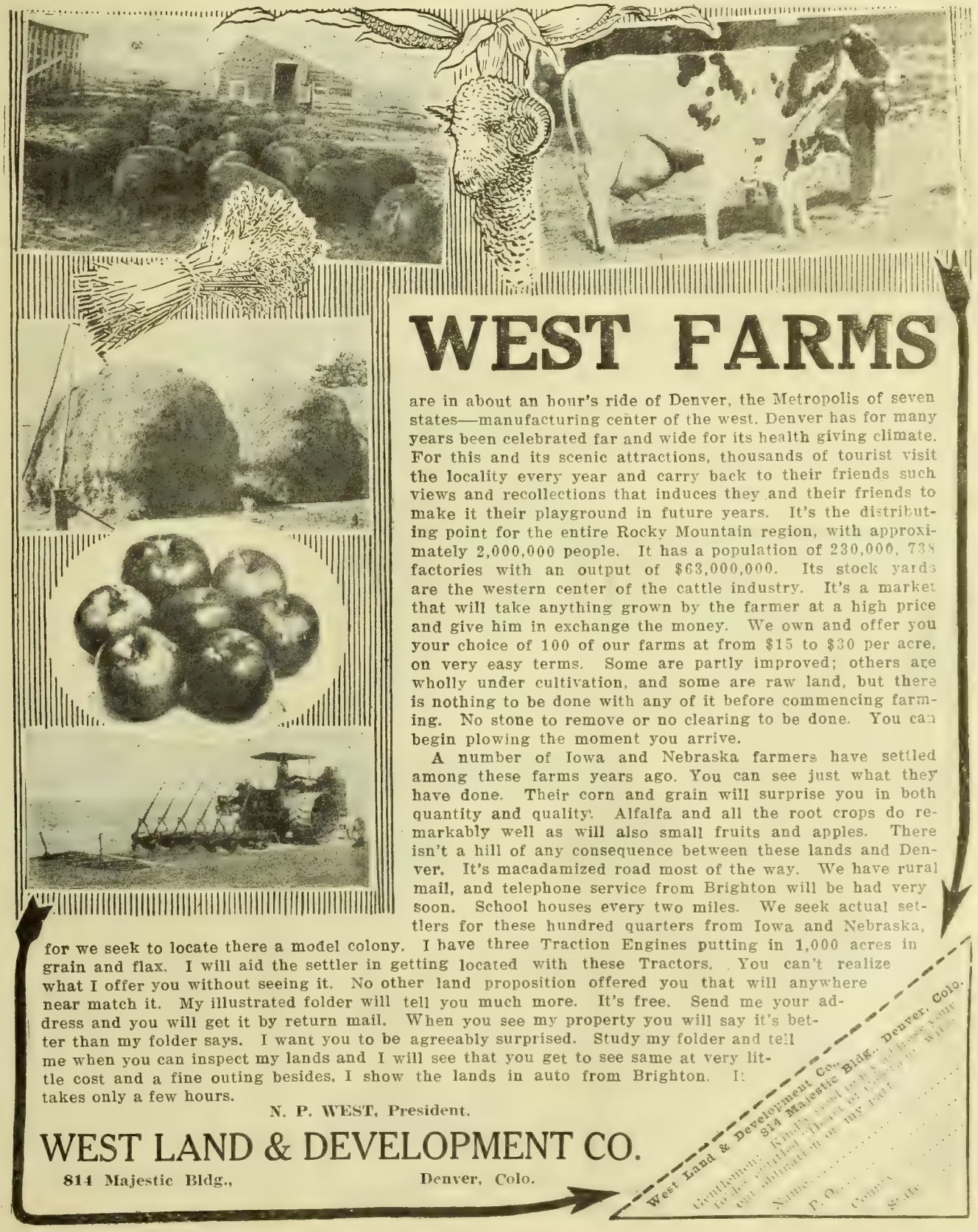

WEST FARMS

are in about an hour's ride of Denver, the Metropolis of seven states—manufacturing center of the west. Denver has for many years been celebrated far and wide for its health giving climate. For this and its scenic attractions, thousands of tourist visit the locality every year and carry back to their friends such views and recollections that induces they and their friends to make it their playground in future years. It's the distributing point for the entire Rocky Mountain region, with approximately 2,000,000 people. It has a population of 230,000, 738 factories with an output of $63,000,000. Its stock yards are the western center of the cattle industry. It's a market that will take anything grown by the farmer at a high price and give him in exchange the money. We own and offer you your choice of 100 of our farms at from $15 to $30 per acre, on very easy terms. Some are partly improved; others are wholly under cultivation, and some are raw land, but there is nothing to be done with any of it before commencing farming. No stone to remove or no clearing to be done. You can begin plowing the moment you arrive.

A number of Iowa and Nebraska farmers have settled among these farms years ago. You can see just what they have done. Their corn and grain will surprise you in both quantity and quality. Alfalfa and all the root crops do remarkably well as will also small fruits and apples. There isn't a hill of any consequence between these lands and Denver. It's macadamized road most of the way. We have rural mail, and telephone service from Brighton will be had very soon. School houses every two miles. We seek actual settlers for these hundred quarters from Iowa and Nebraska, for we seek to locate there a model colony. I have three Traction Engines putting in 1,000 acres in grain and flax. I will aid the settler in getting located with these Tractors. You can't realize what I offer you without seeing it. No other land proposition offered you that will anywhere near match it. My illustrated folder will tell you much more. It's free. Send me your address and you will get it by return mail. When you see my property you will say it's better than my folder says. I want you to be agreeably surprised. Study my folder and tell me when you can inspect my lands and I will see that you get to see same at very little cost and a fine outing besides. I show the lands in auto from Brighton. It takes only a few hours.

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Our Young People

(CONTINUED FROM PAGE EIGHT)

so we went to grandpa's to find out where it was and found it was about three miles north of here. We went to fight it and got it out. By this time the sun had gone down and we had had no dinner. We were very hungry when we got home. There were five fires that day, but we only went to three of them. We slept well that night, for we were very tired.

(Honorable Mention)

Bill

By Alta Cole, Aged 11, Thermopolis, Wyo.

Bill is my little fox terrier. He is all white excepting his head, which is black, marked with brown. He has a short tail, long ears and brown eyes. He is a smart little fellow. He goes into the river for sticks and after ducks when they are shot for him to go after. He will stand up, hop like a rabbit, dance, sit up in the corner and go for sticks. When I ask him if he is hungry he will look at me with a mournful look in his eyes and whine as if to say yes.

Bill is 3 years old. He was born December 22, 1911. Papa brought him home three days after he was born. He had Bill in his pocket. Bill stuck his head out and whined, and then I knew what he had.

Last summer Bill and Sport, another dog of mine, got my new sweater during the night some time and tore it full of holes. The next morning I wanted my sweater and could not find it. I looked out of doors and found it in the yard. Mamma gave Bill and Sport a licking. I cried to see Bill get licked, but I felt like licking him myself. Mamma darned the sweater and said it would be good enough to play around the yard in. Bill must have remembered that licking, for when I show the sweater to him he sneaks off, but when I tell him I am not going to lick him he is just as playful in a minute as he was before.

Bill likes to chase cats. I tell him not to hurt the pussies and he remembers for a while, but when an old, stray cat comes around he is after it in a minute and chasing it. When my sister, my friends and I get to playing Bill runs after us and tries to tear our clothes. I scold him and he goes off and lies down until we are through playing. Bill is very jealous. He hates to see any of us pet any other dogs and will go up and growl at them.

My Mule Ride

By Belva Smelser, Aged 13, Julesburg, Colo.

One day we girls were out in the barn making a swing. There was a little mule in one of the stalls; it was lying down. I was waiting for a swing and was walking along on the manger, when I fell and landed on the mule's back. It jumped up and kicked me on my knee; it made me lame for a long time. The mule ran to the other side of the barn and was afraid to come back. I thought I never wanted any more mule rides, and I guess the mule didn't want to give me any more, either, because it was so frightened.

Additional Stories

Verna Halbeisen, Litchfield, Neb.; Blanche Tichy, Wilber, Neb.; Mabel McCullough, Concord, Neb.; Harold Koehler, Pilger, Neb.; Martin Challburg, Sutton, Neb.; Ferra Jacobs, Cotesfield, Neb.; Vada Leibert, Albion, Neb.; Inez Vandike, Elberson, Ia.; Bernadine Small, Dedham, Ia.; Bethel Barrett, Winifred, Kan.; Naomi Derfelt, Galena, Kan.; Joseph Laier, Kansas City, Mo.; Dixie Mullins, Kingsville, Mo.; Stella Post, St. David, Ariz.; Irene Porterfield, La Junta, Colo.; Ella Erdman, Britton, S. D.; Winifred Holtz, Winchester, Wyo.; Emma Mae Cope, Pittsburg, Tex.; Mary and Emma Gobby, Riverdale, Cal.

Management and Practical Value of Silos

(CONTINUED FROM PAGE THREE)

had regarding the cost and work of filling the silo. Some of them have the idea that it is necessary to keep a gang of fifteen or twenty men around for several days to fill the ordinary silo. This is not true.

There are two methods for filling a silo—the quick and the slow process. By the quick method—that is, by having a full crew, with a good-sized cutter, and pushing the work—a 100 to 150-ton silo is filled in one day. We have found some farmers, however, who are using the slow process—that of having but a small crew, sometimes just their own help, and taking from a week to ten days to fill a 150-ton silo.

There is a difference of opinion among the farmers as to the value of silage filled by these processes. Examination of the silage in a number of silos filled by both processes has brought us to the conclusion that if the work is properly done there is practically no difference in the silage by the use of either method.

As in all other work, equipment cuts considerable figure in silo filling. First, you should have a good cutter, with sharp knives, preferably two sets of knives, so that one may be sharpened while the other is being used. You can't make as good silage with a dull knife as you can with a sharp one, for the reason that some of the tougher leaves and some of the stalks will go through the machine not thoroughly cut, and in consequence cannot be as well packed in the silo.

Stacked or Shocked Corn

We have visited several farmers who did not have sufficient capacity to store all the feed they wanted to use as silage. In the fall they filled their silo with the corn cut green from the field and cut a sufficient amount for another filling. Some of them stacked this fodder and some left it in the ordinary shock in the field. We have seen silage put in the silo in January and February coming from stacks and shocks of this kind and were surprised to find such splendid quality of silage as we have found. In interviewing these men the fact was revealed that the cattle ate it very readily and good results were obtained from its feeding. These men all told us, however, that they did not get water enough in the silo when filled with dry fodder. If any of our readers have to make a filling in this way, we would advise them to stack the fodder in the fall instead of letting it stand in the ordinary shock in the field. Silage we have examined from these second fillings has shown us that better results have been obtained from silage made from stacked corn than from shocked corn.

Careful inquiry was made of these farmers as to the relative feeding value of silage made in this way, and the feeding value of the shocked corn. While no exact figures could be obtained, no question at all was in their minds but that it paid them well to put this corn in the silo. In some later issues of this paper we will give you the names of the farmers having had these experiences, and will also be able to give you some comprehensive figures on the work they have done with corn put into the silo in the winter.

Women Winners

(CONTINUED FROM PAGE FIVE)

itinerant sheep herder a few years ago and is now the richest woman in the state; the Texas woman, who owns the largest ranch in the United States—a solid block of 1,200,000 acres; and the Kansas woman, who topped the live stock market in Kansas City last summer, marketing 200 head of steers in two days for the tidy sum of $20,000—all these and a score of their sisters who stand out conspicuous in the million-strong army of women farmers testify to a marked success for the sex in the more or less arduous work of tilling the soil and raising live stock, a work which was long considered essentially and exclusively man's work, but at which woman has now become so proficient that many have already left their men competitors far behind and are striking out across new and untrodden fields, leaving the men to follow them as best they can, and far behind.

Breeders' Notes

Hensley's Duroc-Jerseys

While in the vicinity of Central City, Neb., last week, we called on J. E. Hensley, breeder of Duroc-Jerseys, living near that place. Mr. Hensley is one of the younger Duroc breeders who is showing that he is really made of the right kind of stuff. Last year he experienced considerable trouble with disease in his herd, but with all that he did not lose faith in the future of the business. As evidence of this fact, he went out to some of the best sales in the state last year and bought some of the very best sows in those sales. As a result of this, he has an extraordinarily good line of pigs this spring, representing the very best blood lines of the breed. He has about seventy-five head, all told, and they are coming along in fine shape. These pigs are all from immune sows and everyone has been given the serum treatment, so they are immune from disease. Among the sires represented in these pigs are such boars as J. E.'s Model King by King the Colonel, Golden Model Boy, Golden Model Again, Bayne's Critic, B. & R.'s Wonder, Golden Model 36th, Long Gano, Big Gano, Golden Model 4th, Colonel Chief, Golden Model and others. Mr. Hensley is a good caretaker and will no doubt bring these pigs out in good shape. If he succeeds in doing so, he is going to have something to offer this fall and next winter that will certainly be worth anyone's while to keep in mind. The sale date will be announced in a later issue. In the meantime keep his herd in mind if you want anything in his line.

McCullough's Poland-Chinas

O. J. McCullough of Clarks, Neb., has seventy-two head of spring pigs this season. These pigs were farrowed by ten sows. By this we mean that there were seventy-two pigs saved and that are now being raised from these ten sows. Of course, there were considerably more farrowed, but we think this is a very good average, taking into consideration the difficulties encountered in saving the pigs from the time they were farrowed to weaning time. His pigs this year are mostly all sired by his own herd boars, Smooth Big Bone and Columbus Again. The larger part of them, however, are sired by Smooth Big Bone. This boar is one of the top breeding boars of the state. He is siring a class of stuff here for Mr. McCullough that is certainly proving to be of the right type and character. They have plenty of bone and stretch and plenty of smoothness and quality, together with an abundance of size. Besides his spring pigs Mr. McCullough has some very choice fall stuff. Among these are one fall boar and four fall gilts of one litter, sired by Smooth Big Bone and out of a Columbus dam. This is a very good litter and they will no doubt be seen at the fair at Lincoln this fall. We are going to have more to say regarding Mr. McCullough's herd in a later issue. In the meantime we would advise any of our readers who think they will be in the market for anything in the line of a good Poland-China to write Mr. McCullough at once.

Van Kleeck & Son Have Goods

G. B. Van Kleeck & Son of Central City, Neb., breeders of Poland-Chinas, have a very choice lot of spring pigs this season, sired by Long Giant by Black Giant, Jumbo by Long Wonder, Baird's Choice, a grandson of Wade's Jumbo; Sampson Van, a grandson of Pawnee Lad; Longfellow 3d and others. Mr. Van Kleek has had an exceptionally good trade during the last year and his customers have all been well satisfied with what they bought from him. Mr. Van Kleeck gives an absolute guarantee with every animal he sells, and if they do not prove to be just as represented to you by him you can return your hog and get your money back. This is the kind of a guarantee that really guarantees in every sense of the word, and is an evidence of the fact that he has confidence in his hogs and also in his ability to give you a just description of anything you may buy of him in a private sale. Remember him when you begin to look around for something in the line of a herd boar for the coming season. He will have some good ones to offer and will price them to you worth the money. Watch these columns for further information.

Armstrong & Son's Durocs

J. T. Armstrong & Son of Clarks, Neb., have 125 spring pigs to date, with several more sows to farrow. This well known firm has been taking a decided interest in Duroc events for several years. They have always been consistent buyers of the very best breeding stock obtainable, and along with this they have exercised particularly good judgment in mating and breeding operations. They have never been given much to outward show, but when it comes down to producing real hogs that go out and make good for the purchaser they can always be counted on as being right up at the top of the ladder. About one-third of the spring pigs this year are sired by their splendid show and breeding boar Model Again, a son of Golden Model. This boar has only been shown once, and that at the Nebraska State Fair, when he won second in a class of fifty-nine. He is a hog with a strong, arched back, wonderful depth, extra heavy bone, first-class on his feet, and along with this he is proving himself to be a sire of unusual merit. Another herd boar in service is Silver Model, a son of the above named boar. Some of the spring stuff is sired by this boar and also some mighty choice fall stuff. There are also several litters sired by Buddy King, a son of the champion Valley King and out of a Freed's Colonel dam. They also have four litters by Nebraska Colonel by C. J.'s Top Colonel by Morton's Top Colonel. This boar was purchased by Messrs. Armstrong & Son in the east last fall with an idea instilling some new blood into their herd. They were unfortunate in losing him close to the end of the breeding season and as a result have only four litters sired by him. These litters are among the very best pigs they have on the farm. Besides the above mentioned they have several litters sired by some of the other prominent boars in service in Nebraska. They will probably have a fall sale and also a bred sow sale next winter. Keep their herd in mind when wanting anything in their line.

Badger & Frost's Holsteins

We spent some time last week, while at Central City, Neb., in looking over a splendid herd of Holstein cattle owned by Badger & Frost of that place. We enjoyed every minute we were there, because these two young men are certainly wide awake and are showing remarkable capabilities in the operation of caring for and building up their herd. They are conducting it along business lines and in a manner that cannot help but prove profitable and satisfactory to them, as well as to those who patronize them in purchasing breeding stock. They have exercised the strictest care in the selection of their breeding stock, and every animal must conform to a certain standard in order to remain in this herd. They have two herd bulls in service. One is Prince Katy, a son of The Milk and Butter King and out of the dam Alma Lincoln, a daughter of the world's famous Katy Gerben. This bull weighs 2,300 pounds in average condition and is of a pronounced dairy type; he is a great bull in every respect and is siring mighty desirable stuff. Some of his get will be seen at the State Fair this fall, and unless we are badly mistaken they are going to cause somebody trouble in the show ring. Another younger bull in service in this herd is Steven's Sir Concordia Pontiac, he by Wild Rose de Kol and out of the dam Starina Pontiac Korndyke. This young bull was purchased by Messrs. Badger & Frost last fall, and he is certainly a plumb good one. At 18 months old and in just average condition he weighs 1,400 pounds, and he has the type and character that cannot help but commend him. These cows average seven months from freshening time and are giving around ninety-five gallons of milk per day. This certainly shows that they are workers. One cow in particular deserving of mention is Lady Jones Vigil. This cow has been milking 195 days and has given 12,760 pounds of milk and 494½ pounds of butter-fat. If this cow keeps on as she has, and she gives every promise of doing so, she is going to make a mighty strong record. A still further evidence of her worth is that neither she nor her produce have ever dropped anything but heifer calves and that every one of her daughters that is old enough is also proving herself to be a mighty strong milker. Messrs. Badger & Frost will have a full show herd at the Lincoln fair this year. If you are interested in anything in the line of a Holstein, write them, mentioning the Twentieth Century Farmer.

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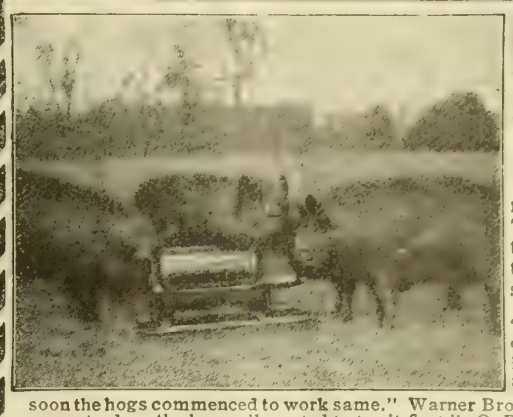

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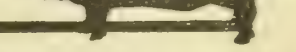

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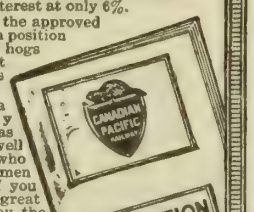

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Review of Live Stock Market

By A. C. Davenport

THERE have been no new developments in the beef market and really nothing in the situation to indicate that the trade is approaching "between the corn and grass" period. Packers are taking the good to choice cornfed cattle, preferably yearlings and handyweights, at good strong prices, in fact about as high as at any time during the season, and while there has been more or less decline in the medium and common grades, this has happened more in anticipation of liberal supplies of southwestern grass cattle than in realization of these offerings. Advices from Texas and the southwest generally are to the effect that the supply of grass was never better at this season of the year, while the available supply of stock cattle was never smaller. As a consequence the Texas stock raisers show a strong disposition to hold on to their young cattle for another year, partly to secure the benefit of the present especially good feed, and partly with a view to offering a choice load of yearlings and 2-year-olds to the trade next spring, when they will undoubtedly be in keen demand.

Southern Beef

The authorities of the Department of Agriculture have apparently been taking considerable interest in the cattle situation and have been urging strongly the resumption of beef production throughout the south. It is to be hoped that this propaganda for beef production in the southern states will prove successful, but to western stockmen it seems that a better way to increase the production of beef would be to encourage the breeding and feeding of cattle in the west and northwest, where condictions are more favorable and where there could be no doubt as to results. Already the more intelligent handling of live stock on the forest reserves has resulted in increasing beef supplies in those sections, which only demonstrates that an equally intelligent disposition of other millions of arid and semi-arid grass areas now held by the government would result in still further increase in the production of live stock. One of the big questions for farmers in the corn belt this fall will be where to secure their stock cattle. That they will be scarce and high seems now to be assured. While there is every prospect that corn will be cheaper on account of imports from Argentina, oats will cost less for feeding purposes on account of imports from Canada, and a wet spring through the west insures a liberal crop of cheap hay. If the government wants to afford practical relief to stock raisers and feeders it will adopt a more liberal as well as a more intelligent policy in reference to its western lands, a large proportion of which are now idle and practically useless.

Packers Bearish on Hogs

It is not always possible to ascertain just why the leading packers of the country take any particular attitude in the provision trade. They are supposed to have so much general information on the subject as well as so much inside information that those not immediately connected with the trade can hardly be expected to fully understand the motives for the moves they make. Just at present, however, it is not difficult to figure out why the packers are bearish on both hogs and provisions. In the first place it would look as if hog prices would go higher in the face of the present very moderate receipts at western markets. To offset this, however, it should be borne in mind that owing to depressed industrial conditions in most sections of the country the consumption of product is below the average. The same state of affairs exists through Europe, our exports being considerable short of recent years. Then, too, there is every assurance that a big crop of pigs will be matured under favorable conditions this spring, and there is the danger that prevailing good prices in this country will attract liberal importation of pork from abroad under the present tariff. One effect of removing the duty on both live and dressed pork is already noticeable in the west, where something like 50,000 hogs from Canada have found a market on the Pacific coast In fact, there are so many doubtful propositions in the provision trade that they more than overshadow the present light supplies of hogs, and packers cannot be blamed for pursuing a hand-to-mouth policy at this time and in not materially increasing their stock of provisions until they are assured of a more satisfactory and profitable outlet for them.

Healthy Mutton Demand

The season for cornfed lambs closes about the latter part of May as a general thing, and it not infrequently happens, as it has this season, that in the interval between the finish of the cornfed season and the beginning of the grassfed season there is a shortage of desirable offerings, so that prices are forced to an unusually high level. When values advance 50 to 75 cents as they have recently, and this advance is sustained for several days, it is a fair indication that there is a healthy demand for mutton in the country. Naturally this strong tone to the market offers encouragement to feeders in the corn and alfalfa belts who are arranging to contract their lambs for next winter's feeding. Advices from the west are that there is a big crop this year produced under favorable conditions of weather and feed, and this has led intending feeder buyers to feel their ground, and many bids have been made at prices 50 cents to $1 per head lower than a year ago.

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FETERITA—HOME-GROWN, TESTED seed, re-cleaned, sacked. Greatest drouth-resisting crop. Matures in 75 days. Pamphlet telling how to grow—$2.75 single bushel, $4.50 per hundred. H. M. Hill Sycamore, Kan. Route 1.

Quick on the Trigger With a Snap-Shot Eye

THE crack trapshooter has to be a man with steady nerves and muscles absolutely under control—always ready, at the sudden jerk of a string to swing his gun into place and bring down his clay pigeon. This means trained, not to the minute, but to the split-second. *He* takes no chances with his *nerves.*

We present the names of some of these crack shots who smoke Tuxedo. They like to smoke, but they take no chances on a tobacco that might "throw them off."

GEORGE W. MAXWELL,

George W. Maxwell, one of the leading trapshooters in the country, says:

"I find relaxation and complete enjoyment in Tuxedo. It's a nerve steadier and a sure fire, slow-burning tobacco. Easily my favorite."

Geo W Maxwell

TOM A. MARSHALL

Tom A. Marshall, whose trapshooting ability has made him famous, says:

"Tuxedo tobacco is unquestionably the acme of perfection; smoking Tuxedo make life better worth living."

Tom A. Marshall

Tuxedo

The Perfect Pipe Tobacco

is purposely made to give you all the benefits of the highest grade smoke. It is made from the very finest tobacco Kentucky grows—ripe, mellow, sweet and mild old Burley, aged right up to perfection-day. Then treated by the original "Tuxedo Process," which takes out the sting, makes Tuxedo smoke cool and slow, and guarantees that it ***cannot bite*** your tongue.

Tuxedo has had many imitators; none has ever equaled it in sheer quality and smoking-value.

YOU CAN BUY TUXEDO EVERYWHERE

Famous green tin with gold lettering, curved to fit the pocket 10c

Convenient pouch, *inner-lined* with moisture-proof paper . . . 5c

In Glass Humidors, 50c and 90c

THE AMERICAN TOBACCO COMPANY

Illustrations are about one-half size of real packages.

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Charles G. Spencer, prominent in all the championship trapshooting tournaments, says:

"For real enjoyment, I'll take a pipeful of Tuxedo. No chance for tongue-bite, and a mighty large amount of satisfaction."

C. G. Spencer

FRED GILBERT

Fred Gilbert, whose name is celebrated among trapshooters, says:

"The coolest, most fragrant, most pleasant tobacco in my experience—Tuxedo. Leads in mildness and purity."

Fred Gilbert

L. J. SQUIER,

L. J. Squir, well known all over the country as a keen-eyed and successful trapshooter, says:

"Tuxedo is the only REAL smoke. A pipeful of Tuxedo is mild and soothing, and I recommend it highly, to all shooters as a clear, cool tobacco."

L. J. Squier

FRED G. BILLS

Fred G. Bills, crack shot, well known to all followers of trapshooting, says:

"Tuxedo appeals to me strongly as a good, healthful smoke. My nerves have behaved admirably since I've been using Tuxedo, the leading tobacco."

F. G. Bills

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, June 6, 1914 | Number 704

Prattle of the Youngsters

Others Wish So

A little boy, during his first country week, was given a drink of milk from a prize Jersey.

"Gee," he said, smacking his lips, "I wish our milkman kept a cow!"

Why Not?

"Some adjectives," said a school teacher, "are made from nouns, such as 'dangerous,' meaning full of danger, and 'hazardous,'' full of hazard. Can anybody give me another example?"

"Yes, sir," replied a fat boy—"pious, full of pie!"

Solomon's Cynicism

A ten-year-old Philadelphian was asked by his Sunday school teacher to write out all he knew about King Solomon and to hand in his paper the next Sunday. As per instructions, the lad submitted the following:

"King Solomon was a great and a wise man. He had 100 wives. After that he did not believe in God."

The Real Thing

Among Laura's toys was a rubber cat of which she was very fond. One day she came home carrying a neighbor's kitten.

"This kitty is nicer than my kitty," she said, enthusiastically. "This isn't rubber; it's a meat kitty, and it's got pins in its paws."—Mother's Magazine.

Knew the Place

Mrs. B. saw her little 3-year-old daughter come from the back door of the house next door eating a cookie, and when the little lady came into the house her mother turned to her and said:

"Why, Elsie, you must not ask Mrs. K. for cookies."

"I didn't ask her, mother," said Elsie. "I know where she keeps them."—Delineator.

To Father's Rescue

There was company to dinner and father was carving his prettiest on a fine roast, when suddenly the knife struck a skewer, made a sliding motion and came out on top. Father attempted to cover his real feelings with jests, but there was an embarrassing silence. Willie took advantage of it.

"Cook has burned her nose orful," he said.

"Too bad," muttered father, still wrestling with the roast. "How did she do it?"

"Trying to pull those skewers out with her teeth."

Defiance

In the good old days, when no child dared reply to a question from an elder without the "sir" or "ma'am," a gentleman, now past middle age, recalls an awesome scene at his father's table.

A stubborn little sister, having been denied a second helping of her favorite dessert, was asked if she wished some bread and butter instead, to which she defiantly answered, "No!"

"No, cat? or no, dog?" asked the father with ominous calm.

"No, dog," was the reckless answer that set the table in silent convulsions.—National Monthly.

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Are You Paid for Your Work?

IT IS not pay if you earn a bare living from your farm. The farmer works harder than most men, and in many cases he gets less pay for the time, labor and brain work he uses. If he is a good farmer and knows how to raise the finest kind of crops and stock and how to conserve the fertility of his soil and utilize the waste products, even then he may not make a fair profit. The trouble is that in most cases he sells his goods at prices that are set by the buyer. Naturally, the buyer does not put the price any higher than he has to.

There is a farmer in Illinois who believes that if the farmer could add to all the other trades that he must master that of scientific salesmanship he could make somewhere near the profits that the city man supposes are made on the farm. "When a farmer drives up to the elevator," writes this man, "with a wagon-box full of No. 1 hard and yells, 'How much?' that is not salesmanship; that's only filling an order, if, indeed, it is not absolute slavery." The suggestions this man has to offer and the examples he cites of the men who have been successful through the use of these methods are worth reading. His article in the next issue of the Twentieth Century Farmer will, we feel sure, be read with great interest.

Bright and Breezy

Too Much Sentiment

"You disapprove of poetry?"

"Yes, sir," replied Farmer Corntossel; "shan't any more of it come into my house. The hired man's been readin' about dandelions an' buttercups an' daisies till I can't git him to pull up a weed."

In Disguise

"Oh, I'm in such trouble! My little Willie's got lost!"

"Well, well; it'll be all right; everyone in the neighborhood knows him."

"Oh, nobody'll know him today, because I've just washed him!"—American Boy.

Plenty of Hog Feed

The big man with the I-know-it-all expression sneeringly watched the little man who was eating from a sack of peanuts. "Down where I came from we use peanuts to fatten hogs," remarked the big man.

"That so?" asked the little man. "Here, have some."

Real Comedy

"Jane," said a lady rather sharply to her cook, "I must insist that you keep better hours and that you have less company in the kitchen at night. Last night you kept me from sleeping because of the uproarious laughter of one of your woman friends."

"Yis, mum, I know," was the apologetic reply, "but she couldn't help it. I was a-tellin' of her how you tried to make cake one day."

English Economy

"So you have no references?" said Farmer Giles to the boy who offered himself as a farmhand.

"No, sir," said the youngster. "But the reason is that I left without asking for one. You see, when I had been there a month a cow died, and we had to eat it. Some weeks afterward a pig died, and—would you believe it?—we had to eat that. Well, two days ago the old woman died, and so I hopped it!"

It Wasn't Annie

Auntie felt called upon to chide Annie for getting wet so often. One day mother and auntie were sitting by the dining table talking of Annie's still being out when it was beginning to rain.

Just then they heard the kitchen door open softly.

"Who has wet feet now?" called auntie.

An ominous stillness for the space of three seconds, then a gruff voice replied:

"The ice man."—Harper's.

Canny Mary

Will and Mary had been busy courting for over two years, meeting every night in Hope street, Glasgow. About a fortnight ago Will, in parting with his beloved, made the usual remark:

"I'll meet ye in Hope street tomorrow nicht. Mind and be punctual."

"Deed, aye, Will, lad," replied Meg with a merry twinkle in her eye. "We hae met noo a lang time in Hope street, an' I was jist thinkin' that it was high time we were shiftin' oor trystin' place a street farther along. Whit wad ye say to Union street?"

TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Theory Versus Practice in Soil Analysis

Why Chemical Analysis is Not Always Reliable and How Farmer May Make His Own Tests

By A. C. Hartenbower

TWO farmers were overheard a few days ago arguing the question of the actual worth of a chemical analysis of soil; one was insistent that such an analysis by an approved chemist would give him a direct clue to the adaptability of his soil for producing certain crops, while the other was equally insistent that there was nothing to such an analysis. Which one was right? Is it true that chemical analysis of a soil has some definite value to the general farmer? Or, in other words, can such analyses serve as guides to the fertilization of soils in order to increase their productivity?

The history of the making of chemical analyses of soils is interesting because it shows how agricultural ideas in this line have changed during the last fifty years. When chemistry was first considered in its relation to agriculture the idea gained ground that it would be a comparatively simple matter to determine with accuracy the exact requirements of any soil. Conditions appeared to warrant that idea. The first thought was that by analyzing the plant and determining the amounts of the essential plant food elements that were used in its development under different yields and conditions, a good idea could be formed of the power of any soil to produce crops. Then, by having an analysis made of the soil to determine the elements that were present and comparing that with the analysis of the plant, the farmer could tell definitely how much his soil lacked in any one or more elements for producing any certain crop. The idea sounded good. It rapidly became considered that the farmer, by having his soil analyzed, could determine exactly what it needed in order to give him maximum crops. He could add one or more fertilizers in accordance with the needs of the soil as shown by the chemical analysis.

Practice and Theory Differ

But practical experience in this respect, as in many other things connected with the farm, did not bear out the theoretical ideas. Farmers noticed that when they had analyses of the different types of soils on their farms made the actual crop-producing power of the soils was not always what might be expected from the indications of the chemical analyses of those soils. The heaviest producing soils often showed up poorer when chemical analyses were made than the less productive ones, and, what seemed more odd, was the fact that oftentimes the lowest producing soils contained such large amounts of plant food that they could produce crops almost indefinitely if the plant food alone was decisive. The investigators saw that they must carry on more extensive experiments in order to arrive at any practicable conclusion.

Today it is well known that there are two kinds of plant food in the soil, viz: available, or usable plant food, and unavailable or unusable plant food. The amount of each of these kinds helps to determine the productiveness of any soil. When a man sends a sample of soil to be analyzed he should remember that the chemist will be unable to tell with any accuracy the condition in which each kind of plant food is present in his soil. The results of the analysis may show that there is a great sufficiency of all of the essential plant food elements, and still he will be unable to produce crops that bring him profits. Unavailable, or unusable, plant food is almost worthless until it has been changed to an available, or usable, form.

Must Be Available

A crop demands for its development food that is capable of being dissolved in the soil moisture, or, in other words, plant food that is soluble, and thus can be carried by the soil moisture into the plants. There may be thousands of pounds of plant food, and still if this is insoluble in the soil water it is useless as far as crop production is concerned. To summarize: The chemist in this case can only determine the total quantity of plant food present, not with accuracy the amounts of each of the available and unavailable plant foods present.

It is well known that the amount of available, or usable, plant food in the soil is determined largely by the physical condition of the soil. In soils that are in poor physical condition the amount is low, and vice versa. The chemist in his laboratory does not know the physical condition of the soil which he analyzes. It may be cloddy or in such other condition that it would be impossible to grow a crop on it, and still the analysis would show up well.

Personally, I think that in most cases, for the general farmer of the middle west and southwest with his generally fertile soil, a mechanical or physical analysis of his soil has greater actual value at the present time to him than has a chemical analysis. The amount of each of the different groups or sizes of soil particles, together with a consideration of the amount of organic matter present would give any crop grower in those sections a better idea today of his soil's power of production than a mere chemical analysis.

When Analysis is Valuable

A chemical analysis of a poor soil, however, that is in good physical condition may have

(CONTINUED ON PAGE EIGHTEEN)

Short-Sighted Seed Policy

IT WOULD seem that a mistake is being made both by farmers and seed dealers in the matter of buying seeds in some localities. A farmer brings to the seed dealer a quantity of alfalfa seed just as it has come from the huller. The dealer buys this seed, agreeing to clean it and pay the farmer for whatever quantity there is of good, recleaned seeds, and the tailings or screenings from the machine belong to the farmer to take home and sow in his fields.

Now the farmer loses in two ways by this process—first, the seed dealer is going to clean out every bit of light, poor seed and weed seed which the cleaning machine can possibly take out and buy only the heavy, good seed. Thus the farmer has less seed to sell and more tailings to take home. Second, the seed which he takes home is partly good, live seed, but it is mixed with light, worthless seed, and, worse than this, a large quantity of weed seeds.

Because a farmer has one hog with cholera he does not go out and buy more diseased ones. Why should he, because he already has foxtail grass, pig weed and possibly dozens of kinds of weeds, including dodder, in his alfalfa field, want to increase the number of weeds by sowing more weed seeds on his field? It is surely a short-sighted policy for both farmer and seed dealer, for year by year the farmer will have poorer and poorer seeds to sell and the dealer will find it more and more difficult to buy good, high-grade seeds.

Only a few years ago Idaho and Utah alfalfa seed could scarcely be found on the market in certain states where seed laws were being enforced. This was the direct result of just such a short-sighted policy. Many fields contained dodder, the seed was threshed, cleaned by the dealer and the farmer took the tailings back and sowed them on his fields. This had been done until it was practically impossible to get seeds from these states which did not contain dodder.

Some lots of seed have this year carried large quantities of foxtail seed (17 to 20 per cent); other lots test as high as 99.9 per cent pure, and it is the 99.9 per cent seed that is bringing the top prices on the market today.

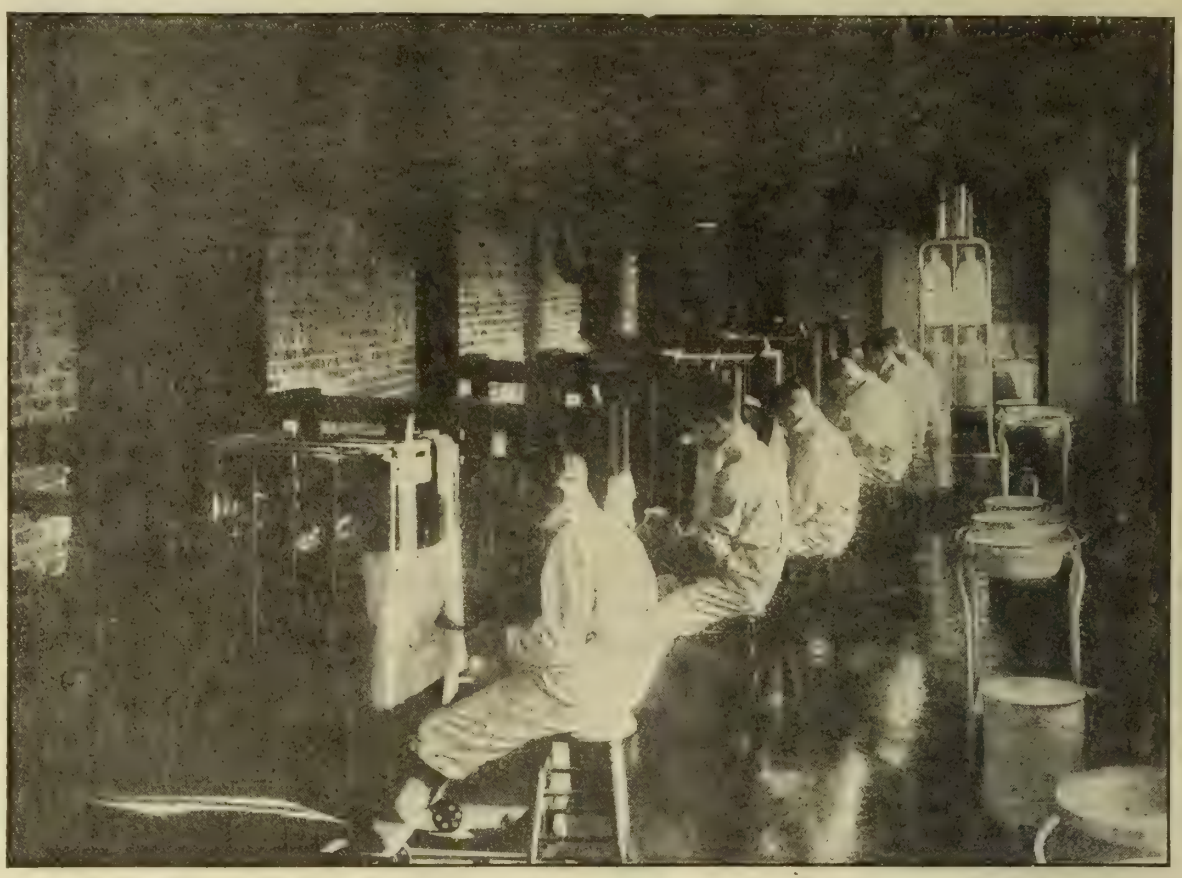
The production of clean, high-grade seeds is a promising industry for future years and nothing should be done to lower the quality or to increase the already abundant supply of weeds.

LOUISE M. ALLEN,
Nebraska State Seed Inspector.

Hog Cholera---Prevention and Treatment

VIII---Methods of Manufacturing Serum and Virus and Plan for Storing Serum

IT MAY be interesting to some of our readers to know how serum and virus are manufactured. Let us briefly explain. We believe the best method, and the method now being pursued by our best manufacturers, is to take a perfectly healthy hog weighing from forty to sixty pounds, and into it inject about two cc. of virus. In from ten to fifteen days this hog would sicken and die from hog cholera. Before death, however, he is killed and from him all the blood taken. In taking the blood from this hog great care is observed to have everything absolutely clean and sanitary. The room in which the operation takes place should be scrupulously clean—no dust of any kind on either the floor or the walls. The floors should be of cement and thoroughly disinfected after each operation. The blood obtained from this pig is virulent cholera blood, or virus.



Tail Bleeding, or Taking Serum from Tail of Hyper-immune Hog. These Pictures Are Taken at the Iowa Agricultural College at Ames.

Manufacture of Serum

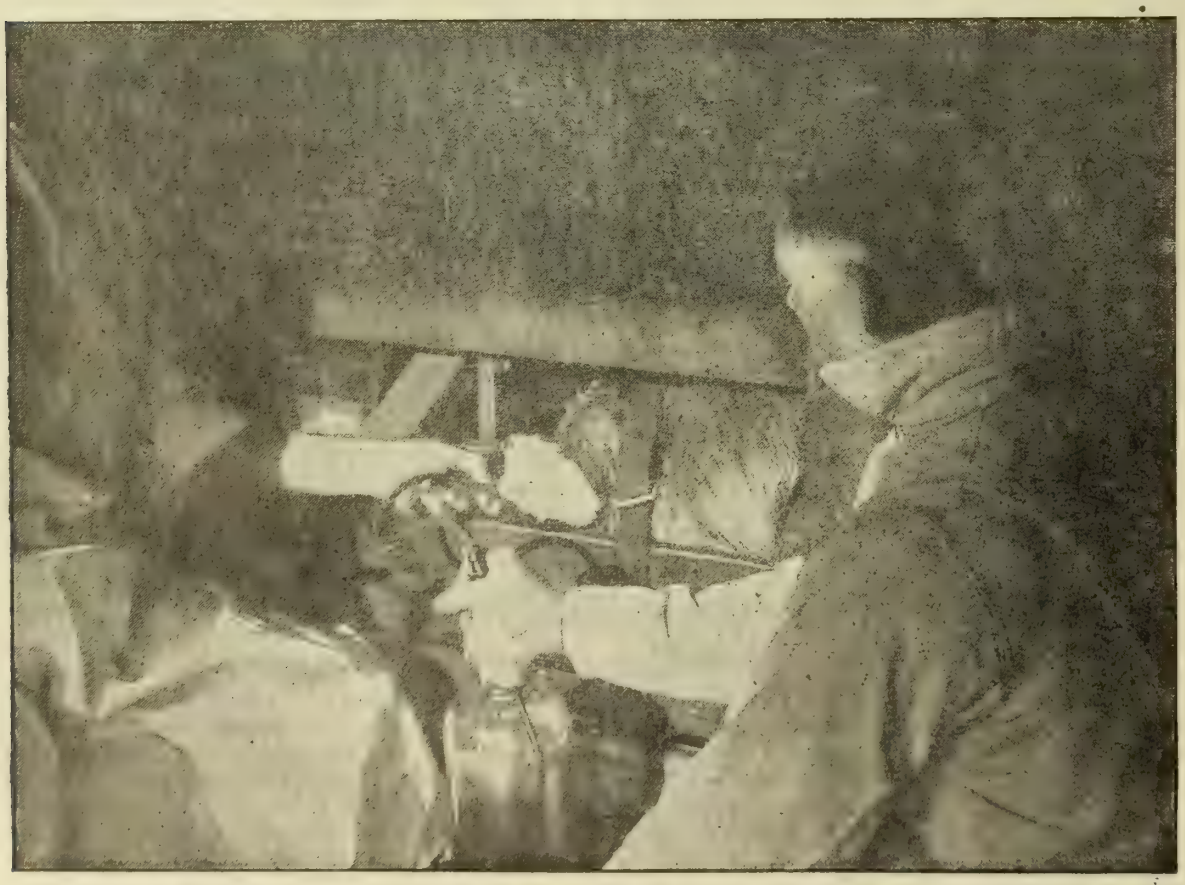
A pig weighing from 150 to 250 pounds, perfectly healthy, is obtained and into it is injected about 2 cc. of virus, and 40 or 50 cc. of serum. This pig is then turned loose. His temperature is taken at least once a day to know exactly his condition, whether he remains healthy or not. At the end of from ten to fifteen days we will have a perfectly immune hog. To make the test sure, about 5 cc. of virus are injected into this pig, with no serum, and he is let go about another two weeks. If he still remains healthy he will then be ready to hyper-immune.

He is then carefully weighed, securely fastened and placed either upon a platform or in a crate, where his ear can be easily operated upon, and through the large vein in the ear, after having first been thoroughly cleaned and shaved, is hypodermically injected 5 cc. of virus or virulent hog cholera blood for every pound of weight. For a 200-pound hog a thousand cc. of virus would be used, or about a quart, enough to kill a thousand head of hogs if properly administered. In ten days this virus has been thoroughly distributed in his blood and throughout his system, and he is ready to be bled for seurm.

He is placed in a crate, his tail thoroughly cleansed, shaved and the end of the tail cut off, protected as shown in the accompanying cut. From this pig is then taken probably a quart and a half of his blood. Then the flow is stopped and he is let go about seven or eight days and then bled again, and probably a third time, when he will be re-hypered with another 1,000 cc. of virus and let go as before. Probably all his tail will be used up by the second hypering and the pig killed, and all the blood taken from him and the carcass used for meat, as it is perfectly healthy. The blood taken in these various tail bleedings after being defibrinated is the serum, and injected into a hog will protect it from cholera.

Question of Tail Bleeding

There is some difference of opinion among serum manufacturers regarding the question of tail-bleeding hypers for serum. Some hold to the opinion that good serum cannot be obtained by more than one bleeding after the hog is hypered, and that to obtain good serum, after the hog is hypered, he should be killed and all his blood taken from the throat. In this connection we will only say that the government authorities say that there is no noticeable difference in the different tail bleedings and the final bleeding.



Hypering, or Injecting Into an Immune Cholera Hog 5 cc. of Virulent Cholera Blood for Each Pound of Live Meat of the Animal.

In our last week's paper we discussed the subject of testing serum, but did not say anything about testing virus. We consider, however, that virulent virus is of as great importance as potent serum, when the serum-simultaneous method is used. Virulent virus is also absolutely necessary in the manufacture of serum.

How Long is Virus Virulent?

We have carefully studied the matter of the production of virus. Inquiry has been made from authorities as to how soon virus should be used after being drawn from the hog. Answers to this question range from twenty-four hours to fourteen days, the prevailing opinion, however, being that it should be used inside of ten days, and the quicker the better. If this is correct, it is hardly practical to test virus before it should be used.

Some manufacturers obtain their virus from cholera hogs at the packing plants, saving the blood from hogs showing cholera lesions on post-mortem examination. Others manufacture theirs by using healthy hogs, as we have above stated. Thorough invesigation into this matter has convinced us that by the continuous use of healthy young hogs a virus of greater virulency can be built up, and we feel that when this method is used a virus will be obtained that is practically reliable.

As we have stated, most of our states in

the corn belt have plants for the manufacture of serum and virus. Provision is made for its sale to farmers, generally at cost. We are fully aware of the fact that during the last season some of these state plants sent out serum that was not potent. We are not condemning them for this any more or less than we do commercial plants. In most of these states the demand was very urgent, so much so that time was not taken to test before sending out. Those in charge thought that probably more good could be accomplished by using the best means available at the time and sending out the serum as fast as manufactured. This was a mistake, and our authorities now fully realize it. We believe that hereafter all state plants will refuse to ship any serum before it is tested, and will ship none that has not a sufficient degree of potency.

Speculation in Serum

More or less speculation has been indulged in by some veterinarians during the last season in buying and administering serum. In an article to follow we will more fully discuss this. Generally, state plants sell the product at cost of manufacture. We believe that the state should sell the product to no one but the hog owner for use in his own herd, and such sale should be for cash only. The general taxpayers having incurred the expense of building and equipping the plant, the product should be sold at approximate cost of production, and there should be given no chance for speculation. This paper believes that states should charge approximate cost of the manufacture of serum and virus in the sale of the product. Farmers get the direct benefit of its use, and we believe are willing to pay to the state all the cost of manufacture.

The old saying, "In time of peace, prepare for war," applies to hog cholera control. It has been demonstrated that serum, if properly kept, may be kept in good condition for some years. We have years in which we have much more hog cholera than in other years, in consequence a much greater demand for serum, last year (1913) being a good exemplification of this condition. These conditions may come again, and we should be prepared to meet them.

To Meet Emergencies

Let the different localities be organized into anti-hog cholera clubs as suggested. Let each member of such a club faithfully do all he has promised to do in good methods of feeding, handling and sanitation. Then let each member of such a club put into the treasury such an amount as may be necessary for the purchase and storage of sufficient serum to treat several herds in case of an outbreak.

In order to be kept any length of time this serum should be in some storage room having a temperature of around 55 degrees. A good many serum plants are using for this storage room an ordinary cave, cemented. Possibly this cave should be dug a little deeper than the ordinary one. There is undoubtedly in every community in which one of these clubs would be organized some farmer who has a cave of this kind in which the serum purchased by the club could be stored, thereby being imediately available in case of an outbreak. The party, or parties, having the first outbreak could take from that serum on hand such quantities as he would need and pay into the treasury of the club the amount of money necessary to buy this

(CONTINUED ON PAGE ELEVEN)

Hog Cholera Day

In an effort to familiarize hog raisers of Nebraska with the various phases of hog cholera and vaccination, one day in each month has been set aside at the Nebraska university farm for the instruction of anyone interested. The first day has been set for Wednesday, June 10. Instruction will be offered the second Wednesday in each month thereafter as long as the demand warrants. The visitors will inspect the serum plant, see the different processes of making serum and virus and witness the vaccination of hogs. They will also examine cholera-infected hogs and the carcasses after the post-mortem is made. From the post-mortem the stockmen are expected to become familiar with cholera diagnosis. Lectures on cholera prevention, as well as other topics of interest to hog raisers, will be given. Instructions will begin at 9 o'clock and last throughout the day. No charge will be made.

June in the Vegetable and Flower Garden

By L. H. Cobb

THE first planting of most vegetables is coming on rapidly now; the cabbage, tomato and sweet potato plants have all been transplanted; the lettuce, radishes, mustard, spinach and set onions planted in the fall or during the winter have been supplying the table now for several days, and the second planting of each is above ground and coming on nicely. Such a condition is apt to make one neglectful of the plantings that should be given attention this month.

It is a good plan to plant by rule and not trust to doing it when you think of it. When the garden is nice and the crops coming on you are not apt to realize the necessity of more planting. The quick maturing vegetables should be planted at intervals of about two weeks if you care for them in the summer. For myself I do not care for mustard, lettuce, radishes or spinach much after the first few weeks, but I relish beans, peas, onions and corn all summer and fall. Beets are better when small, and a couple of plantings will be best for them. The longer period the vegetable remains in good condition for use the less frequently the new plantings should be made. Do not, as a rule, plant the same vegetable twice in the same soil, but follow each planting with some other crop. Very few crops take exactly the same elements from the soil, and this method gives the second planting almost an equal chance with the first.

Use of Fertilizers

If you have not made the garden very rich a little top dressing will be beneficial if it is such manure as will not prevent cultivation. Thoroughly rotted barnyard manure or commercial fertilizer should be used. Bone meal is the best and safest commercial fertilizer for general use, as it is not so rapid in its action and will not be dangerous for the inexperienced to use. Nitrate of soda is good, but it is very concentrated and must be lightly applied. Both of these are rich in nitrogen.

It does not pay to put work and expense on a plot of poor ground, for the additional expense of a rich soil is more than balanced by the greater returns you get for your labor. Be prepared to cultivate to the very best of your knowledge and then make the soil rich enough to reward you. If it will pay the florist and gardener to apply manure to one-fourth the bulk of his cultivated soil, it will pay you as well. The weather, of course, is a factor to be considered, but thorough cultivation can do much toward neutralizing its effects, and a very rich soil will resist bad weather conditions far more than a poor one.

The potatoes will begin to bloom and set, and when this occurs it is best to be very careful how you disturb them. If you wish to do so, and have the material, a deep mulch of loose manure will be good for them. It should be applied just following a good rain. It will keep the soil moist and loose and the potatoes will be in just the kind of soil they like best. If you do not mulch them, do not cultivate deep, but just stir the top crust up a little to keep it from evaporating the moisture from below.

Cultivation After Fruiting

The strawberry patch should be given attention as soon as the fruiting season is over. Cultivate deeply, stirring the mulch into the soil as much as possible; that is, the winter mulch, which should be pretty well rotted. If the mulch is straw put on in the spring, I would pull it forward on top all the time and hoe the soil beneath, leaving the straw to rot on top during the summer. Give a good dressing of droppings from the hen house just before hoeing or plowing.

There is one practice that I have always felt would be a good idea that I never took the time to follow. The seed from the asparagus canes that grow after the crop is harvested is a nuisance, as the young plants that come up each season soon make a thicket if they are not destroyed. The practice of cutting out the seed canes as fast as they bud appeals to me as all right. I am going to try it on my next crop.

Among the Flowers

In the flower garden, June is largely a month of training and cultivating. Vines should be provided with trellises and old blooming stalks and dying foliage cut away from the spring blooming blubs and hardy plants as they reach their maturity. Seeds of such perennial plants as you wish to propagate thus should be planted, and calla lilies from the window should be taken out and turned on their sides in the shade of the trees or bushes.

If the mildew attacks the Crimson Rambler, or other roses, do not delay giving a thorough dusting of fine sulphur. The best method I have found is to take a coarse cloth and put the sulphur in it, tieing it up loosely so it can shake around freely, and then dust the bushes with it. You can soon get the knack of flirting it so as to keep a cloud of sulphur settling over the rose leaves. Take a still day for it, and early in the morning, while the dew is on, is all the better. Sulphur is certain death to mildew.

If you want to trim the spireas, do so at once just after they are through blooming. The flowers are borne on the previous season's wood, so the new shoots that grow this summer will furnish the flowers for next spring. All early spring blooming shrubs are the same. Fall bloomers should be trimmed during the winter. Altheas and hydrangeas belong to this class.

Soil for Next Winter

This is a good time to prepare a good pile of potting soil for use this winter in the window garden. Put a layer of sod and a layer of manure equal to one-third of the sod, and sprinkle lightly with lime. Repeat this until the pile is as large as you wish. Now and then during the summer hoe this pile over, pulverizing and mixing it. By planting time you will have a soil that is ideal for use in the house where the qualities of soil are tested to the extreme. It will keep loose and friable when ordinary garden soil would run together and bake on top. Another good plan is to pile all the green weeds you take off the garden when hoeing, if you should allow any by chance to get big, and let them rot, for they are a good substitute for leaf mould. Look for some surprises, though, for a wheelbarrow of weeds will make a handful of soil.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Hard, drenching showers over the greater part of the corn belt have been reported during the last week.

Early, frequent and shallow cultivation of the ground devoted to corn will almost certainly insure a good yield. It is the lack of cultivation that retards the development of the corn plant. No complaint has been charged against too much tillage.

The prompt cutting of the alfalfa as soon as it is ready for harvest will help in getting a larger tonnage for the entire crop season. A few days' delay will often cause the stems to become hard and brittle, which condition is damaging to the best quality of the hay.

There are some spots in some states where the Hessian fly has reduced the wheat crop acreage, but the general good spring growth of the winter wheat has placed it in most sections out of reach of probable insect damage. June has to be reckoned with yet, however, in all manner of weather freaks, which can never be safely figured on until after the crop is harvested.

The stock cattle trade is causing some strange movements of cattle as they change ownership and are shipped around over the country. One shipment of young steers is reported having made their third appearance in the Kansas City stock yards this year, and in the meantime had been owned in Texas, Kansas and Missouri, and established their residence in each of these states, and had been money makers for each of their several owners as they went on their rounds.

Cheapening Cost of Feeders

The double freight expense of shipping feeder cattle to market and then shipping them out to the feeder buyer is what the feeders of cattle are now complaining of. This, with the lack of spread in price between the feeder cattle and the finished beef animal, makes the margin too narrow to justify the risk of going into this business. "Too much middleman," says the cattle feeder, and all this expense is piled up for him to get back when he disposes of his cattle at the place of last resort—the packing house.

To overcome this, co-operation should exist between the producer of feeder cattle and sheep and the feeder who puts them on the market. The buying of stock direct from the grower for feeding purposes is one of the objects of an association recently formed in Nebraska. The idea of organizing the live stock feeders of the state into an association for mutual benefit and co-operative advantages was first introduced one year ago at the experimental feeding tests at the university farm. It failed to become operative because it was not put into a form of organization that could be recognized by the program committee at the week of agricultural meetings, where all state agricultural associations meet in convention.

At the experimental tests at the university farm on May 22, 1914, the State Live Stock Feeders' Association was fairly put under way. Constitution and bylaws were approved by the feeders and stockmen assembled to witness the results of the experiments to the number of several hundred. A committee on organization was also appointed, with instructions to select suitable persons representing the live stock feeding industry of the state to fill the various offices until the next annual meeting, which will in all probability be held during the week of organized agriculture in January, 1915.

An active campaign for membership will be commenced, and every feeder whose address can be procured will be solicited to join the organization. It is believed that the activities of the association in the interests of its members will bring to it at least 1,000 feeders before the annual meeting.

The officers elected are as follows: E. L Burke, Genoa, president; E. D. Gould, Kearney, vice president; R. K. Bliss, Lincoln, secretary-treasurer; L. W. Leonard, Pawnee City, representative for First congressional district; J. J. Lutz, Papillion, Second congressional district; Heber Hord, Central City, Third congressional district; C. N. Beaver, York, Fourth congressional district; Robert Mousel, Cambridge, Fifth congressional district; Z. F. Leftwich, St. Paul, Sixth congressional district.

Improving the Herds

There is an excellent opportunity now for improving herds of cattle, either of beef breeds or dairy cattle. This is especially true in the disposing for breeding purposes of the tailends at good, fair prices. The country is hungry for cattle. Anything in the shape of a cow sells now for more than she is worth, unless the individual quality is extra good; then she is measured by her producing ability and may bring from $100 to $150, depending upon the neighborhood and inclination of the people toward dairying.

There has never been a better time to go into the breeding of pure-bred cattle than now. There is not the selling difference between grades and pure-breds that the quality justifies. There is not the selling difference between a poor class of grades and the high grades of good quality. This is a period in the history of live stock when the best is the cheapest, almost regardless of cost. It is a period when the scarcity of money does not seem to exist or to be a hindrance with the cattle buyer in satisfying his ambition to own the best, or at least a good quality, of live stock.

The tendency among a large proportion of farmers is for improvement, for better quality in everything pertaining to agriculture and the farm. The high prices for meats afford a ready disposal for all classes and conditions of the undesirables in cattle. The great number of new and inexperienced land owners and farm operators help make these out-of-balance prices that seem to prevail for the poorer classes of animals. The great shipping demand for dairy cows and young cattle to certain localities over the west only emphasizes the ignorance of quality that this trade has developed under the representation of great profits in the dairy business.

There must come a day of reckoning with this class of cow purchasers. Hundreds of cows—yes, thousands—are now being turned into this class of trade with no other qualification than being able to produce a calf, and these must sooner or later be discarded from dairy use as unfit for profitable milk production. The cow craze is justifiable at the present time, owing to the cattle scarcity of the country, but the investor or purchaser must act cautiously in order to get profitable results.

Showers for crops are the demand in some parts of the corn belt just now. It matters but little to the farmer or crop raiser what the condition of weather is in out-of-the season periods of the year. But there comes a time when the planted crops need moisture, and everybody is interested in the showers, in the heavy, soaking rains. It is not the great amount of annual rainfall that interests the soil tiller; it is in getting it during the crop-growing period, gradually distributed along. Ten inches of rainfall during this period, as the crops demand it, is worth more than ten times the amount when the crops are matured. We need the showers frequently now until the wheat crop, the corn crop and the hay crops are completed in growth.

Purifying Cream by Law

The dairy industry in Michigan is menaced by a very serious danger, according to the report of James W. Helme, dairy and food commissioner of that state. A few years ago the cream was handled almost entirely by small co-operative creameries. So profitable were these that several centralized creameries have gone into the state and established a great number of cream buying stations. Competition has become so fierce that any cream will sell, regardless of quality. It does not pay the producer to take care of his cream and deliver it in good condition, because he can sell it somewhere anyhow and get just as good a price for it.

All this looks for a while like prosperity, but a reaction from such conditions always sets in. The creameries that buy poor quality cream must produce poor quality butter. The best butter can only be made from the best cream. The creamery that accepts this rotten cream is short-sighted. The producer who furnishes it is short-sighted. The production of poor quality butter will react against the dairy industry of the section and even of the whole state eventually, and the manufacturers of butter and producers of cream will suffer, the careful ones with the careless, when the state gets a bad reputation in the butter consuming world.

Mr. Helme's idea is to have the legislature enact a law defining unsanitary cream and providing penalties for any manufacturer who uses such cream in manufacturing his products. The results of such legislation would be very interesting to everyone concerned in the future welfare of the dairy and creamery industries, not only of Michigan, but of the whole United States.

The Man and the Cow

In the literature sent out regarding May Rilma, the Guernsey cow that has broken the world's record, the American Guernsey Cattle Club gives due credit to the man who has handled and fed her, Albert Van Tuinen. It was a remarkable achievement for a cow to produce 1,073 pounds of butter-fat in a year, but even the best of cows could not do it without the proper care and attention. The dairyman has a right to share the celebrity of his charge. The milk from the farm where May Rilma is kept retails for 12 cents per quart, and it is figured that she therefore brought in a year's income of $1,200, an income many a man would be glad to earn. Out of this, of course, must be deducted her care, etc., in figuring the profit she brings her owner.

Profitable Live Stock

The raising of live stock is generally regarded as one of the most successful branches of agriculture. It may be said that there is and always has been an open field in this industry for the ambitious, energetic, painstaking young man who will devote his time and best efforts to building up a herd or flock. The raising of live stock has been a success, measurably, under any and all circumstances, when the live stock business of the whole country is taken into account. It has been the general prosperity of the work that has popularized it before the eyes of the general public. This assertion, however, does not argue or mean that all persons who have engaged in live stock raising succeeded or were able to make a financial success of their venture; on the contrary, many have failed and many fortunes have been squandered in the operation of the live stock business.

Successful live stock raising means much in these days of strong competition of breeds and skilled breeders, of combinations of feeds and improved appliances and methods of feeding, of centralized markets and their wide influence in purchase and sale. It is an easy matter for a speculator in live stock to dissipate a fortune otherwise acquired. The raising of live stock is becoming more and more a systematized business. The haphazard, hit-or-miss plan of management in live stock raising is no longer profitable, as it was in the days of the open range and cheap feeds. The time has been when capital and ignorance made a reasonably successful combination in the raising of live stock in the west, but the business is now demanding more knowledge and closer attention. Education in the details of management, skill in the principles of breeding and judgment in the matter of purchase and sale, are essentials that will mark the successful live stock raiser of the future.

One of the most potent causes of failure in achieving a high degree of success in the raising of live stock is lack of care. Care and attention to the animals are essential, and must be the cornerstone of the business. Improved breeds and pedigreed animals of high individual merit have been made so largely by care, attention and feed. Careful selection of breeding stock is an important factor in all live stock raising enterprises, but this alone will fail if the animals receive no attention in feed and care. As success follows the breeder of improved stock with his care, feed, attention to breeding, etc., so will success follow like efforts bestowed upon the common stock of the farm or ranch.

If you have not already commenced with improved methods and systems of care in handling the live stock on the farm, commence it at once. It will pay to give up the old, careless ways and adopt newer and better ones. Increase the live stock values on the farm and ranch by giving the animals better care. There are degrees in successful live stock raising, commencing with a very low per cent of profit and in an ascending scale they develop, according to the efforts and skill of the supervisor.

Look Out for Fakes

Last week we warned our readers against a patent article that was being advertised as a remedy for hog cholera. We had received a paper, cleverly worded to make it appear to be a government bulletin, setting forth the claims of a preparation called benetol. Some of the claims made in this paper were so extravagant, and the statistics quoted were so inaccurate, that our suspicions were aroused and we investigated this preparation, finding it to be nothing more or less than a "patent medicine." We warned our readers, and later noticed in some of the other farm papers that the circular had been run in full, the publishers evidently being under the impression —which the company tried to convey—that they were publishing a government bulletin.

Since the publication of our editorial we are in receipt of a real government bulletin on this subject. In this bulletin the Department of Agriculture warns all hog raisers and farm paper publishers against using or advocating the use of this so-called "remedy," and says that the statements made by this company in its circular are entirely false and misleading. The department also adds an interesting bit of information, which is that this same company at one time advertised this remedy as a sure cure for tuberculosis, typhoid and cancer among human beings, and sent out circulars so worded that it was made to appear that the War department was interested in it.

The government authorities recommend no cure for hog cholera. They recommend sanitary observance and the use of serum under certain conditions, but they do not recommend any other treatment for this disease.

Perin Resigns

Willis Perin, superintendent of the Nebraska state farm since 1889 —twenty-five years—has resigned to take the management of the Oak Glen dairy and stock farm of S. P. Stephens at Bartlett, Ill.

Mr. Perin, in point of service, is credited as being the oldest man associated with the Nebraska Agricultural College and Experiment Station. He has witnessed this institution grow from almost an open prairie farm, with its crude and cheap buildings and fixtures, to one of the foremost educational and well equipped institutions in the country.

Mr. Perin has been a strong factor in his official relationship in the growth and development of this farm for educational work. He has not only been a supervisor of men in the carrying out of plans and work, but he has himself been a diligent student in the acquiring of knowledge in the matter of animal husbandry in all varied phases, as well as crop and farm management. Few men have had the practical instruction and close observation in the study of general agriculture that has come to Mr. Perin in his twenty-five years on the Nebraska college farm and experiment station. He is without doubt one of the best fitted students that the institution has ever sent out and will prove a good advertisement for Nebraska in his new position.

He was popular with the boys, and thousands who read this notice, scattered from ocean to ocean, will recall the pleasant days they spent at the Nebraska University College of Agriculture, and their pleasant, genial friend, Superintendent Perin, who, unlike most people, only had one side—one great, big, broad, smooth side—the same one day with another, though positive and observing of all the details that enter into the duties of a superintendent and advisor. Mr. Perin, in his removal, is performing a duty that he owes himself. Nebraska loses a man whose position will be difficult to fill.

Conservation of Bird Life

There is a question of vital importance to the people of all civilized countries that must soon become a live issue with the producer and consumer—birds against insects, profit against loss. The need of birds as insect destroyers has never been brought forcibly before the attention of the thinking and producing classes of humanity. On the other hand, our law makers, through their indifference and inattention, have encouraged and cultivated into the minds of the people the idea that a bird is a feature of game, created for the amusement of the man with the gun, who is more content in destroying life than shooting at a mark. Why does the sight of a bird flying in the air prompt a desire to destroy it?

Our law-makers and our citizenship generally need more information on the ravages of insect pests and the great loss that is annually being sustained in crop damages due to the scarcity of insect-destroying birds, which has been brought about by the total lack of prohibitive measures and their enforcement in the interest of bird preservation.

The time is not now far distant when birds will be recognized as the greatest means of insect destruction, and their services will be appreciated by everyone capable of thinking and understanding the effective mission they are delegated to perform. It is only a matter of a little intelligent agitation, a joining together of the organized forces of agriculture, the understanding of the need of birds as insect destroyers, to start a reverse movement that will legislate protective restrictions in the interest of the birds of all classes and cause a halt in their destruction.

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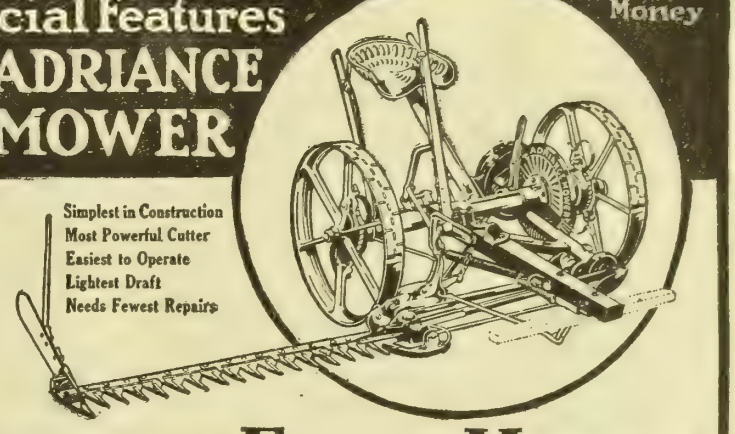

Simplest in Construction
Most Powerful Cutter
Easiest to Operate
Lightest Draft
Needs Fewest Repairs

"Simplest—Easiest Managed —Most Durable"

The Verdict of the User—Read These Letters

I have an Adriance Mower that has been run for 30 years. It cut 25 acres the past season and is still in good shape. It runs easy and cuts grass no matter how heavy.
E. V. Link.
Shepherdstown, W. Va.

I have used the Adriance Mower made at Poughkeepsie, N. Y. for the last 19 years and consider the No. 8 Adriance, the simplest, easiest managed and most durable machine I have ever seen, and I have used several makes.
Rich Hill, Mo. Harrison Philbrick.

The Adriance Mower Will Save You Money

Haying season is short and every hour is worth gold dollars. If your mower is old or not wholly reliable, don't trust it and have it "lay down" right in the midst of the busy haying season.

The one mower that gives faultless service, every hour of the day, year after year, is the **Adriance.**

No other mower is so simple in construction; no other mower is so well made—no other mower has the record of so many years of hard service with so little expense for repairs.

Flexible Cutter Bar—The **Adriance** Cutter Bar follows uneven land. The coupling frame hinges are in exact line and swing like a door—no binding. The bar can be folded over the tongue when not in use.

Knife Starts Instantly—The clutch is on the high speed shaft—thus starting the knife instantly and avoiding clogging.

Visible Driving Pawls—In plain sight where you can always see them work. No danger of spoiling a whole wheel as with the enclosed kind.

Automatic Spring Draft—Prevents the driver, team and mower from being injured when striking an obstruction.

Runs Easy—Roller Bearings on the main axle, and the level crank shaft with bronze composition bearings make the **Adriance** run easy and last long.

Complete machines and full stocks of repairs carried by our Branch Houses in all principal cities and dealers everywhere. Any Flying Dutchman Dealer can show you the **Adriance**—ask him. Write us for FREE BOOKLET on Flying Dutchman Hay Tools.

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Dept. 17 MOLINE, ILL.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Waking Grandma

Mamma said, "Little one, go and see
If grandmother's ready to come to tea;"
I knew I mustn't disturb her, so
I stepped so gently along tiptoe.
And stood a moment to take a peep—
And there was grandmother fast asleep.

I knew it was time for her to wake;
I thought I would give her a little shake,
Or a tap at her door, or softly call;
But I hadn't the heart for that at all—

She looked so sweet and so quiet there,
Lying back in her high arm chair,
With her dear white hair and a little smile,
That means "she's loving you all the while."

I didn't make a speck of noise;
I knew she was dreaming of little boys
And girls who lived with her long ago,
And then went to Heaven—she had told me so.
I went up close and I didn't speak
One word, but I give her on her cheek
The softest bit of a little kiss,
Just in a whisper, and then said this:

"Grandma, dear, it's time for tea."
She opened her eyes and looked at me
And said, "Why, pet, I have just now dreamed
Of a little angel who came and seemed
To kiss me lovingly on my face"—
She pointed right at the very place.
I never told her 'twas only me—
I took her hand and went to tea.

The Editor's Corner

A letter came in a short time ago that showed such a good spirit in regard to the contests that I want you all to read it. It was from a little girl who sent in a story for the story contest. It did not receive a prize, nor even honorable mention, but was just printed down next to the list of additional stories. Here is her letter:

"We received the last Twentieth Century Farmer and I was surprised that my story was printed. It was the first time I ever wrote to you. I thank you very much for printing it. I am going to send story after story to the Twentieth Century Farmer. I don't expect to win a prize, because my stories aren't half as good as the prize stories you print."

This is the kind of little girl who will receive benefit from the contests. She will notice why the prize stories are better than hers and try to improve hers, and she will probably make them so good that in time she will be winning the prizes. We do not expect most of you to become great novelists or writers, but if you learn to tell well the events of your everyday life you will have learned to do what many grown people now are not able to do—to write interesting personal letters and express yourself when it is necessary to write in regard to business.

HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Prize Story.)

Her First Babies

By Mary Calkins, Aged 13, Alamosa, Colo.

We have a Persian cat which we got when a kitten. She is gray with a white ring around her neck and white feet; she is now about a year old and the smartest cat I ever saw; she is almost like a human being.

We have a big barn which contains a loft in which she spends part of her time. She has a box in one corner about half full of hay, which she uses for a bed.

One morning while papa was out feeding and tending to the horses she came down from the loft and began purring and rubbing herself against him and then going back and trying to get him to go to the loft. After he finished the horses he started up the ladder leading to the loft, and she went ahead of him and ran and jumped into the box. Papa then looked into the box, and what do you think he saw? Why, five of the cutest, dearest little baby kittens, all cuddled down together. The old cat took her paw and stirred them around and wanted papa to look at them.

When papa came to the house he told us about the kittens, so I went right out to see them. I thought I would take one in and show it to mamma, so I took it in my hand and started to the house. The old cat jumped out of the box and began trying to get me to put it down, but I shut the barn door on her and brought the kitten to the house and showed it to mamma. I then took it back.

When I opened the barn door she jumped up and looked at the kitten and began running back and forth, trying to get me to take it up into the loft. So I took it up and put it in the box with the others. She then jumped in and stirred them all up and put her nose on every single one as if counting them, and then looked up at me, perfectly contented, and then laid down.

I believe she can really count them and knows if one is gone, because I have taken one and hid it to see. I think she is an awfully smart cat, don't you? She thinks that those kittens are the sweetest babies that ever lived, and they say people's first babies are always the sweetest, cutest, dearest things that ever were.

(Honorable Mention.)

An Automobile Trip

By Harold P. Riisoe, Aged 13, Kinsley, Kan.

Last August, about 4 o'clock on a bright Sunday morning, my two brothers, my sister and I started to visit an older sister, who lives seventy-six miles southwest of here. We followed the Santa Fe trail about forty miles and met many automobiles, some of them camping and some traveling. When we got to Dodge City it was 7 o'clock.

We had to stop quite frequently to get water in the radiator and inquire about the road to Montezuma, but we got there at 9 o'clock without any trouble.

On our way back we were not quite so fortunate. Everything was all right until we got within eleven miles of Dodge City, when the machine stopped. It was 8 o'clock in the evening. We walked to a farmer's house and 'phoned to a garage man to come after us and then we all went out and pushed the machine for a mile, but couldn't make it go. The man didn't come until 10 o'clock, and when he did he tied our machine behind his and took us to Dodge.

Everything went well for five miles, when the rope broke and he didn't notice it until he had gone two miles. Then he looked back and we weren't there. He tied us on again and we went for three miles, and then the rope broke again. We all gave a keen yell that time, and he heard us. He tied us on and got us back to Dodge about 2 o'clock, where we got the machine fixed and started for home again and arrived at 5 o'clock, happy but hungry and cold. We all said we wouldn't take another trip like that.

Additional Stories

Violet Frostrom, Wausa, Neb.; Martha Schweitzer, Milford, Neb.; Edith Wheeler, Ainsworth, Neb.; Esther Nielsen, Dannebrog, Neb.; Sylvia Johnston, Logan, Neb.; Minnie Kujath, Fairbury, Neb.; Francis Giltner, Elliott, Ia.; Hazel Phillis, Havensville, Kan.; Hattie Hurt, Osborn, Mo.; W. L. Black, Murrietto, Cal.

Picture Contest No. 14

Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it interesting. Say the things you would think if you really saw these children. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than July 4. Answers to contest No. 13 will appear in the next issue.

HER MOTHER-IN LAW
Proves a Wise, Good Friend

A young woman out in Iowa found a wise, good friend in her mother-in-law, jokes notwithstanding. She writes:

"I was greatly troubled with my stomach, complexion was blotchy and yellow. After meals I often suffered sharp pains and would have to lie down. My mother often told me it was the coffee I drank at meals. But when I'd quit coffee I'd have a severe headache.

"While visiting my mother-in-law I remarked that she always made such good coffee and asked her to tell me how. She laughed and told me it was easy to make good 'coffee' when you use Postum.

"I began to use Postum as soon as I got home, and now we have the same good 'coffee' (Postum) every day, and I have no more trouble. Indigestion is a thing of the past, and my complexion has cleared up beautifully.

"My grandmother suffered a great deal with her stomach. Her doctor told her to leave off coffee. She then took tea, but that was just as bad.

"She finally was induced to try Postum, which she has used for over a year. She traveled during the winter over the greater part of Iowa, visiting, something she had not been able to do for years. She says she owes her present good health to Postum."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum now comes in two forms:

Regular Postum—must be well boiled. 15c and 25c packages.

Instant Postum—is a soluble powder. A teaspoonful dissolves quickly in a sup of hot water and with cream and sugar makes a delicious beverage instantly. 30c and 50c tins.

The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.

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and get $100 to $150 a month or more. There are not enough experienced men to fill good jobs because the automobile industry is growing faster than men can be trained. Equip yourself as expert mechanic or for entering the automobile business for yourself. Ours is the largest, best equipped auto school in the West. You get complete instruction in auto machine shops, many makes of autos. Individual chauffeur work in large touring cars. Write for booklet.

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DADANT & SONS, Box 8, Hamilton, Ill.

Of Interest to Our Women Readers

The Testing

When in the dim beginning of the years,
God mixed in man the rapture and the tears
And scattered through his brain the starry stuff.
He said, "Behold! Yet this is not enough,
For I must test his spirit to make sure
That he can dare the vision and endure.

"I will withdraw my face,
Veil me in shadow for a certain space,
And leave behind only a broken clue,
A crevice where the glory glimmers through.
Some whisper from the sky,
Some footprint in the road to track me by.

"I will leave man to make the fateful guess,
Will leave him torn between the no and yes,
Leave him unresting till he rests in Me,
Drawn upward by the choice that makes him free—
Leave him in tragic loneliness to choose,
With all in life to win or all to lose."

—Edwin Markham.

Poisoning Our Canned Goods

As the early summer vegetables show a tendency to become ready for use and we find that we are going to have loads more than we can eat or sell, and as the strawberries form on the vines, showing that this is going to be a good strawberry year, and we will produce more than we will be able, perhaps, readily to dispose of, thoughts of canning begin to come to us. The early vegetables and strawberries are probably the hardest to put up and keep successfully. So discouraging is it to spend hours over the hot range and then find our jars of fruit and vegetables spoiled when we come to use them that the housewife has turned a ready ear to the stories of the men who have preserving powders to sell. I distinctly remember once, many years ago, going with my mother to a canning demonstration where we were shown beautiful cans of peas, string beans, fruits and so forth, all as fresh and plump as when they were gathered from the vines, although we were assured that they had been canned a year or more. I couldn't understand at the time why the women all said things about preservatives and why most of them refused to buy the powder or fluid which made these canned goods so beautifully fresh and appetizing to look at. Now I know that they were unusually wise women. In many communities these preservatives are sold in great quantities; they are composed largely of salicylic and boric acid, both of which are highly injurious to the health, and their use, even in moderate quantities, is likely to cause indigestion and stomach trouble.

Time and care given to the putting up of the fruit and vegetables and the careful exclusion of every particle of air are the only remedies to prevent the spoiling of canned goods. It is not worth while to keep them fresh and unspoiled at the cost of the digestions of the family eating them. We understand that the steam canners are giving satisfaction. If they are as easy to operate and do as sucessful work as some of the people who have used them seem to think, they ought quite to revolutionalize the home canning proposition and prevent the waste of hundreds of dollars' worth of perishable garden stuff, or its sale at prices that do not admit of profit.

HOME EDITOR.

The Mother's Mission

At a recent meeting of charity and social purity associations in Omaha, at which the national authorities on such matters were present, it was a little woman from a small Nebraska town who made the speech that attracted the most attention. Mrs. G. W. Crossland of Wayne, Neb., was an interested listener to all that was said. Finally she arose and spoke. "I am not connected with any reformatory institutions," she said, "but I am a member of the greatest institution in this commonwealth, and that is the home." Her talk was not prepared and polished, like most of those preceding her. It came from the depths of her heart. Below, it is reproduced in part:

It seems to me as though the American woman of today has in some way lost the vision of the duty and the responsibility of the home. The mothers think their life work is washing dishes and cooking and feeding the body—I want to say to them that their life work is doing much more vital and important things. Their life work is the training of their children, for they have them from the time of their birth all the way through, and if they fail in their mission of bringing up these children in the nurture and the rights that belong to them, somebody else must do that work, and that is where our trouble comes in today.

I would just like to say to the mothers here today that you have got a man's job, and it is a mighty big one at that. I am not one of these elderly ladies who has no boys to raise. I have four boys. I know what I am talking about. My boys have heard all the sacred things of life in their home. They did not have to go out on the street and hear whether the stork brings the baby or anything about that. I want to tell you mothers it is your duty to tell them about this. What right have you to send a young man out into this world who does not know anything about the pitfalls and the dangers and the sins and the temptations of life? You are not doing your whole duty when you do it.

I am a woman, I am a mother and I consider that I have a mission in this world, and it is not the mission of scrubbing floors and washing dishes. Those are little side issues. My mission in this world is to give to the world men who will leave a footprint somewhere on the sands of time that will help lighten the load of humanity, that the world may be made a little better for my life that has been lived in the tiny corner of a home. Our commonwealth is only measured by the happy, prosperous homes.

It takes a great deal of charity to handle a boy, but they are manly fellows, and it is something worth all your effort. Sometimes you have to put your arm around the young man and look him straight in the eye when down in your heart you feel like hitting him a good smack.

Sometimes I feel like opening my home to the mothers and daughters and just talking along this line and seeing if I cannot help them get a vision of the wonderful work God has entrusted to the mother's care. You say, "Well, I cannot do that way." Why can't you? The effort is not great enough. You don't make a good enough effort, because I tell you Almighty God will help the mother in every case. If you have a big problem, if your boy wants to keep company with a young lady who is not right, talk to him and persuade him in some way, if you can, not to do so. And when you have done all you can, just say to God: "Here, I am in trouble, help me out of this difficulty." The conscientious Christian mother has a hope that some people know nothing about ,and when the boy goes astray put your arms around him and make him believe that he is worth more than anything else in the world. I make a great plea for the American mother to wake up and find out that she has a mission far beyond the washing of dishes and scrubbing of floors—the mission of the home. Take a girl and say, "Mother is your friend, even if you do the worst thing in the world," and also tell the girl that mother always has been and always will be a friend that "sticketh closer" than anyone else. This is the mother that has been awakened to her mission.

Before Sickness Comes

It is easier and pleasanter to keep sickness out of the home than to get rid of it once it has gained a foothold, and with this end in view one should strive diligently at all times to see that cleanliness reigns supreme.

Do away with dark corners and musty-smelling drawers and chests. Let light and sun and air have full sway. Moderation, cheerfulness and a simple, nutritious diet, in combination with deep breathing of fresh air spell health. Women especially do not half use their lungs.

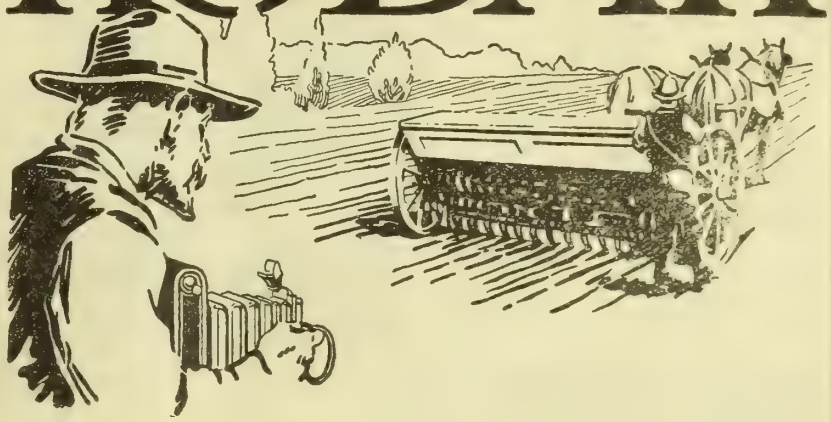
Self-control also must come into play, for fits of anger, ungoverned jealousy, moroseness, or "blues," are most detrimental to health. You alone are responsible for keeping your individual plot of life sweet and free from weeds. Do not allow yourself, therefore, to get stirred into rebellion over another's wrongdoing, even though it seems aimed directly at you. The only way in which another can really harm you is by allowing yourself to be shaken out of the calm which is your birthright. Let their part go, but keep your own stable and sweet, and contentment and peace will ultimately be yours.

Remember that cleanliness, not only of the house, but of the body, is essential. The daily bath, either cold or tepid, is a habit which, once formed, one will never drop.

A few minutes of full, deep breathing at an open window, a vigorous rub with flesh brush or rough towel, until every inch of the body is in a glow, following a quick bath, will put one in trim for the day better than any amount of medicine. And, listen: Do not forget a few moments of quiet thought and steady, true-hearted resolve about the affairs of the day before you leave your room. Get into harmony with life and the day will swing smooth and free, for that is the wonderful thread on which a complete and happy life is strung.

Bear in mind also that the body requires a liberal supply of water inside as well as out. A glassful,

KODAK



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of your farming operations and illustrate that record with Kodak pictures. An album of Kodak pictures, with explanatory notes on methods of tillage, drainage, fencing, building, breeding and the like will make a valuable reference work that will help you plan for the year to come. Experience is the best teacher —but you need records of such experience. Let the Kodak help.

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hot, about half an hour before meals is a great aid to digestion, and one should form the habit of drinking at least six or eight glasses of cold water during the day.

Personally, I believe the more raw foods, such as fruits, cabbage, lettuce, celery, etc., one can work into the diet the better, and it is well to know that bran is a great regulator of the bowels if they become sluggish or irregular—the usual daily amount being from one to four tablespoonfuls, but one should regulate the quantity by individual need.

It may be taken either cooked or raw, the simplest way being to mix one or two tablespoonfuls into a glass of cold water. If faithfully persisted in, it will cure bowel trouble of many years standing.

L. D. STEARNS.

Marshmallow Cake

Take one-half cup of butter and beat it to a cream alone, then add two small cups of sugar and again beat to a cream; one cup of sweet milk and two and two-thirds cups of flour; add alternately, having incorporated four teaspoonfuls of baking powder in the flour. Fold in at the last the whites of four eggs beaten stiff. Bake in three thick layers.

Filling—Two cups of sugar and one-half cup of water; boil till it hairs; have ready the whites of two eggs beaten stiff and pour the boiling syrup into them, beating briskly. Flavor with rose, and while frosting is still hot stir into it one cup of marshmallows—pink ones that have been cut each into four pieces. Fill cake with this mixture. The mallows are not expected to dissolve entirely.

Iowa's state bee inspector estimates that his state will produce this year 50,000,000 pounds of honey.

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The Twentieth Century Farmer is interested in everything that will benefit its readers. We never offer anything that we do not believe in ourselves. This needle book is a real treasure. We are glad to offer it to you. There is a needle for every need; silk and cotton darners, art work needles, rug and tapestry needles, punch work needles, milliners' needles—in fact, there 142 needles which would cost you $1.00 if you bought them at the store.

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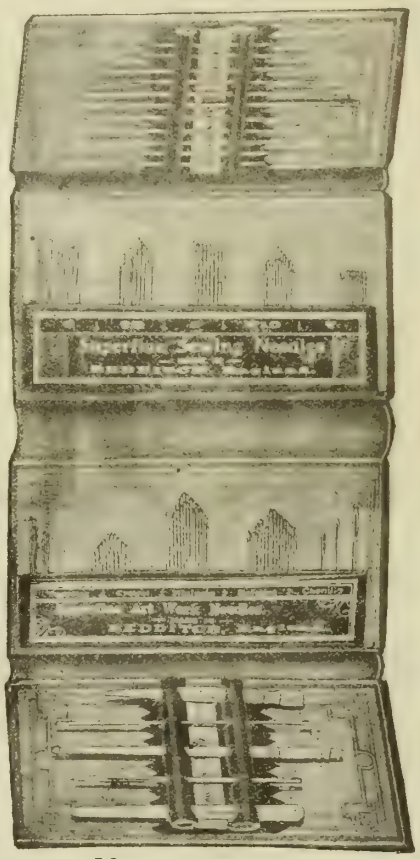

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Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

5995—Ladies' Shirt-Waist—Linen, madras or china silk can be used to make this waist. The waist closes at the front and can be made with either the high or low collar. The sleeves may be long or short. The pattern 5995 is cut in sizes 32 to 42 inches bust measure. Medium size requires 2½ yards of 36-inch material.

4615—Children's Apron—This is a one-piece design for children and girls. The garment is seamless and front and back are buttoned together on the top of the shoulder, while a strap across the shoulders in the back holds the apron in position. The pattern 4615 is cut in sizes 4 to 12 years. Medium size requires 1½ yards of 27-inch material.

6032—Ladies' Dressing Sacque—Quite a dainty dressing sacque model is here given. The garment has a group of tucks at each shoulder at the front, and the closing line is cut in fancy effect. The pattern 6032 is cut in sizes 34 to 42 inches bust measure. Medium size requires 2¾ yards of 36-inch material and ⅞ yard of 27-inch contrasting goods.

5944—Ladies' Dress—Linen, gingham or serge can be used to make this dress. The dress closes at the front and can be made with either the long or short sleeves. The four-gored skirt can be made with either the inverted plait or habit back. The pattern 5944 is cut in sizes 32 to 40 inches bust measure. Medium size requires 5½ yards of 36-inch material and two yards of insertion.

5735—Ladies' House Dress—This clever house dress is simply made, and besides being practical is an attractive garment. The closing is at the left side. The body and sleeves are cut in one and the skirt is cut in four gores. The pattern 5735 is cut in sizes 32 to 42 inches bust measure. Medium size requires 5⅝ yards of 36-inch material.

6054—Ladies' Skirt—Serge, cheviot or broadcloth can be used to make this skirt. The skirt can be used to complete a coat suit. The skirt is cut in six gores and can be made with either the empire or regulation waistline. The pattern 6054 is cut in sizes 22 to 30 inches waist measure. Medium size requires 2⅝ yards of 44-inch material.

6398—Ladies' Skirt—Any woman can make this skirt herself without the least difficulty. It closes at the front and is cut in two gores. The high or regulation waistline can be used. Linen or serge can be used to make the skirt. The pattern 6398 is cut in sizes 22 to 30 inches waist measure. Medium size requires 2⅝ yards of 44-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

THE open-front poultry house still gains ground, but it must be made right. A poultry house 16x25 feet will house a good-sized flock of birds comfortably—100, if they have the chance of outside the greater part of the time; 50 if they must be kept shut up at times for several weeks.

***

The average American hen lays but eighty-six eggs a year. The hen that lays so few eggs in a year isn't much of a hen; don't keep too many of her kind. The average hen should not lay less than 125 eggs a year.

***

The hen that pays high commission should lay the bulk of her yearly output between the first week of December and some time along in May. After that she usually slows up in finishing her yearly record until molting time ends it for that year.

***

If you will notice the market reports of some large cities, you will see this item: "Forty cents for strictly fresh eggs; 16 cents for dirties and checks." See? You are to blame for some of this last—the dirty eggs, anyway. Look out for the nests.

***

Remember that a goose hatches more slowly than a chicken. After the gosling pips the shell it may not get out until next day. It is learning to breathe air. Simply watch that the membrane doesn't dry on its wings. If it does, loosen it.

***

Turkeys drink more than chickens, so don't forget their watering pans. Some people believe that a poult should not be given water the first three or four days of its life because they so often notice the turkey hen pushing them back from water in a stream. She is quite likely ordering them back until she investigates for snakes or turtles lying in wait.

***

Goslings like cracked corn stirred up in skim milk, so do ducks. But, if you have left ducks or goslings without water too long, don't feed them first, or give too much water. Let them drink a little, then take it from them for a while. Ducks especially will die quickly if deprived too long of water.

***

If you find some of the pullets looking rough these days, with feathers loose on back or neck, they are molting. Young hens often molt in the spring, especially the very early chicks of last year. They may molt again in the fall. As a rule the spring molt is not thorough.

***

Now that you have the chickens well started, keep them growing. Because you have a large number now is no sign that you may have a month from this time. Feed them well; it is a difficult thing to overfeed the growing youngsters on range; they run off surplus food or refuse as much as they want in their haste to get off and away. Keep their coops clean even if you have to put in fresh straw every other night. Nothing diseases or stunts a young bird quicker than coops damp with foul stuff. Sniffles are nearly always caused by such carelessness. It is folly to leave coop doors open if the nights are warming up. Rats, cats, weasels, muskrats and polecats watch all such open doors. Make screen doors and windows, no difference how rough they are, just so they save your chickens.

***

Seldom do you find a poultry yard or house that does not hold some kind of poultry lice, maybe all kinds. It means some thought, time and elbow grease to get rid of them. At this time of year all kinds multiply. If you find the smaller chicks with head lice, grease the old hen they are with, and use nothing but pure lard. Give the chick's head and throat a touch. If you get too much grease on the chicks in this way, which you are not likely to unless you gave the hen too large a dose, and the weather turns cool or rainy, keep the hen and chicks up. If the chicks are larger and seem to have lice all over, don't grease them all over, for this stops up the pores and weakens them to death. Merely grease about the head, and dust under the wings and body with vermin powder. Don't dust the head with vermin powder, as most kinds hurt the eyes. Look over them a week after and repeat. Also scald their houses or coops and throw ashes under coop floors.

Hog Cholera

(CONTINUED FROM PAGE FIVE.)

serum, and money to be used for immediate purchase of serum to take its place in the storage room.

The matter we want to impress is the absolute necessity of having potent serum available for immediate use in case of an outbreak. There is no question but that the death rate in any herd where an outbreak occurs can be kept down to a very small per cent if potent serum is available for immediate use. In localities where none of these clubs exist individual hog owners could buy this serum and could undoubtedly make arrangements for storage with the party from whom they make the purchase, if they are not prepared to store it at home. In these times of telephone and quick transportation there would scarcely be a point in any state to which the farmer could not get his serum within twenty-four hours after ordering it if he had it stored in some point and held subject to his order. This would, however, necessitate an outlay of considerable more money by one individual in order to have a sufficient amount available in case of need than would be the case where the matter was undertaken by clubs as outlined above.

Look at the matter from the viewpoint of insurance. Would it not be money well spent to know you could have this serum for use when needed? We are spending money for other insurance as a matter of protection. Why not use the amount necessary for this protection? We are firmly of the belief that this plan, carefully carried out, would very materially reduce our losses from hog cholera. The plan more fully worked out would practically eradicate the disease.

In our next issue we will take up the application of serum and virus.

Tom Profit Discusses Blades

—like a pocket knife that a fellow can tote around for years, an' love because it's old an' tried an' true. I like to *know* that the steel in the blades is a stayer an' a good reliable bit of metal. I've carried a Keen Kutter Pocket Knife now for ten year an' it's a good bit worn from a good many rubs—but even ten years hasn't rubbed the gumption out of my

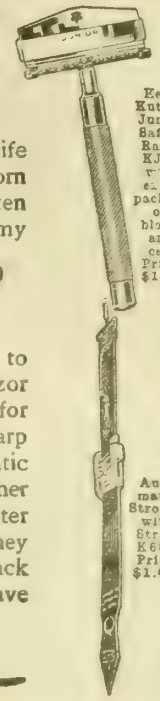
KEEN KUTTER

knife. 'Bout five year ago I started to usin' a Keen Kutter Junior Safety Razor an' now I wouldn't use any other kind for hire. No, sir! I keep my blades as sharp as frost on a Keen Kutter Automatic Stropper an' there's no man wears a smoother face than I do. He *couldn't.* Keen Kutter blades, knife or safety, are *right.* If they ain't, the dealer is authorized to hand back the price. But you'd ruther have the blades. Yes, sir!

Tom Profit

Pocket Knife
No. K3878
3 Blades
Price $1.25

E. C. SIMMONS KEEN KUTTER CUTLERY

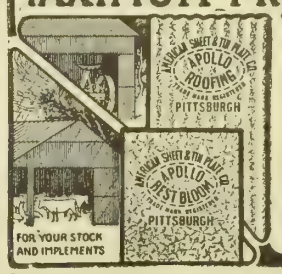


Keen Kutter Junior Safety Razor KJ10 with extra package of blades and case Price $1.00

Automatic Stropper with Strop K600 Price $1.00

MAXIMUM PROTECTION AT MINIMUM COST

Comfort for stock, and protection for implements, machinery and crops.



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The modern scientific treatment for the prevention of hog cholera
Endorsed and advocated by the United States Department of Agriculture.
The vaccination of hogs has long passed the experimental stage. This treatment, where POTENT SERUM has been properly applied, has proved to be just as practical and satisfactory as similar methods used in treating human beings.
The O. K. SERUM CO. recently vaccinated 4,000 head of stock hogs at the U. S. Yards, South Omaha, Neb., with a loss of less than 1 per cent.
The same company has vaccinated thousands of hogs in the country districts with equal results. It is very important that POTENT SERUM be used and the only way to obtain this is by insisting on serum produced by a company operating under a U. S. Government license. WRITE US FOR INFORMATION.

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die of bowel trouble more than any other cause. It is estimated that of every 1000 chicks hatched each year less than 400 reach marketable size. Germozone users raise, usually, 90% of chicks hatched. Germozone keeps the bowels regular. It prevents diarrhoea from overdrinking of water; from eating musty or spoiled food, etc. It should be given in drinking water twice a week from the day they are hatched. It stops the loss. Every chick that dies cuts badly into the profit from the rest. Every chick saved will pay the cost of a bottle of Germozone.

One size only, 50 cents, at dealer's or postpaid.

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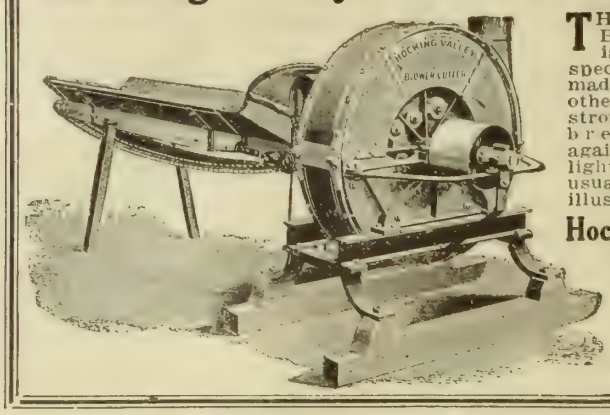
Hocking Valley Blower Ensilage Cutter



THE Hocking Valley Blower Ensilage Cutter is equal in every respect to any Silo Filler made and superior to any other in many ways. It is strong, durable, free from breakage, guaranteed against "blowing up," is light of draft and has unusual capacity. Write for illustrated circular.

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To go to "West Farms" from Denver start from the Capitol building, go eighteen miles northeastward on the macadamized road to Brighton, the county seat of Adams county. This road is a fine level one —on either side you will see numerous small farms growing alfalfa and pasturing dairy cows, a few young orchards and other fields being put into cultivation, the whole suggesting a most prosperous community. Brighton is a fine town of 1,200 people with every modern city convenience.

Now **"WEST FARMS"** lie 12 miles east on a good level road with improved farms all along on either side and there are settlers from Iowa and Nebraska here and there among our hundred farms who are well satisfied with the results they have attained in growing grain, corn, alfalfa, etc., as well as stock raising and dairying. You can see just what the country will do by what they have done. I am putting into cultivation 1,000 acres with my traction engines. The new "cut off" of the U. P. Ry. will run from Denver to Fort Morgan through our lands and Bashor Post Office will be a station on this line. Am building a creamery, store and ranch building there now. I propose to build up here a model community of farmers who will have every modern convenience, all within less than an hour's ride of Denver which is the distributing center for 2,000,000 of people. No better market anywhere.

Settle upon my farms and you will live in the finest, most healthful climate in the world, make money every year on what you produce and your lands will increase in value very rapidly. I am making specially low rate to actual settlers. It takes only a couple of days to make the whole trip. We meet you at Brighton with an automobile and can show you all you will want to see in one day.

Let me send you my fine illustrated catalogue. It's free. Let the rich vitalizing zone fill your lungs once.

N. P. WEST, President.

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Granite Harvester Oil

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Granite Harvester Oil never gums or corrodes, and prevents rust.

Supplied in gallons, 5-gallons, barrels and half-barrels.

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OMAHA

Experiments in Steer Feeding

Practical Work at Nebraska Experiment Station

THE annual exhibition and analysis of the last year's work in steer feeding at the Nebraska Experiment Station was held May 22 at the state farm. This has become an annual feature of this department of the institution. The live stock feeders, farmers and all persons interested in this line of industry are invited to attend these occasions to gather the information obtained by these experiments by not only seeing the animals, but by having each animal analyzed in its full relationship to these feeding tests from the day it entered the feed barn until it had been released for shipment to the packer, which in this particular case was 154 days, or five months.

The entire feeding proposition planned by this experiment is practical, and of such a character as to be of interest to anyone engaged in cattle feeding. There is no disposition to pad up a feeding test that will show extraordinary results, such as might be had by extremes of advantage in the selection of extra types of feeding steers, finely bred beef breeds or cattle of superior advantage during their calfhood and care before coming into this feeding test. On the contrary, the cattle selected are generally of the Nebraska sand hills stock. This means a good class of grade range steers, of Hereford or Shorthorn breeds, and usually shipments of animals that have the breed resemblance of both these breeds, the Shorthorn grade showing their ancestry by the roan, red and spotted red and white, the Hereford by the white or brockle face, and the entire bunch ranging from common or middling to good to rather choice steers, just such range-bred steers as come from the western range to the live stock markets in the autumn season by the trainload.

These experimental steers usually comprise a herd of fifty to sixty head, and are sorted into experiment divisions of six to eight each for the several combinations of rations to be used in feeding tests. In this experiment there were two groups of six each, one of seven and five of eight each, making eight groups. Corn and alfalfa have long since been established at this station as the essentials in cheap and successful beef-making, and whatever variation there may be in a beef-feeding ration tested, it will be in the proportions of these feeds used, or in the composition of others added. But for the foundation of beef-making in Nebraska it is no secret that corn and alfalfa are the cornerstone, and the feeder who is well provided with these on his farm or feeding ranch, and with the well filled silo, is, figuratively speaking, on the "ground floor" when it comes to feeding cattle. If he cannot make the business pay with these advantages in feed, there is some other influence at work aside from the feed.

The results of the feeding tests that have been carried on at the Nebraska station are of great benefit to those who attend these annual windups, where each steer is singled out and taken up and discussed individually and his whole feeding career analyzed—what he was in weight and appearance when he first set his foot on the farm, his behavior continuously from that day down to the day of his exhibition and final settlement. The best steer in the group is stood alongside the poorest and their full history related, thus giving a vivid picture ofttimes of the hereditary or natural advantage the one had over the other and the periods of indisposition possibly of one that worked against its development. It is a most excellent place for the feeder to study type, feeding and breeding of cattle from the individual results that these tests bring out.

The housing, care and attention that cattle get at an experiment station in the operation of a feeding season are not parallel with that dealt out on the average farm, but this does not materially lessen the benefits to be derived from these experiments. The system of expense account cannot be so accurately carried out on the farm, or on all farms, and need not be. There is a great deal of feed that the feeding cattle on the farm may use that has very little, if any, commercial value, while every forkful of straw is figured in at so much a ton in the experiment station account. The roughage used on the farm is generally sold at a pretty good price when marketed through the feeding cattle. The feeder can pretty generally tell whether or not he got paid for his labor, feed and investment when feeding cattle; besides, he has some side lines that work in to help even up, such as hogs that follow the cattle, and a crop of manure that is today a big factor in keeping up the fertility of the farm.

There was an average profit per steer in these various lots representing the various rations used, varying from $1.41 to $3.31, which does not look very big to the feeder, but when he considers the prices at which all this feed was estimated it shows that the farm-grown feed was pretty well sold—corn, 65 cents per bushel; alfalfa, $10 per ton; silage, $3.50 per ton; cottonseed cake, $26 per ton; straw, $2 per ton.

Each feeder of cattle should have one of the printed sheets giving a a detailed statement of every feature of this feeding test. It is a good thing to study; it will give you a broader idea of what the animal husbandry department of this state institution is doing. It may be called scientific work, or "book learning" to a degree, but with all that it is practical work. It is accomplishing results right along the lines of most interest to our breeders, growers and feeders of live stock. Write Prof. R. K. Bliss at Lincoln for a statement of the cattle feeding test of 1913 and 1914.

More than 46,000,000 bunches of bananas were imported into the United States last year, or about forty bananas for each man, woman and child.

Cattle, Alfalfa, Water, Reclaim Waste Lands

Successors to the Texas Steer

Young Orchards Dot the Landscapes

LAST winter there was a live stock show held at Denver that opened the eyes of the stockmen of this country to the fact that the old range country, once the summer feeding ground of the Texas steer, was rapidly becoming a pure-bred cattle country. The ranges are being turned into cultivated fields. Alfalfa and the sorghums are taking the place of the native grasses in the feeding of cattle, and better and better cattle are being used in this district. At the Denver show last winter there were to be seen as good animals as at any show in the country, with the possible exception of the International, and they were the property of the western stockman.

It is an interesting thing to watch the growth and development of our American country, and in no phase is it more interesting than the live stock and agricultural phase. Where once the range country was shipping to the eastern markets long strings of cars of wild-eyed, long-horned range cattle, now this country is tributary to the great Denver stock yards, and is shipping them good, fat cattle, the equal of any in the corn belt. The White Face, the Shorthorn, Angus and Galloway, not only grade, but pure-bred as well, are constantly seen in the Denver stock yards, and the sunny western fields are producing the grain and hay to put them into the condition that brings top market prices.

Irrigation and the practice of deep plowing and careful cultivation have done much for this country. It was once thought that these dry plains could produce nothing but the short native grasses. The dryness is only on the surface, however. Underneath the ground there is plenty of water, and where this has been pumped out and used for irrigation purposes the former great American desert has blossomed out into alfalfa fields, orchards and gardens. The dry, clear air, not subject to extremes of heat and cold, together with abundant moisture from the irrigating ditches, make ideal conditions for the growing of alfalfa, fruit, potatoes, sugar beets, and, indeed, almost any crop.

The soil, washed from the mountain tops by pouring rains and melting snows, was once supposed to be unfit for cultivation. "Nothing but sage brush will ever grow here," said the emigrant, and pushed his weary way farther west. All that was needed was water and intelligent cultivation. Now the enthusiastic western farmer will tell you "there is nothing that won't grow here," and of the two he is much nearer right, for there are few crops grown in the temperate zone that will not do well in this fertile soil.

Demand Exceeds Supply

From all over the United States come reports of a demand for dairy cattle that exceeds the supply. The western country is getting in line to do its share to meet this demand. Dealers in dairy cattle throughout the eastern and middle west country are surprised at the orders coming from the Rocky mountain states. Nothing is too good for these western dairymen, who are ordering good, pure-bred dairy cattle in large numbers. With a distributing center like Denver close at hand, there is never any danger of glutting the cream market.

Until recently there were but few hogs raised in the western states, but of late the corn-belt states have been making large shipments of good swine into this territory. The Rocky mountain farmer is finding that hog raising pays. Where the hog was once an unusual sight we now find numbers of herds in the alfalfa fields, where they seem as contented as in the middle western states, and grow just as fat. So far, cholera has not invaded this western country, and precautions are being taken to keep it out.

Colorado Potatoes

The seven wonders of the ancient world were monuments of stone and cement and buildings of great height and beauty. The wonders of the modern world are not its sky scrapers or statues, wonderful and beautiful though they are. Far more wonderful and of far greater benefit to the race than our advance in art or the mechanical sciences is the advance mankind has made during the last century in the science of farming. Lands once considered worthless have been made the garden spots of the earth. The country from the Missouri river west to the coast was once unproductive, waste land. Man, by his ingenuity, has made it a land of plenty. Where once the hills were brown with the scorched buffalo grass, now they are green with the billowing alfalfa or golden with the wheat harvest. Where once the sun poured down its rays upon the open prairie, young orchards, pink and white in the spring time and bending low with red fruit in the summer, dot the landscape. Where wild herds of buffalo once were the lords of the plain, prize-winning steers now crowd the fenced-in pastures of the ranchman. Where the pioneer, on his way across the country once died from lack of food and water, now may be seen long rows of sugar beets and potatoes, with the plentiful waters of the irrigating ditches shining close by. From a land of starvation and death, this has been made a land of health and plenty. Is not this, the triumph of the American farmer, a greater work than the building of the pyramids or the sphinx?

Fields Golden with the Wheat Harvest

State Capitol at Denver

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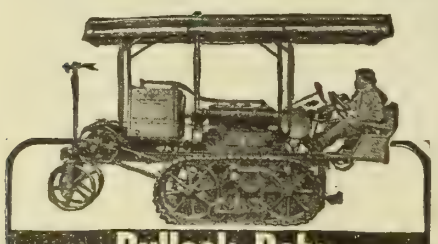

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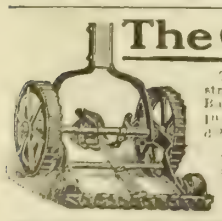

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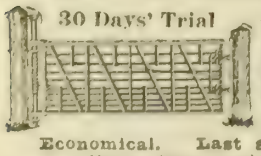

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Indian Peons of the Peruvian Plateau

By Frank G. Carpenter

CUZCO, Peru—I write of the debt slaves of the Andes. They are numbered by the hundreds of thousands and the most of them are in the direst of bondage. This mighty plateau between the two ranges of mountains is divided into farms or haciendas, owned by the whites, descendants of the Spaniards, or by the Cholos, a mixture of Spaniards and Indians. These estates are large. You may ride all day across many of them and not come to the end of the property. Each of them has a large number of Indians upon it and these Indians are practically the debt slaves of the owners. They live in villages or in huts, scattered over the property. The land belongs to the haciendados and the Indians have their huts and small pieces of land, which are leased to them under certain conditions. One of these is that the Indian must work a part of each week for his master. He may have cattle, llamas, alpacas and sheep, but he has to give a certain percentage of the increase to the haciendados. There are, also, fixed rules as to how the stock must be sold, and the estate owner controls the disposition of this and of all the products that the Indians raise. He practically fixes the prices and he gets everything for a song. The haciendados make such advances to the Indian as keep him in a state of debt slavery, and this state is transmitted to his children. The conditions are different in the different provinces and in some places they are milder than in others. But all over the plateau they are such that the red man has practically no chance of accumulating property or of advancing in the state of civilization.

A Talk with Haciendado

I have just had a long talk with a haciendado who lives in Cuzco. He owns 288,000 acres of land at Cussipata, in the province of Paucartando, but he goes there only during a part of the summer, and spends his money abroad. He has a house here at Cuzco, and his Indians bring the crops here to market. This man's estate represents about the worst of the conditions on the high Andes. He was very free in talking about them, and he seems to have no shame in the part he is taking in them. I shall give our conversation as it occurred. Said he:

"Land here is cheap. The estate at Cusipata cost us only about 4 cents an acre. We got the whole, including the stock, which consisted of a large number of cattle, alpacas and sheep, for 20,000 soles, or about $10,000. I think we would sell it for twice that amount today. Much of the land is high, running up to 16,000 feet above the sea. This is fitted only for pasture. We have also some which is as low as 10,000 feet, upon which barley, potatoes, quinua and other crops can be grown. We have big flocks of alpacas, and altogether about 8,000 sheep. We have also cattle and horses and llamas and donkeys.

"The most important possession of the farm, however, is our Indians. Our lands are valuable not according to their area, but according to the number of families of Indians who have homes upon them and are therefore obliged to work for the owners. The great trouble here is labor. If we do not have the Indians on the estates we can get no one to work them. Therefore we hold them by keeping them more or less in debt to us. We advance money for their expenses, and also for the purchase of the cattle, llamas, alpacas and other stock that they own. This is done from time to time until they are so deep in our debt they cannot get out. We want to keep them in debt, for this is the only way we can be sure of holding them to the land. The Indian seldom pays his debts. He has been accustomed for generations to our system, and the only way he could pay would be by getting some other farmer to assume his obligation to us. In that case he could move, but he would be only going from one master to another."

"But how do the Indians begin their life on the farm?" I asked.

"They come first to get homes and pastures for their stock, as well as to have lands to cultivate. They have no land of their own and no money to buy it, so they rent the land of us. As they have no money, the conditions of the rent are that they must work a part of each week for us. According to my contracts every Indian man has to work five days for the estate. In his lease he agrees to give all of his Mondays, Tuesdays, Wednesdays, Thursdays and Fridays to me and to have only Saturday and Sunday for himself. This is the rule throughout the year with the exception of holidays and saints' days. In addition we have special arrangements as to his stock, providing that it must be sold to us at fixed prices."

"Can you give me those arrangements?"

"Yes," said the haciendado, as he picked up a ledger filled with writing and accounts of one kind or another. "Here is my farm book. It contains all of the data regarding the running of the estate, including our terms of contract with the Indians. These terms are the same as have been in use upon this farm since it was established away back in colonial times. I will give you them as they are read to all the Indians when they are hired. As you will see, the last record of these rules was put down in May, 1902.

Exchange Labor for Coca

"In the first place, the Indians agree to work for us from Monday to Friday without any other pay except an ounce and a half of coca per day. This is about a handful and it costs us, per man, four cents a week. It is also agreed that each of the three Indian villages on the farm shall furnish me from time to time throughout the year a man servant or pongo, and a woman servant to work in my house, or for some one else if I so direct. I bring one of these pongoes to Cuzco and use him here, keeping the two others to work on the farm. The pongoes are changed from month to month and the village authorities see that a new one is on hand before the old one leaves. In this way we always have house servants.

"The next provisions of the lease are as to trade. The Indians cannot trade with a stranger without our permission, and we have the first chance as to everything they sell. As an ordinary thing they will not trade with anyone else under any condition, and that not even if the prices offered were ten times what we give. For instance, although my Indians are now selling me their lambs for 20 cents each, you could not buy a lamb from them for $2. The same is true of horses and cattle, and, in fact, of everything.

Go American Packers One Better

"According to our contracts we have fixed prices at which certain things shall be sold by the Indians to us. I will give you them in American money. Bulls 3 years old are sold for $2.50 each. When we resell them we get $10 or more. If the bull is 4 years old the Indian gets $3.50, and he must sell his cows at $5.20. He receives $8 for a full grown ox. For a cow we get $17 and for an ox about $20.

"And then take the prices of sheep," this man continued. "According to our written contracts with the Indian he must sell his lambs at 20 cents each, his ewes, full grown, at 50 cents, and his wethers at 60 cents. A hog sells for about $2.50—that is, when it represents a weight of at least 200 pounds. If it is only a shoat of 6 months it brings 20 cents. We resell the hogs for their meat and lard, and get good prices for them. It is the same with the sheep; they bring us many times as much as the Indian receives. We have also an agreement as to the pastures, by which the Indians pay us 10 per cent of the increase of the sheep each year for their use. They also pay 20 cents per annum for the feed of each llama and alpaca, and 60 cents for each head of cattle. It is provided that the sheep and cattle be branded, and that they be counted over at certain times by the farmer. This is in order that we may collect our share of the stock as it grows up.

Cheap Transportation

"Another provision is as to the carrying of the crops to the market. We are fifty-four miles from Cuzco, and, according to our contracts, the Indians who own llamas must take the products of the farm to that point or to anywhere else we may direct without extra pay than that stipulated in the contract. The rate we have established for the fifty-four-mile trip to Cuzco is $2 for 110 arrobas, or 2,750 pounds. If the goods are taken to Sicuani they get twice this amount, but the distance to that point is 100 miles. The Indians do not have to work on the farm at the time they are engaged in transporting these goods, and we furnish them food to use on the way. They will load the grain in bags upon llamas and drive them to the market. It takes them about a week to go to Cuzco and back, and they sleep at night on the road. They may stay a day in Cuzco, and then they will start and walk back, driving their llamas loaded with supplies for the farm. It takes twenty-five or thirty llamas to carry 110 arrobas. Each llama has a bag of grain on his back weighing seventy-five or eighty pounds. This is taken off when it reaches Cuzco, and a load of some other kind is put on for the return trip. We allow the Indians to keep as many llamas as they please, for every additional llama adds to the freight possibilities of the farm."

"It would seem that the farmers ought to make money on such contracts," said I.

"They cannot help it," was the reply. "Think of it! I buy a lamb of an Indian for 20 cents, and the understanding is that he is to pasture and care for it until it is six months old or older. At that age he brings it to me, and I can sell it for $1.50 or $2. If the lamb dies he has to replace it. We have a fixed price for hides, which are now selling in Cuzco for 23 cents a pound, or $23 per hundredweight. We buy these hides from the Indians at 30 cents each, making no account of the weight. As to wool we buy that by the fleece without regard to the weight. Every fleece of sheep's wool is sold to us for 5 cents, and we sell it for ten, fifteen or twenty times that amount. This is by our contract, made at the time of the lease. As to the alpacas, we pay for their wool according to the quality, but the amount is a bagatelle in comparison with what we get from the exporters."

Work of Women and Children

"But if the man works five days for you how is he to take care of his own crop and to watch his cattle and sheep?"

"That is done by his wife and children," was the reply. "The children learn to herd the sheep and cattle almost as soon as they are able to walk, and the women keep the weeds out of the potatoes and help hoe the crops. The Indian can do the same on Saturday and Sunday. All of the Indian women work, and the husband selects his wife as much for her strength as her beauty. The women are industrious. They are always spinning or knitting while looking after their sheep and alpacas. They do their own weaving and make all the clothes for the family. They do all the cooking, and, in fact, almost everything connected with the farm and the house"

"Tell me something about the homes and the life of the Indians on the farm."

"Their homes are just about the same as those you see everywhere between here and Lake Titicaca. They are mud huts, thatched with straw. The huts have no windows, and are entered by low doors. There is only one door to a hut, and this is made small on account of the cold weather. There is no floor but the ground, and the people sit and sleep on the floor. They lie down at night upon skins of llamas or alpacas, covering themselves with their ponchos or blankets. In some huts there are mud ledges on which to sit or sleep. The Indians have no arrangements for bathing or washing the hands and face. Nearly every woman

has a comb, but the hair of the men is left to go frowsy."

Daily Life of Indians

"How about the daily life of the Indians?"

"The ordinary Indian family gets up at sunrise, and all start preparing the breakfast. This meal is as substantial as the people can afford. If the family is well-to-do it will consist of a stew of boiled potatoes, corn and meat, and a plate of quinua cooked together to the thickness of a gruel. They may have some crushed corn cooked into a soup, and at rare times some roast llama, alpaca or mutton. In the latter case the animal killed is divided among a number of families.

"After breakfast the Indians start out to their work. The men go off to the fields of the farmer of whom they have leased their land, and the women hoe in the little patches about the house or herd the stock. On my farm the men do not start working much before 8 o'clock. They take things easy, and at 10 knock off for a half an hour's rest. During this time they chew coca. They then go back to work until 1 o'clock, when they take an hour for their lunch. They bring the lunch with them. At 4 o'clock they have another rest of half an hour for coca chewing, and shortly after that they stop for the day and return to their homes. The dinner is about the same as the breakfast. They have no light to speak of, and by dark they are asleep."

Easy Victim of Debt Snare

"Tell me more about the debt arrangements," said I.

"We loan the Indians money according to the number and value of their stock, being careful not to credit them with more than their cattle, sheep, alpacas and other animals would bring at forced sale. We have some Indians who are in debt to us only $30 or $40, and we have some who owe as much as $300. Several of my Indians have each a large amount of stock. We have one, named Paucar, who owns 400 alpacas, which are worth perhaps $2 apiece, and we have some who own sheep and cattle to a value of $300 or $400 and even $1,000. Such men work on the farm on the same conditions as the other Indians, and they live just about the same.

"As a rule the Indian will borrow all that he can. He wants money for feast days and for marriages and funerals. He is not afraid of debt. He has always been in debt and expects to stay so all his life. When he dies his debt must be paid out of what he leaves, or it is assumed by his widow and children.

"To show you how the indebtedness comes," continued the haciendado, "I have here the accounts of some of my Indians. Here is Mariano Condori, who owes me $399. Within the last year the account shows that I have loaned him $365. Of this he has paid something on account, and in addition has sold us ten sheep at 20 cents each, and one bull for which we have credited him $7.50.

"The next account is that of Manuel Jacinto, who received $45 during the year and at the end owed $34. Part of the balance he paid in currency, and he is credited also with 40 cents for the loan of his horses to us. He got $1 for taking a train of llamas to Cuzco and bringing back food and meat. Think of going 108 miles for $1, and carrying a ton load on your llamas all the way. Here is the account of Facunda Casa, which shows that he sold us thirty sheep for $7.50 or for 25 cents apiece. The other accounts run much the same."

Competition to Railroad Strong

"But doesn't this method of carrying crops so cheaply to the markets compete with the railroads?"

"Of course it does," replied the haciendado. "Why should I use the railroad to market any crops when I can have my Indians do it for nothing? I would not give a centavo to have a railroad pass my farm. If it did, myself and family would be the only ones who would use it. If I send my goods by the Indians on the backs of llamas it takes a little longer, but if the weight is short when they reach the market the Indian is responsible. Suppose I ship a hundred pounds of barley to Cuzco by rail, and it comes in four pounds short. I could not get damages of the railroad, but the Indian would have to make up the balance. He is responsible for everything he carries, and if he should break a plate or a glass in the load of goods he brings me he has to pay for it."

"But how can you force the Indians to submit to such treatment?"

"They have been used to it all their lives, and besides we can punish them in various ways. For small offenses we can put them in the farm prison on a diet of water and a very little else for a couple of days. We can also whip them for stealing, provided we are careful not to let the authorities hear of what we are doing, or we can make them come to Cuzco to work here as pongoes for a month or so. There are some cases in which the Indians are badly treated, and I know of an instance on my own farm where an Indian was tied with a rope under the arms and raised to the top of a eucalyptus tree and left the-- for two hours. If it had been found out, the overseer would have gone to jail for two or three years. Justice, however, is more in favor of the master than the servant in this part of the world, and although the laws to protect the Indians are fairly good the Indian has little chance before the courts if one of the higher classes is the defendant."

How Indian Villages Are Governed

In further conversation, this man told me something of the Indian villages, and how they are governed. He says the farmer works almost entirely through the Indian village officials. Each town has a native alcade or mayor, who, as a sign of authority, carries a cane as big around as a ball club, which is decorated with silver ornaments, and he has in addition two other officers with smaller canes. It is the business of these men to rectify offenses and to pass upon disputes. They have the right of punishment. They are selected each year. In addition each village has a a mandon, who is a kind of overseer of the work of the town, and of the Indians as employed by the farmer. The farmer gives all his orders through the mandon, and the latter is responsible for seeing that the work shall be done.

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A Drove of Alpacas

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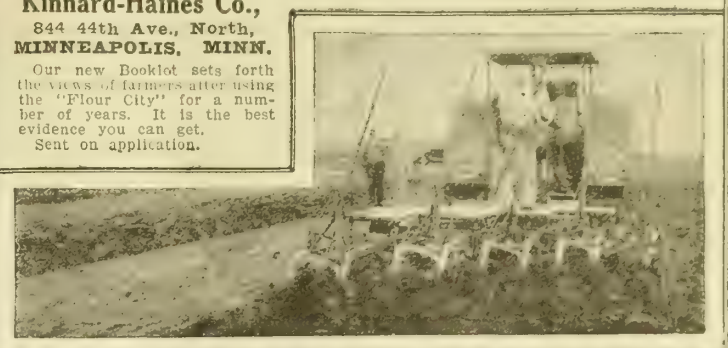

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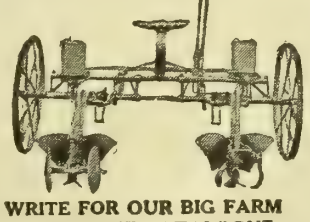

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EASY AND SAFE TO USE
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ON ALL LIVE STOCK
DISINFECTS.
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It has so many uses that it is necessity on every farm.

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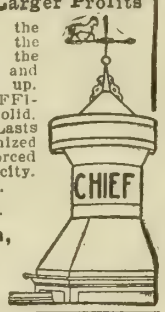
Equip your barns with the CHIEF CUPOLA, conceded the best made and strongest on the market. Bird, rain, snow and wind proof. Easy to put up. WORKMANSHIP AND EFFICIENCY GUARANTEED. Solid, durable and ornamental. Lasts a lifetime. Made of galvanized steel, well braced; reinforced edges. Large ventilation capacity. Turn your losses into profits.



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Shrauger & Johnson,
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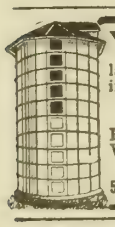

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The old reliable remedy for curb, splint, bony growths, ringbone, spavin or other lameness. 36 years of remarkable results. $1 a bottle, 6 for $5. At all drug stores. Ask for Free Book, "Treatise on the Horse."
Dr. B. J. Kendall Co., Enosburg Falls, Vt.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Sick Cow and Weak Pigs

J. S., Montana: I have just lost a young milch cow. We noticed at night that she was not as she should be, but was puffing quite a little and dribbling at the mouth. She was not bloated. I gave her some salts and ginger, but the next morning she was dead. Would that treatment affect her any, and what would be the matter with her? Would like to know, as I live a long way from a veterinarian.

I also had trouble with my pigs. When they were farrowed they seemed to be weak. I have fed the sows well. My neighbors have told me I fed them too well and they are too fat, but I don't think so. I have been feeding them ground barley cooked and they are in the sunny alfalfa field in the daytime. Do you think that the alfalfa was too young for them, as they ate it when it first came up?

Answer—You do not give us enough information about the cow to make it possible to tell what was the matter. If this occurred soon after calving, it was probably milk fever, although we could not be sure. Your treatment indicates that you believed it to be milk fever, as a drench of salts and feeding Jamaica ginger are sometimes recommended. However, the cow should have been given more care if this was the trouble. Milk should have been completely removed from the udder and air pumped in. There is a special pump made for this purpose, but lacking it, it is often possible to use a bicycle or automobile pump. Cold water and ice on the head and frequent massaging of the udder are also recommended. The symptoms you describe, however, such as the puffing and dribbling at the mouth, lead us to think that it is quite possible that your cow may have eaten some poisonous weed.

You do not say what feed besides the barley the sows were getting before the alfalfa was up. The chances are that they were getting too much fat-producing and not enough bone-producing food, as barley is very fattening. Then, too, the sows should be regularly exercised all during pregnancy. Balanced rations and exercise are necessary if the sows are to farrow strong, healthy pigs.

Goats for Milk Supply

Mrs. F. D. L., Colorado: Is it true that goats are the only herd animal that are free from the dreaded disease tuberculosis? How should they be cared for so they will be good for milk? I ask you these questions because my family physician has prescribed a goat's milk diet for one of my family, and therefore I should like the best of advice as to the feed they should have to make good, rich milk.

Answer—So far as we know, goats do not have tuberculosis. They are not very common in this country, but are rapidly becoming more numerous, and seem to be giving good satisfaction for this purpose. Do not purchase Angoras, but one of the milk breeds. From six to eight goats may be kept on the amount of feed sufficient for one cow, and one goat gives about one-fourth as much milk as a cow. They are very prolific, usually giving birth to from two to four kids at a time. They may be bred as yearlings. The period of gestation is about four months. Breed for kidding three times in two years. The buck should be from a good milking strain, carefully chosen with this qualification in mind. Discard if not found to transmit the milking qualities. Keep him separate from the does.

Pens have to be closely built and care taken to keep the goats from breaking out. They do not as a rule jump fences, but they have wonderful climbing ability.

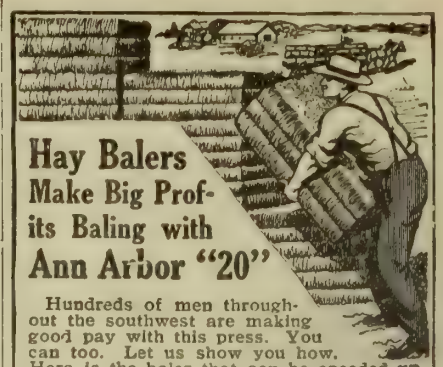
While goats will eat brush and other waste material, if you want them for milk producers you must be careful as to their feed. They need hay; clover or alfalfa hay are especially good and should be fed from racks and mixed with equal quantities of straw. Feed this night and morning, and also feed grain. The noon meal may consist of vegetable tops, stale bread and other kitchen refuse. Green oats are good for the kids. Bran, oats and vegetables are good feeds. Frequent feeding and variety are important. In summer they should be allowed exercise in pasture. Give plenty of salt and plenty of water, as with other animals.

Keep in clean yards and barns and milk regularly three times a day. Always wash udders with warm water before milking. Kindness and gentleness in handling are absolutely essential to good milk production. Cleanliness, light and fresh air are also necessary.

Does produce milk until about 10 years old, and after that they may be fattened, though they do not make very good meat. Buck kids may be castrated and fattened, killing when a few months old, at which time they make better meat than lamb. Kids should be separated from their mothers and fed on a bottle, weaning gradually.

The government has published a bulletin on raising milk goats, which might be of further service to anyone caring to raise these animals.

Large shipments of cows and calves are being made into South Dakota; in fact, all over the west and northwest states. Many of these are referred to as dairy cattle or cows to be distributed among the settlers and homesteaders for milk and dairy use. They are of the class that some persons refer to as the dual-purpose cow; that is, she gives milk, but she is of no recognized distinctive breed of milk cattle. There are, however, a great many of the Holstein and Jersey cows and heifers and their grades being bought up over the eastern states and shipped west to fill a demand that exists for the strictly dairy cow.



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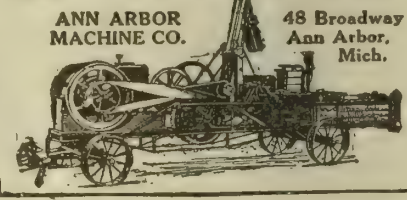

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and sweating. It penetrates both bone and tissue—reaching the cause—and cures without blistering or loss of hair. A signed Guarantee Contract to return money if remedy fails on Ringbone—Thoropin—SPAVIN—and ALL—Shoulder, Knee, Ankle, Hoof and Tendon Disease But write. BOOK, Sample Contract and Advice—ALL FREE (to Horse Owners and Managers). Address,

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Druggists everywhere sell Save-The-Horse WITH CONTRACT, or we send by Parcel Post or Express paid.

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You can buy any cut in the Twentieth Century Farmer for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as we have only one of each kind. Address,

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The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

International Prizes for 1914

AT A recent directors' meeting of the Internatinal Live Stock Exposition Association the classification was gone over in detail and such liberal appropriations were voted for prizes to be offered in connection with the 1914 show that this event is certain to prove even more popular with exhibitors and breeders than any of its predecessors.

Liberal futurity prizes are to be offered to breeders of Shorthorns, in addition to the extensive classification they have had in the past, while practically all the other cattle breeders' associations report that they, too, would extend their liberal offerings of former years.

Owing to the fact that many feeders regard it as unprofitable and wasteful to fit carlots of 3-year-old steers for the shows, it was decided to drop these from the classification, beginning with the 1915 exposition.

In the sheep division all the leading breeds were given the same liberal classification.

The Oxford association having voted a reasonable appropriation for special prizes, were also given a full classification for animals of this breed.

The Exmoor association having made an appropriation, was given further recognition in the shape of a classification for their breed.

In compliance with several requests, the directors changed the wording in the breeding division from "four lambs of either sex, the get of one sire," to "four lambs, bred by exhibitors," and in the wether classes from "pen of five wether lambs" to "pen of three wether lambs."

As a result of numerous requests urging that restrictions be placed on the number of wethers any one exhibitor might enter in the dressed carcass contest, it was decided, in order that the smaller exhibitors might have an equal chance with others, to limit the entries from any one exhibitor to four animals in any one class.

The various breeds of swine were again given the same extensive classification, both in the breeding and fat divisions.

The National Spotted-Poland Record association and the Mule-Foot Hog Record association had each requested recognition for their respective breeds and were each given a classification.

It was found that practically all the draft horse associations had increased their appropriations for this show and each breed was voted the same liberal prizes for the 1914 exposition.

For the purpose of stimulating the more extended breeding of popular market types of draft horses, it was decided to still further increase this classification.

W. S. MacWilliam, manager of the Royal Farms, Windsor, England, has secured a leave of absence from his majesty, King George V, for the purpose of judging the steers at the 1914 International.

Breeders' Notes

Wineland Farm Jerseys

We spent a few hours last week at the home of Wineland Farm Jerseys, Lincoln, Neb. The proprietor of this herd of Jersey cattle, Mr. H. C. Young, is a gentleman whom it is always a pleasure to meet and one who is sure to have something interesting to tell you any time you happen to call on him. Without question, Mr. Young has one of the very best, modernly equipped dairy farms in the west. At the present time he is milking forty head of registered Jerseys. For many years Mr. Young has been subjecting his herd to a culling process, and today he has one of the very best herds in the west. The forty head he is milking at this time are averaging around eighteen pounds of milk per day. This is very good when you consider that these cows average about six months from the last freshening time. At the present time he has fifteen head of Register of Merit cows in his herd. In 1913 these fifteen cows averaged 7,600 pounds of milk. Of these fifteen there were eight 2-year-olds and two 3-year-olds. Mr. Young informs us that he has no doubt but what nearly every female that he is milking at this time could reach the Register of Merit requirements if they were subjected to the test. He has twelve young bull calves coming on that will be ready for service this fall. Seven head of these are from Register of Merit cows. One of these bulls is from a cow that milked 11,500 pounds last year. Another of these calves is from a cow that milked 8,854 pounds of milk and produced 464 pounds of butter-fat as a 2-year-old. This is one of the best calves ever produced on this farm. The females in this herd are not only producers, but they are of the correct dairy and show ring type. Mr. Young will have an exhibition at the fair this fall and will certainly have an attractive lineup if all goes well. Keep this herd in mind and write him if you are in the market for anything in his line.

Cavett's Poland-Chinas

Our old friend, T. W. Cavett of Phillips, Neb., has eighty-five head of Poland-China spring pigs this year that measure up to the usual high standard found on this farm. Mr. Cavett is one of the oldest breeders of Poland-Chinas in Nebraska, having engaged in the business before coming to this state. His pigs this year are sired by Big Cloverdale, he by Cloverdale Hadley, and Again Expansion. The dams of these pigs are by such sires as Big Wonder, Cloverdale Hadley, Mabel's Wonder, Cavett's Big Hadley and others. If you are going to be in the market for something in the line of a good Poland-China male or some gilts, keep Mr. Cavett's herd in mind and write him.

McKelvie's Poland-Chinas

O. McKelvie of Clay Center, Neb., has eighty-eight spring pigs this year coming along in first-class form. These pigs are sired by Massive King, Big Bone Sampson and Jumbo Chief Junior. Eight sows farrowed ninety-two pigs and saved an average of better than seven. This is very good and shows that they are prolific. These pigs are out of sows representing the very choicest blood lines of the big, smooth, heavy-boned type. The name of McKelvie behind a Poland-China means as much as the word "sterling" on a spoon. This family is one of the pioneers of the Poland-China breeding business in the west, and they have always produced a class of hogs that measured up to the very highest standard. If you are going to be in the market for a herd boar or anything else in the Poland-China line, write Mr. McKelvie at Clay Center, Neb., mentioning the Twentieth Century Farmer.

Durocs and Red Polls

George W. Schwab of Clay Center, Neb., still has a few choice Duroc-Jersey bred sows for sale; also some extra growthy fall boars. Mr. Schwab is one of the largest shippers of registered Duroc-Jerseys in Nebraska and can no doubt supply you with almost anything you want in this line. He sends his nogs out with a guarantee that they are to be just as represented by him or they can be returned to him and you will get your money back. This is certainly a mighty good way to buy, because you are taking no chances. He also has a number of good, big, rugged young Red Polled bulls that he is offering for sale at prices that should meet the approval of anyone wanting some really good cattle. Get in touch with him at once, as these bargains are not going to last very long. Kindly mention the Twentieth Century Farmer when writing.

Sale Dates

Duroc-Jersey Hogs

September 30—F. B. Nelson, Lindsay, Neb.
October 2—F. A. Lemmerman, Creston, Neb.
October 5—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.

Healthy Gums and Sound Teeth

ANTITARTAR is the unfailing remedy for sore gums and decaying teeth. The greatest dental discovery of the age. By mail, only $1.00. **The Antitartar Company, P. O. Box 793, Denver, Colo.**

LEARN beautiful self-teaching musical instrument. No canvassing, no trouble. Write quick. Marx Mfg. Co., Dept. 8, Denver, Colo.

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Real shirts for real men—with the good looks that result from good taste and good quality in every detail.

HALLMARK new models for Summer express the highest degree of shirt excellence. In style, pattern, fit and fabric — they're the kind of shirts you've always wanted, at the price you want to pay.

Sold everywhere—$1, $1.50 and up

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All dealers 15c, 2 for 25c

Ask your dealer to show you the Slidewell summer models—in distinctive styles and fabrics. They have the patented non-binding back button shield and the graduated tie space that give your scarf full freedom.

If your dealer cannot supply these models, send us 75c for box of six, or write for the SLIDEWELL catalog

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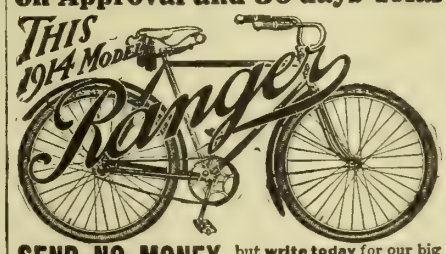

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Vegetable Hog Potash

A perfect worm expeller and preventive.

A bone builder, an appetizer and conditioner, a mineral balancer.

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Distributed by
GRAIN BELT SUPPLY COMPANY,
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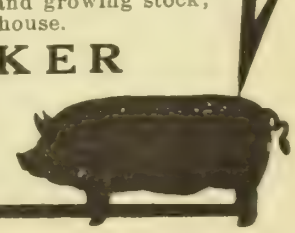

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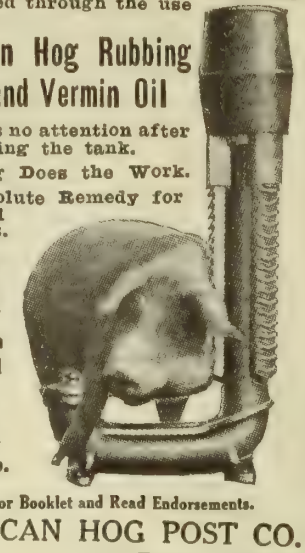

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The Hog Does the Work.

An Absolute Remedy for External Troubles.

Insures Against Cholera.

Satisfaction Guaranteed

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Write for Booklet and Read Endorsements.

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Dept. F. Peoria, Illinois.

NATIONAL OILER

Save your hogs by using a National Automatic Hog Oiler Post. Experiments show that it is the best and most practical method. Write for further information at once.

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Richmond, Ind.

Review of Live Stock Market

By A. C. Davenport

WEATHER news of an encouraging character has created a very optimistic feeling in the big live stock centers of the country. Reports indicating satisfactory rainfall over a wide extent of territory speak volumes for the future prosperity of the live stock business, according to the views taken by market men.

The season for cornfed stock of all kinds is rapidly drawing to a close, and the trade is naturally beginning to figure on the opening of the season for grassers. Already predictions are being made that the season for both range cattle and range sheep will open early, the basis for these predictions being the assumption that a fair amount of rainfall is producing a good crop of grass, and other forage, which in its turn should mean an early supply of grass, beef and mutton. Live stock men, however, are looking still farther ahead and as the prospects for farm crops brighten, are already anticipatnig liberal supplies of fed stock for the coming winter. This, according to a stock man's method of reasoning the outlook of the live stock trade, is very encouraging.

As regards the present no great change has taken place in the cattle market during the last week, and so far as that goes, none is anticipated for the very near future. As a rule the trade expects to see the market fluctuate, that is, prices may move up a little or down a little from week to week. As the season progresses and grass cattle become more plentiful it would be only reasonable to expect common to medium cattle to show more or less decline as they come into direct competition with the cheaper grassers. Already cattle from the south are having some effect on the unfinished cornfeds, and are reducing the demand for them very materially. On the other hand, as the season advances, good to fancy cornfeds are almost certain to become scarcer and it would not be at all surprising should the market on that class of stock show greater firmness than at present.

During the last week the markets of the country have received liberal shipments of grassers from Texas and distillery fattened cattle from Kentucky and other states, which gave prices a lower tendency, the different markets of the country for the week being reported 10c to 15c, or more, lower than the previous week. This downward movement in values was aided by the arrival of the second largest shipment of Argentine beef received at New York since the removal of the tariff. It is assumed at market centers that a considerable percentage of this beef will go to the army, but as a matter of course, it reduces the demand for medium grades of American beef.

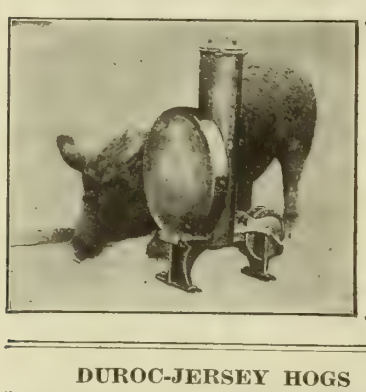
According to the reports of the progress being made in cattle growing in Brazil recently given out by an old Colorado cattle man on his way home from that country, Argentine will not long be the only South American competitor with American beef. Developments in the southern provinces of Brazil promise to increase the world's supply of cattle very materially, and the packers and growers are depending largely upon the United States as a market for their product. The country appears to be well adapted to the live stock industry and the ranges, which abound in nutritious grasses, are being stocked up as rapidly as possible.

The trade is feeling a little bearish as regards the future of hogs. Prices have shown more or less weakness, and the demand is not at present writing sufficiently urgent to create a feeling of confidence in the stability of the market. The big packers appear to regard prices as too high to make it a safe proposition to store away any great quantity of provisions. On the other hand the shipping demand is unusually light for this season of the year. It would appear that eastern farmers, encouraged by the prospect of high prices, went into hog growing more extensively than usual, with the result that the small packers and the little local markets of the eastern states have been receiving about all the hogs required to meet demands from the fresh meat trade, and thus have not been compelled to call upon the west for supplies to any thing like the extent usual in previous years. Thus the hog market has been gradually worked downward for the lack of an active buying demand and no one can say at the present time just when the bottom will be reached. One thing is very evident and that is that the receipts at market centers have proven larger than anticipated.

Values on sheep and lambs which recently made noteworthy gains have been well maintained. As a matter of course, the strength developed in the market has been due to moderate receipts at most points and to a very fair buying demand. While there are still a good many sheep and lambs to come forward, the season is so far advanced that lighter receipts and stronger prices were natural results that were already anticipated. Such changes as have taken place in the market have by no means been in the nature of surprises. As a rule operators on the market are anticipating a satisfactory trade in fed sheep and lambs throughout the remainder of the season. Conditions in the west up to date have all been very favorable for sheep growers and thus far indications are very encouraging for a large supply of grass stock with the coming of the range season.

Potato Crop Falling Off in France

Figures just made by the French department of agriculture show a falling off in the 1913 potato crop of France of 34,884,268 pounds as compared with the yield of 1912.



Agents! Wanted Everywhere for the Sherman Hog Greaser

Hog lice, fleas and gnats, positively exterminated. Cures scurvy and wards off contagious diseases. The SHERMAN method is the safest, cheapest and surest.

Hogs are always kept healthy and take on fat rapidly. Best results are certain. Write today for Special Offer.

THE SHERMAN HOG GREASER CO., Dept. O, Peoria, Illinois.

Write for our free copyrighted 16-page booklet on 'How to Keep Hogs Healthy and Raise Them Profitably."

DUROC-JERSEY HOGS

DUROCS AND RED POLLS

25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed.

GEO. W. SCHWAB, Clay Center, Neb.

Twentieth Century Farmer will not knowingly accept for publication any advertisement that is meant to deceive or mislead its readers in any way. Kindly inform us of any advertiser who does not do as he advertises.

O. I. C. HOGS

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." C. S. BENJAMIN RFD79 Portland, Mich.

LEARN TO BE AN AUCTIONEER National Auctioneering School of America. Box 34, Lincoln, Neb.

RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

W. F. SCHWAB, Clay Center, Nebraska.

AYRSHIRE CATTLE

AYRSHIRES THE PERFECT DAIRY COW

The Loveland Farms Company of Omaha, Neb., has the largest herd of thoroughbred Ayrshires in the west. Young bulls of all ages for sale. To responsible Nebraska and Iowa Dairymen desiring to improve their herds, young bulls furnished which need not be paid for until bull is ready for service.

HOLSTEIN CATTLE

Purebred Registered

HOLSTEIN CATTLE

The Capital, Topeka, Kansas, June 16, said: "When Maid Henry, the famous 13-year-old Holstein owned by the Kansas Agricultural College, was working so hard for the record of 19,600 pounds of milk and 835 pounds of butter in a year's time, dairymen prophesied that the Maid would be ruined. But Maid Henry returns to show that she is some cow even after breaking a record. She has a 114 pound male calf, born just the other day, to prove it."

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro, Vt.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

PERCHERON HORSES

Part from 2400-lb. imported sire and part from 2200-lb. imported sire and imported dams, my 2, 3 and 4-year-old registered Percheron stallions would prove valuable breeders for you. With all their weight and bone they are dressy and straight sound. This is some of the most substantial and most attractive Percheron breeding material in the world. Farm raised and offered at farmer's prices. Just east of Omaha.

FRED CHANDLER, R. 7, Chariton, Ia.

Theory Versus Pactice in Soil Analysis

(CONTINUED FROM PAGE THREE)

value. The principal value lies in the fact that when any certain chemical element is woefully deficient or extremely low in any soil the chemist will be able to tell that. In this way, of infertile soils that are not infertile because of poor physical condition the chemist can give the farmer an idea as to what mineral plant food is necessary. Moreover, if the amount of all of the essential plant foods is shown to be high from the results of the analysis, the farmer may so change his system of cultivation by including fall plowing, etc., as may render the unavailable plant food available.

Another point must be considered in determining the productivity of any soil, and that is the character of the subsoil which underlies it. Most soils are rendered productive for certain crops because they are underlaid with extremely desirable types of subsoil, desirable either from the chemical or physical standpoint. The amount of plant food drawn up from the deeper soil layers and subsoil r any times makes a soil a good alfalfa producer, for example. In judging of the value of any soil from a chemical analysis alone, no idea can be formed of the effect that the subsoil may have on the crop-producing power of the soil. Without this a one-sided idea is necessarily formed.

One of the factors most deficient in soils of the central west and the southwest is decaying vegetable or animal matter—that is, organic matter. Many of our farmers who are not receiving the crop yields that they feel they should receive from their fields make up their minds to have chemical analyses made rather than to look into the amount of organic matter in their productive and unproductive soils. On many farms the addition of barnyard manure or the plowing under of small amounts of green crops and crop residues would change conditions and oftentimes render relatively unproductive soils productive.

Test Your Own Soil

If the farmer is desirous of determining in what plant food element or elements his soils are deficient, the most practical and best method to use is to make a simple field test. Such a test is easily and cheaply made. Any farmer can do it, and from the results obtained determine his needs, if any, in plant food. In making such a field test the farmer should lay off such small plots as he will need and apply different plant foods and combinations of the four most commonly deficient plant foods, together with different amounts of them. Nitrogen, phosphorous, potassium and calcium (lime) are the plant foods most often deficient. Two or three of the plots should be untreated, or kept as check plots. To one plot, for example, nitrogen could be applied; to a second, phosphorous; to a third, potassium, and to a fourth, lime; to a fifth, a combination of nitrogen and phosphorous, etc., until the different combinations, together with a fertilizer embracing the four plant food elements named have been tried. such a simple test would give the farmer a direct clue to the elements needed to bring up his crop production, if any were needed, on the soils on which the test is made. Why not try such a test?

To summarize: A chemical analysis of a soil may show the deficient elements when the plant food content is low, but it cannot be taken absolutely as an accurate guide to the plant food requirements of any soil. It is better for the farmer to make a simple test of the fertilizer requirements of the different soil types found on his farm.

Ducks

FAWN AND WHITE INDIAN RUNner duck eggs, $1 per 12. Heavy laying strain. E. Dooley, Selma, Ia.

Leghorns

SINGLE-COMB BROWN LEGHORN Eggs—$4, 100; $2.50, 50; $1, 15; from 200 2-year-old hens, mated with cockerels scoring 93¾. Edward Dooley, Selma, Ia.

FOR SALE—80 SINGLE-COMB WHITE Leghorn hens, healthy and good looking, including my blue ribbon winners; 900 eggs sold to one party from these hens hatched out 90 per cent strong chix. Fremont, Neb. Ivar Johnson.

SINGLE-COMB WHITE LEGHORN eggs, 3½c each. Will Rockwell, Hubbard, Neb.

Langshans

BLACK LANGSHAN EGGS—CIRCular. Jake Hetrick, Wahoo, Neb.

Orpingtons

PRIZE-WINNING BUFF ORPINGton eggs. Mrs. Cook, Eddyville, Neb.

ORPINGTONS—BUFF OR WHITE—Eggs, cockerels. List free. Frank Lewis, Gibbon, Neb.

Plymouth Rocks

BARRED ROCK EGGS FOR HATCHing, 60c per 15, $3 per 100. Mrs. Anna Eklund, Waterloo, Neb.

BARRED ROCK EGGS, 5c APIECE—None shipped over three days old. Miss Voorhees, Sweetwater, Neb.

BIG REDUCTION—BARRED ROCK eggs, famous "Ringlet" strain from Thompson's $10 matings—$1 per 15, $4 per 100. Mrs. B. Taft, Norfolk, Neb.

Rhode Island Reds

SINGLE-COMB RHODE ISLAND RED eggs, $1 per 15 eggs, $5 per 100. Delmer McCann, Arlington, Neb.

HIGH-SCORING RED MALES, BLUE ribbon winners, cheap. Need room for young stock. Price list free. George Ainsworth, Fremont, Neb.

SINGLE-COMB RHODE ISLAND Red eggs from pure-bred stock—$1 per 15, $5 per 100; laying hens, $1 each. Mrs. Chas. Kellett, Waterloo, Neb.

SINGLE-COMB REDS, $3 AND $5—Eggs, exhibition matings, now $2 fifteen, $5 fifty. Scott Covalt, Box O, Council Bluffs, Ia.

SINGLE-COMB REDS AT PIONEER Home—Large, dark red; heavy layers. Pens, $1.50 per 15; utility, $4 per 100. Mrs. John Hall, Valley, Neb.

Turkeys

TURKEYS, NARRAGANSETT, $2 PER 10; Indian Runner ducks, fawn and white, $1 per 15; prepaid by parcel post. Henry Korgan, Hastings, Neb.

Wyandottes

WHITE WYANDOTTES—EGGS HALF price. Best strains in America. White Wyandotte Farm, Oscar L. Bock, Prop., Council Bluffs, Ia.

BUFF WYANDOTTE EGGS FOR setting. Mrs. Chas. Hough, Weston, Ia.

Miscellaneous Poultry

MAPLEWOOD FARM HATCHERY, Exeter, Neb., is the largest in world hatching more than two varieties of high-class, thoroughbred chicks not connected with a broiler plant. June discounts, 10 per cent; July discounts, 20 per cent. Write your wants. Sterile eggs for private customers, hospitals, after July 15.

WYANDOTTES, LEGHORNS, ROCKS, Reds, Orpingtons, water fowls. Free catalogue. C. W. Brehm, Harvard, Neb.

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

HOLSTEIN CALVES—BEAUTIFULLY marked, 15-16ths pure, 3 to 5 weeks old, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

DOGS

50 FEMALE COLLIE PUPS TO LET on shares; 50 female Airedale pups to let on shares. Must have reference. Also have a few to sell. Snd for my large sales list. W. R. Watson, Oakland, Ia.

SCOTCH COLLIE PUPS FOR SALE—Well marked, $5 each. John Bader, Scribner, Neb.

RATE—Five cents per word per issue. Cash must be sent with all orders

Count every word, initial and numeral, including the address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred five thousand farmers are regular paid-in-advance subscribers to TWENTIETH CENTURY FARMER. If you have any wants or if you have anything to sell, insert an ad. in this department

LANDS—Arkansas

160-ACRE RICH CREEK IMPROVED farm; 60 cultivation, balance timbered—$20 acre. Sessions Co., Winthrop, Ark.

British Columbia

OPENING OF A NEW COUNTRY—The new transcontinental line, the Grand Trunk Pacific, is finished, giving access to Central British Columbia that has hitherto had no railroads. The very best opportunities ever presented are awaiting you in the fertile valley of the Fraser river and Fort George, Nechaco and Bulkley valleys of Central British Columbia, where nature has provided soil and climate as near ideal as can be found anywhere. If you wish to know about this country, write Whitney Land Co., Germania Life Bldg., St. Paul, Minn.

Colorado

WANTED—GOOD, LIVE REAL ESTate agents to co-operate with us in colonizing a 20,000-acre tract of good farm land in eastern Colorado near Platte river in the Shallow Water district, where the crop pays for the land in two years. Good commission to live agents. Write at once for literature. Platte River Valley Land Co., Omaha State Bank Bldg., Omaha. Neb.

Crop Payment

IF YOU HAVE A TEAM OF HORSES and some cattle, you can buy a good farm in Minnesota, North Dakota or Montana on the crop payment plan. For particulars address L. J. Bricker, General Immigration Agent, Northern Pacific Ry., St. Paul, Minn.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

CASH FOR YOUR FARM OR BUSIness. I bring buyers and sellers together. Write me. Established 1881. Frank P. Cleveland, 1315 Adams Express Building, Chicago, Ill.

WANTED—FARMS FROM OWNERS for sale. We have direct buyers. Send description. Magazine, particulars free. Western Sales Agency, Minneapolis, Minn.

Kansas

FOR SALE—320 ACRES, IMPROVED, in the famous Moran Valley, Allen county, Kansas. Very low for cash, or on easy terms. View of farm sent on application. Address owner, Lock Box 367, Iola, Kansas.

Miscellaneous Lands

GOVERNMENT LAND SCRIP FOR Sale—Soldiers' additional land scrip in 40, 80 and 120-acre assignments. Can be located on vacant government land. No residence or cultivation required. Address Fred D. Mason, Security Mutual Life Bldg., Lincoln, Neb.

Minnesota

TODD—COUNTY OF CREAMERIES, corn and clover. For information write Van Dyke & Van Dyke, Main St., Long Prairie, Minn.

CORN AND CLOVER LANDS IN central Minnesota. Low prices. Reasonable terms. Write Murray, Wadena, Minn.

100 CHOICE FARMS IN THE GARden spot of southern Minnesota, where corn is king. Price, $75 per acre and up. Prices advancing rapidly. Come now. Free list. The Paffrath-Schmit Company, Springfield, Minn.

WAR—ON HIGH-PRICED LAND—IS our motto. Don't do a thing till you have sent your address to us and received and read our illustrated folder on Aitkin County, Minnesota, describing the wonderful opportunities in this section of the state, telling of the low prices at which we sell our lands, and the easy terms we make. Aitkin county is in the center of Minnesota's clover and dairying district. A little money will start you on the road to success. Write. Get the facts. Do it today. Land Agent, C., R. I. & P. Ry. Co., 378 Wolvin Bldg., Duluth, Minn.

NORTHERN MINNESOTA—THE greatest natural cattle section; no drouths; alfalfa, clover, corn and potatoes are principal crops. Prairie or timber. Free information. We have no land for sale. Write W. R. Mackenzie, 904 Palace Bldg., Minneapolis, Minn.

Missouri

FOR SALE—BIG SHORTAGE CATtle—Big profit raising them. We offer exceptional bargains in Ozark county, Missouri, ranches. Cheap land; good grazing; plenty pure spring water; 40 to 50 inches rainfall. Tell us how many acres you want and we will send you particulars. Price, $6 to $8 per acre. Easy terms. Must not be undervalued because we do not overcharge for it. SCHREI & READ, 30 N. LaSalle St., Chicago.

LANDS—Missouri

IF YOU WANT FARMS OR ranches in the Ozarks of Missouri, write A. J. Johnston, 221-226 Woodruff Bldg., Springfield, Mo.

Montana

READ! FROM OWNER DIRECT—Five miles south of Great Falls, Montana; population, 24,000; alfalfa, grain, dairy ranch, 1,980 acres; 900 cultivated, 550 winter wheat and other grain, 350 fine alfalfa, 40 timber along river, balance heavy grass. Good buildings; all fenced, partly woven wire; water at buildings. All products consumed here, big prices—alfalfa, $12 to $15; butter, 40c; milk, 10c; eggs, 25 to 60 cents. Good work horses with ranch, full set machinery, cattle, hogs and crops; $52 per acre, one-third trade, balance easy terms. Investigate. A fortune in it. Another square section close—420 acres at station; will trade. Write today. Sam Stenson, Box 448, Great Falls, Montana.

Nebraska

GO WEST—FOR SALE, A 14,000-ACRE colonization tract. Will retail $12.50 to $25 per acre. This tract is scattered with fine farms, homes and showing splendid crops which we raise in that territory. This is a bargain for eastern real estate colonization agents or speculators—$8 per acre. Write for terms. Will split tract to suit. 522 State Bank Bldg., Omaha, Neb.

North Dakota

NORTH DAKOTA LANDS DIRECT to Purchaser—We have listed with us to sell several hundred thousands acres of choice North Dakota lands. In order to obtain settlers along our 1,200 miles of track in North Dakota, we will sell these lands at cost. Prices are about one-fifth those asked in Iowa or Illinois, and agricultural possibilities are just as great. Roads, schools, churches, railroads, all established. Very low excursion rates. For literature and full particulars write J. S. Murphy, Immigration Agt., Soo Line Railway, Minneapolis, Minn.

Oregon

DO YOU REALIZE THAT ONTARIO has seven railroads and is on the main line of the Union Pacific, Omaha to Portland? All around this city are fine irrigated farm lands that will grow anything that's suited to the locality in great abundance and of very fine quality. These farms lie among cultivated ones, so that you can see just what the productions are. Actual settlers wanted, to whom remarkable terms will be given. Excursion rates first and third Tuesdays of each month. Lands are low-priced. Send for folder; it's free. Oregon & Western Col. Co., 536 Paxton Block, Omaha, Neb.

Washington

ONE ACRE, ONE COW—SPOKANE Valley Irrigated Lands will produce enough feed on one acre for one cow. We are importing butter, eggs, ham and bacon. This means good market. Mild climate. Productive soil. Abundance of water. No drouths. Close to city. Worth investigating. Write Spokane Valley Land and Water Company, Spokane, Wash.

Wyoming

GOVERNMENT LAND—GET 320 acres. We stock your land, buy your crop. Some means required. Particulars free. Wyoming Settlement, Janet, Wyo.

FOR SALE—SECTION LAND NEAR Laramie, Wyo., under irrigation. Will make ideal stock ranch—$25 per acre. Write owner, Gilbert Angrimson, Fowler, Colo.

COME TO PINE BLUFFS, WYOMING, where farming pays—where those who are here have made good—where on the average the crop on every acre under cultivation pays for the land each year—where oats yield 60 to 90 bushels per acre, wheat 20 to 40 bushels, flax 15 to 25 bushels—where 1,000 cars of grain are shipped out annually—where the land cultivates easily—where the climate is inspiring and the rainfall ample—where choice, level farm land can now be had at from $15 to $25 per acre, on terms as low as one-tenth cash and the balance in nine equal yearly payments—where you buy direct from the owner and save the agent's commission. Will refund your expenses if these statements untrue. C. L. Beatty, Pine Bluffs, Wyo.

MISCELLANEOUS

FENCE POSTS AND LUMBER Direct to consumer. C. J. Coleman, Sand Point, Idaho.

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

MISCELLANEOUS

USE BOTH SIDES OF YOUR DOLlar. Double value watch repairing—cleaning, 75c; main spring, 75c. Not over $2 to repair any watch. Oklahoma Watch Repair Shop, Walters, Okl. Send by parcel post.

DAIRY FARM CO., 1201 FARNAM, Omaha, makes big inducements to practical farmers who believe in corn—silo—milk pail—hog—route for sure money in farming.

AUTOMOBILES

70 USED CARS—WE CARRY THE largest stock of used automobiles ever offered to the public. We are exclusive used-car dealers, which enables us to offer astonishing bargains. We can save you at least 50 per cent on any car you wish to buy. All of our cars are thoroughly overhauled in our own shop that we may know the exact condition of the mechanism. Write for our Bulletin No. 5, prices and large list of satisfied customers. Industrial Garage Company, 20th and Harney, Omaha, Neb.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer. Omaha, Neb.

U. S. GOVERNMENT JOBS OPEN to men and women. Over 15,000 appointments coming; $75 to $150 month. Life jobs. Pleasant work. Short hours. Vacations. Common-sense education sufficient. Full directions telling how to get position free. Franklin Institute, Dept. G-93, Rochester, N. Y.

WANTED—A MAN TO SOLICIT SUBscriptions for Twentieth Century Farmer; salary $42 a week. Address Circulation Manager, Twentieth Century Farmer, Omaha, Neb.

THE AUTOMOBILE BUSINESS PAYS $25 to $50 weekly. We teach you how. Write for our free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

MAKE $100 A SEASON IN SPARE time only and get all your own clothes free. Easy to get orders for men's suits with our beautiful samples and up-to-date styles. Write at once for free book of samples and styles, agents' inside costs and retail prices, full information and our big, new offer. It's a wonderful opportunity. Knickerbocker Tailoring Co., Dept. 102, Chicago.

GOVERNMENT FARMERS WANTED—Make $125 monthly. Free living quarters. Write Ozment, 39 F, St. Louis, Mo.

SEEDS

ALFALFA SEED—DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

I AM IN THE MARKET FOR CLOver, timothy, alfalfa, cane and millet seed. Send samples. I have a large, select stock of all these seeds for sale. Werter DeVaughn, 1614 Harney St., Omaha, Neb.

FETERITA—HOME-GROWN, TESTED seed, re-cleaned, sacked. Greatest drouth-resisting crop. Matures in 75 days. Pamphlet telling how to grow—$2.75 single bushel, $4.50 per hundred. H. M. Hill, Sycamore, Kan. Route 1.

IF YOU WANT WHAT YOU WANT when you want it, place an ad. in the Market Place of Twentieth Century Farmer.

Breeders' Notes

Friesland Farm Holsteins

Dr. B. B. Davis, room 200, Bee building, Omaha, Neb., proprietor of Friesland Farm Holsteins, located just west of Omaha, has some choice young sons of Kalmuck Skylark Johanna and King Segis Lyons for sale; also will spare a few females. It always gives us great pleasure to mention this herd, because we consider it to be one of the very best herds of Holstein cattle in the west. Dr. Davis has spared neither time nor expense in the upbuilding of this herd. He has selected the very best breeding animals obtainable and has set a standard to which they must conform if they remain in the herd. When you buy anything from this herd you know just what you are going to get. It is certainly worth something to know that you are getting an animal that is free from disease, has been grown and developed in the right manner and comes from a line of ancestry that gives you reasonable assurance that you are getting something that will prove a profitable investment to you. Write Dr. Davis if you want anything in his line, and rest assured you will get a square deal. Kindly mention the Twentieth Century Farmer when writing.

Tuxedo---A Hit With the Hit-Makers

FRED CLARKE

"I'd advise every ballplayer to smoke Tuxedo. I do, always. I know of no other tobacco that gives the satisfaction that Tuxedo does."

Fred C Clarke

HUNDREDS of the snappiest ball players in the country—the clean-cut athletes who provide Americans with their greatest outdoor relaxation—enthusiastically endorse Tuxedo. This is the kind of endorsement that carries a convincing punch.

These men know that Tuxedo is a mild, pure tobacco, which can be smoked all day with pleasure. Tuxedo *cannot bite* the tongue; it burns freely and smoothly, giving a cool, sweet smoke.

Tuxedo

The Perfect Pipe Tobacco

From the scoreboard man to the magnate in the private box, everybody on the grounds is "catching on to" the *supreme merit* of Tuxedo.

Tuxedo is made from the finest, mildest leaves of high-grade Burley tobacco, so treated under the famous *original* "Tuxedo Process" that it burns slow and cool, with a delightful flavor and aroma.

The "Tuxedo Process" makes it impossible for for this perfect tobacco to bite or sting the most delicate tongue or throat.

Tuxedo has many imitators—in outward appearances. It has *no* equal in the pipe.

YOU CAN BUY TUXEDO EVERYWHERE

Famous green tin with gold lettering, curved to fit the pocket 10c

Convenient pouch, *inner-lined* with moisture-proof paper . . . 5c

In Glass Humidors, 50c and 90c

THE AMERICAN TOBACCO COMPANY

JOE TINKER

"A pipeful of Tuxedo after a game is the most restful smoke I can find."

Joe B Tinker

JIMMY ARCHER

"Tuxedo is my idea of a good smoke in every way—coolness, mildness, purity. Tuxedo is a winner."

Jimmy Archer

ROGER BRESNAHAN

"Tuxedo appeals to me more than other tobaccos; it's so remarkably mild and soothing. Easily my favorite smoke."

Roger Bresnahan

MILLER HUGGINS

"I'm for Tuxedo every time. It's cool, mild, fragrant—everything the ball player could want in his tobacco."

Miller J. Huggins

Illustrations are about one-half size of real packages.

JACK McINNIS

"Tuxedo gives a cool, mild smoke, and never affects the wind. Tuxedo is a tobacco that's always good"

John M. Dennis

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, June 13, 1914 | Number 705

Prattle of the Youngsters

Unseemly Anxiety

The class in English had just finished reading about Launcelot and Elaine.

"Now, Thomas," said the teacher, "tell us what you think of Elaine."

'Aw, I don't think much of her," said Thomas; "she was too anxious."

Not Eggs

School Mistress—You dirty boy! Why don't you wash your face and not let it show what you had for breakfast this morning?"

Small Boy—What was it?

School Mistress—Eggs.

Small Boy—Wrong! Eggs was yesterday.

Change of Aim

Four-year-old Wesley, having been rebuked for some slight breach of etiquette, replied defensively, "Papa does it."

"Your father," the mother answered rather carelessly, "is a privileged character."

Wesley seemed to be thinking deeply, and finally surprised his mother with the announcement: "When I get big I'm not going to be a farmer; I'm going to be what you said papa is."—Mother's Magazine.

Obeying Orders

A woman, coming down the garden walk, was horrifed at seeing her son standing on his head against the garden wall.

"Johnnie, you bad boy!" she cried. "What are you doing now?"

"Standing on my head," replied Johnny. "Didn't yer tell me to play at summat that wouldn't wear my boots out?"

Had Been Looking

"Mother," said Bobby, after a full week of obedience, "have I been a good boy lately?"

"Yes, dear," replied the mother, "a very, very good boy."

"And do you trust me," he continued.

"Why, of course, mother trusts her little boy," she answered.

But the chastened child was not pacified.

"I mean really, really trust me, you know," he explained.

"Yes, I really, really trust you," nodded his mother. "Why do you ask?"

"Just because," said Bobby, diving his hand into his pockets and looking her in the face, "if you trust me like you say you do, why do you go on hiding the jam?"

Bessie's Prayer

Some time ago Bessie's aunt called and in a confidential moment the little girl told what a naughty boy her brother was. She said that he had set a trap in the yard to catch birds, but assured aunty that she had seen to it that none were caught.

"That was very good of you, Bessie," smilingly returned aunty. "How did you manage to do it?"

"Why, I prayed, aunty," answered Bessie. "I just prayed that brother might not catch any of the birds."

"That was quite right," returned aunty. "Did he catch any?"

"He did not," was the quick rejoinder. "Just as soon as I got done praying I went out and busted up the trap."

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What Silos Really Do

IN OUR issue of May 30 we started a series of silo articles which will run from time to time during the summer. These articles are based on extended investigations among silo owners in Nebraska, Kansas and Iowa, and the advice given our readers in the articles is the advice of the men who own silos and have used them with profit. Our next issue will contain the second of this series of articles. In this number we will tell you what these silo owners say in regard to the saving effected by the silo, explaining just where and how the silos have saved their owners money. Last year we published a series of silo articles for the man who had no silo. We told him of the various kinds of silo he could build and explained something of the value of each kind under various conditions. During the last year thousands of silos have been built in the territory covered by the Twentieth Century Farmer. Owing to the dry weather that prevailed over almost all parts of the country, it was the biggest silo building year we have ever had. Hundreds of our readers who did not own silos a year or so ago own them now. This present series of articles is of benefit to the man who owns a silo, showing him under what conditions and by the use of what methods men have been able to make a maximum amount of profit out of the silo.

Bright and Breezy

As Usual

A woman with little wit sat at a public meeting between a bishop and a rabbi. She thought she would be clever, and said to the rabbi:

"I feel as if I were a leaf between the Old and the New Testaments."

"That page, madam," said the rabbi, "is usually a blank one."

Help Wanted

"My dear, a burglar fired a revolver at a Boston man, and the bullet struck a button, thus saving his life."

"Well, what of it?"

"Only this: A man could shoot at me with a shotgun and never hit a button."

Soul-Saving Time Limit

One day a visiting clergyman, who was to preach before the students at Yale University, asked how long he was expected to talk.

"Of course, we put no limit upon you," replied President Hadley, "but we have a feeling here at Yale—that no souls—are saved—after the first twenty minutes." — The World's Work.

Hand in Hand

"I tell you, Pat, my boy," the big man of the town confided, laying a patronizing hand on the young Irishman's shoulder, "I wish I had your tongue."

"Sure, sor," grinned Pat, "but it would do yez no good without me brains."—Woman's Home Companion.

For Every-Day Wear

Applicant for Position—I have here a letter of recommendation from my minister.

Head of Firm—That's very good so far as it goes, but we won't need your services on Sundays. Have you any references from anybody who knows you the other six days of the week?

Not Ready to Go

In an asylum two patients named Sandie and Tam formed a plan to make escape. Sandie says to Tam:

"Bend doon and I'll get on your back and get on the tap o' the wall and haul you up."

Sandie gets on the top of the wall and slides down the other side, saying:

"Tam, I think you'll be better to stay anither fortnicht, for you're no near sane yet."

Pity the Suffering

An Ohio man tells of a farmer in that state who, even in the hour of adversity, could think of others. An unseasonable frost had completed the damage done by the insects to his potatoes. The tops of the plants, which had served as pasturage for the pests, were wholly destroyed. Meeting him at the postoffice one day, a friend asked: "How are you, Tom? Things goin' well?" "Goin' well!" exclaimed the old man; "I should say not! There's trouble and plenty of it! Why, up at my place there's 9,000,000 potato bugs, an' nothin' for them to eat."

THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Putting Your Products on the Market

Raise the Best and Then Sell for More Than Current Quotations

By H. B. Trueman

HAVING been a farmer and an advertiser and having made the combination profitable, the following suggestions are offered for what they are worth to those beginning to think of something besides making two blades of alfalfa grow where there was only one rag weed before.

Ever since Adam was a gardener, without a market, the farmer has been long on production and shy on salesmanship. He has become accustomed to thinking of himself as a soil tiller exclusively. He has had it dinged into him by all the powers that have tried to "uplift" him. The two blades of grass theory has been quoted by public speakers and writers ad nauseam, especially the gentlemen who generally relieve him of the shipping, transporting, commission merchanting, jobbing and brokering—meaning, of course, the philanthropic middlemen. How they have striven to inoculate the farmer with the idea that he is a producer only!

Be Your Own Middleman

Now, brother farmers, I think I am well within the facts when I state that the only men who ever made a big thing of farming are the producers who are also their own middlemen. Not satisfied to close the deal at the grocery, the elevator or the loading chutes by letting the other fellow fix the price on the farmer's own goods, they combine modern business system with the new science of agriculture, and not only grow maximum crops, but get maximum prices for their output.

It does not ordinarily pay to grow grain and hay for sale, and many farmers are finding this out. It is evident that if a farmer is in business for profit instead of his health he must feed the crude products of his fields to live stock that will bring the highest returns.

When a man has raised a bunch of purebreds he has something to talk about; and that's about all there is to advertising—having something worth talking about and telling people who, where and what you are. The man who makes the most convincing selling talk is the one who gets the cream of the trade.

What Advertising Is

Advertising is not alone telling the world about your goods; it needs also a dash of pep that will make the reader want your article so much that he can't resist the appeal.

Scientific salesmanship is selling goods at a profit through persuasion. It is not salesmanship when a farmer drives up to the elevator with a wagonbox full of No. 1 hard and yells, "how much?" That's only filling an order, if, indeed, it is not absolute slavery.

Every sale goes through a certain routine. First you catch attention, then create interest, then induce desire and finally persuade to the resolve to buy. Advertising is salesmanship on paper and operates precisely in the same way, except that the selling talk appeals to the eye instead of to the ear.

When a farmer raises something of especial merit and can sell it through advertising, his fortune is made. For, hark you! The material prizes of the world go to the man who can persuade others to buy. A school teacher, in the noblest profession in the world, may get only $800 a year, while a traveling salesman, with no education to speak of, may get $5,000 a year, because he can make more than that for his house.

What the People Want

To get in this game a farmer must first produce something people want. It must be something out of the ordinary and of high quality. He must put it up in attractive form. No use talking, folks do eat with their eyes. Offer a messy lump done up in a greasy rag and you couldn't sell blue-ribbon butter at oleo prices. Put your pound print in a clean carton with a handsome label; tell how clean you keep your cows and dairy; mention that this butter took a prize at the fair; tell how valuable a food butter is; give it a fancy name and ask 5 cents more a pound for it, and it's a ten-to-one shot that you will buy more cows before long.

A salesman or advertiser must put a big chunk of psychology into his persuasion, which is no more nor less than understanding the human heart and telling the truth in an interesting way.

I am not trying to write a compendium of scientific advertising, but only to hint at some of its possibilities. There isn't a farmer in the land, no matter where he is located, what he raises or what his previous experience has been, but can improve his financial status by employing business methods along with his scientific crop production.

Have a Specialty

The writer spent a goodly number of years as a dairyman near a large city. Wholesale prices being inadequate for his ideals of decent living, a sanitary bottling plant was installed and a wagon route started. We had choice milk: that was the foundation. No use boosting an article without merit. We told people about our specialty. Folks with babies and puny children, sick people and old folks, discriminating judges of milk and others were glad to pay 10 cents a quart for our bottled sunshine and clover, where other milkmen were getting 6 cents.

Advertising Turned the Trick

Another time we had some oats too good for feed and we put a little advertisement into several papers read by farmers. Instead of selling on the open market juggled by those sacred "quotations," we got a dollar a bushel for our virile, cleaned and graded seed oats. We furnished the bags, but the buyer paid the freight.

"Funny" Gate Sign Works Like Magic

A neighbor had a fine crop of onions. He put up a funny sign at the front gate offering them for sale at retail prices; folks came to his door, paid cash, took their purchases away, and were lucky to get such big, mild onions at the usual price.

A cousin living near a small factory town made money selling weanling pigs at $5 apiece. Almost every family in the suburbs wanted a "swate bit of a pig" to bring up by hand in a pen and to eat the table scraps and garden wastes and grow into a 300-pound porker for family use.

I know a dairyman who makes choice butter. He heard of Prof. Metchnikoff (successor to the great Pasteur) and his Bulgarian soured milk that makes you live to be 100. He procured some of the dope and learned to put up this new brand of "buttermilk." It brought fancy prices at drug stores, hotels and residences. What formerly had been fed to hogs at a value of about a cent a gallon was converted by brains and skill into a highly desired article of human food worth 20 to 40 cents a gallon.

Others Have Done It

Most readers are familiar with the significant successes of such advertising farmers as Lovejoy of Berkshire fame; Hill, Scribner and Gillette, the Guernsey, Jersey and Holstein trio at Rosendale, Wis.; Milo C. Jones and his little-pig sausages; ex-Governor Hoard and his prime butter direct to the consumer; Hale and his peaches; the Funk seed corn farms, etc.

Express, freight and parcel post afford opportunities to farmers to build up a profitable trade direct with the consumer. By advertising or personal solicitation a set of customers can be listed who think first of quality and next of price. Each of these will take a weekly hamper of mixed stuff—eggs, dressed poultry, fresh or cured meats, butter, cottage cheese, honey, fruits, vegetables, flowers, mushrooms, etc., all packed according to the needs and whims of the customer. The empty hamper comes back at slight cost. Some farmers use corrugated paper boxes, costing less than 10 cents for the half-bushel size.

No Limit to Farm Family's Activities

There is no limit to what a farmer's family can do in the way of producing something else besides corn, timothy hay and fat stock for the "quotation" market. With imagination and nerve to start it and brains and commercial instinct to keep it going, farming is a most attractive advertising field for the ambitious man or woman who will wed effective advertising to economical production. But before attempting anything of this sort the reader should fix this motto everlastingly in his mind—quality before quantity. Then let 'em know about it.

(?

Hog Cholera---Prevention and Treatment

IX---Should Farmers Be Allowed to Adminsiter Serum and Virus?

Thoroughly wash the skin of the animal where needle is inserted. One man should hold the pig, one do the washing and another the operating. The operator should never catch or hold the pig.

Injecting Serum—Have table on which to place all instruments and serum. Notice that serum containers are covered to keep out dust. Instruments are placed on antiseptic cotton. Bowl on corner of table contains antiseptic solution in which needles are kept.

ONE of the matters that has received the attention of the authorities of our different states who have the matter in charge is the question of who should be allowed to administer serum and virus. There is no question but that the proper administration of the remedy is one of the essential matters in the successful use of these remedies.

Some authorities hold to the idea that almost anyone is capable of administering serum, while others hold that to get the best results a veterinarian should do the work. Careful inquiry into this matter has brought us to the belief and conclusion that anyone, be he a veterinarian or layman, can, without danger, administer serum, and with some training can do the work in a manner from which the best results may be obtained.

Should Understand Administering

We believe, however, that in order properly to do this work the party doing it should have some training along this line. He should be taught the importance of thoroughly cleansing his implements before the operation. Under no circumstances should a syringe or needle be used that is not thoroughly boiled in water for at least ten minutes. In performing the operation sufficient help should always be at hand so that the operator will at no time be compelled to assist in holding the animal to be treated. He should keep his instruments and hands scrupulously clean. Without question, a large per cent of the abscesses coming from the operations are due to the uncleanliness of the operator or his instruments.

The operator should have one vessel in which to keep his instruments, into which he should immediately place the instrument after each operation. Into this vessel must be placed a sufficient quantity of some well known, thorough disinfectant. He should have another vessel with plenty of disinfectant in which he can cleanse his hands after each operation.

Before inserting the needle the skin of the animal should be, and must be, thoroughly cleansed by using a cloth or sponge soaked in some good, reliable disinfectant. Many of our best operators recommend a 3 per cent solution of cresol, as prescribed by the Department of Agriculture for this special purpose.

These are some of the simple, plain rules that should be followed by all operators, whether they be veterinarians or laymen. The owner of the herd is paying for the work and he should insist that all these sanitary measures should be taken by the operator.

Keep Serum Clean

Another important matter is the keeping absolutely clean of the serum. The best way to do this is to place the serum in a sealed fruit jar and give it into the keeping of one particular man. Let him be exceedingly careful to keep the cover tightly on the jar all the time, except when the operator is in the process of taking some of the serum into his needle. Infection was found in a number of hypers used at the Indiana station, and careful investigation as to the cause of this infection revealed the fact that it came from dust getting into the serum in the operating room. We must keep in mind that many abscesses may be formed by the use of serum that contains foreign infections. For that reason extreme care is advised in keeping the container closed as much as possible during the course of the operation.

Danger in Use of Virus

The use of virus is another matter. The party using virus must know or be taught exactly the nature of the stuff he is handling. When you are handling virus you are handling virulent cholera blood, a very small particle of which can start infection in any herd, and if not stopped could practically wipe out the bunch. Some of our states are requiring that before anyone can administer virus he must first be especially instructed in such administration and obtain license from state authorities. We believe this a good plan. Virus can spread hog cholera; therefore the utmost care and precaution must be taken in its administration. We believe that the state live stock sanitary board should require anyone, be he a veterinarian or layman, before administering virus into any hogs in the state, to be especially instructed in the use and administration of this product, and obtain from such authority as the board may see fit to designate a special permit.

It has been fully demonstrated during the last year, in the rush of work occasioned by the great outbreak of cholera, that many of our farmers are as fully equipped to administer virus as our veterinarians. The board, in making rules providing for a permit to use virus; should use care and discretion to give sufficient time for those to obtain this permit or license who have successfully in the past used this product.

Farmers Should Have Permits

The Twentieth Century Farmer in previous articles has urged the necessity of the live stock sanitary board appointing one or more competent hog cholera men to be put into the field to do field work, both in an educational and practical way. We are pleased to state that the Nebraska board has appointed one man for this work, Dr. C. M. Day of South Omaha, and he is now in the field. We believe that Dr. Day and any other man or men whom the board may in the future appoint to do the same kind of work should have power and authority to instruct farmers or others in the use of virus, and, when they are sufficiently acquainted with its administration, to grant them a permit or license to administer. We believe in making it as convenient as possible for those who want this license to get it. At the same time we feel the necessity of special training and instruction in its use. We want to emphasize the fact that we believe that it is as necessary for the veterinarian to have this special training as it is for the farmer.

The question of who shall administer serum and virus is of very great importance, for the reason that, to a great extent, on the proper administration of the product depends the success of the operation.

We believe that some veterinarians do not look upon their vocation in the right light. We regard the veterinary surgeon as a professional man and not a commercial man. Some of our veterinarians seem to hold to the idea that in the treatment of hogs for cholera they are both commercial and professional men.

Profits on Sale of Serum

At the January meeting of the Missouri Valley Veterinary Association, held in Kansas City, the subject, "What is a Just Charge for the Administration of Serum and Virus?" was discussed. The president of the association, in introducing the first speaker on this subject, made

the statement that this was a matter of great importance to the profession and should be given careful consideration. We quite agree with President Stouder in this statement.

Two of the gentlemen on the program discussing this question had opinions not in accord with those of the Twentieth Century Farmer. One of the speakers said that the veterinarian should buy from the manufacturer all the serum he uses, and that he should have a profit of half a cent per c. c. on all the product he administers, this in addition to other regular charges. The other speaker followed the same idea, except he would be satisfied with ¼ cent per c. c. profit.

This paper has no axe to grind with the veterinarians. We fully realize and appreciate their valuable services to the farmers and stockmen of this country. The veterinarian should be liberally paid for services rendered. but when answering a professional call he should not receive, in addition to pay for professional services, a profit on the serum administered. One member of the profession told a representative of this paper that he didn't use state serum for the reason that he couldn't make a profit on it and could make a profit on commercial serum.

At no time since the graduate or professional veterinarian has been generally employed by our farmers and stockmen in the treatment of animal diseases has there been any one thing that has made so much work, consequently so much money, for the practitioner as has the treatment of hogs for cholera.

Farmers Will Pay Just Fees

Let us here sound a note of warning. We believe a large majority of our farmers would prefer paying a good, reliable veterinarian a reasonable fee to treat their hogs, but they will not stand for an over-charge or graft. The farmer has a remedy if he feels that he is being imposed upon. He can do this work himself, and can do it successfully, and he will do it if the veterinarian insists on a profit on the serum in addition to his regular fee for this service.

The veterinarian is the logical man to do this work. If he will take hold of it as a professional man should, he can be of inestimable value to the farmers of this country in this particular work. His sole purpose should be to eliminate the disease. His training and work peculiarly fit him to do this work, but he must not think that because he is so fitted he is the only one who can do it and that his services in this work can't be dispensed with.

We want to say in this connection that a large per cent of veterinarians are not trying to make an added revenue by charging a profit on serum and are giving their very best services to our farmers at a fee that is just and reasonable.

Our only object in taking up these matters as we have is to assist in wiping out hog cholera. If the veterinarians will co-operate with the state authorities and the farmers as they should, they can render no greater service to their clients and the people of the country in general. We hope they will look at this matter as they should and give us this co-operation.

New Hog Cholera Regulations in Nebraska

Live Stock Sanitary Board Adopts Some Important Rules

THE Live Stock Sanitary Board met at Lincoln on May 29. At this meeting were adopted probably the most important rules and regulations pertaining to hog cholera work since the organization of the board. This paper, in several articles heretofore published, has strongly urged the necessity of as nearly as possible standardizing serum plants and also the product. We have urged that the best method of standardizing the plant was to require that all plants doing business should have government licenses. To cover this point the board at this meeting passed the following resolution:

That we prohibit the sale or distribution of anti-hog cholera serum or virus in the state of Nebraska after August 1, 1914, except such serum and virus as has been produced by a person, firm or corporation in possession of an uncancelled United States veterinary license.

In connection with this we wish to state that this regulation was asked for by the serum manufacturers, both those holding government licenses and the ones who do not. This is certainly commendable on their part and shows their willingness to comply with any reasonable regulation and their desire to put upon the market a good article. This means that after August 1 no serum plant will be allowed to manufacture and sell any of its product except those holding an uncancelled license from the government.

All Serum Must Be Tested

This is a long step in the right direction. Under government regulations all serum offered for sale by these plants must be tested, and careful records be kept by the manufacturer showing when the test was made, the number of pigs used, temperatures during the test, etc. The Twentieth Century Farmer has urged the necessity of the testing by government or state officials of all serum offered for sale. We realize that it takes time to get to the ideal, and believe that until the government and state can secure sufficient funds by which they may test this product the holding of a government license by a manufacturer is the best guarantee now available to the farmer that he is buying a good product.

Provision was also made at this meeting by the board for the testing of all serum now on hand by all unlicensed commercial plants and all on hand by the plants holding government licenses which was manufactured prior to the time of obtaining such license. To provide for this the following resolution was passed:

No serum shall be sold after July 1, 1914, in the state of Nebraska except serum made by a person, firm or corporation holding an uncancelled United States veterinary license when such serum is made, or serum that has been tested and found of sufficient potency as provided by the bureau of animal industry, order No. 196. Such test to be under the direction of the Live Stock Sanitary Board, such test to be made at the expense of the producers, except the expense of the official designated by such board to make such tests. All containers in which such serum is sold shall bear label showing that it has been tested and passed in accordance with this order.

This means that the buyer of serum hereafter in Nebraska will buy nothing but tested serum. All serum sold will be tested, whether by the state or by the manufacturer, under government regulations.

Nebraska in Front Rank

Without question, the potency of serum is the most important factor in the fight against hog cholera where serum is used. Nebraska, by this action of the Live Stock Sanitary Board, is certainly placed in the front rank as regards protection to the buyers of this product. Thousands of dollars were lost last year by our farmers or hog raisers on account of the poor quality of serum being sent out to protect their hogs and which gave no protection whatever. This loss, we believe, will be reduced to a minimum under the regulations we now have.

Let us again, however, urge upon our farmers the necessity of taking strict sanitary measures. If your herd becomes infected, let us urge the necessity of having good, clean quarters in which to confine your hogs both before and after vaccination. This means not to expect the serum and party who administers it to do it all. You have your work to do, which is without question the most important.

For the first time since the country has been settled, hog cholera has broken out in different parts of the North Platte valley irrigated country. Our officials, however, were apprised and are taking prompt action. Careful inquiry has been made as to the source of the trouble, and it has been found without question that the disease was brought into the country by the importation of hogs from other parts of the state. To guard against this, the government has placed a quarantine in Scott's Bluff, Banner, Morrill, Box Butte and the south half of Sioux counties. No hogs will be allowed to be shipped into this territory that are not accompanied by a certificate showing the hogs to be immune, or to be used for immediate slaughter. In addition to this, hogs shipped into this territory must not be loaded into the cars from any public stock yard, but must be loaded either from the wagons or a private chute, and must be unloaded at the destination in the same manner.

Farmers Are Assisting Board

The farmers are thoroughly alive to this question. Three meetings were held in different parts of this district on Friday and Saturday, June 5 and 6. These meetings were attended and addressed by Dr. L. C. Kigin, state veterinarian; Dr. C. M. Day, field veterinarian, and Dr. J. H. Gain, chief veterinarian of the Agricultural College of Nebraska. These gentlemen have told the farmers what is best to be done under the circumstances, and we look for some very efficient work in hog cholera control in this district. After going over the ground thoroughly, these officials are strongly of the belief that with the co-operation of the farmers they will be successful in confining the disease practically to the herds now affected and in a short time stamping it out entirely in this valley. In this district the officials are going to attempt to stamp out the disease by using strict sanitary and quarantine rules and regulations and the use of serum alone. No virus will be used in any herds in the district. This is going to be a very interesting, very important experiment, and it will pay all farmers and hog raisers to watch the outcome, and, if it is successful, get all the details possible, which will be fully given by this paper.

Action was also taken at this meeting of the board to quarantine Johnson and the northern half of Gage counties in the southern part of the state in connection with the government in its work of eliminating the disease from this locality. Dr. J. C. Bowman of Tecumseh has been appointed as a veterinary inspector to work in conjunction with Dr. Cosford, government official in this district, giving his whole time to the work.

Stock Yard Infection

Another very important regulation in connection with hog cholera control was adopted by the board as follows:

It is hereby made a state regulation that all public and private stock yards in the state of Nebraska are considered infected with cholera. Removal of hogs from these yards is prohibited, except for shipment to market or for immediate slaughter.

There can be no doubt but that all public

(CONTINUED ON PAGE EIGHTEEN)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

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Chicago, 901 Hearst Bldg., H. W. King, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
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ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100 000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

The American Galloway Breeders' Association has put out a little booklet in regard to this breed of cattle. This bulletin contains a short history of the breed and is to be followed by others giving information of value to those interested in these cattle. There is a growing demand for Galloways throughout this section and the activity of this association will no doubt increase this demand.

In looking through the interesting little booklet, "About Jersey Cattle," which has recently been published by the American Jersey Cattle Club, we note that Nebraska is well represented. The booklet, as its name indicates, gives a number of interesting facts about the Jersey, and it is also well illustrated with beautiful scenes from the finest Jersey farms in the country. There are none more beautiful than three views of the Wineland farm at Lincoln, Neb. H. C. Young, proprietor of this farm, is to be congratulated at the showing he makes among the best Jersey breeders of America.

A compost heap should be established on the farm where there is no definite disposition made of the manures and waste from the barns, stables, sheds, feed lots and places of confining the stock through the feeding season. The practice of hauling out in the manure spreader and distributing this waste as produced through the winter is practiced to some extent. The old eastern style of having cement basins near by where these wastes may be dumped to rot and later hauled out on the crops or fields as sown, might be practiced to good advantage.

New Serum Regulations

The regulations passed by the Nebraska Live Stock Sanitary Board at its last meeting, held May 29, are far-reaching and of very great importance to the hog growers of the country, particularly to the hog grower who buys his serum from the manufacturer doing business in Nebraska who has not yet obtained a government license or from a plant in any state which holds a government license if the serum was made before the plant obtained the license.

After August 1 no plant will be allowed to distribute any serum or virus except the plant has a government license.

After July 1 no serum will be allowed to be sold in Nebraska except serum that has been tested under the direction of the Live Stock Sanitary Board or serum made by a plant after obtaining a government license. The government requires plants holding government licenses to test all serum before sending out.

The Twentieth Century Farmer has been insistent that all serum sold should be tested, and we wish to congratulate the Live Stock Sanitary Board on giving the hog raiser this protection. It has shown that it intends to protect the hog raiser from the man who would sell him a poor product. We know the farmers will appreciate this action and will feel that in the future they can look with confidence to this board for necessary protection and assistance.

This action of the board places Nebraska in the front rank as far as regulation of serum plants and the testing of their products are concerned. Let all other states take the matter up at once and see to it that no serum is offered for sale except it has first been tested.

Critical Period with Young

The period of greatest importance in the life of all young things on the farm is the first six months. A little extra attention now will save what proves later to be the basis of prosperity and profit in the live stock operations. It is a small thing, apparently, to lose a pig, a lamb, a calf, a colt, but what has it cost? In most instances a year's breeding effort for the particular animal is lost. This feature of loss is often not measured with the degree of seriousness that it deserves.

The producing animals are not at fault usually, though there are vicious dispositions occasionally that are responsible. In such cases the breeding of these animals should be discontinued. Attention, care and proper feeding is the keynote to breeding success ninety-nine times out of a hundred. The quiet, skillful handler of the breeding animals should be able to detect irregularities in the habits and dispositions of the various animals under his care and provide for these accordingly.

There must be some stimulus in the mind or imagination of the caretaker of the young as to their possible or future value in order to prompt activity and energy in looking after the safety and growth of the young things. The feeder who places a mature value on each of his charges as it comes into the world and as it each day develops soon acquires pride in care that means success in stock growing.

The nursing period with all young things is the period of greatest danger. Infantile diseases and little irregularities that influence toward disease prevail to a greater or less extent and prove fatal among the animals just as naturally as with the human family, and nothing but the most exacting care and skillful attention will serve to ward them off. Every caretaker of this division of the farm stock must feel his responsibility and exert his best efforts to provide accommodations that will tend to health, growth and quick development of the young things in his charge. The first six months of the farm animals' existence carries them practically over the danger period.

Cow Testing Contest

The children of southern Iowa are engaged in a dairy contest. The cows of the home herd are being tested, accurate and careful records being turned in on sheets prepared, showing amount and kind of feed, pounds of milk given and butter-fat content of milk. These tests are held under management of the Iowa State Dairy Association, and will be of great value to these future milch cow owners in teaching them to judge the value of the cows in their herds. The fact that 172 boys and girls have entered the contests shows that great interest is being taken in this work. The following score card is being used to grade the contestants:

Accuracy (all calculations concise and correct)	25
Number of cows (the larger the number of records kept the more credit will be given)...	15
Neatness (manner in which reports are made)	20
Completeness of details (based upon details of recording feeds, conditions of cows, etc.)....	20
Essay	20
Perfect score	100

The breeders of dairy cattle and dairy supply houses have assisted the association by offering prizes to the winners of the contest. The three highest contestants will receive their choice of a pure-bred Guernsey, Holstein or Jersey bull calf. The other prizes offered are cream separators, Babcock testers, milk scales, dairy publications and a number of cash offerings.

The Spirited Horse

The spirited horse is the natural horse, and the natural horse is the serviceable horse, and the serviceable horse is the horse that pays his way on the farm or wherever he is kept. The killing of the spirit of the horse by abuse, cruel, hard treatment and starvation does not pay in any sense. Making young horses old by killing the spirit is quite common; this is one of the ways of training the colt. It is called "breaking the colt" by some horse handlers.

The colt is to be the old horse, a team horse for heavy work, a driving horse, a saddle horse or the horse of all purposes. It matters not what place he takes in servitude, it is very necessary that he be trustworthy, ambitious and capable of performing his part satisfactorily. This he cannot do if his colt life has been such as to kill the spirit of the animal.

The beauty, style and ambitious bearing of the horse determines his value in the eye of most buyers. It is generally the well trained, active horse that attracts attention. Few buyers are looking for a listless, stupid horse. The family horse is no longer prized on account of his slow, stupid, listless indifference to what is going on around him. A horse may be gentle, not easily frightened, not silly and foolish about things that he sees around him, and yet be wide awake, alert, quick to move and have an intelligent, dignified bearing and carriage that pleases the eye of the horse fancier.

It is the intelligence of the horse and the result of intelligent horsemanship in handling the colt in breaking that makes the safe, ambitious, spirited animal. The well bred, well kept, well trained horse is said to be the brightest type of domestic animals.

The Peach Crop

The general reports are that the peach crop is below normal conditions of yield. While this is possibly true, there will be peaches on the market and in quantities to satisfy the very anxious demand. It is possible that prices may be a little stronger in the city markets than usual. Higher prices will have a tendency to turn consumers to look a little more to other varieties of fruits, which now indicate a full supply from most all fruit-growing districts.

The improved facilities for getting the fruits into market in good condition and the better system of distribution introduced by the organization of associations looking toward these features of protection to the consuming public will have much to do in the economic distribution and saving of the fruit supply. The knowledge of when and how to pick, how to pack and prompt shipment has proven a great saving for both grower and consumer. The berry crops form a very large part in the fruit trade and are the most difficult to get safely landed into the possession of the consumer.

First Cutting of Alfalfa

The first cutting of alfalfa throughout the Missouri valley district is harvested. It usually commences the last week of May and continues for two to three weeks, covering the various parts of the state. Some sections secure four cuttings and in these districts the early start of the plant in the spring and later growth in the fall enables the crop to afford four cuttings; in fact, the fifth cutting has frequently been harvested on the eastern side of Nebraska and Kansas, but this only occurs under very favorable seasons for growth and where no time is lost after the maturing of the crop, cutting each crop as soon as it shows evidences of bloom, thus losing no time by letting the crop stand on the ground.

The importance of early cutting with the first crop is being appreciated more now than formerly, since this crop inclines to a rank, large growth of stem, and if allowed to reach full bloom or half bloom does not make nearly so good a quality of hay as if cut just as soon as ready to bloom or shows but slight evidence of bloom; in fact, the tendency is to earlier cutting throughout the season. The first is usually the big crop and encounters all kinds of spring irregularities of showery weather.

The present first crop of alfalfa all over Nebraska and Kansas will probably be the big crop in the history of alfalfa growing. A ton and a half and two tons per acre is reported as guess estimates on many of the big alfalfa farms. The present spring sowing is also reported as showing a remarkable stand.

Who is Making Money?

The importance of a good foundation is found in every walk of life, in every line of industry; it is the basis of success everywhere. Who ever heard of scrub hogs, scrub cattle or scrub stock of any kind making their owners money, especially when grown on high-priced feed such as prevails all over the country at the present time? The farmer and producer must first understand that the beginning principle for success in all lines of work is a solid foundation upon which improvement and progress may be attained. A low grade of production has practically no demand and is always produced at a loss to the grower or producer.

In the line of live stock this is possibly more pronounced than in most other industries. The scrub breeder or producer has a hard time finding a market, and even then represents no standard of production that will give a uniform grading or price. The tendency is to get away from scrub influences, to breed better animals, to feed better in order to secure increased quality. There is a steady, persistent, upward tendency, because feed and keeping of animals are expensive, and it does not pay to feed high-priced provender into low-priced stock.

It is only necessary to look around and see what your neighbors are doing. Who is making money, the man who is careless enough to keep scrub stock or the man who is at the front in the introduction of the best the country can produce? A good foundation in live stock is the best investment any man ever made in entering the land operating and crop producing industry. It will pay to take a little time and look around before investing in the foundation flock or herd.

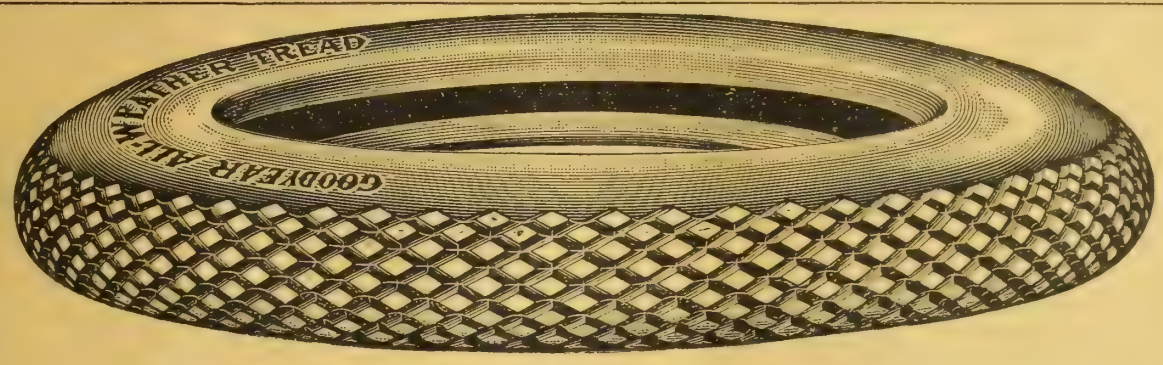
There has never been a period in the history of this country when greater results have been achieved in the improvement of live stock breeding than now. The tendency all over the country is for better breeding stock. Price does not generally stand in the way in the purchase of sires. It is quality now more than limit of price against which the buyer is matching his judgment.

Kind Word for the Crow

It is generally conceded that all things were created for a purpose and that there is wisdom in all creation. This general principle has been attacked in bird criticism by an attempt to set the crow out as a mistake, a grievous nuisance, one of nature's blunders. But this is refuted by some scientific authority and backed up by some practical, observing farmers, who have discovered that the crow is not bent on the destruction of the corn crop when it pulls up a few of the fresh, green plants, but is after the cutworm that is located at the root or just below the surface, and that the cornfield attraction for the crow and blackbird is only their instinctive nature to locate the worms and that after all they are conservers of farm crop interests when properly understood.

The crow as a carrier of hog cholera germs can become a great menace if the carcasses of hogs dying of this disease are left where he can get them. Burning and destroying the carcasses of dead animals is the remedy for this evil and not the shooting of crows.

The motto should be on every farm, "Permit no waste of feed." If all farmers would observe this as a rule, there could be many more head of stock wintered, more stock fed for the market and more money made at practically the same expense of operation. The theory of conservation of feed should be studied and practical methods applied in harvesting and saving in the best form.



Tire Prices That We Call Unjust

Let men, if they will, claim a tire as good as the Goodyear No-Rim-Cut tire. But don't let men claim a better tire to charge you a higher price.

Bear in mind that Goodyear tires hold top place in Tiredom. They outsell any other. After millions of tests, men are adopting them faster than ever. Our this year's sales break every record, by 55 per cent.

And these tires offer four great features found in no other tire. Compel the men who ask higher prices to show some reason for them.

From $5 to $15 More

Sixteen makes of tires now sell above the Goodyear prices. The price per tire will often run from $5 to $15 more.

The reason lies in our mammoth output, our factory efficiency, our modest profit. It results from Goodyear popularity. Those extra prices, we can prove to you, are utterly unjust.

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AKRON, OHIO
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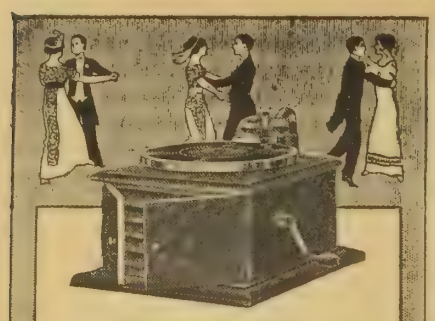

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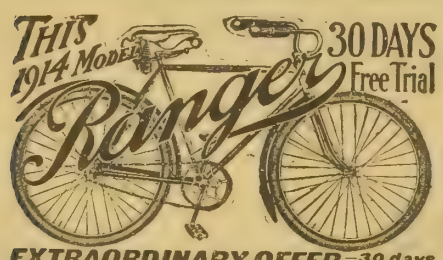

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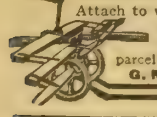

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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Clovers

The clovers have no time to play;
They feed the cows, and make the hay,

And trim the lawns, and help the bees,
Until the sun sinks through the trees.

And then they lay aside their cares,
And fold their hands to say their prayers,

And drop their tired little heads,
And go to sleep in clover beds.

Then when the day dawns clear and blue
They awake and wash their hands in dew;

And as the sun climbs up the sky,
They hold them up and let them dry;

And then to work the whole long day;
For clovers have no time to play.
—Helen Leeming Jelliffe.

Where Mosquitoes Come From

Rose and Harry were sitting on the porch after supper, enjoying a visit with their Uncle Jack. The two collies lay sleeping beside them, tired with the long day's work and play that had just been finished by bringing in the sheep and cattle. The shrill song of the mosquitoes was the only disturbing influence in an otherwise peaceful and happy evening.

"I wish all the mosquitoes were dead," said Rose, slapping her cheek vigorously. "What are they good for, Uncle Jack?"

"I'm sure I don't know," replied he. "I never heard of their doing any good deeds, and they do a lot of bad ones."

"What makes them so thick tonight?" asked Harry.

"It must have been the heavy rains the last two or three weeks," answered their uncle. "They left pools in the orchard and fields that have not dried yet."

"What have pools got to do with mosquitoes?" asked Rose. "I should think the rain would drown them."

"Ho, you can't drown a mosquito," jeered Harry.

"Yes, you can, too," said Uncle Jack, "if you go about it right. When these little pests aren't busy feeding on us they are laying eggs, and they lay them in the water; that is what the rain has to do with it, for pools of standing water are necessary to hatch the eggs. They die if the pools dry up. The mosquito lays from 200 to 400 of these eggs at once, and they form a little raft that floats on the surface. After about a day and a half these eggs hatch out and from them come little wigglers."

"Worms?" asked Rose.

"No, they are more like tadpoles, only much smaller. They can't live out of water, but they can't breathe under water either. Each one has a little tube on the side of its body that sticks above the surface and through this it breathes the air. When alarmed they sink, but they have to come up soon for air. They have little hair-like things about about their mouths with which they sweep in the food particles. If you put common coal oil on the water where the wigglers are it spreads over the surface in a thin film and gets into the breathing tubes of the wigglers and chokes them so they drown. After about nine days, during which they change their shape from time to time like a tadpole, they come out of the water as full-grown mosquitoes and go in search of food. They will eat plant juice, but they prefer human blood to anything else."

"Doesn't any animal eat them?" asked Harry.

"When they are wigglers the fish consider them tempting morsels and eat thousands of them," answered Uncle Jack.

"Come, children," called their mother; "it is time to go to bed now."

"Oh, dear," said Rose, as she obediently kissed her uncle goodnight and followed her brother into the house, "there were such lots more questions I wanted to ask."

HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

Awards in Picture Contest No. 13

Again there were over 100 verses submitted in the picture contest. Of these there was an unusually large proportion of good ones. You want to be careful about following directions. One of the best verses this month was that of Ethel Mae Minor, given below. We regret that she did not give her age, as this is one rule that must be followed to permit of winning the prize. Most of you do follow the rules carefully, and write neatly and carefully. It is quite wonderful how you have improved in these particulars since the picture contests began.

(First Prize)

Amy Walker, Aged 10, Ord, Neb.

Two little mischiefs up on a chair;
Now, do you s'pose their mother will care?
For they're helping themselves to the jellies and jams,
And, oh, won't they be sticky, the dear little lambs?

(Second Prize)

Mae Schmitt, Aged 8, Mound City, Mo.

Jamie said to Jack,
"I can the loudest smack."
Then the crock went crack,
And mamma will go whack!

Mary McDermott, Aged 10, Holstein, Ia.

Jam and jell are both so high,
We can get them if we try.
Take care, Teddy, do not fall;
If you do, we'll spill it all.

Ethel Mae Minor, Halstead, Kan.

We cannot stand on etiquette
With strawberry jam so rare,
And so, in haste to get a taste,
We're standing on a chair.

Marie Bauman, Aged 12, Atkinson, Neb.

Joe and Dick stood on a chair,
Both trying to get some jam or pears.
Says Joe to Dick, "O, do be quick,
For here comes ma with a great, big stick!"

Marjorie Stephenson, Aged 7, Fairfield, Neb.

Which shall it be? Which shall it be?
I looked at Bud; Bud looked at me.
Of this good jam let's have a taste,
Then make our getaway in haste.

Florence Busby, Aged 9, Maryville, Mo.

Two little children before the shelves.
What are they doing, the little elves?
I s'pose they're hunting the chocolate cake
Their mamma promised them she would make.

Louise Feil, Aged 9, Riverton, Ia.

Here are Ned and Frank stealing mamma's jam;
They slip into the pantry every time they can.
Mamma slips up softly, gives the door a slam;
Two sweet little mousies caught while stealing jam.

(Prize Story)

Dog or Money?

By Myrtle Wolery, Aged 13, Whiting, Ia.

It happened just before the big state fair, and I came very near taking the money. But I will tell you the story so you will know what I mean.

The summer that I was 12 mamma gave me a little colt for my birthday, and all that summer papa had been wanting to buy it. Of course, I couldn't sell, and when it was most my birthday again, and just before the fair, I counted my money and found I had only $3 to spend during the fair. I asked papa for more, but he winked at mamma and said: "No, Virgil, I won't give you any money, but I will give you a pretty little puppy for that colt of yours." I said: "I guess not." And that settled it until the day before the fair; then I told papa he could have the colt if he would give me $2 and the puppy. He said, "All right," and that night he gave me $8 and a white bulldog puppy. I named him Cupid at once, and he and I had many a good frolic.

One evening, a long time after, while I was out playing with him, mamma gave me $20 to take to a man that owned our house and lived about four miles away. "Now, it

looks as if it might storm, Virgil," mamma said, "but you take the pony and don't stay, and I think you will be home before it comes."

I saddled up my pony and started out, but the storm came suddenly when I was about half way over there. I jumped off Sailor and ran into a cave I had dug when I was herding. It was dark and I struck a match and lighted an old lamp mamma had given me and took up "Frank on the Prairie" to read, and was having a fine time, when I heard voices, and two dirty men came in. Gee, it makes my hair rise yet!

"Hello," I said.

"Hello," answered one.

"Pretty rainy," I said, trying to appear careless.

"Yes," said one. "Say, sonny, just hand over that $20."

"What $20?" I asked faintly.

"Come, now. We saw your ma give you $20. We were in the yard."

Well, I'm not ashamed to say I was afraid, but I tried to put up a bold front. After a little while they got tired of asking and one of them hit me on the head. I hit him back, but the other man came up behind me and kicked me. I don't know whether they would have killed me or not, but suddenly I heard a bark, and in sprang Cupid, and I jumped up and shouted and told him to go for them. Before long papa came in. He had been looking for me, and Cupid and I made so much noise he found me.

I still have that $20 bill to remember the time by, and if you kids were to ask me which I would take, the dog or the money, I'd answer sudden, "The dog!"

Note—As Myrtle Wolery was the winner of the prize in the issue of January 10 last, this makes her a member of the honor department. She can no longer compete for the prize, but whenever she wishes to send in a story we are glad to have her do so, and if we consider it as good as the prize story we will print it as soon as we have room and send her a book. We do this so that you may all have a chance at winning the prizes. The other members of the honor department now are Orrie Campbell, Hubbard, Neb.; Bertha E. Hayes, Fayetteville, Ark., and

(CONTINUED ON PAGE SIXTEEN)

ROSY AND PLUMP
Good Health from Right Food

"It's not a new food to me," remarked a Va. man, in speaking of Grape-Nuts.

"About twelve months ago my wife was in very bad health, could not keep anything on her stomach. The doctor recommended milk, half water, but it was not sufficiently nourishing.

"A friend of mine told me one day to try Grape-Nuts and cream. The result was really marvelous. My wife soon regained her usual strength and today is as rosy and plump as when a girl of 16.

"These are plain facts and nothing I could say in praise of Grape-Nuts would exaggerate in the least the value of this great food."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Styles for Home Dressmaker

All Patterns on This Page Ten Cents Each

Description of Patterns

6700—Ladies' Corset Cover—This garment offers a distinct novelty. It has no other opening than the rounded neck, and it is to be slipped on over the head. It extends a little below the waistline, where it is gathered. The pattern 6700 is cut in sizes 34 to 44 inches bust measure. Medium size requires 1¼ yards of 36-inch material, 1⅜ yards of beading and 5¼ yards of ribbon.

6708—Ladies' Skirt—This is a handsome, practical two-piece model, which has a three-piece yoke, and is trimmed where the two parts join with a graduated ruffle. In the back is a box plait and the closing line of the upper part of the skirt is nearer the center than that of the lower part. The pattern 6708 is cut in sizes 22 to 32 inches waist measure. Medium size requires 3⅜ yards of 44-inch material.

5848—Ladies' Shirt-Waist — This shirtwaist is made in simulated sailor fashion, with an attractive collar and a handkerchief pocket for completion. It can be made with high or low neck and has the set in sleeves. Silk, pongee, linen or madras can be used for this waist. The pattern 5848 is cut in sizes 32 to 42 inches bust measure. Medium size requires 2⅛ yards of 36-inch material and ½ yard of 27-inch contrasting goods.

5903—Ladies' Dress—Serge, cheviot or linen can be used to make this dress. The dress closes at the front and is made with short sleeves and a sailor collar. The skirt is cut in three pieces. The pattern 5903 is cut in sizes 32 to 42 inches bust measure. Medium size requires 3⅝ yards of 44-inch material.

5822—Girls' Dress—Somewhat in the order of the sailor suit is this pretty frock. The loose blouse opens over a removable shield and the closing is in the center of the front. The skirt is plaited all around and also opens in the front. The pattern 5822 is cut in sizes 6 to 12 years. Medium size requires 2⅝ yards of 44-inch material.

5947—Boys' Russian Suit — Linen or serge can be used to make this suit, with the collar, cuffs and belt of contrasting material. The blouse of the suit closes at the front in Duchess style. The trousers can be finished with legbands or elastics. The pattern 5947 is cut in sizes 2, 4 and 6 years. Age 4 years requires 1⅞ yards of 50-inch material and ⅜ yard of 27-inch contrasting goods.

5960—Ladies' Apron—Linen, gingham or percale can be used to make this apron. The apron covers the entire dress and closes at the back. It can be made with or without the sleeves. The pattern provides for a dust cap. The pattern 5960 is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size requires 5 yards of 36-inch material and ¾ yard of 27-inch contrasting goods.

5838—Boys' Knickerbockers—Broadcloth or serge can be used for these knickerbockers. The garment can be made with or without a fly and can be finished with either legbands or elastics. The pattern 5838 is cut in sizes 4 to 14 years. Age 8 years requires 1⅞ yards of 36-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

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Of Interest to Our Women Readers

The Day's Work

When you have sought your rest at night,
And look back on the busy day,
Has all your work been true and right,
And honorable in every way?
Has sorrow entered any heart
Because of aught you may have said?
Or have you bravely done a part
Which left no bitter tears to shed?

If, when the day of toil is o'er,
Some heart is filled with grief and woe,
And stands accusing at your door,
And whispers, "You have made it so,"
You will not have the conscience clean
Of him who kneels at night in prayer,
Contented, that the day has seen
Some burdened soul relieved of care.

Can you go home at even's hush
Delighted with successes won,
Or is there aught which brings the blush
Of shame because of what you've done?
Is there a peace, a joy, a rest,
That satisfies you through the night,
Or does regret tug at your breast
Because you failed in doing right?

When you are silent and alone
As eventide makes shadows deep,
Are there some deeds you would atone
Which come to harass you in sleep?
Or is your conscience calm and clear
That you have helped relieve distress
With just a little word of cheer
Or some small deed of kindliness?
—Selected.

Our Home Chat

The mother and her little 4-year-old daughter were waiting at the station for a train; perhaps father was coming home or auntie was coming for a visit. At any rate, they were evidently waiting for the arrival of someone, as they had no baggage. The train was a little late and the child became impatient, running about the platform. Finally she began to climb on the iron gates that kept the public from the tracks and beside which a colored gateman was standing. "Don't do that, Elizabeth," called the mother; "that man will bite your nose off." "Aw, he will not," answered the child, still climbing, but she watched the gateman, who smiled down in a kindly way, and the minute he made a move toward the gate she slipped down and ran swiftly to her mother. It was evident that she did not implicitly believe her mother, but she thought it might be true and was afraid of the gateman.

That mother had failed to accomplish her immediate purpose and she had injured the child in two ways by her foolish threat—she had taught her little daughter that mother did not consider it wrong to lie and she had inspired fear of and distrust for a kind and faithful public guardian, whose only duty was to keep foolish children and grown people from getting hurt. People are constantly lying to children, and then wondering why it seems so impossible to teach the children not to fib. Much harm is also done by threatening that policemen, constables, porters or other public officials will hurt bad children. Haven't you all seen little children cringe and cry at the approach of a uniformed officer? These public officials are placed in their positions for the protection of the public. How can they help the children if the children are taught to fear and avoid them?

A little boy, left by his mother for a few minutes with a friend in a city office, was introduced to a big, good-natured man, whom he seemed to like until he was told that this man was the chief of police; then he threw himself screaming into the arms of his mother's friend and begged her to take him away quick and not let the policeman hurt him, and he was positively unmanageable until the policeman left the room. "Poor kid," the man said afterward. "I wish people could know how hard it makes it for us sometimes when their children are lost and we find them; so many of them have been taught that we eat babies that they are scared stiff if we speak to them."

HOME EDITOR.

The Right Attitude

That the woman on the farm has much to do there is no denying. Her life is one of toil, for there are multitudinous duties on every hand and she is often wearied both mentally and bodily. But labor is sweet for those we love and compensations many. If we are living lives of drudgery, we ourselves are to blame, for we have carelessly, unthinkingly allowed ourselves to drift into that condition. When we find we are growing despondent, ailing in body and sick at heart, it is time to call a halt; there is something out of gear.

Let us sit down in the nearest rocker and try to study it out. What if the work is piling sky high; it can wait. We are not slaves. Instead of allowing ourselves to be goaded on, through a misconstrued sense of duty and pride, until we are ready to drop, let us assert a little independence and rest while we try to find a way out of the rut. Let us begin by taking an inventory of the tasks on hand, dividing them into two classes—the essentials and the nonessentials. In this every woman must be her own judge.

In addition to the regular routine duties there may be baking, ironing and mopping scheduled for the day. Bread we must have; it is one of the essentials. Pies we can do without. Now for the basket of clothes. If we sort them well the nonessential pile will be far higher than the other. If the floor is "simply awful" we may feel we are justified in calling the mopping essential, but if by doing it we are cheating ourselves out of a needed half hour for the personal toilet or the afternoon nap, we can usually refrain.

I simply detest lying down in the daytime. I must have inherited it from my grandmother, who, though she lived to be 90, never took a daytime nap. But I have found it pays sometimes to smother my feelings and lie down to give the tired muscles a chance to relax.

Talk about labor-saving devices! The greatest labor-saving device on the market cannot equal economy of work, once the sensible woman determines on it. Short cuts which give satisfactory results are always permissible. Unnecessary tasks may be dispensed with and co-operation employed in the doing of the others. You may be the only woman in the home, but there are other individuals—children, boys or men. Why should the woman do it all? Simply because she wills to do it. Tact can drill many hands into service. There is no need to make the children help; just let them. Even the tiny little tots delight in "helping mamma." "Let me;" "Can't I help, too?" they say. Bless the babies! Don't repulse them, though they are a bother at first; they will learn. Avoid saying, "You are too little," or "You can't do that," or by and by they will become so used to that idea that they will imagine every task too hard and be handicapped for life. Little folks can save many steps if their minds are rightly directed.

If there are no girls old enough to be utilized as mother's helpers, boys make splendid substitutes. My high school boy can sweep, dust and make beds as well as I; he can even cook in an emergency. Last summer, when there were hands to cook for, he would leave the field half an hour in advance of the other fellows and come in and help dish up dinner or do whatever there was to do. You know, one often gets hurried and warm just toward the last of getting a meal. I know a number of boys and a man or two in this vicinity who help out in time of need. When my boy stayed with a friend one stormy night he told me afterward: "Guy helped get breakfast, mamma, and Sam washed the dishes."

My boy had often wanted to run the sewing machine, but I would not let him, until one day an old lady was telling what her boys used to do on rainy days. "I let them hem tea towels, run up seams in sheets and such things," she said.

"Why, Ray is always wanting to sew," I told her, "but I was afraid he would break the machine."

"Let him," she said. "He's not apt to break anything unless it might be a needle right at first. My boys used to mend their overalls on the machine; I showed them how—just rip up the inner seam of the leg and stitch on a patch and then sew it up again. It saved me a lot of work. Boys like to be doing things. This is not a chance to let slip; besides, it gives one a splendid chance to get on an equal footing with them and be chummy."

I have in mind a mother of eight children; the two eldest are girls of 14 and 15. This family lives on a farm, and owing to the fact that its means are very limited, its labor-saving devices are few. But the children all know how to work and have good times doing it; whether it be the usual work, the sewing or the putting up of fruit, it is always "we" over there and not "I" that did it. The girls are proud of their accomplishments and glad to have a part in the homemaking.

Do you catch the vision, sisters mine?

Kansas. MRS. C. K. T.

Sandwiches

Cheese—Pound, with half its amount of butter; season with prepared mustard. If dry moisten with a little tarragon vinegar. Spread between buttered slices of either white or brown bread.

Green Peppers—Use green sweet peppers; remove all seeds; add equal amount of olives, with pits taken out. Chop fine and mix to a paste with any good salad dressing.

Chocolate—Melt two squares of chocolate; add one cup of sugar, one-fourth cup of cream and one-half cup of chopped almonds. Cook over hot water for a few minutes and partly cool before spreading. Use buttered slices of white bread.

Chicken or Ham — Chop fine enough cold meat to make one cup; add a stalk of celery and a hard-boiled egg, minced fine. Season to taste and blend with your favorite salad dressing. MRS. GILBERT.

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

THE large-cropped fowl is usually considered the fowl that lays a large number of eggs. The larger the crop the more feed she can take in and assimilate. It is said that dairymen favor the cow with the large stomach, declaring you seldom find this kind giving a scanty milk flow.

***

Caponizing pays best on the farm. The young cockerels of all large breeds, from the Rocks and others of their size on up, are the kind that give best profit as a capon. Some of the crosses make monster capons. The Plymouth Rock and Brahma make a fine cross for the capon market. On the farm the capon is practically little expense and there is so much room for him. It is often a question what to do with the cockerels. There are more than you care to eat, and the price soon declines toward fall, and with so many chasing around they fight and run off their flesh. Not so the capon.

***

If the young turkeys, or poults, most people speak of them, begin to droop and die, and before death show up with a yellow, watery discharge, the first thing to be done is to change the ration entirely, as it might merely be indigestion. Then, for fear that it isn't, separate the sick from the well, and open one of the dead poults. If you find the liver badly spotted, and the blind intestines (the two short ones) decidedly showing inflammation, then the matter is serious and the poults have the blackhead, and recovery is doubtful. However, one can but try. Get the as yet well to themselves, feed light bread and milk, in which is a good sprinkling of pepper for each meal. Give each poult a half teaspoonful of castor oil in which is placed four or five drops of turpentine. Each day after, don't miss the dosage of turpentine once a day—from two drops to five or six for the younger poults. This dosage is for the well. As for the sick, it would not hurt to try it, though once sick with this it usually means death.

***

The sitting hen takes on a fever; she is much warmer then than when laying or at other times. The febrile symptoms continue three weeks, lowering and rising. The first few days after these symptoms set in the hen does not care to eat, but clings close to her nest; yet she does not perceptibly lose flesh. After this abstinence from food she gets hungry and should be well fed when she comes off the nest. After the chicks are hatched she may eat greedily when first set off, after which she is too anxious that her babies get enough to think about food for herself. It is said that the very lean hen will not sit, and if she does she shows no brooding fever and remains on the nest but a short time. Fat hens are the best brooders. This may account for many flocks becoming such persistent sitters, while other flocks, though of the same kind, are too poorly fed to get the sitting fever. It is known that hens can be made so fat they refuse to lay, and yet such hens, without the laying of an egg, will go to brooding. But this does not say that fat hens will not lay, for they require plenty of fat to lay well. Man himself has trained the sitting instinct out of certain breeds by forcing them to lay many eggs and breaking up their broodiness; in fact, the primitive hen laid very few eggs, and then just in the spring, one clutch, which she raised in part; another later, which, maybe, she raised.

***

Where fowls have rough scales on their legs give the legs and feet to the extreme end of the toes a good rubbing in with coal oil, but don't make them bleed. After this rubbing in then rub next day with vaseline, and keep this up every day until you find the scales showing up smoothly in place and as clear in color as they should be.

***

Like begets like, is the rule, and when you get birds from good, strong stock you expect the birds to grow to be like their parents. This the large majority should and will do if you care for them aright, but how often the chicks that hatched out so big and strong, under bad weather conditions, poor housing, lack of exercise or even too much in chilly or wet weather, vermin, too little, too much or not the right kind of feed, lose all the early vigor and do no credit to the parent stock or their start at all. Almost any reliable breeder has seen his good stock make just such poor growth, bad color and under size in a flock grown in yards cared for in this careless manner, and more than one has refused to sell his good stock to such people. It is no credit to his breeding stock and an eyesore to know that the stock he has taken such care to make good is abused in this manner.

***

When feeding young chickens, if any show up with a clogging of the intestines at their opening, you may be nearly sure that indigestion is the sole cause of the trouble and especially if the chick emit a strange quivering cry at intervals. Such chicks can usually be saved by removing the clogged stuff, greasing the flesh under and giving it a few drops of castor oil. Then look to what you are feeding to cause this condition. See that plenty of grit is at hand for them.

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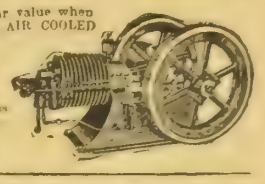

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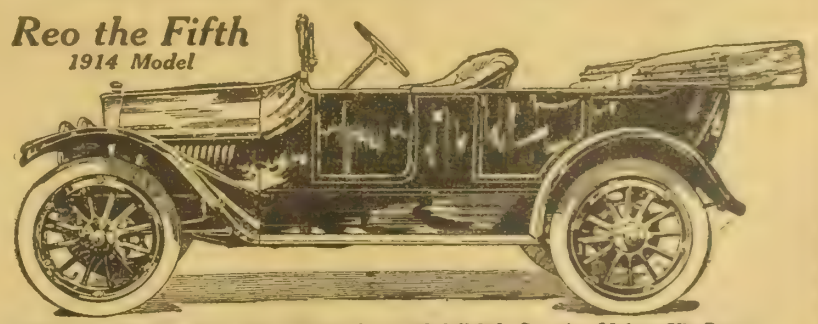

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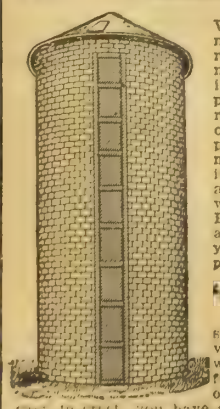

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Buried Treasures in the High Andes

By Frank G. Carpenter

URCOS, Peru, June 7.—Have you ever heard of Urcos? It is a little mud town on the railroad between Cuzco and Lake Titicaca. It is more than two miles above the sea, high up in the Andes and not far from Lake Urcos, in which are said to be buried treasures of the Incas worth many millions. When the Spaniards under Pizarro had killed the Inca king Atahualpa they marched upon Cuzco. The Indians knew their greed for the precious metals, and they took most of their treasures from the capital city and secretly buried them. According to tradition, they threw millions of dollars' worth of gold into this lake, and with other things the great golden chain that ran around their main plaza. This plaza remained intact until a few years ago. It was about 500 feet long and several hundred feet wide, so that the length of the chain was probably between 1,000 and 2,000 feet. The chain was pure gold, wrought into links about a foot long and as large around as the wrist of a man. The links were so heavy that a man could not lift more than one of them at a time, and it is said that hundreds of Indians were required to carry the chain. They took it into the lake, and there it is supposed to lie to this day, although many have searched for it in vain. The treasure hunters have dived into the water and clawed over the mud near the shore. They have also dragged the lake with grappling hooks, but in places it is exceedingly deep, and so far the treasure had not been discovered. At one time a syndicate was organized to drain the lake. This syndicate had a capital of $5,000,000 and its plan was to tunnel the mountainside. But the rock was too tough and the enterprise was abandoned.

Filled Room with Gold for Freedom

The treasurers of the Incas were not confined to Cuzco. I have heard stories of buried hoards all along the Andes from Panama to Lake Titicaca. They had vast quantities of gold and silver in Quito, and at Cerro de Pasco I found a party of Americans and British who were prospecting for one of these hoards. They have already spent thousands of dollars and are sinking more every day. While I was before the vault of the Cuzco cathedral I was shown a golden box weighing thirty-six pounds made of the plates that were torn from the Inca Temple of the Sun, and was told that that cathedral was largely built by Inca gold.

I understand that the treasures of gold that were stored on the holy islands of the sun and moon were thrown into Lake Titicaca, and I hear other traditions of the vast amounts of gold and silver the Spaniards failed to get. That which they obtained was greater than the wealth of Croesus. The amount taken from the temples of Cuzco alone is said to have been worth more than $90,000,000, and a part of this went to Cajamarca to free the Inca emperor who had come in friendship. He was treacherously imprisoned by Pizarro. He was carried to Cajamarca in a lifter of massive gold covered with a cloth embroidered with plumes of tropical birds. This cloth was studded with gold and silver plates. Atahualpa's hair was decorated with gold. He had on a golden crown, and around his neck was a collar of emeralds.

Buried Treasures in Many Places

At the start Pizarro treated Atahualpa well but a little later on charged him with treachery, and put him in a prison about fourteen feet square. The Inca king took a stone and scratched a mark on the wall as high as he could reach, telling Pizarro that he would fill the room to that height with gold if he could only be free. This proposition was accepted, and gold in the shape of vases, utensils and plates was brought in from all parts of the empire. It was melted down by the Indians under the direction of the Spaniards. When the prison room was filled to above the mark made by Atahualpa, he was released. But he was still kept under surveillance, and a little later was accused of plotting against the Spaniards. He was given a mock trial, and was condemned to be burned, his execution being brought about largely by Friar Valverde, who was afterward made bishop of Cuzco.

A Quichua, Descendant of the Slaves of the Incas

During my stay in Cuzco I visited the Temple of the Sun, upon whose foundations now stand the church and convent of the Dominicans. This was known by the Incas as "The Coricancha," or the "place of gold." It was rectangular on three sides, with a great oval at the back, and its walls were two stories high and altogether about 1,200 feet long. These walls were surrounded by a thick cornice or border of gold about eight inches thick, and where the wall joined the roof there was a broad golden band. The roof was covered with gold, and the inner walls of the temple were literally plated with it, vegetables and vines of all sorts being engraved upon them.

Human Face Made of Gold

Opposite the entrance to the temple was a mighty plate of solid gold, heavily incrusted with emeralds and precious stones. This represented a human face surrounded with rays. It was the image of the sun whom the Incas worshiped, and used gold in doing so. They considered that metal sacred to the sun, and often referred to it as the tears of that heavenly body. On both sides of the image were the embalmed bodies of the Incas of the past, each seated on a chair of solid gold.

In addition to the Temple of the Sun, the Incas had temples to the stars and moon. The traditions say that there were chapels to these heavenly bodies in the great temple at Cuzco, and it is whispered that evidences of these have recently been discovered. When I went through the church my guide was not permitted to go with me. The holy father in charge performed this duty himself, and the guide thought that it was to prevent me from learning what they had recently discovered.

All of the ornaments and utensils devoted to the religion of the Incas were made of gold and silver. In the great hall of the sun there were golden ewers which held the water, used at the time of the sacrifices, and there were twelve silver jars filled with Indian corn. There was a golden llama with a golden fleece, and also golden birds and golden flowers, all of life size.

Vast Amount of Gold in Cemeteries

The Spaniards found a vast amount of gold in the cemeteries of the Incas. Some of those monarchs after death had their royal bowels filled with gold. Gold was buried wtih them. There is a record that one Garcia Guiterrez paid one-fifth of the treasures he found in the graveyards at Trujillo to the Spanish crown. This was only 20 per cent of the whole and it shows that his discoveries netted him over 677,000 castellanos of that precious metal. They are now finding gold in the excavations being made at Teochuanaco and that in the shape of gold and silver plates tacked to the heads of mummies and on skulls.

The building of the great granite cathedral in Cuzco, which stands on the plaza near the ancient site of one of the Inca palaces, was brought about by the discovery of an Inca treasure. Its origin was in a miraculous dream of the bishop. In this dream the Virgin Mary appeared before the bishop and told him that she wanted a cathedral in Cuzco. She fixed the location on the ancient plaza of the Incas and described the grand building as it now is. The bishop replied that his people were poor, that he had no money and that he could not possibly raise the money needed. Thereupon the Madonna directed him to go to a place near Cuzco and dig. There he would uncover some of the lost treasures of the Incas. This was duly reported to the people, and, as the story goes, they went with the bishop in a great procession to the place designated. They dug down into the earth and there found a large store of gold. It was with this gold that they began the cathedral which, although here far off from the sea and between the walls of the Andes, is one of the finest churches of the new world.

Gorgeous Image of Christ

I have already described the cathedral of Cuzco. All told it is perhaps more gorgeous than was Coricancha, the Inca temple of the Sun. It is a vast museum of gold carvings and beautiful paintings. One of its treasures is a life-sized figure of the Christ fastened to a wooden cross by great nails of solid gold. The figure is decorated with jewels and the pedestal or car upon which the cross stands is plated with silver and incrusted with diamonds.

This image is greatly revered by the Indians and also by the other people of Cuzco. They carry it around through the streets on Good Monday, at which time they kneel down on the sidewalks and pray before it. They call it the Lord of the Earthquakes and believe that their city is safe from seismic disturbances as long as the annual procession takes place. This comes from a tradition that the Christ was once left in the church beyond the hour usually set for the procession, when the mountains began to sway and an earthquake occurred which it was thought would swallow the city. Thereupon the Christ was brought out and the earth ceased its quaking.

Indian Godfather Makes Good

Another story of lost treasure relates to a Cuzco white man of Spanish descent whom the Lord blessed with numerous children. It is the custom here that a godfather shall look after and provide for his godchild; and so, as this man was poor, he tried to add to his resources by getting a corps of good godfathers. So as the infants came one after another he named each in honor of one of the distinguished citizens of the town. The citizens, however, did not respond and the man grew poorer and poorer. At last he had had nine babies, each of whom had been given a rich godfather, but there was no help forthcoming. The father swore that he would leave the rich and choose as the patron of his next child the first man he met on the street after its birth. In due time the stork came again, and the man, rushing out, saw a poor Indian driving a caravan of llamas into the town. He stopped him and told him he wanted him to be godfather to his child. The Indian objected, saying that he was poor and not fit to be godfather to a white child. The man then told of his vow and finally persuaded the Indian to accept the position.

In due time the baby was baptized and the Indian appeared at the ceremony as its godfather. He kissed his godson as he left the church and the next day came back into Cuzco with a score of llamas, loaded with wood. He took this wood to the father of his godchild, say-

ing that he had brought what he could and that he must accept the wood as a gift. The man was thanked and the wood was duly stored away in the court of the house. Some time after that the bundles of sticks and roots were opened; and inside each was found a great bag of gold in nuggets and dust. In the meantime the Indian had disappeared and could not be found. The man took the gold and built two large houses on the street called Triumph. If you do not believe this story come to Cuzco, and the people will show you the street and point out the houses.

Hidden Treasure Makes Many Rich

Another treasure story is the tale of an Indian woman 100 years old. It relates to a great hoard of gold that was hidden in the Andes by one of the chiefs, who was murdered before he came back to Cuzco. This treasure has long been searched for in vain by both foreigners and Peruvians. Not long ago this old Indian woman, being about to die, sent word to a haciendado of Spanish descent for whom she had worked, asking him to hasten to her. He reached her hut in the mountains just in time to get her last message. This was that her maternal grandmother, who had died eighty years before, had given her a word that would indicate where this treasure lay. The word was an Indian one and it meant the Lake of Two Stones. The old woman was questioned, but she would tell nothing more. That night she died. The story went forth and the whole country was searched by treasure hunters, all seeking for the Lake of Two Stones. At last a narrow valley was discovered containing a lake in which there were two tall rocks rising high over the water. The investigators drained the lake. They dug down under the largest stone and there found a platform of masonry, covering a chamber in which the treasure was found. The secret was kept from the officials for fear of confiscation. And so no one knows just how much gold was discovered, but it was of such value that it made all of those who participated in the division rich.

Granite Giant a Rich Treasure Vault

Another of those Inca traditions relates to a cave in a mountain called Pillchan, near Cuenca in Ecuador. This cave contains a mighty treasure of gold, but its entrance is closed by a giant of granite, under whose arm is a hole which is open only once a year and that on Good Friday. Then, and then only, the giant raises his arm and the man who can be there at that time can crawl in under it and get an immense treasure of gold. As the story goes, the gold is in piles so labeled that only one pile is to be taken at a time. If one man takes only the assigned quantity he will get away safely. But if he is greedy and takes more, he will be squeezed to death by the arm of the giant as he goes out. This is the belief held by the Indians. Many superstitious people have looked for that cave, but so far neither the cave nor the giant has yet been discovered.

A fairly well authenticated tradition refers to an Inca named Ruminagui, who is said to have carried away the gold and silver of Quito and buried them. These treasures were taken from the palaces of Atahualpa and from the temple and convents of the virgins of the sun at that place. It is said that some of the gold was started to Cajamarca in order that it might aid in freeing Atahaulpo, but that Ruminagua feared the treachery of the Spaniards and buried the gold on the way. This story came to the Spaniards, and Sebastian de Benalcazar, one of the subordinate officers under Pizzaro, took 150 men and started for Quito, searching along the path of Ruminagui, but finding nothing.

In the meantime Ruminagui had dug traps in the trails and made snares to destroy the enemy and their horses. He also set fire to Quito and killed the virgins of the sun before Benalcazar appeared. He then climbed to the high mountain behind the city, where he was finally taken by Benalcazar. He was tortured to death to make him tell where the golden hoard was secreted, but he showed no signs of weakness and the

Another Treasure Story is that of an Indian Woman 100 Years Old

knowledge of the location of the treasure died with him.

Greedy Spaniard Loses Out

There is a story told in Cuzco of an Indian girl who was in love with a Spaniard. The Spaniard had taken advantage of her affection, but he would not make her a proposal of marriage until she told him that she could make him the richest man in Peru. He thereupon promised to marry her if she would prove that she could do what she proposed, and at her request went with her one night into the mountains. There he was blindfolded and led through ravine after ravine until he finally came to a cave. Here the bandages were taken off his eyes and his sweetheart said:

"Behold! There is the gold that I am ready to give you when we are married."

The Spaniard looked down and saw a great pile of golden bars and a collection of golden vessels curiously carved. It is supposed that they were from the treasures of Atahualpa. The greedy man attempted to seize some of the largest pieces nearest him, but the girl pulled him back, saying: "Those things are sacred until we are wedded, and if you attempt to touch any of them or take away any, my friends who are here at hand will certainly kill you."

The girl was so earnest the Speniard grew scared. He threw down the gold and submitted again to be blindfolded. When he returned to Cuzco he informed the authorities and an order was issued for the arrest of the girl. The officers went to her hut, but they found that she and all the rest of the family had left for the mountains. And that was the last of the treasure.

Records Left of Hidden Wealth

There are records left by the Spaniards describing several localities where they think some of these Inca treasures may be found. One of these is in chapter V of the Dettetero of Valverde. Valverde died in Spain, after having returned from the mountains of Llanganati in Ecuador. He was known to have gone many times into the mountains and to have brought out a great quantity of gold whose character showed it to be a part of the treasures of Atahualpa.

Upon dying Valverde left directions giving the route to where the gold lay, and the King of Spain sent this description to Ambato, a town now on the railroad between the coast and Quito, and ordered the officers there to search for the treasure. I understand that the manuscript of the king's letter is still on record. I abbreviate the description: It tells the searcher for the treasure to stand on the mountain of Guapa, with his back to Ambato and look to the east. From there he will see three mountains in the form of a triangle surounding an artificial lake, into which the ancients, when they heard of the death of the Incan king, threw the gold they had prepared for his ransom. The Spanish directions then show one just how to get there, and the dangers he is liable to incur on the way. By following them

(CONTINUED ON PAGE FIFTEEN)

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How to Improve the Flock

Breeding Mistakes May Be Corrected

FLOCK improvement depends mainly upon three requirements — high quality of sire, careful selection of the breeding ewes and the feed and care of the flock. It is a comparatively easy matter to injure the constitutional properties and fleece qualities of a flock of sheep. Mistakes in breeding, however, can be corrected if not carried into the second generation. When it is observed that the get of a ram has not been of advantage in the improvement of the flock this increase should not be added to the breeding flock; cut it out, dispose of it at once and get another ram and commence again where the mistake was made.

The breeding ram should be selected with special reference to constitutional vigor and stamina, symmetrical form and proud bearing. In these properties you get in the animal about all that is desirable as a sire in physical makeup — the short, broad head, well turned horn (if of the horned breed), thick, heavy neck, straight, flat back, round barrel, short legs, well set apart; deep and broad chest, giving plenty of lung power and good heart action. The important thing in the improvement of any kind of stock is to get a rugged animal. From this all the fine qualities of skin covering may be added by careful breeding.

In the pure-bred animals of the present day it is not a difficult matter to make selections of sires that possess to a reasonable degree about all the desirable qualities that are needed in the herd or flock. Breeding up from the grade flock is the common demand of the flockmaster, and the success and rapidity with which this is done depends on the selection of the sire. It pays to buy the best; the better the ram the greater the improvement in the increase of the flock.

Did you ever stop to consider what may be done in breeding or buying the best males to use as sires? The difference in sires is responsible for the difference in flocks as a general thing. A flock of ewes of average quality may be divided and put into the hands of two breeders or caretakers, the flock and increase to be continued for a period of years—the one breeder a careless, indifferent judge of sheep, the other a critical, progressive sheepman, one who knows and observes quality in the individual. What will be the similarity in these two flocks at the end of, say, ten years? Will there be any family resemblance? It is not likely there will be any more than that of breed. The evidences of family relationship and family characteristics will have disappeared. Every observing old sheep breeder has seen just such cases and knows the truth and force of the statement.

There is no line of live stock so easily affected by good or bad breeding as the sheep. The improvement that can be made in a single season's mating, where the ewe flock has been carefully selected and averaged up, is astonishing. The crop of lambs from the strong-charactered, high-bred ram come all of the same type, look alike, are fleeced alike, show that they are related and have the stamp of the sire on them.

The greatest difficulty with many of our large sheepmen is that they have no fixed type of sheep in their minds. Every big, fat ram they see impresses them as a desirable thing for their flock. Consequently their breeding rams are of all breeds; all types of wool and mutton breeds are represented in their flocks. What is the result? The increase of such a flock is as varied as the colors of the rainbow. The mixing of blood and the crosses thus made destroy the uniformity so desirable in flocks and herds.

The object of introducing this feature of the flock industry now is that the attention of the flockmaster may be called to this spring crop of lambs. There is no better time to judge of a ram's breeding qualities than when his lambs are a few weeks old. As soon as the lamb is well under way of nursing, has commenced to round out and grow rapidly, the characteristics and family resemblance are very pronounced. These may increase as the lamb approaches the weaning age or they may decrease. Many old breeders have said that they almost universally make their selections of superiority in quality when the lambs are only a few days old. This might be termed expert knowledge, but it is true that these decisions rarely have to be reversed.

Study the breeding of your ram by the close inspection of his lambs as they come and as they develop from week to week. This is the time and place to acquire information as to the breeding value of your ram, and this is the time to determine whether you want to keep him or pass him on down the line of discarded experiments. A ram that is capable of siring a lot of lambs of uniform style and appearance, even with a pretty good flock of ewes, shows evidence of being a good breeder.

Use nothing but the good rams. Select for a special type and finish in fleece and form, and breed to this type until you have established this in your flock. Remember, the full-blood ram is the only one from which you can hope to get any permanent and lasting benefit. Hundreds of breeders, especially among the fine wool sheep, have developed a type of sheep and fleece that was comparatively their own, a distinct fleece quality and distinct fleece and sheep combination that gave flock character and flock individuality that belonged to no other man's breeding, critically analyzed and measured up from the standpoint of good breeding. This is the evidence that proves the skill of men as breeders.

Rice was the chief crop of the Philippines in 1913, the output being over 1,500,000,000 pounds, worth nearly $31,000,000.

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Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Don't Trim Strawberry Foliage

E. W., Iowa: As a subscriber to your paper I would like to have your opinion in regard to strawberries. My strawberries have a heavy foliage that stands above the berry stem and is so thick that the sun cannot get to the berry stem. In your opinion, would it be wise to top the foliage off so that the sun can get to the stems more than it does, or would it hurt the production of the berries and injure the plants as a whole?

Answer—Yes, it would injure your plants to trim the foliage. The heavy foliage is a sign that the plants are in good, healthy condition. We have had plants that produced nearly a quart of berries where the foliage was so thick that we could not see through it. After the first berries ripen and you begin to pick them the leaves will fall over and expose the berries to the sun. Never trim or thin strawberry foliage after the berries begin to ripen.

Turnips for Hogs

G. A. H., Nebraska: Am writing to see what you think about sowing turnips for hogs. I have seven acres put in corn, fenced hog tight. I expect to turn the hogs into it this fall and let them hog it down. I want to sow something in the field as I lay it by. Would prefer a root crop, as hogs have constant access to good pasture consisting of alfalfa, green rye, red-top, timothy and white clover. I thought of sowing turnips as I laid the corn by and let them root them but when they are turned into the corn.

Answer—We have never had any experience with sowing a root crop with corn, but should think the corn would shade it so much that it would not make a good growth. Rape is a crop that does well in this way. Turnips are not an especially good hog feed, as they contain such a large percentage of water. If you are going to sow anything of the kind, would advise rutabagas, as they are superior to turnips.

Saw Fly on Strawberries

N. O., Nebraska: Can you tell me what is the matter with my strawberries? The leaves get full of holes and wilt and the plants die in a short time. (Enclosed in this letter were three strawberry leaves so badly eaten that nothing but the veins remained).

Answer — This was undoubtedly the work of the saw fly larvae. This insect can be checked by spraying the vines with white hellebore and water, one ounce of hellebore to three gallons of water. Mix thoroughly and apply at once. This poison will not injure the persons eating the berries if not applied after the berries are half grown. Do not, however, apply to vines on which there are ripe berries.

Depths to Which Crops Use Moisture

"Oats, spring wheat, barley and corn feed to a depth of four feet," says bulletin No. 140 of the agricultural experiment station of Nebraska. "Winter wheat feeds to a depth of six or seven feet. Perennial grasses dry the soil out to a greater depth. Alfalfa will send its roots to greater depths for water than any other common farm crop if water is available in all intervening portions of the soil to supply the roots while making this greater growth. In this manner alfalfa on the second bottom lands usually obtains permanent water supply. The roots frequently go down to the sheet water where it is within twenty or thirty feet of the surface."

Buried Treasures in the High Andes

(CONTINUED FROM PAGE THIRTEEN)

he will finally come into a bog filled with grains of gold that can be washed out in a stream nearby, and still farther on is a certain cave where was the furnace through which the Indians melted their ores. This is on the left-hand side of the mountain. The directions are quite intricate, and so far no one has yet found the treasure.

Hunchback Pays Debt of Gratitude

Returning again, to the treasures of Atahualpa, buried by Ruminagui, there was an Indian boy named Catuna, the son of one of the Inca chiefs, who was with his father at the time of the hoard was secreted. This boy was injured in one of the battles and was supposed to be dead. He was taken up by one of the Spaniards, and he recovered. His injuries were so severe, however, that his features were distorted and he became hunchback. The Spaniard who adopted him, as it were, was a Captain Suarez. He taught him to read and write, and made him a Christian. He treated the Indian boy so well that he came to love him, and his heart was filled with gratitude.

Later on Suarez became unfortunate in his speculations, and his house was about to be sold by his creditors, when Catuna told him that if he would make a secret vault under the residence and give him some instruments for gold melting he could find enough gold to pay off his debts. He also made his master promise not to say where the gold came from. Suarez agreed to this, and Catuna supplied so much treasure that he became a rich man. He gave a great deal to the church, and when he died in 1550 he made Catuna his heir.

Compact with the Evil One

After that Catuna gave very liberally to the church and he was known to have so much money that he was questioned as to the source whence he derived his great wealth. He answered that he had made a compact with the evil one, to whom he had sold his soul for this gold. This statement was credited, and the more easily because at that time the Indians were believed to have regular intercourse with the devil.

After Catuna's death his premises were searched and the vault was discovered. It contained a great quantity of gold in ingots and bars, and also in vessels of gold that evidently came from the Incas. The people, however, persisted in believing that the story of the pact with the devil was true, "and," says Father Velasco, from whose letters this story comes, "the truth would have never been discovered if it had not been that Catuna's confessor, a Franciscan monk, had left a written account of the burial of Atahualpa's treasure, and his use of it, which had been confided to him."

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Here's the Proof!

Hogs go crazy to rub-rub-rub on the Hog-Joy Oiler. They leave posts, stumps, trees and fences to get to the machine to rid themselves of vermin.

Louis Kleines, Illinois, writes: "Set up my Hog-Joy machine today and the hogs rubbed on it as soon as I left the machine." Phil. S. Haner, Illinois, says: "Was surprised to find out how soon the hogs commenced to work same." Warner Bros., Kansas, write: "We set ours up yesterday; the hogs all wanted to try it first." O. E. Bone, Indiana, says: "In less than three hours my hogs looked as though they had been through a dipping tank."

Understand that the hogs do *all* the work themselves. You have nothing to do—no work, time or worry—no individual treatments—no special dosing to be repeated every few weeks. You simply put the Hog-Joy machine in the pen, and the hogs do the rest. 5 cents a year per hog keeps them free from lice.

What the U. S. Government Says

If your hogs are lousy, beware! According to Assistant Secretary of Agriculture B. F. Galloway, hogs that have vermin will be more apt to contract Cholera and die than hogs that are free from lice. Blood-sucking lice on your hogs mean poor, lean, restless, unhealthy hogs—*less profit for you.*

Why not save feed, keep your hogs healthy and fat and get them to market quicker by keeping them free from blood-sucking and profit-sucking lice with the Hog-Joy Oiling Machine? This wonderful machine consists of only three parts—all heavily built of cast iron—a trough, an oil bottle, and an oiled roller which presents a broad surface on which the hogs rub.

There are no small valves, springs or delicate parts to rust, clog up and stick—there's nothing to break or get out of order.

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One-pulley and chain-drive on blower outfits replace power-wasting idlers. Large journals. Hard-oil cups mean easy running, no burned-out bearings. Blower operates separate from cutter—no chance of sudden stoppage of cutter causing breakdown. **Send a postal for the latest Smalley Catalog,** and get all the facts today about the fastest, cleanest Cutter and Filler in the world.

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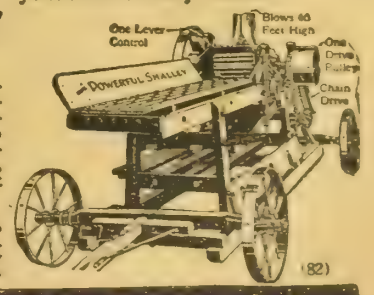
Mfrs. of Ensilage, Alfalfa and Hand Feed Cutters, Combination Ensilage and Snapping Machines, Drag and Circular Saw Machines, Champion Plows, Cob Grinders and Feed Mills.

Alfalfa-Grinding Screen

Another great Smalley feature. Grinds 100 to 400 pounds of alfalfa meal per hour. More fattening than wheat bran, at half the cost. Screen detachable. Protected by screen patent No. 721-246.

Don't fail to get prices on our new Enclosed Carrier, if you operate a 5 or 6 horsepower engine. Fills your silo in windy weather.



(82)

BINDER TWINE

Factory to Farm

QUALITY GUARANTEED. 26th year. Quick shipment. Farmers, write for FREE samples. WHOLESALE PRICE

AUGUST POST, Box 50, Moulton, Iowa

Did it ever occur to you that an advertisement placed in a magazine that will not knowingly publish a "fake" ad. is worth 100 per cent more to the honest advertiser than when placed in a publication that accepts any and all advertising it can get?

WEST FARMS
IS
Where Milk Makes Money

You likely have teams and tools to work a farm—the money to make the first payment, buy a few cows, some brood sows and some good pullets.

You have got to locate where you will get a regular cash income to care for the family—besides, you want a farm home that will increase in value constantly.

You are eager to get located in an invigorating climate where wife and children will be well, strong and happy. You want to live in a community of enterprising intelligent people who are neighborly and believe in progress.

West Farms Is a Natural Dairy Country

The wild grasses are fine feed in summer and winter. West Farm's forage crops are as sure as corn in Iowa. You can move to a West Farm today, set up a stove and the beds arrange the furniture, etc., and tonight you can milk the cows, separate the cream, doing the same thing in the morning, whereupon you can take your butter fat to the station and come back with your cream check. Your income has begun. This you can do two or three times per week and always get a good price for butter fat in money. Any good cow will yield $120 per year so that five good cows will easily support an ordinary family. Hens do specially well there, but no better than hogs. No disease to annoy either. Children thrive there like weeds. The broad prairie inspires them. Life there is clean and wholesome. It develops responsibility and efficiency in young people. It's a very superior place to make money and raise a family. I invite you to inspect my lands. I make a specially low combination round trip rate and show lands in the automobile from Brighton—first station of consequence northeast of Denver. I want to send you a new folder free. Your address on a postal gets it.

N. P. WEST, President.

West Land Development Co.

814 Majestic Bldg., Denver, Colo.

SILO TALK

It is now almost universally admitted that, where the work is properly done, Monolithic Reinforced Concrete Construction makes the **best** SILO—"POLK SYSTEM" is the perfect and economical method. Ask the Government or any experiment station. Twenty-five year tests show that these silos will not crack open, fall, burn or blow down. The walls will not absorb the moisture from the ensilage; neither will the acid eat into the walls. Ensilage will keep perfectly to the very outside edge.

We have gathered a fund of reliable information about silos and silage which is free for the asking, and it's well worth the price.. Send for it; or, if you prefer that we come to see you, ask us.

PLATT & FREES,

State Agents, RED CLOUD, NEBRASKA

Free Hogs From Lice

Close examination will show many lice on your hogs. The hogs will do better, grow faster and withstand disease longer if the lice are killed. There are several methods—spraying, dipping and use of hog rubbing posts or machines. The latter is a very easy and thorough means.

Write for a few hog post or machine catalogues and study the proposition. There are several advertised in this issue.

Twentieth Century Farmer

Books on General Farm Topics

TRACTION Farming and Traction Engineering" is the title of a book recently written by James H. Stephenson, M. E. The prominent part now played by the tractor in the operation of farms of even moderate dimensions makes the publication of this book of particular interest. The larger part of the book deals with gas and oil tractors, giving practical information as to the construction, care and operation of the tractor in general and detailed information regarding many of the well known makes. There are also chapters dealing with the important problems of lighting and heating the farm home and others treating of threshing machines, plows and other farm machinery used in connection with the tractor.

"Traction Farming and Traction Engineering," by James H. Stephenson, M. E. Published by Frederick J. Drake & Co., Chicago.

***

"Management and Breeding of Horses," by Merritt W. Harper, professor of animal husbandry at Cornell, is a very interesting and comprehensive volume, dealing with the horse, covering light and draft types, as well as the pony, the burro, jacks and mules. Principles of breeding and feeding, diseases, training, care and management in general are clearly and concisely discussed.

"Management and Breeding of Horses," by M. W. Harper. 466 pages, fully illustrated. Published by Orange Judd company, New York.

***

A very complete treatise on the tractor is Victor W. Page's book, "The Modern Gas Tractor." This book is dedicated to the American farmer and is intended as a manual to assist him in the management of any gasoline or oil tractor, whether large or small, and of any make. Numerous photographs and diagrams are inserted to make the directions clearer and more easily followed.

"The Modern Gas Tractor," by Victor W. Page, M. E. 480 pages, 204 illustrations. Price, $2. Published by the Norman W. Henley Publishing company, New York.

***

"Wheat" is the title of a little volume written by Prof. A. M. Ten Eyck of Iowa. It covers the subject thoroughly, from a discussion of varieties and preparation of the seed bed to harvesting, running the binder and marketing the crop. The book is not technical, but treats the subject in a practical manner and recites the methods employed by some of the most successful wheat growers of the middle west.

"Wheat," by A. M. Ten Eyck. 191 pages, illustrated. Price, $1.50. Published by Campbell Soil Culture Publishing company, Lincoln, Neb.

***

"Farm Gas Engines," by C. F. Hirshfeld and T. C. Ulbricht, both of the department of power engineering of Cornell. This is a very simply written and practical manual for the user of gas engines. In the fore part of the book various fuels are discussed. The balance of the book treats of the management of engines of the different types, mentioning the strong and weak points of the various makes and the conditions under which different designs are desirable; prices of engines are also discussed. The purpose of the book is not only to aid the engine owner in the operation of his engine, but to guide him in purchasing the one best fitted to his conditions.

"Farm Gas Engines," by C. F. Hirshfeld and T. C. Ulbricht. 239 pages, 188 figures. Price, $1.50 net. Published by John Wiley & Sons, New York.

***

For the man interested in peach culture, F. A. Waugh of the Massachusetts Agricultural College has compiled a book called "The American Peach Orchard." He has based the information contained in this book on the collected experiences of peach growers in all parts of the United States and Canada. Climate, soils, varieties, cover crops, fertilizers, enemies, marketing; in fact, all phases of the subject are taken up and thoroughly discussed.

"The American Peach Orchard," by F. A. Waugh. 238 pages, fully illustrated. Published by Orange Judd company, New York.

Our Young People

(CONTINUED FROM PAGE NINE)

John Wiebe, Bingham Lake, Minn. We believe that Ytole Norris, a former member, is over 16, so she is no longer eligible as a writer for the children's page. We are sorry to have her grow up.

(Honorable Mention)

The May Basket

By Dorothy Allen, Aged 13, East San Diego, Cal.

May day everyone delights in giving away May baskets, as well as in receiving them. Mrs. Kerns, one of our neighbors, had one of the most unusual May baskets given her. It was the 2d of May. Mrs. Kerns was going to the store, but stopped suddenly in the door at the sight of a large brown basket. The basket was covered, and, naturally being curious to know what was in it, she uncovered it. Before her eyes lay a tiny baby girl. There was a note attached to it, which read:

"Three weeks old, born Easter Sunday. Father is dead and mother unable to support it."

Mrs. Kerns was so surprised she could not do anything for some time, but finally she took the baby in her arms and read the note. She had sympathy for the babe at once. She called her husband to see the sight and they both agreed to keep the baby. They do not know who sent the baby, but the one that left it must have known that they had no children of their own and could and would support it, as they are kind and well-to-do people.

Additional Stories

Orpha and Isla M. Hatfield, Burwell, Neb.; Jennie Sullivan, Sargent, Neb.; Bessie McClurg, Dustin, Neb.; Amy Rogers, Dodge, Neb.; Lester Krotcher, Orchard, Neb.; Martha Anderson, Weeping Water, Neb.; Marion Paine, Lyons, Neb.; Helen Grady, Brady, Neb.; Mabel Rasmusson, Homer, Neb.; Roosevelt Anderson, Wausa, Neb.; Sallie Martha Thompson, Danbury, Ia.; Lela Rose, Guthrie Center, Ia.; Violet Patterson, Lawrence, Kan.; Dixie Mullins, Kingsville, Mo.; Edward Murphy, Beresford, S. D.; Ella Grunning, Beresford, S. D.; Beulah Cheever, Shoshone, Wyo.; Donald McLeod, Hawthorne, Nev.; Elizabeth McSparrow, Furniss, Pa.

Panama-Pacific Dollar Day
Set Apart by the Governor

THE temporary commission selected by other state officers and myself to consider ways and means for the procuring of a Nebraska building at the Panama-Pacific exposition now reports a means by which the money may be raised.

Bronze medallions or medals are being made bearing on one side the great seal of the state of Nebraska and upon the other side the seal of the Panama-Pacific International Exposition. Each contributor of $1 toward the Nebraska building will receive one of these medals.

This plan seems to me to be most feasible and expedient. It gives every loyal Nebraskan an opportunity to share in this worthy enterprise and places a burden upon no one. Also, this is the first time, to my knowledge, that the state seal will have been circulated in such a movement.

I am advised that forty states in the union and thirty-six foreign countries have already selected sites and have provided funds with which to erect buildings upon the exposition grounds. The states touching Nebraska on every side are in that list. In states where the legislature did not feel like imposing a tax upon the people for this purpose the money was raised by popular subscription.

Because of this general response on the part of other states and nations, the proposition comes up to Nebraska upon a basis of state prestige and pride.

The site selected for the Nebraska building is one of the very best on the exposition grounds. The temporary commission has in mind erecting a building of bungalow type, which will be more in the nature of an exposition home—a place of comfort for Nebraskans, former Nebraskans and friends from other states; also it will provide an auditorium for the exposition of moving pictures of Nebraska's resources.

Therefore, in view of the important factors which emphasize the need for a Nebraska building at the Panama-Pacific International Exposition, I commend to the people of Nebraska the raising of this money through the plan above outlined. I also proclaim June 17 as "Nebraska Panama-Pacific Dollar Day," and upon that day Nebraskans who feel the patriotic impulses associated with the movement may send $1 to Lieutenant Governor S. R. McKelvie, Lincoln, Neb., who is in active charge of raising the fund.

JOHN H. MOREHEAD,
Governor.

Is an Apology Due?

In an article on farm buildings, relating to their construction and care after they are constructed, published in our issue of May 2, we ran this picture:

Below it was the line, "Buildings and fences rotten and insecure detract from the appearance and sale value of the farm." We did not know whose farm this was, as the picture was one that had been in the office for some time and there was no record as to where it came from. Soon after the publication of the article we received an envelope containing a postcard bearing this picture:

On the back was written: "This is not such a bad looking place when you get a fair picture of it." We were glad to receive this anonymous communication and we are glad to publish the two pictures together, showing what a difference it made when the fences and barns were repaired and the litter cleaned up. It is possible that the place has changed hands in the course of years. Certain it is that the place has changed in appearance. If we owe the owner an apology for using his place as a "horrible example," we hope this will be accepted as such an apology.

Hot Weather Rules

The Boston Work Horse Relief association has compiled the following list of hot weather rules, many of which are of value on the farm, as well as in the city:

1. Load lightly and drive slowly.
2. Stop in the shade if possible.
3. Water your horse as often as possible. So long as a horse is working, water in moderate quantities will not hurt him. But let him drink only a few swallows if he is going to stand still. Do not fail to water him at night after he has eaten his hay.
4. When he comes in after work, sponge off the harness marks and sweat, his eyes, his nose and mouth, and the dock. Wash his feet, but not his legs.
5. If the thermometer is 75 degrees or higher, wipe him all over with a wet sponge. Use vinegar water if possible. Do not turn the hose on him.
6. Saturday night, give a bran mash, cold; and all a tablespoon of saltpetre
7. Do not use a horse-hot, unless it is a canopy-top hat. The ordinary bell-shaped hat does more harm than good.
8. A sponge on top of the hear, or even a cloth, is good if kept wet. If dry it is worse than nothing.
9. If the horse is overcome by heat, get him into the shade, remove harness and bridle, wash out his mouth, sponge him all over, shower his legs and give him four ounces or aromatic spirits or ammonia or two ounces of sweet spirits of niter in a pint of water, or give him a pint of warm coffee. Cool his head at once, using cold water, or, if necessary, chopped ice, wrapped in a cloth.
10. If a horse is off his feed, try him with two quarts of oats mixed with bran and a little water, and add a little salt or sugar. Or give him oatmeal gruel or barley water to drink.
11. Watch your horse. If he stops sweating suddenly, of if he breathes short and quick, or if his ears droop, or if he stands with his legs braced sideways, he is in danger of a heat or sun stroke and needs attention at once.
12. If it is so hot that the horse sweats in the stable at night, tie him outside. Unless he cools off during the night, he cannot well stand the next day's heat.

Time to Cut Sweet Clover

The time to cut sweet clover for hay will depend largely upon whether the crop is in its first or second year of growth. Generally speaking only one crop can be obtained the first year, and this should not be cut until the crown sprouts begin to show. This cutting may be close as the plant will have sufficient time to obtain a certain amount of growth ere the cold weather arrives and thus be able to withstand the winter.

During the second year of growth two or three crops of hay may be obtained if the proper precautions are exercised. The first cutting should be made just previous to the time that the plant begins to bloom and should be done so as to leave a few branches and leaves on each plant. If cut close at this time the majority of the plants will be killed. The second cutting should be done in exactly the same manner as the first, while the third and last cutting may be made close to the ground.

It is somewhat difficult to say just when the second and third cuttings should be made owing to the variation in the plant growth, but as a rule the crop should be cut sufficiently early in order to avoid coarse and woody stems. —James D. Marshall, Colorado Agricultural College.

DIRECT FROM FACTORY!

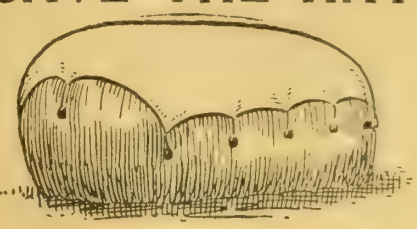
THE FAMOUS "OLD HICKORY" BUGGIES

The "Old Hickory" buggies have been the standard of buggy value for 20 years. They give more and better service for the money than any other vehicle made. The styles are always the newest and most modern. Every "Old Hickory" is sold under a written guarantee of satisfaction or your money back.

Save $25.00 by buying your buggy direct you pay no profit to middlemen. Write for our finely illustrated catalog quoting the factory prices on the "Old Hickory," over thirty-five different styles to select from. Catalog mailed FREE. Write Us Now.

H. S. BACHELOR MFG. CO., 1501 Genesee Street, KANSAS CITY, MO.

SAVE THE HAY



A GATE CITY STACK COVER

Bought Direct From the Manufacturer saves enough on your hay crop to more than pay for it.

GATE CITY COVER is full weight canvas. You will find many uses for it. Let us give you our direct-to-the-farmer prices on the size you need.

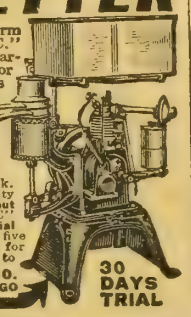
Gate City Tent & Awning Co.,
OMAHA, NEBRASKA.

FREE GOVERNMENT HOMESTEAD LAND

In Grand, Routt and Moffat counties, Colorado, and the Uinta Basin, Utah. Now ready for settlers. Ideal soil, fine climate, good crops and ready market for Fruits, Dairy, Poultry and general farm products. An opportunity for industrious farmers to get a start. For free descriptive literature write to W. H. PAUL, G. F. & P. A., Denver & Salt Lake Railroad, 617 First National Bank Bldg., Denver, Colo.

Skims CLOSER Pays BETTER

All butter fat saved by uniform spinning of the "AUTOMATIC." Self-powered, crankless and gearless, an engine and separator combined. Costs only 3 cents an hour to operate.



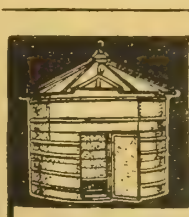
AUTOMATIC CREAM SEPARATOR

Over 10,000 in Use

Skims faster than ten men can milk. The engine has double the capacity needed. Runs for hours without watching. Ward's "AUTOMATIC" guaranteed and sold on 30 Days Trial at our risk. Every farmer with five cows or more should write today for Cream Separator Book No. 8 to

MONTGOMERY WARD & CO.
Chicago Avenue Bridge CHICAGO

30 DAYS TRIAL



BUTLER METAL Grain Bin

Corrugated. Can't Cave In. Rat-Proof. Fire-Proof.

Can be used for store house. Capacity increased by additional sections. Keeps grain perfectly. Large door and removable shoveling board.

Ask for Booklet Showing Letters from Satisfied Users.

BUTLER MANUFACTURING CO.
1212 W. Tenth St., Kansas City, Mo.

GRAIN BELT BRAND
Vegetable Hog Potash

A perfect worm expeller and preventive.

A bone builder, an appetizer and conditioner, a mineral balancer.

This is a most valuable product to feed the pigs at weaning time. It serves to keep the bowels regular, keeps the pig free from worms, aids digestion and keeps the pigs in a healthy, thrifty, growing condition, thereby giving them more resisting powers against disease A natural vegetable product, free from any injurious ingredients Can be fed with equally good results to brood sows suckling a litter, to suckling pigs and growing stock; in fact, any hog from birth to the slaughter house.

BIG TYPE MAKER

Manufactured by Union Stock Yards Company of Omaha (Limited) South Omaha, Neb

Distributed by
GRAIN BELT SUPPLY COMPANY,
SOUTH OMAHA, NEB.

95 cents

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Railroad Watch

To advertise our business, make new friends and introduce our catalogue of Watch bargains we will send this elegant Railroad watch by mail post paid for ONLY 95 CENTS. Gentlemen's size, full nickel silver plated case, locomotive on dial, lever escapement, stem wind and stem set, a perfect timekeeper and fully guaranteed for 6 years. Send this advertisement to us with 95 CENTS and watch will be sent by return mail post paid. Satisfaction guaranteed or money refunded. Send 95c today. Address

R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO.

ORIGINAL
Eureka Hog Oiler

The only rubbing post of which the valves will not open and waste oil when a hog lays down against it.

$1.00 a year buys the post and rids your hogs of lice, mange and skin diseases. Can you afford it?

Adaptable to hogs of all sizes.

The price is right, 30 days' trial. Send for circular and iron-clad guarantee. Agents wanted in every locality.

Eureka Mfg. Co.
Dept. 500, Council Bluffs, Ia.

KILLS HOG LICE!

AGENTS WRITE TODAY

This wonder-worker rids hogs of lice and other vermin pests by automatically applying crude or medicated oil.

Works When Hog Itches

Double automatic feature makes double saving. No oil wasted---flows only when hog rubs and only enough for each dose. Gets right to the spot. Better than dipping. Costs only 4c per year per hog to keep your hogs healthy. Savesfeed. Fattens quickly. Write today for prices and terms.

STARBUCK MFG. CO.
Dept. 75 PEORIA, ILL.

The Original Genuine
SCHULTZ HOG OILER

First successful crude oil machine invented. The hog man's wish is now a reality.

Hogs positively rid themselves of lice and mange. Don't cost much more than inferior imitations.

The best is the cheapest. Sold under a written guarantee to do the business. We want a live agent around every town to handle our line of Hog Yard Necessities.

The Oiler with the Flexible Arms.
Send for Big Free Hog Oiler Book.

POWER CREEK MFG. CO.
Treynor, Iowa.

DUROC-JERSEY HOGS

DUROCS AND RED POLLS

25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed.

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RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

W. P. SCHWAB, Clay Center, Nebraska.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

The successful dairyman has judgment, business ability and courage. Cutting down expenses is not enough. He must know how to invest.

Apply business methods to your farm, keep a record of the net profit from each cow and you'll soon convince yourself of the economy of putting your money into efficient milkers.

You'll find one good Holstein will do the work of two, perhaps three, ordinary cows. You save greatly on feed, and divide the expense of housing and labor by two or three.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro. Vt.

O. I. C. HOGS

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." C. S. BENJAMIN RFD79 Portland, Mich.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

PERCHERON HORSES

Part from 2400-lb. imported sire and part from 2200-lb. imported sire and imported dams, my 2, 3 and 4-year-old registered Percheron stallions would prove valuable breeders for you. With all their weight and bone they are dressy and straight sound. This is some of the most substantial and most attractive Percheron breeding material in the world. Farm raised and offered at farmer's prices. Just east of Omaha.

FRED CHANDLER, R. 7, Chariton, Ia.

Review of Live Stock Market

By A. C. Davenport

WHILE no one was making any predictions to that effect, many had hoped that the beginning of June would show some improvement in the cattle markets of the country. The early part of June has passed without any realization of such hopes, and at present writing there is nothing to indicate that they will be realized in the very near future.

The market is still in the dumps and no one can say when it will be lifted out. The cause for the depressed condition of the trade appears to be the lack of a good buying demand from the large consuming centers on the Atlantic seaboard. The east has always been the main outlet for western beef as well as for all other western farm products. The meager demand for beef and cattle from the best buyer the west has ever had is naturally having a depressing influence upon the markets of the country. Thus it happens that, in spite of the moderate receipts of cattle the trade is slow and weak and prices show a much greater tendency to decline than advance. An overpowering lethargy seems to have taken possession of the market, while all evidence of life and strength has disappeared. Day after day the trade drags along its weary length with an entire absence of that "snap" and "go" so necessary to the making of a market satisfactory to the selling interests.

After all, prevailing prices on fat cattle are really high, especially so when reviewed from the beef consumers' standpoint, and they might be regarded as high even by the producer if he had been able to buy his feeding cattle at lower prices. Unfortunately feeding cattle were very high all last season and as a result the cattle that are now coming forward to market are in many cases showing considerable loss on the part of the man who fattened them. Some cattle that were purchased earlier and at prices, say, from $7 downward, on the basis of the Missouri river, are making the farmers a little money. But it will be remembered that during last fall and the early winter a great proportion of the feeding cattle sold at $7.00@8.00, and it is these high priced cattle that are causing the losses and that are responsible for the dissatisfaction prevalent among cattle feeders. As has been pointed out previously in these columns, the cattle market is too high at the bottom as compared with the top. To equalize matters, feeding stock should sell lower or beef higher. Until this disparity in prices between finished and unfinished cattle is adjusted there is bound to be more or less dissatisfaction among cattlemen.

The cause for the lethargy and the lack of strength so noticeable in the cattle markets of the country is being generally discussed by stockmen at all the big centers. While it is ascribed by different ones to a wide variety of causes they are generally being reduced down to two primal causes, namely a lack of industrial activity at the big consuming centers and to heavy importations of Argentine and Australian beef.

Cows Being Held Back

A noticeable feature of the markets is the scarcity at most all points of cows and heifers and of good young breeding stock. It would appear that the country is conserving the female cattle, and it is very fortunate from the market point of view that such a policy is being followed. Cow beef would naturally come into direct competition with frozen beef from abroad and could not fail to suffer more or less demoralization in consequence, which would tend to make the general market even duller and weaker than it is.

Texas grass cattle are becoming quite plentiful at southern markets and quite a sprinkling of them are finding their way into the northern markets, where they take the place of the medium and common kinds of cornfeds, thus tending to weaken the market on the latter.

While the present situation, as regards the cattle trade is unfortunate, and especially unsatisfactory to the selling interests, no one is able to offer any consolation in the way of prospective improvement. There is really nothing in sight to give a ray of hope that the market will be materially improved in the very near future. As a rule operators on the market believe that present prices are likely to prevail for some time to come and that, while there may be an advance later in the season, it can hardly be expected until the most of the cornfeds have been disposed of. Under present industrial conditions it would appear that the market on beef is about as high as the consumer is willing to pay, and any tendency toward advance is almost immediately checked by reduced consumption. If it is true that fat cattle are now as high as consumers will pay it follows that the only relief for the maker of beef is to buy his feeding cattle at a price that will leave him a profit with fat cattle selling at present figures

Quiet in Hogs and Sheep

Hogs have been fluctuating within narrow limits during the last week or more. As a rule, the market has been without any new or especially interesting features, the trade being more or less colorless.

Sheep and lambs have been in moderate receipt at most market points. The season for cornfed stock is rapidly drawing to a close, so much so that in some localities pretty much all of the fed stock has already gone forward to market. As a result of moderate supplies, prices have recently advanced sharply, as it was expected they would. The market has for some time back been in a good healthy and from a sellers standpoint entirely satisfactory condition. While further advances may take place as the supply becomes still more reduced, the market is regarded generally as being about as high as consumers can be expected to stand for as compared with the way other kinds of stock are selling.

Hog Cholera Regulations

(CONTINUED FROM PAGE FIVE.)

yards are infected with hog cholera germs. It has been clearly shown in a number of instances where hogs have been sold to the local hog buyer, put in the yard and resold to some other farmer, whether for feeding or breeding purposes, giving to the new location the hog cholera germ and entailing a big loss through this disease to the buyer. The action of the Live Stock Sanitary Board in absolutely prohibiting the removal of any hogs once they are in these yards, except for immediate slaughter, is certainly a step in the right direction in hog cholera control.

These matters are all of very great importance and we hope that everyone interested in any way in the control of hog cholera will lend every assistance to the Live Stock Sanitary Board and officials actively engaged in this work. Farmers and others can in many ways give them material assistance if they will but make the effort, which in many cases is but a small one.

Some doubt has been expressed as to the advisability of the Live Stock Sanitary Board of Nebraska passing the order prohibiting hogs from being taken from any public stock yards except for immediate slaughter. In connection with this objection we quote a letter from a farmer printed in a farm paper published in Minnesota:

Last fall an unscrupulous party went to our stock buyer and offered to sell him some young hogs just ready for fattening. Knowing that the grower had plenty of corn, our buyer asked the reason for selling, saying that he could probably sell them to some of the neighbors to feed. The grower answered: "Well, you see, neighbor so-and-so has cholera in his herd and I am afraid mine will get it." The stock buyer bought the hogs and promptly resold them from the yards to a neighbor on the other side of town to feed. In a few days some of the hogs died, and upon examination were found to have had the cholera. The balance, as well as all the rest of the hogs that farmer had, were immediately marketed for slaughter, subject, of course, to inspection. Shortly afterward the next neighbor lost two, and he immediately sold the rest, burned the carcasses of the dead hogs and both places were thoroughly disinfected and cleaned up, and the disease has spread no further.

While the actual loss from the disease at the moment does not seem great, the amount lost by the sale of breeding stock cannot well be estimated. By the way, it leaked out about the time the hogs began to die that the original owner had lost some by the disease before selling. The opinion held of this party by the community is not flattering, to say the least.

Had this order been in force in Minnesota at the time, this loss would never have occurred. The selling of hogs from public stock yards back to the farms is, without question, the cause of many an outbreak of cholera. Farmers will be materially helping themselves by helping to enforce this order.

Central Nebraska Dairymen

The second annual rally of the Central Nebraska Dairymen's association will take place at Central City on June 17 and 18. A splendid program has been arranged for this meeting, commencing on the morning of the 17th and ending the evening of the 18th. Various subjects pertaining to the general dairy business will be discussed by men alive to their subjects and thoroughly competent to speak. There will be an exhibit of dairy cattle, as well as dairy products, milking and judging contests and demonstrations of machines of all kinds pertaining to the dairy industry. Reports will be made for the second year of the Merrick County Cow Testing Association, which is composed of some twenty-five farmers and dairymen in Merrick county who have kept a careful record of the feed consumed by their various cows during the last year and the pounds of milk and butter-fat obtained. This will be one of the very interesting and instructive features of the rally.

No dairyman or farmer who can find it possible to attend this meeting should stay away. He will find plenty both to entertain and instruct him. The officers of the association are: Leonard Nelson, president, Stromsburg; E. W. Page, first vice president, Central City; George E. Rockes, secretary-treasurer, Central City. For detailed program or any other information write to any of these gentlemen. They will be glad to give you full information.

The number of co-operative bodies in Russia on January 1, 1914, was about 26,500, of which 12,500 were credit co-operatives, 6,000 were agricultural societies and 8,000 were consumers' companies. The number of members exceeded 8,200,000.

The Department of Agriculture states that the farm horse averages about three and one-half hours of work a day the year around.

Potato scab germs live over in the soil for years. It takes at least a five-year rotation to get rid of them.

The same steam engine has been pumping water out of a coal mine in England for more than 100 years.

Bee keeping in Porto Rico has grown in five years to a $100,000 business.

POULTRY—Langshans

BLACK LANGSHAN EGGS—CIRCULAR. Jake Hetrick, Wahoo, Neb.

Leghorns

SINGLE-COMB WHITE LEGHORN eggs, 3½c each. Will Rockwell, Hubbard, Neb.

Minorcas

HIGH-CLASS BLACK MINORCA eggs. Frank A. Agnew, South Omaha, Neb.

Orpingtons

ORPINGTONS—BUFF OR WHITE—Eggs, cockerels. List free. Frank Lewis, Gibbon, Neb.

Plymouth Rocks

BARRED ROCK EGGS FOR HATCHing, 60c per 15, $3 per 100. Mrs. Anna Eklund, Waterloo, Neb.

Rhode Island Reds

SINGLE-COMB RHODE ISLAND RED eggs, $1 per 15 eggs, $5 per 100. Delmer McCann, Arlington, Neb.

HIGH-SCORING RED MALES, BLUE ribbon winners, cheap. Need room for young stock. Price list free. George Ainsworth, Fremont, Neb.

COVALT'S SINGLE-COMB REDS—This month, half price—yearling hens, fine breeders, $1 and $2 each. Scott Covalt, Council Bluffs, Ia.

Wyandottes

WHITE WYANDOTTES—EGGS HALF price. Best strains in America. White Wyandotte Farm, Oscar L. Bock, Prop., Council Bluffs, Ia.

BUFF WYANDOTTE EGGS FOR setting. Mrs. Chas. Hough, Weston, Ia.

Miscellaneous Poultry

WYANDOTTES, LEGHORNS, ROCKS, Reds, Orpingtons, water fowls. Free catalogue. C. W. Brehm, Harvard, Neb.

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

SEEDS

ALFALFA SEED—DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

I AM IN THE MARKET FOR CLOver, timothy, alfalfa, cane and millet seed. Send samples. I have a large, select stock of all these seeds for sale. Werter DeVaughn, 1614 Harney St., Omaha, Neb.

CEMENT MIXERS

WRITE TODAY FOR CIRCULARS and prices on the most complete, most compact and most simple concrete mixer on the market. Built for the farmer and sold at a price every farmer can afford to pay. Superior Manufacturing Co., 307 West Fifth St., Waterloo, Ia.

RATE—Five cents per word per issue. Cash must be sent with all orders

Count every word, initial and numeral, including the address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred five thousand farmers are regular paid-in-advance subscribers to TWENTIETH CENTURY FARMER. If you have any wants or if you have anything to sell, insert an ad. in this department.

LANDS—Arkansas

80 ACRES RED LOAM LAND; 50 CULtivation, balance timbered; orchard, house, water; 4 acres clover; $20 acre, terms. Sessions Co., Winthrop, Ark.

Colorado

WANTED—GOOD, LIVE REAL ESTate agents to co-operate with us in colonizing a 20,000-acre tract of good farm land in eastern Colorado near Platte river in the Shallow Water district, where the crop pays for the land in two years. Good commission to live agents. Write at once for literature. Platte River Valley Land Co., Omaha State Bank Bldg., Omaha. Neb.

Crop Payment

IF YOU HAVE A TEAM OF HORSES and some cattle, you can buy a good farm in Minnesota, North Dakota or Montana on the crop-payment plan. For particulars address L. J. Bricker, General Immigration Agent, 377 Northern Pacific Ry., St. Paul, Minn.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

FARMS WANTED—WE HAVE DIrect buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

Kansas

FOR SALE—320 ACRES, IMPROVED, in the famous Moran Valley, Allen county, Kansas. Very low for cash, or on easy terms. View of farm sent on application. Address owner, Lock Box 367, Iola, Kansas.

Minnesota

CORN AND CLOVER LANDS IN central Minnesota. Low prices. Reasonable terms. Write Murray, Wadena, Minn.

100 CHOICE FARMS IN THE GARden spot of southern Minnesota, where corn is king. Price, $75 per acre and up. Prices advancing rapidly. Come now. Free list. The Paffrath-Schmit Company, Springfield, Minn.

NORTHERN MINNESOTA—THE greatest natural cattle section; no drouths; alfalfa, clover, corn and potatoes are principal crops. Prairie or timber. Free information. We have no land for sale. Write W. R. Mackenzie, 904 Palace Bldg., Minneapolis, Minn.

LANDS—Missouri

IF YOU WANT FARMS OR ranches in the Ozarks of Missouri, write A. J. Johnston, 221-226 Woodruff Bldg., Springfield, Mo.

Nebraska

GO WEST—FOR SALE, A 14,000-ACRE colonization tract. Will retail $12.50 to $25 per acre. This tract is scattered with fine farms, homes and showing splendid crops which we raise in that territory. This is a bargain for eastern real estate colonization agents or speculators—$8 per acre. Write for terms. Will split tract to suit. 522 State Bank Bldg., Omaha, Neb.

North Dakota

NORTH DAKOTA LANDS DIRECT to Purchaser—We have listed with us to sell several hundred thousands acres of choice North Dakota lands. In order to obtain settlers along our 1,200 miles of track in North Dakota, we will sell these lands at cost. Prices are about one-fifth those asked in Iowa or Illinois, and agricultural possibilities are just as great. Roads, schools, churches, railroads, all established. Very low excursion rates. For literature and full particulars write J. S. Murphy, Immigration Agt., Soo Line Railway, Minneapolis, Minn.

Washington

NO DROUTHS ON OUR SPOKANE Valley Irrigated Lands. Here you can depend every year on raising alfalfa, corn, etc., enough on one acre for one cow. With chickens, hogs and fruit an industrious man will succeed. We import all these products, hence good markets. Mild climate. Abundance of water. Close to city. Prices and terms very reasonable to actual settlers. Write to Spokane Valley Land and Water Co., Spokane, Wash.

Wyoming

COME TO PINE BLUFFS, WYOMING, where farming pays—where those who are here have made good—where on the average the crop on every acre under cultivation pays for the land each year—where oats yield 60 to 90 bushels per acre, wheat 20 to 40 bushels, flax 15 to 25 bushels—where 1,000 cars of grain are shipped out annually—where the land cultivates easily—where the climate is inspiring and the rainfall ample—where choice, level farm land can now be had at from $15 to $25 per acre, on terms as low as one-tenth cash and the balance in nine equal yearly payments—where you buy direct from the owner and save the agent's commission. Will refund your expenses if these statements untrue. C. L. Beatty, Pine Bluffs, Wyo.

IF YOU WANT WHAT YOU WANT when you want it, place an ad. in the Market Place of Twentieth Century Farmer.

MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

DAIRY FARM CO., 1201 FARNAM, Omaha, makes big inducements to practical farmers who believe in corn—silo—milk pail—hog—route for sure money in farming.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

U. S. GOVERNMENT JOBS OPEN to men and women. Over 15,000 appointments coming; $75 to $150 month. Life jobs. Pleasant work. Short hours. Vacations. Common-sense education sufficient. Full directions telling how to get position free. Franklin Institute, Dept. G-93, Rochester, N. Y.

WANTED—A MAN TO SOLICIT SUBscriptions for Twentieth Century Farmer; salary $42 a week. Address Circulation Manager, Twentieth Century Farmer, Omaha, Neb.

THE AUTOMOBILE BUSINESS PAYS $25 to $50 wekly. We teach you how. Write for our free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

GOVERNMENT FARMERS WANTED—Make $125 monthly. Free living quarters. Write Ozment, 39 F. St. Louis, Mo.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

HOLSTEIN CALVES—BEAUTIFULLY marked, 15-16ths pure, 3 to 5 weeks old, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

DOGS

50 FEMALE COLLIE PUPS TO LET on shares; 50 female Airedale pups to let on shares. Must have reference. Also have a few to sell. Snd for my large sales list. W. R. Watson, Oakland, Ia.

SCOTCH COLLIE PUPS FOR SALE—Well marked, $5 each. John Bader, Scribner, Neb.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Armstrong Sells Durocs Feb. 19

J. T. Armstrong & Son of Clarks, Neb., will hold their annual sale of Duroc-Jersey bred sows February 19, 1915. Everything is coming along as well as could be expected at the farms, and if nothing occurs in the meantime they will certainly have a splendid line up to offer. Keep this date in mind and watch these columns for further announcements.

Naiman's Poland-Chinas

One of the leading breeders of the big, smooth type of Poland-Chinas in southern Nebraska is John L. Naiman of Alexandria. Mr. Naiman is a constructive breeder, in the strictest sense of the word and has succeeded in building up a herd that is worthy of the patronage of anyone wanting a strictly first class Poland-China. He has an especially strong lot of spring pigs this year, and among them are a number of excellent herd boar prospects. These pigs are sired mostly by Blue Valley Oak, a son of the great Blue Valley, at the head of the Thomas F. Walker herd. These pigs are out of sows weighing from 500 to 800 pounds. At this time Mr. Naiman has three good fall boars that he is offering for sale. These boars are cholera immune and are being offered at the reasonable price of $25 each. Write him if you are in need of anything in his line, mentioning the Twentieth Century Farmer.

Benjamin's O. I. C.'s

C. S. Benjamin, Portland, Mich., will sell you an O. I. C. male or a male and any number of sows of different blood lines sufficient to start you in the hog business. Mr. Benjamin has probably started more men in the business than any other O. I. C. breeder in the country. His hogs are of a type and character that will please you, and we believe you will find it to your interest to write him when wanting anything in his line. This is a good time to buy spring pigs, and the express rates will not be so high as they would on older stuff. Write him for further information, mentioning the Twentieth Century Farmer.

Clarence Wallace Heard From

In a letter of recent date, Clarence Wallace of Wisner, Neb., breeder of Duroc-Jerseys, informs us that everything is coming along in splendid shape at his place. He has an especially choice lot of spring pigs this year and also a line up of fall stuff that will certainly be worth while looking after this fall and winter. In the line of fall boars he has a number of herd headers that are really of exceptional merit. Several of these are out of Fancy Advance 2d, champion sow at Nebraska last year. Others are out of the fourth prize sow in the same show. Get in touch with Mr. Wallace if you want anything in his line, for he certainly has the goods. Kindly mention this paper when writing.

Chandler's Drafters

Horsemen generally are today coming to recognize the fact that American bred horses are the equals of those imported from other countries, if not superior to them. The fact that the American bred horse is acclimated and is grown and developed in natural conditions prevalent here makes him much more valuable in this respect. The rapid advancement made in the breeding of draft horses in America in the last decade has brought the American bred horse up to a standard equal or superior to his foreign brothers. One of the men who has been strongly identified with the American bred horse is Fred Chandler of Chariton, Ia. He is raising a type of animal that meets every popular requirement, and they are raised under conditions that assure their going into almost any part of the country and making good. He can supply you with a stallion or a few mares at almost any time, and they are sold under a guarantee that is all that could be asked for. Write Mr. Chandler when you are in the market for anything in the line of a draft horse. He will give you value received and treat you right. Kindly mention the Twentieth Century Farmer when writing.

Sale Dates

Duroc-Jersey Hogs

September 30—F. B. Nelson, Lindsay, Neb.
October 2—F. A. Lemmerman, Creston, Neb.
October 5—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.

Whittled to a Point

An easy way to borrow trouble is to lend money.

Woman is better at driving bargains than nails.

The uncertainty of love is one of life's sure things.

Woman's crowning glory seldom looks it in the early morn.

Spoiled children and foolish parents are often found in the same house.

Anyway, a man never sits down on the floor when he puts on his hosiery.

An evening call is productive of much pleasure—if not when you come, at least when you go.

But the man who restricts his joy riding to street cars doesn't have to worry about punctures.—Chicago News.

Here!

Drink this
and be refreshed!

Coca-Cola

TRADE-MARK REGISTERED

Sip by sip here's pure enjoyment—cool comfort—a satisfied thirst—a contented palate.

Demand the genuine by full name—
Nicknames encourage substitution.

THE COCA-COLA COMPANY
ATLANTA, GA.

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Whenever you see an Arrow think of Coca-Cola.

MICA AXLE GREASE

Stops Squeaking Spindles

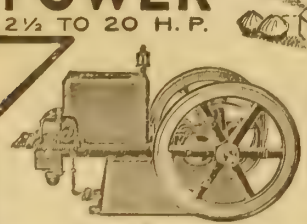
because there's Mica in it

Eureka Harness Oil will Keep Your Harness Black, Soft and Strong

STANDARD OIL COMPANY
(NEBRASKA)
OMAHA

EFFICIENT—PROGRESSIVE POWER FARMS

2½ TO 20 H. P.



Kerosene Engines

Fuller & Johnson Engines

are powerful factors in building up modern, up-to-date farms. Once installed, they make a connecting link in a farm equipment as necessary as the plow, harrow, planter, etc. For durable, economical, reliable service, they are unsurpassed. Every progressive farm should have a Fuller & Johnson Kerosene Engine—they go hand in hand.

Write for Catalog No. 18.

FULLER & JOHNSON MFG. COMPANY
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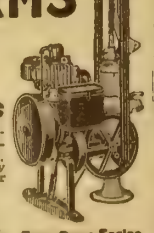

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$33.00 IT'S BUILT RIGHT

IT'S RELIABLE IT'S DURABLE
EASY DRAFT SIMPLE AND SERVICEABLE

30 DAYS FREE TRIAL

THIS ONE ROW RIDING LISTER

Is the only lister equipped with a Screw Adjustment Shaft which adjusts the pitch of the mould board to suit the soil in any locality, thus insuring perfect work and light draft. The drop is perfect, you can see the corn as it goes into the ground. Can be used with 3 or 4 horses, with or without tongue. Sold and Shipped DIRECT TO YOU FROM OUR FACTORY equipped with 3 or 4 horse evener, adjustable disc covers, rolling coulter. If tongue is wanted add $1.50. $33.00

"SWANSON NEW-COMER"

WRITE TODAY FOR BIG BARGAIN CATALOG

SWANSON-ST. JOSEPH PLOW COMPANY
SAINT JOSEPH, MISSOURI

$65.85 None Better---Few as Good

AS THE SWANSON LATEST IMPROVED

TWO ROW RIDING LISTER

Sold and Shipped Direct to the Farmer from Our Factory on 30 DAYS FREE TRIAL. All our farm implements are fully GUARANTEED This lister is simple and strong in construction, equipped with the most reliable dropping device made: no chains to slip, break or wear out.

Equipped with either Disc or Shovel covers, 6-horse Evener and Neck-yoke	Lister without Drill	$65.85
	With Drill and Shovel Covers	73.00
	With Drill and Disc Covers	74.50

WRITE FOR OUR BIG FARM IMPLEMENT CATALOGUE

SWANSON-ST. JOSEPH PLOW COMPANY
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Swanson Two-Row Steel King Cultivator, $25.85

Less than manufacturing cost. This offer will hold good for only 10 days.

This cultivator is absolutely guaranteed to do the work or your money refunded. Equipped with 4 discs and 4 shovels, hard maple disc bearings guaranteed for the life of the cultivator.

Send your reservation in now. These cultivators will not last long at these sacrifice prices. Terms cash or acceptable note, f. o. b. St. Joseph, Missouri.

SWANSON-ST. JOSEPH PLOW COMPANY
SAINT JOSEPH, MISSOURI

On Farms Where Efficiency Rules

— where progressiveness marks every feature of equipment and method—you will find the buildings covered, once and forever, with

J-M ASBESTOS ROOFING

"The Roll of Honor"

A roofing of everlasting, pliable stone, made of pure Asbestos and Trinidad Lake Asphalt. A perfect protection for otherwise perishable buildings. Requires no paint or other protection. No maintenance cost. Keeps buildings cool in summer, warm in winter. Affords wonderful fire protection. Proof against every weather condition. Easy to lay with J-M Cleats, which come with each roll. White and attractive — no cement-smeared, unsightly joints or laps.

J-M REGAL ROOFING was perfected to supply a demand for a rubber type, wool felt roofing, lower in price than J-M ASBESTOS, but containing the H. W. Johns-Manville Co.'s standard of quality and service. Also applied with J-M CLEATS.

J-M ASBESTOS SHINGLES meet the demand for a decorative fire-proof residence roofing that never needs paint.

Your dealer keeps J-M Roofings, or you may order direct. Write nearest branch for Book No. 3885

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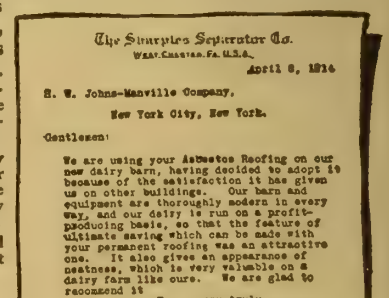


The Sharples Separator Co.
West Chester, Pa. U.S.A.
April 8, 1914

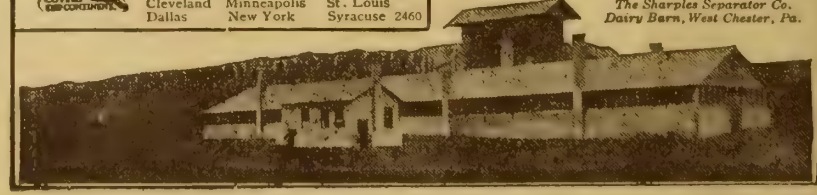
H. W. Johns-Manville Company,
New York City, New York.

Gentlemen:

We are using your Asbestos Roofing on our new dairy barn, having decided to adopt it because of the satisfaction it has given us on other buildings. Our barn and equipment are thoroughly modern in every way, and our dairy is run on a profit-producing basis, so that the feature of ultimate saving which can be made with your permanent roofing was an attractive one. It also gives an appearance of neatness, which is very valuable on a dairy farm like ours. We are glad to recommend it

Yours very truly,
THE SHARPLES SEPARATOR CO.
R. K. Sharples
Vice-President.

PTS-RLG.



The Sharples Separator Co.
Dairy Barn, West Chester, Pa.

Tell Your Neighbor to Subscribe for Twentieth Century Farmer

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, June 20, 1914 | Number 706

Prattle of the Youngsters

Fixing Father

"Did your father ever lick you?"

"Once, but I got good and even."

"How?"

"Why, when the circus came to town shortly afterward I said I didn't care to go."

So Would We

The teacher addressed one of her pupils, an average boy of 12.

"Now, James," said she, "tell us what you would think of if you saw the stars and stripes waving proudly over the field of battle."

"I should think," replied James, "that the wind was blowing."

The Party that Worked

Mr. Green—Now I'm going to tell you something, Ethel. Do you know that last night, at your party, your sister promised to marry me? I hope you'll forgive me for taking her away.

Little Ethel—Forgive you, Mr. Green? Of course I will. Why that's what the party was for.

Touching

A teacher trying to impress on her children the rightness of kindness toward all animals, took them for a walk, to bring the lesson home to them.

Hearing a scream from little Johnny, she asked: "What's the matter, Johnny?"

"I've been sitting on a hornet," was the tearful response, "and I'm afraid I've hurt the poor thing."—Delineator.

Ready for It

Outside it was snowing hard and the teacher considered it her duty to warn her charges.

"Boys and girls should be very careful to avoid colds at this time," she said solemnly. "I had a darling little brother only 7 years old. One day he went out in the snow with his new sled and caught cold. Pneumonia set in and in three days he was dead."

A hush fell upon the school room; then a youngster in the back row stood up and asked:

"Where's his sled?"—Ladies' Home Journal.

Pleasing the Bishop

"The late Bishop Bowman," said a Philadelphia minister, "once rebuked my too soft and conciliatory leanings by telling me a story about a little girl.

"This little girl, it seems, had written with great pains a composition on the cow. The composition ran as follows:

" 'The cow is a very useful animal.'

"That evening the bishop dined at the little girl's house, and her mother, since she was a very little girl, indeed, was proud of the composition, and requested its author to read it aloud.

"The little girl got her manuscript, but instead of reading it as it stood she amended it on the bishop's behalf so that it ran:

" 'The cow is the most useful animal there is except religion.' "

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Hog Cholera Articles

WE ARE nearing the close of our series of articles on hog cholera, which will now be collected into pamphlet form. The reason we are publishing these articles in this form is that we have received so many calls for the back issues of the papers containing the articles that we have exhausted the supply.

We believe this collection of articles will be the most complete and practical statement of the facts concerning hog cholera that has yet been published. We have not taken the matter up from the standpoint of the veterinarian, although we have consulted the veterinarians in the employ of the government, the colleges and the states, as well as many veterinarians practicing independently among farmers, and have given careful consideration to their experiences and opinions. We have not taken the subject up from the standpoint of any one farmer, or the farmers in any one locality, nor based our judgment on the experiences of men under identical conditions. We have personally interviewed farmers and breeders in three states—Nebraska, Kansas and Iowa—and have written hog raisers in other localities.

These investigations have been made by a man who has an established reputation as a hog breeder, and whose years of practical experience in this line enable him to weigh the matter collected and draw from it conclusions that should be of great value to any man who wants to combat this dread disease in a rational and practical manner. The writer is no scientist and has not written a scientific treatise; he merely discusses the subject in the plain, every-day language of farm and market.

These bulletins will be ready for distribution in a few days. We are making a charge of 5 cents each to cover postage and handling. If you want one of these bulletins, write us and we will be glad to supply you.

Bright and Breezy

That English Language

Dr. Arnold was paying a visit to one of his patients, a young mother.

"You must let the baby have one cow's milk to drink every day, Mrs. Burrell," he said.

"Very well, doctor, if you say so, of course I will," replied the perplexed young woman, "but I really don't see how he is going to hold it all."—Lippincott's Magazine.

Prepared for Emergencies

Speaking of accommodating hotel clerks, the best I ever saw was in a certain Maine town. I reached the hotel late in the evening. Just before retiring I heard a scampering under the bed and saw two large rats just escaping. I complained at the office. The clerk was as serene as a summer breeze.

"I'll fix that all right, sir,' he said. "Front! Take a cat up to room 23 at once.' "

Who Was Right?

Patrick O'Rourke had the misfortune one day of falling from the second story of a house just being completed. Mike Flaherty, the foreman, saw him fall and immediately called an ambulance, which in due course of time arrived. The surgeon gave one glance toward the still form and said: "He's dead."

Pat, who was coming to, heard him, and, rising to a sitting posture, replied: "You're a liar! I ain't!"

Mike was standing close by and took hold of Pat, gently saying: "Lie down, Pat; the doctor knows better."

Keeping the Sabbath

Sir Archibald Keikie once told a story which ilustrates, says the London Chronicle, one view of keeping the Sabbath. Donald was mending a wheelbarrow in his back yard, and the noise shocked the Sabbath calm of the neighborhood.

His wife came out with protestations. "Donal', mon, ye're making an awfu' row. What wull the neebors think?"

Donald went on nailing a board on the barrow. "I maun git ma barra mendit," he replied.

"Oh, but Donal'," returned the good wife, "it's vera wrang to work on the Sabbath. Ye ought to use screws."

Clever Elephant

"Elephants are clever animals," said a trainer, "and I once had one that could read. He was a quarrelsome beast, and one day he got into a scrape with the Bengal tiger and before we could get them separated he had his trunk badly damaged. After the scrimmage was over the elephant broke loose and started down the street fast. 'He's going wild!' somebody shouted. 'Don't you believe it,' says I. Now, where do you suppose that elephant went to?"

"Went to the surgeon's, I suppose. Can't you get up a better yarn?"

"No, he didn't go to the surgeon's. He went straight to a little shop where a sign read, 'Trunks repaired while you wait.' Of course, he had made a mistake, but what do you expect of a poor dumb brute?"

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Management and Practical Value of Silos

II---How Silage Saves the Farmer Money and How to Use the Silo to the Best Advantage

THERE can be no question but that a very large portion of our farms could be made more profitable if a greater number of live stock were kept. During the last few years, in portions of southwest Nebraska and Kansas, drouth conditions have been such that many of our farmers were compelled, on acount of lack of feed, to sell not only their surplus animals, but a large per cent of their breeding animals as well. There is no question but that during the last six or seven years many thousands of breeding cows have been forced onto the market for the simple reason that the owner did not have sufficient feed to carry them through, due principally to weather conditions. This paper is inclined to the belief, however, that in a good many of these cases quite a per cent of these breeding animals could have been kept on these farms had the owners used methods in taking care of what they did raise different from the methods used.

We refer to the silo. We believe there is no way by which so large an amount of good food can be stored for future use as cheaply as can be done by using this valuable structure on your farm. The truth is that the loss occasioned by this forced selling of our catttle is very much greater than one would suppose at first thought. Cattle sold at these times are generaly sold in such condition and weight that a very great sacrifice is made in price. Very often are they sold at an immature age and often on a glutted market. Particularly is this true if the drouth conditions extend over a very wide territory. Some of our farmers are forced to sell so much stock that they are even deprived of the necessary milk and butter for home consumption. Often years of time and an outlay of considerable money have been made to build up a good herd such as the owner intends to keep for the future. When such animals as these are forced onto the market the sacrifice is by no means small. It is possible that when good conditions do return this man may not have the means with which to buy the kind of animals he has been forced to sell, perhaps being obliged to stock his farm with inferior animals, which any farmer knows are not nearly as profitable as are well-bred ones.

Loss Due to Forced Sale

Again, under these conditions, it is often true, although a man had the funds to buy what he wanted, the animals are not available, due to the increased demand occasioned by many farmers and stock raisers in the same community replenishing their run-down herds.

Another direct loss is made by the decreased quantity of manure available for use on the fields. While this may not seem to be of great value, time will show that this loss was much greater than some of us at first supposed.

Ivestigation of this proposition by this paper has revealed to us one fact quite clearly, and that is that a large per cent of these animals could be retained on these farms by a more extended use of the silo and feeding of silage. A personal visit to those districts has shown us that in the last year or two in particular, practically every man who has had a silo has retained his breeding herd, while the reverse is practically true of those who have not had silage for feed. In some instances have we talked to men who have not only retained their breeding herd, but have made a nice profit on the venture of buying some of the animals from neighbors who were forced to sell, feeding them on silage and other feeds available.

Can Always Fill Silo

Under our present methods of farming and soil tillage there will be very few, if any, years in practically all the territory covered by this paper in which good forage cannot be raised for filling the silo. You may not be able to raise corn, well eared, but it is nearly always possible to raise cane or some of the kafirs.

If what we have stated are facts, it cer—tainly stands every farmer in hand to make a close investigation of the silo proposition.

If you conclude to build a silo, give the matter of location considerable attention. It should be located conveniently for filling and feeding, preferably close to the building where you will feed the largest per cent of your silage. We have noticed some silos located at considerable distance from any feeding place, occasioning expense in getting the silage from the silo to the stock. Some farmers have so placed their silos on account of the danger of fire. You had probably better pay a small amount of insurance than to lose so much time in feeding.

Considerable feed is generally wasted during the year from silos being placed a distance from the feeding place on account of the wind, and the feed being dropped from the carrier, whether it be a wagon, wheelbarow or what not.

Silage Keeps Indefinitely

One of the greatest advantages of the silo is the fact that silage can be kept for feed in good condition for an indefinite period. One man with whom we talked recently had a silo which he filled six years ago, and has not yet fed out all the silage put into the silo at that time. He has, however, during that time fed silage which had been in the silo four years, and said it was equally as good as that put in the year previous to feeding. This being a fact, is not silage almost indispensable as a feed to have on hand with which dry pastures may be supplemented any year?

There is scarcely a year goes by but that sometime during the pasture season the pastures become dry, and the cattle in consequence lose flesh or quantity of milk. We believe if the farmer had sufficient supply of silage on hand during these times the cattle could keep on gaining steadily and the flow of milk be maintained. Late summer and early fall are very trying on dairy cows. Farmers who have been blessed with plenty of silage for summer feed have universally told us that the flow of milk has been fully maintained in dairy cattle during the dry periods in the summer, and that stock cattle have maintained a steady gain by having this feed on hand.

Silage as Summer Feed

We have, however, among the very large number of farmers to whom we have talked on this subject, found very few who have had sufficient silage to have any left for summer feed, most of them using it all during the winter season. One of our very strong impressions was the fact that every single farmer but one with whom we talked said that in past years he had not had silage enough, claiming that he could have done better with his stock had he had more of this splendid feed. Particularly has this been true in reference to the value of silage as a summer feed. In a future issue of this paper we will give you the experiences of one man who carries a very large dairy herd and has no pasture whatever, depending on his silage, with other feeds, twelve months in the year. We have talked to a number of farmers who have told us that they were going to erect sufficient silo room that they may be sure they will have all the silage they will need for both summer and winter feed if necessary.

Why not look at this proposition as insurance? You are paying out money all the time to insure youself against loss occasioned by fire, tornado and hail storms. Why would not a little money spent in erecting and filling a silo be a good investment to insure yourself that it would not be necessary for you to deplete your breeding herd of cattle?

Prevents Cornstalk Disease

Another thing incidental to the use of silo, while not possibly of great value, would be the saving in the loss of the large number of cattle dying each year from cornstalk disease. We have no figures on the losses occasioned in this way, but everyone knows that in the cornfields of this country each year hundreds of cattle die from this disease. This would all be saved if these cattle were fed in the yard with the same cornstalks put in the silos and fed in the form of silage. We are also firm in the belief that if these same cattle were fed in the yards and barns, leaving out the value of the feed entirely, a much greater gain could be obtained by their being in good, warm, dry, comfortable quarters as compared with being compelled to run out in the open and be pelted with snow and sleet to get this feed.

We hear a great deal about testing the cow. Why not pay a little attention to the testing of the man who is feeding the cow, and his methods of feeding? Do you not think the cow would show much better in the test if she were allowed to be fed protected in the shed or barn instead of running the open field? Think about

(CONTINUED ON PAGE FOURTEEN.)

How Manure from Stock Yards Pens is Used

General View of Plant, Showing Driveway

Collecting Manure in Stock Pens

Dumping Manure Into Pits

Putting Manure Into Kilns to Be Burned

Absorption Chamber for Collecting Nitrogen from Manure for Fertilizer

Removing the Ash from the Kilns

After Grinding, the Ash is Sacked for Shipment

Plant Showing Grinding and Storing Shed at Right

Hog Cholera---Prevention and Treatment

X—Methods of Treatment and Period of Immunity and Cost of Immunizing

WHEN should hogs be treated? We take the general broad view of this matter that we do in the human family. Don't give medicine until it is needed. We fully realize the nature of hog cholera and the ease with which infection may be carried. Smallpox in the human family is a very infectious disease, but we don't vaccinate against it unless we find it in the community, and feel that we are liable to come in contact with it. We do know, however, that we are less likely to contract the disease if we are careful in our diet and habits and keep our premises sanitary.

What applies to the human family will apply with equal force to the hog, both as regards his ration and his sanitary surroundings. In a former article we stated what in our opinion should be done in the way of treatment to confine the outbreak to the premises and what to do to protect herds on adjoining farms.

When to Use Serum-Simultaneous

There are herds of hogs maintained which we believe should be kept immune all the time by the serum-simultaneous treatment. We would classify these as herds feeding on the garbage from cities, herds into which cholera germs are liable to come any time on account of continually shipping in and out different kinds of live stock, and herds where feeders are largely bought from stock yards.

There are those who hold to the idea of continuous serum-simultaneous treatment. Dr. Dorset, speaking on this subject before the veterinarians, said: "We were soon convinced that it is not practicable to attempt to immunize every hog in the United States. To understand this it is only necessary to remember that at the very minimum the cost of the serum and its application would probably average around 50 cents per head. In the year 1913 there were more than 61,000,000 hogs in the United States. Therefore, the treatment of all hogs in the country would have cost approximately $30,000,000. This would not seem excessive if by this treatment we could insure the control of the disease during the subsequent years at a small annual outlay, but such is not the case, because the life of the average hog is less than a year. Consequently, even if we should immunize all of the hogs this year, we would be obliged to do the same again next year, and during the succeeding years. On account of the expense alone this plan does not at the present time seem practicable."

Hogs Should Be Confined in Absolutely Clean and Sanitary Quarters, Both Before and After Treatment.

Cost of Immunizing

The other available line of campaign which was finally adopted included the administration of anti-hog cholera serum when required, but in addition to this emphasis was laid upon the too much neglected sanitary measures, which, if properly carried out, should greatly lessen the extent of the disease. Let us look into the item of expense which must be taken into consideration. The government figures show that for a ten-year period, 1903-1912 inclusive, the average annual number of hogs in the United States was 53,700,000. This same report shows that the average annual total loss from hog cholera was $17,789,120.

To get the true situation regarding the cost of vaccinating by the double treatment, it is only necessary to remember that at the very minimum the cost of the serum and its application would probably average around 50 cents per head, or an average annual outlay for the ten years above quoted of $26,850,000. This would be an average annual outlay for serum and its application of more than $9,000,000, more than the value of the hogs lost by hog cholera during these years.

Virus May Spread Germs

Another fact to be taken into consideration is that when we are using the serum-simultaneous treatment we are dealing with hog cholera. The best reports we read show that more than 1 per cent of hogs treated with this method have shown visible signs of sickness, thereby being able to throw off hog cholera germs, which may be carried to other herds.

Dealing with this subject, we asked a number of authorities this question, "Would you advise the making of a rule by authorities not to allow virus to be sold or shipped into a community where there is no cholera or danger of infection?" The answer was the same from all these men. They would not allow virus sold into a community where there were no sick hogs or danger of infection. Among the authorities answering this question were men strong in the advocacy of the serum alone treatment, while others were as strong for the other treatment.

The fact remains, however, that there are times when treatment is necessary. What, then,

(CONTINUED ON PAGE TWELVE.)

How Manure from Stock Yards Pens is Used

CONSERVATION is the theme of many published articles and public speeches, and justly so. Without question, many valuable products are now wasted that can be, and in time will be, utilized and made of value.

Until recently it has been a problem with the stock yards people to dispose of the manure daily accumulated in the yards. It was offered to farmers free on board the cars at South Omaha. A portion of it was gotten rid of in this way, but a large per cent remained uncalled for. Just to the left of the plant, as shown in last picture on the opposite page, is a manure pile covering seven acres, which is seventy-five feet deep—the accumulation of years.

A few years ago the stock yards people at Kansas City conceived the idea of burning this manure and sending it out as a fertilizer. To do this an incinerating plant was built and the manure burned and sold to farmers for fertilizing purposes. One of the purchasers of this fertilizer, who was a large hog grower, noticed one day his hogs readily eating the product, and observation disclosed the fact that this product was valuable as a worm killer in hogs.

The stock yards people at South Omaha in 1912 built a modern plant for the purpose of turning their waste manure into something of value. This plant is of of special construction, so built that everything can be turned into a product of value. Even the smoke coming from this burning is utilized, being turned into a solid, later to be used with the ash as a fertilizer. The plant at South Omaha is the only one of its kind in the United States.

On November 14, 1912, the match was applied to the first kiln of manure, and the fire has never since gone out. No fuel is required in this burning, the manure being its own fuel. The heat from this burning is enormous, so much that water pipes have been constructed in the grates, through which water is continuously running. If these water pipes were not there the enormous heat would soon destroy the grates.

The present plant is of sufficient capacity to consume just about the amount of manure daily gathered from the yards. It consists of two furnaces, each furnace having a battery of twenty kilns. About 300 tons of manure are now being burned daily. When the present plant was constructed it was calculated to take care of the output of the yards for many years to come. The growth of the yards is such that another plant must be built soon or there will be a surplus of manure. The manure accumulated daily must be taken care of. The visitor to the yards is impressed with the cleanly conditions always maintained.

Plans for the new plant to be constructed include provision for the utilizing of the waste heat and gas. Millions of cubic feet of gas are made and wasted by the present plant. It is the plan to so construct the new plant that this heat and gas can be turned into power for commercial uses.

To produce one ton of ash requires the burning of from twenty to thirty tons of manure. The large manure pile referred to above contains enough manure to keep the present plant running night and day for the next four years.

The ash taken from the kilns as shown in the cut is conveyed to the mill, where it is run through a screen and then ground. The screening process sorts out nails, bolts, wire, etc. The ground ash product is about one-third fertilizer and two-thirds potash.

Probably but few of our readers know of the existence of such a plant, or have given the matter of the disposition of stock yards manure any thought. The stock yards people would be pleased to show this plant to any of their visitors and explain the workings.

This plant at South Omaha was constructed under the supervision of Mr. J. F. McAnany, who constructed the plant at Kansas City. Mr. McAnany is an expert in this work. He is located in the Exchange building, just to the right of the main south entrance, and will take pleasure in showing you over the plant.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

T. F. STURGESS - - - - - - Editor
G. W. HERVEY - - Associate Editor
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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

A big crop of the commercial grains—corn, wheat, oats, barley and rye—is the present demand in order to set the wheels of trade revolving, and there has never been a better prospect at this date for the fulfillment of this forecast since the beginning of crop growing in this country. A few days more of continued favorable conditions will place a guarantee on the winter wheat and rye crops.

Eastern Nebraska has experienced a rainy season that proved very annoying to the first crop harvest of alfalfa. The rains were heavy, and alfalfa in winrow or shock did not have time to dry out sufficiently for stacking between showers. The result is considerable loss in color and quality of hay where this occurred. The second growth is coming on so rapidly that the clearing of the ground was a necessity. There has never been a heavier growth of first-crop alfalfa in that section.

In a recent issue of the Rural New Yorker appears a long letter from a New York farmer telling of his experiences with a medium-sized gas tractor. He says he uses it for everything and that it will plow on steep hills. He finds it of especial value in hauling from one part of his farm to another, as his land is not all in one piece, and says that the economy in saving the feed of eight horses during the winter seasons more than pays for it. That we have learned these things in the west is demonstrated by the increasing popularity of the tractor on our western farms.

Land Values and Pastures

It is asserted that increased land values are making pastures scarce. This may be true in the cheap land districts or where land adapted to cultivation has been used for pasture purposes. There are, however, large areas of land that are by their nature adapted or suited to grazing that could not be profitably cultivated under any condition or circumstances. These lands are more profitable for the use they are adapted to serve—the growing of pasture grasses. Every state in the United States has some land of this character and when properly handled and given the advantage of pasture grass improvement it becomes a valuable factor in the growing and handling of live stock.

Wild-grass pastures, where the soil is deep and the surface adapted to cultivation, will not justify continuing in this use. The pasture will deteriorate by close grazing and weeds take its place. Such lands must eventually be turned to cultivated crops if they are to serve their best purpose in profitable production. The tame-grass pasture is the solution of the pasture problem on all farms where the lands are of a character suited to cultivation. All farm lands must produce crops commensurate with their money value in order to be self-sustaining from a financial point of view, and this is exactly what the land ownership question is drifting into. One hundred and $200-per-acre land cannot lie idle, or partially so, when it is costing this amount in its investment to carry it. These lands are costing the interest on their selling price, the taxes, maintenance, etc.

It is a mistaken idea that some persons have of the pasture land values. Pastures have been regarded all over the new land districts as of little real value, a kind of idle land that produces a volunteer crop that may be used or may not be used, just to suit the convenience or need of the land owner. This is an old idea of this class of lands that we have inherited from our forefathers, who had no special need or use of the open idle lands that were not needed for cultivation and which produced nothing but its volunteer crop of wild grasses.

The farm pasture lands are not carefully credited up with their production. These are really the most valuable and best paying lands on the farm; they are a source of feed supply almost every month in the year. Their measure of advantage in cutting down the use of expensive prepared feeds, both feeds and grains, is never closely estimated, and can be computed only on the farm where stock of all kinds are kept in the barns and feed lots and receive their daily rations by the hand of the feeder.

It is a question of "will it pay to continue lands in pastures when grain production will exceed it in profit?" It is merely a question of learning how to make pastures that will, through their feed-producing ability, exceed in crop value that of any other acres on the farm when measured from their relation as a combination farm crop ration in the growing and handling of live stock. The best combination of tame grasses for permanent pastures is an experiment that our agricultural experiment farms could with profit now take up.

The Dandelion Nuisance

The dandelion has become a great nuisance throughout the country and especially on the lawns of the homes in country, town and city. These beauty spots, which all members of the family are interested in keeping green, neat and orderly as nearly the whole year round as possible, have been invaded by this persistent weed pest, and so completely has it taken possession as to render the cultivated grasses on the lawns a failure in the sense of beauty and decoration.

The extermination of the dandelion was at first thought a small matter; a little bit of well directed energy and perseverance, and the desired results would surely follow. This proved to be a failure; in fact, the more cutting, digging and trimming this weed received the more ground its root space seemed to demand, and it usually got all its demands satisfied. The lawn grasses were injured more by the cutting and digging, and the dandelion was benefited, applying this as a sort of cultivation.

The Department of Agriculture has been interested in experiments leading to some system of extermination of the dandelion, but has practically failed to be able to present anything new or even reasonably successful. The sulphate of iron treatment for a time was thought to be worth trial, but this is not a success. Cutting out by the root is a fairly good remedy if followed by the application of some salt on the exposed roots, but this means a treatment only adapted to small areas, such as front dooryards or lawns of very small space.

The cultivation of the lawn by sowing more blue-grass seed, fertilizing the ground so as to encourage the growth of the grass, not cutting too frequently or too short, gives the grass an opportunity to choke or crowd out the dandelion by growing over it. This is argued by the example of lots and fields that are left to grow up in blue grass year after year, not disturbed by mowing or by being grazed off. These lots are found usually with few or no dandelion plants, but a very heavy growth of blue grass, illustrating the injury that a constant cropping of the lawn influences on the grass.

The ordinary city or town lawn is cut possibly twenty times each season; thus twenty crops of grass have been removed, and nothing put back, where the ordinary field crop takes its one crop each year of hay or grain and even then deteriorates, demanding fertilization and rotation of crop, etc. The lawn is the most abused plot of ground in connection with the farm or home and offers as a result a good opportunity for the invasion of noxious weeds, and the dandelion is an ever-ready invader.

Government After Railroads

We are glad to note that the United States Department of Agriculture has secured twenty-one convictions against railroads that have violated the law prohibiting the confinement of live stock for more than twenty-eight hours without unloading for feed, water and rest. One fine amounted to $4,700. A case came to our notice during the last spring in which eleven Holstein calves were expressed from Wisconsin to western Nebraska. They were in transit over seventy hours and arrived in such a weakened condition that some of them died and all required the greatest care to bring them through. Proper facilities for safely shipping good stock from one part of the country to another are one of the greatest necessities for the development of the dairy industry in the middle west. We are glad to know that the government is looking into the matter.

Grow More Forage Crops

There cannot be too much said for the encouragement of growing more forage crops, crops that practically cost but little time or attention, crops that may often be sown in with other crops and on waste pieces of land. It is much better to plow up the old weed lots about the premises and sow them to rape, turnips or anything that will produce a lot of feed that can be pastured in the later summer or autumn. There is nothing better for the swine of all ages than a rape patch to spend a portion of their grazing season in. This can be arranged so they can have a little variety. Of course, the Nebraska and Kansas hog raiser will not yield any preference over the alfalfa hog pasture, but a "change of pasture" might be found very acceptable to the hog as well as the sheep.

It is important that the fly be made as scarce on the farm as possible, and it is possible to go out of the fly-raising business on most farms. Of course, where much stock is kept about the barns, stables and feed lots there is practically no relief except to keep doors and windows well screened if the flies get a good start. The extermination of the fly when he has been started in life is a hard and tedious proposition, but the earlier in the year flies are trapped and killed the more the nuisance may be reduced, even on stock farms, where conditions are best for their breeding.

The June crop condition has never been in better condition of growth than now over the Missouri valley country. Rains have been abundant and reached every district, sufficient to drive away all fears of immediate injury from dry weather. The winter wheat and alfalfa crops over the south half of this district demand less moisture in order to facilitate harvest operations which are now in progress. Corn, oats and vegetable crops are in the height of rapid development. A big crop is the general expression when viewing the agricultural situation as a whole.

The Fish Pond on the Farm

The farm should be equipped with as many real conveniences and advantages as possible. A farm is never complete until it is supplied with all the reasonable improvements that add to its desirability and value as a home. It is the duty of every owner of a farm home to plan for its ultimate equipment according to his ideas of comfort and pleasure. If there is any place in this world that demands the full enjoyment of home comforts it is the farm home, the place where the wife and children live and stay so many long years of their existence.

The fish pond is one of the little side attractions that help to kill the monotony of the unimproved farm. It is so easy to make such additions, so inexpensive and yet so valuable in farm equipment. Some states are now urging the farmers to build ponds and raise fish. State game wardens are contributing their advice and information in assisting farmers in fish culture.

Many states have their fish hatcheries, where all the desirable varieties of fish are produced for the stocking of creeks, streams, fish ponds and such water basins as are capable of propagating fish successfully. It is an easy matter to start up in the fish business under present opportunities of state assistance. On most farms there are natural locations for ponds. Some may be created by only a little excavation and water drained into them from streams or natural springs.

The water supply is the important feature of this enterprise. It must be pure and easily regulated in supply and cut-off. The damming of a ravine or drainage surface that may in wet weather throw a flood of surface water into the fish pond may do irreparable injury and cause great loss and expense in repairs. The safest supply is from a spring or well, and the basin or pond built so it can be drained if need be.

Besides the novelty of this improvement on the farm and its value as an entertainment feature, there may be great advantage derived in the sale of the surplus fish produced. The family supply will enter into the living expenses of the household very perceptibly in the course of the year. Look the farm over and see where you can profitably turn a little labor into the building of the fish pond. The varieties most successfully raised in the farm fish pond are crappie, German carp, bullhead, sunfish and black bass.

EYE STRAIN
Relieved by Quitting Coffee

Many cases of defective vision are caused by the habitual use of coffee.

It is said that in Arabia, where coffee is used in large quantities, many lose their eyesight at about 50. Tea contains the same drug, caffeine, as coffee.

A N. J. woman writes to the point concerning eye trouble and coffee. She says:

"My son was for years troubled with his eyes. He tried several kinds of glasses without relief. The optician said there was a defect in his eyes which was hard to reach.

"He used to drink coffee, as we all did, and finally quit it and began to use Postum. That was three years ago and he has not had to wear glasses and has had no trouble with his eyes since.

"I was always fond of tea and coffee and finally became so nervous I could hardly sit still long enough to eat a meal. My heart was in such a condition I thought I might die at any time.

"Medicine did not give me relief and I was almost desperate. It was about this time we decided to quit coffee and use Postum, and have used it ever since. I am in perfect health. No trouble now with my heart and never felt better in my life.

"Postum has been a great blessing to us all, particularly to my own son and myself."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum now comes in two forms:

Regular Postum—must be well boiled. 15c and 25c packages.

Instant Postum—is a soluble powder. A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage instantly. 30c and 50c tins.

The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.

—sold by Grocers.

Corncob Rot

Corncob rot, a comparatively new disease in this country, is announced as existing now in Kansas. The plant pathologist of the Kansas Experiment Station has issued a note of warning for the farmers of his state to be on the lookout for this infection of the ear. Its full extent of damage is possibly not yet understood. It is claimed that no injury to the feeding value of the corn has been discovered, though the greatest difficulty in shelling has been experienced.

The disease may be detected at husking time and any time during its storage in crib. The lack of firmness in the ear is the first evidence of its presence. There is no report as to its injury to cattle in being fed in the ear, snapped or husked. It is quite certain, however, that it does not add any desirable qualities other than being a little easier to masticate by the steer. It would seem that any disease of the cob that would cause a decay, mould or rot, would be very objectionable in the ear in its feeding quality.

A dry autumn season favorable to the ripening and quick maturing of the crop is not conducive to its existence or spread.

That this disease was first discovered in Ohio in 1912, is the present published history of its origin, under authority of Prof. Mechers of Kansas Experiment Station. A condition of soft cob in seasons of slow maturity, owing to excessive dampness in the autumn months, has been the experience in Ohio districts almost from the beginning of corn raising.

Where to Buy Breeding Stock

There is no better place to buy breeding stock than from the breeder of pure-bred stock if he has the quality of stock you are seeking. There is no safer or surer means of introduction to this class of persons than to take your agricultural paper and turn to the advertising columns and read over the lists of names of those advertising the kind of stock you want. This brings you an introduction that you can follow up by writing and making known your wants, asking questions, etc.

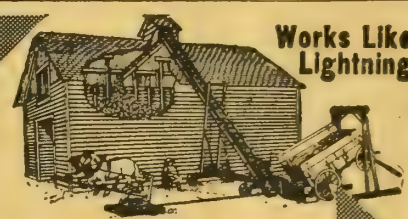
It is well in writing to address several breeders. One may have just what you want, while the others may not. Live stock advertisers are as a rule a pretty safe class of persons to deal with. They cannot afford to misrepresent what they have, and very seldom do nowadays. It is possible for men to differ in opinion on the quality and value of stock. It is always best to see the animal or animals you are getting before they are shipped, just for this reason — all persons cannot see breeding quality exactly alike, and a very good animal may have some particular point of fancy a little coarse or objectionable that you are very particular and exacting about.

There are some very good breeders who boast of shipping animals on order subject to inspection and claim they have never had any complaints. It is possible for this to be done, especially where the breeder has an extra fine herd or flock and keeps nothing but choice animals of popular type. But it is hard to please critical persons when they are present and have the whole herd to select from. These are the breeders that usually are accomplishing results and have attained good breeding quality by caution and close discrimination. These men generally prefer to go in person to buy an animal. With the breeder of grades it is a little different. He can afford to be less cautious about fine breeding points in his selection.

There is nothing associated with the farm operations that will justify more caution and careful selection than the sires to be used. Advertising breeders are as a rule worthy of confidence and trust; they cannot do business any other way. The public is watching them. Farm papers aim to protect their readers in the matter of honest advertising and will not permit an impostor or a fraud to go unpunished if they know of misrepresentation or unfairness in business methods.

Your family needs a balanced ration as much as the stock. Nothing equals a good garden in that respect.

Get Double Value—
Buy Your Sandwich Elevator NOW!



Cut Out Drudgery in Hot Harvest

Store your small grain with a Sandwich this summer, then let it crib your corn next fall.

Every farmer who buys his Sandwich Elevator before harvest gets double work out of it! And double value too, besides saving him work and worry, and giving him health and comfort.

You, too, can get double value—you, too, can cut out that useless drudgery of shoveling load after load 'till you drop. You, too, can add 3c to 4c a bushel to the profits of your field.

"The Sandwich Farm Elevator is the best investment I ever made in hard labor-saving machinery," writes Herman Frey, Melvin, Iowa,—one of a vast army who say the same.

Behold! The Noiseless Elevator

Sandwich (Eternal Cypress) Farm Elevator

No Rattle and Din—No Shaking to Pieces

Beware of the elevator that rattles, for that deafening rattle and din means a steady vibration—a steady loosening and finally the dropping out of the nuts, bolts and rivets.

The Sandwich works silently—bolts do not loosen. It is built of Cypress, though steel lined, and will be everlastingly on the the job when the steel kind is bent and broken—when pine and poplar have rotted and fallen to pieces.

Cannot Sag

Straight and firm all the time. Here's how we do it. Elevator is made in two sections with strong malleable hinge couplings. Hinges extend 20 in. on elevator sides. This is doubly re-enforced by 4½ in. bolts that hold the sections closely and firmly. Every four feet on bottom and sides, rigid heavy band strap-iron braces and trusses are placed.

Experimenting All Done

before a single Sandwich was sold. **We built it right at first!** That is why every blessed farmer who bought a Sandwich swears by it. And now many of our most enthusiastic customers are farmers who became disgusted with other elevators and cast them aside for a Sandwich.

This is proved because we have sold more elevators in six years than any other manufacturer.

Does the Work of 7 Men

A few years ago people would have laughed at the idea that one boy could store as much grain and crib as much corn as 7 men. But now an army of progressive farmers own Sandwich Farm Elevators, and the boys and girls can do the storing and cribbing.

One man writes, "My 11 year old boy runs my Sandwich Elevator as well as I can."

No Leg-Breaking Platform

The Sandwich wagon-jack is over head. "Works to perfection," says A. J. Anderson, Boone, Iowa. You drive right under—with even the tallest load. And it dumps it in the hopper in a jiffy. Then hitch on any power—horse or engine—and it's off with a flying start for a bin and crib full—clear to the top.

Sandwich Bucket Elevators

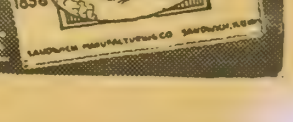
We also make Bucket Elevators with 18 in. cups and No. 77 chain. Send for **Free** Booklet giving full information.

Send Today for Free Catalog

And the name of a dealer nearby who will show you the Everlasting Sandwich. This book pictures it—tells the inside facts of Elevator construction—why we built of **Cypress**, "the wood eternal," line it with steel and give you the best though it costs us more, for Cypress is a costly wood; yet we have always used it.

This book also gives you measurements of cribs and granaries. You'll want them if you ever build. Sent **Free.** Postage paid by us.

SANDWICH MFG. COMPANY, 209 Walnut St., Sandwich, Ill.



WRITE QUICK FOR FREE CATALOGUE

Steady Motor for Stationary Work

You can use the Caterpillar for threshing, sawing, pumping, shelling, grinding, filling silos and for all sorts of stationary farm work. It has a steady, powerful four cylinder motor. Every part is made to resist heavy strains.

CATERPILLAR
Reg U S Pat Off

All this stationary work is in addition to your regular hauling, plowing and cultivating that is done with the Caterpillar. No other tractor can rank with the Caterpillar for field work. It is because of the long, wide Caterpillar tracks—they get a sure grip on the ground and transfer more motor power into pulling power than round wheel tractors can. It's the big tracks, too, that enable the Caterpillar to work on soft, wet ground where other tractors can't.

The Caterpillar is not a new or untried machine. We have made tractors since 1894, specializing on the Caterpillar during the past ten years—after its advantages over our own round wheel machines became so apparent.

We make the Caterpillar in three sizes. Write today for Catalog AF 44 and find out more about them.

The Holt Manufacturing Co.
Incorporated
Peoria, Ill. Stockton, Cal.
New York, N. Y. Spokane, Wash.

WHEN CAMPING

or hunting or fishing, or at any kind of outdoor summer life, **Germozone** is a most gratifying help in time of trouble. For bites of insects, reptiles or animals, poison oak or ivy, mosquito bites, sunburn, chafing, cuts, wounds, itching or any skin irritation, **Germozone** is immediately soothing, healing and curative. Most druggists now sell it. Liquid or tablet form. Both equally effective. Both same price, **50 cts.** Tablets are especially convenient for campers or travelers. Mailed postpaid on receipt of price, and money back if not satisfied.

GEO. H. LEE CO., OMAHA, NEB.

Only $2 Down
One Year to Pay!

$24 Buys the New Butterfly Jr. No. 1. Light running, easy cleaning, close skimming, durable. **Guaranteed a lifetime.** Skims 95 qts. per hour. Made also in four larger sizes up to 1-2 shown here.

30 Days' Free Trial Earns its own cost and more by what it saves in cream. Postal brings Free catalog folder and "direct-from-factory" offer. Buy from the manufacturer and save half. (12)

ALBAUGH-DOVER CO.
2208 Marshall Blvd. CHICAGO

BARN BUILDERS

should write us before buying LUMBER. Can save you all middlemen's profits. We are manufacturers, and sell direct. Bills estimated.

KEYSTONE LUMBER CO.,
DEPT. E TACOMA, WASH.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

SUMMER is the time when, if ever, extra care in cleaning up is needed. One week of allowing the floors and drinking pans to go filthy may mean more sickness in the flock than you can control in three months—to say nothing of the loss.

* * *

Poultry keepers often wonder at the difference in size sometimes shown in a flock of chicks hatched from good stock on both sides. This is the case in most hatchings, but it is usually just one or two, and the cause is generally hard to find.

* * *

In hot weather chicks of different ages should not be brooded together. In such bunches the younger lot will seem to lose all vitality and when several weeks old not show larger bodies than when 1 week old. The older chicks overcrowd the younger and somewhow seem to absorb all the vitality the younger started with.

* * *

Don't allow hens to roost on nest boxes at any time, and in hot weather especially keep them off the boxes. Burn the straw out of the boxes frequently now, as nests, as well as roosts, harbor lice.

* * *

In hot weather you can easily give a good hen twenty-five or thirty chicks, because now the little fellows had rather take turns lying outside the hen in the coop. However, should a rainy cool spell come on, more than twenty-five might mean suffering for some.

* * *

Both hens and chicks must have shade; in fact, the summer-hatched chick must be given extra good shade the first week or two of its life or it will die of the "sun sickness." Keep it from head lice and give deep, cool shade and it will live.

* * *

A fowl is a warm-blooded animal, and on account of a fast-beating heart the hen gets very hot in laying, and laying hens on hot days often die on the nests, especially if the nests are made in secluded places into which but little air can enter. The door of a coop accidentally dropped with the hen laying inside the coop has resulted in the death of the hen in a short time.

* * *

There are certain localities where young chicks allowed to run in the wet weeds early in the morning, or at any time when the weeds may be damp, get sore eyes from some of the poisonous weeds. Dew is thought to be worst on the eyes. Sometimes the feet also get sore.

* * *

If often happens that young chickens at any age, brooder or range-raised, in the heated weather show up to be regular cannibals. Sometimes it is one another's toes, sometimes the combs they eat. Only thing to do is to pen them, then watch for the chief offenders. You will find them. Any of the chicks will pick at the flesh after it is once broken, but few will be found starting the blood. Get rid of these or cure them by themselves. Feed the rest nothing but meat, highly seasoned with pepper, for the next three or four feeds. This will stop the bad work.

* * *

The best diet to bring the young fowls up to market weight speedily is the grass on a good range, cracked corn and beef scrap. But keep them away in harvest times from too much stuffing about wheat and oat shocks. This means great loss, nine times in ten.

* * *

Farmers who live in the states that are noted for mild weather the year around could surely make a profit by bringing off large droves of chicks in the fall, to sell late in the winter or early in the spring, when all ages of chickens sell highest, and young stock still higher.

***

If you suspect gapes in the young chicks, try the London purple remedy. Put a little in a paper flour sack; empty some chicks into this; be quick about it; shake up twice and empty out right off. They come out sneezing and ruffled, but it helps matters. Never allow them in its fumes more than a second or two and never allow them to eat over it.

***

Various devices are thought out for scaring away the wise old crow, or the quick hawk, from chicken yards. Besides the common old "scarecrow," which some may heed, are the bright pieces of tin swung to high poles and limbs, or a dead hawk hung well in sight, or a collection of twine strings stretched high about the premises often keep these marauders away. The strings they do not understand and seem to suspect a trap. Any contrivance that moves or swings nearly all of the time will keep them away.

* * *

How about the air in the poultry house? Are the windows tight as in winter? If they are, you are laying up trouble with the flock before hot weather is over. Coolness is the order now. Many farmers shut the fowls from the houses and make them roost in trees. This is not a good idea with a large flock. Many, instead of taking to the trees, roost under the barn, on fences and where they should not roost; then when cold weather comes the task is a large one to get them broken again to go into the poultry house. If the windows do not slide back and forth, or swing open on hinges, then take them out and either leave them wide open or tack screen wire over them. If windows are on opposite sides or ends, this makes a good breeze through, and if just on one end or side plenty of air comes in anyway to keep the poultry cool enough.

SOMETHING BRAND NEW

Learn about the new and simple electric lighting plant unit that has put farm lighting on a cheaper and more satisfactory basis than ever before. It s called the

"Hyray-Exide"

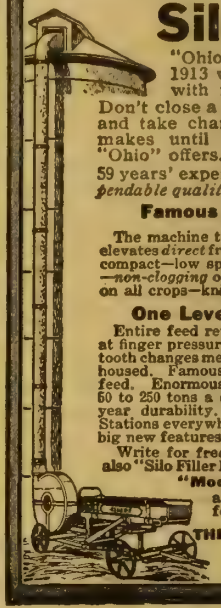
Our new booklet tells you all about independent electric lighting plants. Your copy will be sent absolutely free for postal request.

It's valuable; you want it. Send for it now. Write the office nearest you.

THE ELECTRIC STORAGE BATTERY CO.
PHILADELPHIA

New York, Boston, Chicago, St. Louis, Cleveland, Atlanta, Denver, Detroit, San Francisco, Rochester, Portland, Ore., Toronto, Los Angeles, Seattle.

"Ohio" 1914 Model
The Improved Logical
Silo Filler



"Ohio" Improvements for 1913 were radical—and with marvelous results. Don't close a deal for *any* Cutter and take chances with unknown makes until you see what the "Ohio" offers.

59 years' experience—*absolutely dependable quality.*

Famous Direct Drive

The machine that is driven, cuts and elevates *direct* from main shaft. Simple, compact—low speed fan—*non-explosive —non-clogging* on any cut. Cuts *clean* on all crops—knives can't spring.

One Lever Controls All

Entire feed reverses by *wood friction* at finger pressure—no strain—not a gear tooth changes mesh. All gears perfectly housed. Famous "Bull-Dog" grip self-feed. Enormous *half-inch cut* tonnage, 50 to 250 tons a day—6 to 15 h. p. 20-year durability. Used by Experiment Stations everywhere. Guaranteed. Many big new features this year.

Write for free "Ohio" folder today, also "Silo Filler Logic." A postal will do.

"Modern Silage Methods"
a 264-page book mailed for 10c, coin or stamps.

THE SILVER MFG. CO.
313 Broadway
Salem, Ohio

Bullock Baby Creeping Grip Tractor

Another notable achievement of the Bullock Tractor Co. Pronounced by expert agriculturists the ideal type and size tractor for small farms. Its low price, adaptability to do every kind of traction work and its low cost of operation makes it quick and big profit-maker on farms even as small as 160 acres.

One important feature of this tractor is that it steers with the creepers at the same time with the front wheels, permitting short turns and operating close into fence corners; the machine can turn within its own length.

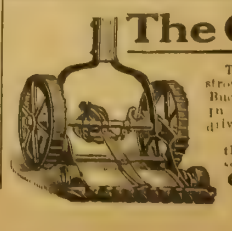
Interesting literature describing the Bullock Baby 30-20 H P.—also 3 larger sizes with prices sent on request. Address

BULLOCK TRACTOR CO.
1806 Diversey Parkway, Chicago

Works Easy On Any Job

Especially Adapted for Small Farms and Orchard Plowing.

Get Prices



The CLIPPER

There are three things that destroy your lawns: Dandelions, Buck Plantain and Crab Grass in one season the Clipper will drive them all out.

If your dealers do not keep them, let us know and we will send circulars and prices.

Clipper Lawn Mower Co., Dixon, Illinois.

Of Interest to Our Women Readers

God's Gifts

God gives me many things—
He gives me fears
That I may learn how not to be afraid
Of this strong world's rough bluster;
He gives me tears
That I may bravely learn how not to weep,
And how to rouse a languid soul from sleep.
God shows me many things—
He shows me doubt
That I may learn how deeply to believe—
For old faiths a new gospel!
He shows me wrath, which I must yet subdue,
And treachery that I may be more true!
—By Marguerite O .B. Wilkinson.

The Old Summer House

Young Mrs. Mathews was not in the house when the visitor called. The visitor was a neighbor who had stopped on the way in to town in the new automobile. The collie ran out, but he knew her and was friendly. "Where's your mistress, Collie?" the visitor asked, and he led her to the old summer house under the trees near by.

There she found Mrs. Mathews ironing. A big basket was piled full of clothes and on a line in the sunshine were hanging the freshly pressed garments she had finished. The baby was tethered to a tree near by, where he lay on his back on a blanket, playing with his toes.

"Come on in and see my new arrangement," called Mrs. Mathews gaily. "I had the boys put this floor in the old summer house, and it is fine to work in afternoons. These trees shade it beautifully, and there is such a nice breeze at the top of this little hill."

"Are you very busy?" asked the visitor. "I was afraid you would be, but I want you to go to town with us."

"Sorry, but I simply have to get this ironing done today. About half the things are needed. However, I can't complain now if I do have to work when some of you are playing, and, really, I don't mind it so much. Isn't my new self-heating iron splendid? I am going to do all my ironing out here. Then the kitchen can cool off and get comfortable before supper time."

"You always have the latest and best things," said the visitor, a little enviously. "I wish I had a summer house and all the other things you have."

"You have an automobile," said Mrs. Mathews, laughing, "and I have none and don't expect to have one, but these things to help with my work I must have or I never could take care of my big family of men and look after the baby. That sickness I had last summer following the hot weather gave me a warning, and this year I am going to arrange my afternoon work so that I can do most of it out of doors. I can get the vegetables ready for supper and prepare the fruit for canning and do my sewing and ever so many more things out here, and all the while I can watch the baby and at the some time keep him out of doors. I believe it is going to be worth while."

An impatient toot of the horn called the visitor away. "Well, I wish you could go with me," she said as she turned away. "Is there anything I can bring you?"

"Not a thing," replied Mrs. Mathews. "I feel as if I had had my share for this summer already."

HOME EDITOR.

Styles for Home Dressmaker

Description of Patterns

6228—Ladies' Waist—Any woman can make this waist in a couple of hours. The waist closes at the front and can be made with either the long or short sleeves. The waist is made with a yoke in the front and back. The pattern 6228 is cut in sizes 34 to 42 inches bust measure. Medium size requires two yards of 44-inch material and 1¼ yards of edging.

6222—Misses' and Small Women's Dress—Any of the striped wash materials can be used to make this dress. The dress closes at the front and can be made with either the long or short sleeves. The skirt is cut in three gores. The pattern 6222 is cut in sizes 14, 16 and 18 years. Age 16 years requires three yards of 54-inch material.

6071—Ladies' Shirt-Waist—Linen or madras can be used to make this shirt-waist. The waist closes at the front and can be made with or without the box plait at the front. It can also be made with the standing or rolling collar. The pattern 6071 is cut in sizes 34 to 42 inches bust measure. Medium size requires 2¼ yards of 36-inch material.

5899—Ladies' Apron—This apron is just the thing for wearing around the kitchen, as it covers the entire dress. It closes at the back and can be made with or without the seam at the front. The high or low neck can be used. The pattern 5899 is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size requires 6¾ yards of 36-inch material and one-half yard of banding.

5111—Children's Rompers—Every small girl and boy needs a pair of rompers and here is an excellent pattern for making such a garment. The rompers button at the back and also at the leg seams. Linen, gingham or chambray can be used for the rompers. The pattern 5111 is cut in one size and requires two yards of 27-inch material.

5435—Ladies' Dress—Any of the wash materials can be used to make this dress, with the collar and cuffs of contrasting material. The dress closes at the front and can be made with either the high or Dutch neck and with the long or short sleeves. The pattern 5435 is cut in sizes 32 to 42 inches bust measure. Medium size requires 4⅞ yards of 44-inch material and five-eighths yard of 24-inch contrasting goods.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Trouble is with Parents

I have seen so much in your paper about the rural schools, in which I am interested and always have been, but, like many mothers, I don't like to see them consolidated, for I think there is a better way if we could only get at it. I think our country schools are all right. The trouble is with the people in the districts.

In nearly every district in northwestern Nebraska there is a big quarrel at school meetings. The people do not meet to arrange things for a good term of school; they mostly meet to fix things to spite some neighbor that has children to go to school. They say they don't like Mr. A., and if we have to have school we won't have but two or three months; and then if Miss B. gets the school we won't let our children go, because she will run it to suit Mrs. C.

The way, I think, and the only way, is to have the schools run by the county superintendent, and, if we need two, why elect them. They would have to know just the way the schools are run, and that would put a stop to all the spite work in each and every district. As a rule the teacher and scholars get along all right. It is the parents. The children that are taught to mind at home give little or no trouble at school.

There are very few districts, with the help we get from the state, that couldn't afford to have from six to nine months of school a year, and every boy and girl could be kept in school. In some districts school could not start as early as in others, but two good men in each county could take care of that. Then the men and women would learn something besides spite. Our children were educated in a country school, and there is nothing better if properly run. Our men and women should work for the good of the child, even if they have had trouble with its parents, and be honest men and women and stay by the children and the schools. They should get a good teacher and honor and help her, for she has many things to put up with in our children, and we should help her from her first day of school; and if some little trouble comes up we should take the child and go to see the teacher or stay at home and keep still.

Nebraska. MRS. A. K. R.

Note—While we cannot quite agree with the writer of this letter in her ideas as to the consolidated school, yet we do believe she is right as to one of the greatest difficulties of our rural schools of today. There is too much personal feeling among the adults that is allowed to interfere with the working of the school for the best interests of the

children. It is unfortunte that anyone should visit his displeasure with a man or woman on the poor little children, but it is without doubt true that it is often done. For this very reason we believe the consolidated school is a good thing. We believe in the consolidated school in the country, however, for the country children, not in the consolidated school located in a town. Larger districts would be covered, where the patrons do not know each other as intimately as they now do. Petty quarrels would, therefore, not play as important a part. So far in the consolidated schools that have been established excellent results have been obtained, and we believe this solution of our difficulties will soon be very generally adopted.

The Late Garden

If from any cause the garden making or some part of it must be left until late in the season, there is yet plenty of time to raise a number of vegetables and they will prove well worth the work and care given them.

Tomato, cabbage and peppers give splendid returns if young plants are set out any time in June. In June or July one may plant cucumbers, early squash, lima beans and early corn. Lettuce, radishes, beets, onion seed and parsley also give excellent results.

In the August garden, turnips, spinach, lettuce and bush beans grow quickly and well. We have often grown these vegetables after the early garden was used.

Last fall a neighbor of ours sold $50 worth of small onions, beets, radishes and lettuce during September and October by working and planting his early garden over the second time.

MRS. GILBERT.

Delivered TO YOU FREE
on Approval and 30 days Trial

SEND NO MONEY but write today for our big 1914 catalog of ***"Ranger"*** Bicycles, Tires and Sundries at prices *so low they will astonish you.* Also particulars of our **great new offer** to deliver you a ***Ranger*** Bicycle on **one month's free trial** without a cent expense to you.

BOYS you can make money taking orders for bicycles, tires, lamps, sundries, etc. from our big handsome catalog. **It's free.** It contains "combination offers" for re-fitting your old bicycle like new at very low cost. Also much useful bicycle information. Send for it.

LOW FACTORY PRICES direct to you. No one else can offer such values and such terms. You cannot afford to buy a bicycle, tires or sundries without *first learning what we can offer you.* **Write now.**

MEAD CYCLE CO., Dept. S186, CHICAGO, ILL.

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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Table Talk

If at table you should cough
Till your head comes almost off,
I have sometimes heard it said,
You might turn away your head
Without being thought ill-bred.

"Please" is not considered rude
When you pass your plate for food,
And it very seldom ranks
With the most ill-mannered pranks
If you take it back with "Thanks."

You are not compelled to take
Over half the jelly cake,
And because the pie's refused
Do not fear to be abused;
Force is very seldom used.

Should your father or your mother
Venture to address each other,
Though you feel you might complain,
It will not be thought profane
If you manage to refrain.

If you've work or play to do,
You might leave when you are through.
But "Excuse me," when one rises,
Seldom shocks or scandalizes
Or occasions pained surprises.

Manners are of no avail
To keep anyone in jail.
True politeness, calm and quiet,
Very rarely causes riot.
If you doubt me, children, try it.
—Edmund Vance Cook.

Why Shep Scratched

"Are fleas insects, Uncle Jack?" asked Harry as he watched Shep making a wild scramble after one of these tiny dog foes.

"They certainly are. Why do you ask?"

"Well, I thought all insects went through four stages—egg, cocoon, worm and winged stage—but fleas just hatch out of the egg, and there they are. They haven't any wings, either."

"You are a very observing boy," said Uncle Jack, "and you are right about insects in a general way, but wrong about the flea. While it has no real wings, it has what they call rudimentary wings. That means tiny little plates on its sides, showing where it perhaps had wings ages ago. Now, since it lives in the fur of animals, it doesn't need them. Its hind legs are wonderfully strong instead."

"But it isn't ever a worm, is it?" asked Rose.

"Yes, it is a sort of worm at one time," said Uncle Jack; "a tiny white thing with a little brown head. The mother flea lays the eggs just anywhere, and in a few days they hatch out into little worm-like things. The eggs and the worms, or larvae, as they are called, fall off Shep and Don all over the place, and they are so small that when they get in the house your mother can't sweep them up. They get into cracks and everywhere."

"Do they starve when they fall off?" asked Harry.

"I should say not. They live on lint and dust and all sorts of things you wouldn't think could be eaten, and in a day or two they turn into full-grown fleas."

"Don't they have cocoons at all?" asked Rose.

"Some people say they spin a cocoon, but it seems never to have been proved. Anyhow, from egg to flea is only a day or two; then they give a spring and land on you or a dog, or whoever comes handy, carve a hole with their little saws, sink a pipe and gorge themselves with blood.

"Ouch!" said Rose, "it makes me itchy to thing about it."

"I wish I could see a flea under the microscope," said Harry.

"I wish you could, too," said their uncle, "for they are peculiar looking things. A flea has a head with big, round eyes, and a body composed of twelve parts, each covered with a joint of hard brown skin that breaks with a crack, you know, when you get one between your two thumb nails. At each joint are little stiff hairs pointing backward and helping the flea to work its way forward through the fur. There are six legs, all fastened just behind the head, and the back pair are very long and trail out behind; they are very strong. If Harry's legs were as strong in proportion to his size he wouldn't need that motorcycle he is teasing his father for, because one jump would land him in town and another would bring him home again."

"Well, please remember I'm not a flea," said Harry, "and you tell papa how I need that motorcycle."

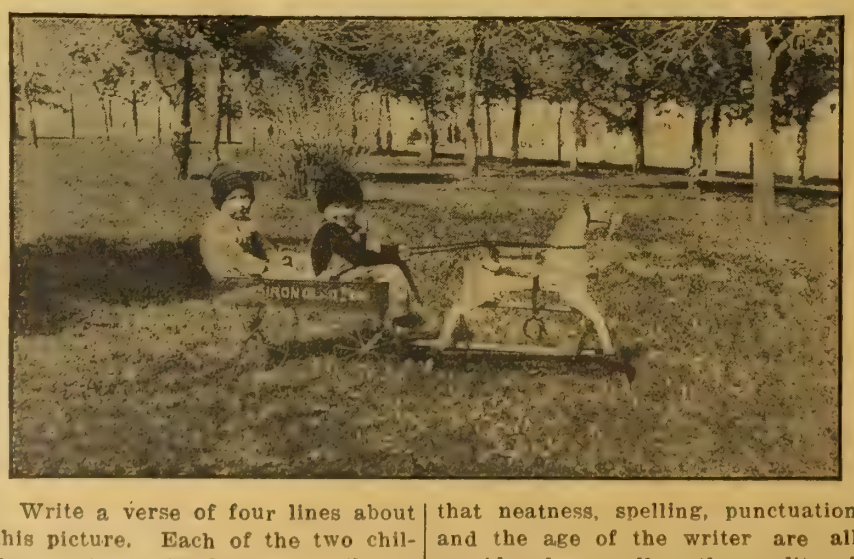
"All fleas are not alike," said Rose. "The sand fleas are different from the dog fleas."

"There are over 100 different kinds of flea in the world," said Uncle Jack, "but here in America I believe there are only about thirty of the varieties. The jigger is a flea and is probably the worst kind."

"I'm glad I don't live where the other seventy kinds are," said the children's mother, who had just come out on the porch with her sewing in time to hear the last words. "Thirty kinds are plenty for me."

HOME EDITOR.

Picture Contest No. 14



Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it interesting. Say the things you would think if you really saw these children. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than July 4.

(Prize Story.)

My Pet Squirrel

By Clyde Camerer, Aged 11, Graby, Mo.

One day my brother was walking through the woods with his dogs, and they treed an old fox squirrel and her two young ones. The dogs killed one of the young ones and my brother caught the other and gave it to me. I got a large box and fixed her a nice house in it. I fed her nuts and milk, but now she is grown she will not drink milk. She will hunt in my pockets for nuts and prefers them to any other food. She likes roses and gooseberries. After she eats she will wash her face with her paws and dry it with her tail.

One day mamma had some littlte chickens in the house and I put four of them in with the squirrel for company and then went away. Presently I came back, and my squirrel was eating one chicken's head off; it w not quite dead, but I finished killing it to put it out of its misery.

I found a bluejay's nest with five eggs in it and put the nest, with the eggs, into her box, and she ate the eggs and shells, too. Now I wonder if squirrels in their wild state will rob birds' nests and eat the young birds. Some of the boys and girls may think I am a very bad boy to rob the blue jay's nest, but they are really a nuisance around us, as they rob the hen's nest and catch young chickens, so I destroy every jay's nest I find. I let my squirrel out every day for a romp in the trees, and when I call her she will come to me. Her name is Pet.

Editor's Note—Yes, the squirrels do rob the nests of the birds and eat the little ones. They are worse than the jays. In many places the squirrels are being killed to save the birds, as the birds are so necessary to keep down the insects that eat grain and fruits.

Additional Stories.

Agnes McQueen, Walnut, Neb.; Clara Gerdaw, Bloomfield, Neb.; Helice Graff, Elmwood, Neb.; Gladys Blair, St. Edward, Neb.; Francis Gorham, St. Edward, Neb.; Mata de la Motte, Litchfield, Neb.; Margaret Carbaugh, Elwood, Neb.; Lettie Teban, Miller, Neb.; Leah Thomas, St. Paul, Neb.; Albert N. Schaefer, Cedar Creek, Neb.; Freda Ganer, Cedar Creek, Neb.; Edith Wheeler, Ainsworth, Neb.; Rolin Mansfield, Boone, Neb.; Eli Yost, Saronville, Neb.; Harold Schuster, Shelby, Ia.; Mary O'Mally, Dresden, Kan.; Lillie Richardson, Seneca, Mo.; Lillard McClay, Kahola, Mo.; Dixie Louise Mullins, Kingsville, Mo.; Anna Eckermann, Elk Point, S. D.; John Fuller, Lycite, Wyo.; Ethel Speese, Empire, Wyo.; Lenora Urish, Green Valley, Ill.; Walter Dyer, Bruceville, Tex.; Nadine Hogan, Le Grand, Colo.; Mabel Stevens, Friant, Cal.; Lulu Badgley, San Jacinto, Cal.

Steaming Through Clouds on Top of the Andes

By Frank G. Carpenter

GUAQUI, Bolivia—Take a seat on the aeroplane of your imagination and point its nose toward the sky. Pull the lever and guide yourself straight upward until you are more than two and a half miles above sea level; then fly about 4,000 miles straight to the south. Cross the Gulf of Mexico and the Caribbean sea; twist your way in and out among the high peaks of the Andes, through Colombia, Ecuador and Peru; then descend just 500 feet, and you are at Guaqui, Bolivia, on the shores of Lake Titicaca, the highest body of water that is now traversed by a steamer. You are further up in the air than the top of Fujiyama, Japan.. You are more than twice at high as Mount Washington, and less than 1,500 feet below the top of Pike's Peak. You are on the shores of an inland sea almost half as big as Lake Erie, and in plain sight of a snow-clad wall of extinct volcanoes, some of which are nearer to heaven than any point on the North American continent. Much of the high plateau that borders the two sides of the lake is 13,000 feet above sea level, and the lake itself is more than 12,500. Mount Sorati, at one end of the ragged wall of glaciers in front of you, is more than 22,000 feet high; and the glaciers of Mount Illimani are so tall and so steep they have never been climbed. As I stand here on the shores of the lake I seem to be on the very roof of the world and as I ride over the waters I feel as though, if I climbed up their shores, I would drop off into space.

From Cuzco to Lake Titicaca

I came to Lake Titicaca from Cuzco, riding for 200 miles on the railroad through the high valley between the Andean ranges. The whole way I was in plain sight of mountains, some of which rose two miles above me, and I could look over pampas, the sod of which was as smooth as that of the lawn in front of your dwelling. These high Andean plains, which are so far above the sea that twenty-six Washington monuments resting one on top of the other would not reach to their altitude, were covered with sheep, alpacas and llamas, and spotted with the mud huts of the Indians. The latter part of the journey was over plains that once formed a part of the bed of the lake, and I crossed many streams that were winding their way down into it.

As I came nearer Lake Titicaca, the cultivated patches increased. The soil was richer, and there were hundreds of Indians working their crops of barley, potatoes and quinua. The flocks of sheep became larger, and I was told that there are haciendas nearby, each of which has flocks numbering thousands.

American Windmill Welcome Sight

We stopped at Juliaca and an hour later landed at Puno, a tin and mud town of one and two story buildings roofed with galvanized iron. I remember seeing an American windmill close to the station, that seemed to wave its arms in welcome to me as the train took me out on the long pier to the steamer Yavari. There I embarked for my trip across the lake from Peru to Bolivia. The distance is 120 miles, and we were steaming all night and the greater part of the morning. I am now at Guaqui, the Bolivian port on the southern end of the lake, and not very far from the mouth of the river Desaguadero. This river forms the outlet of the lake. It carries its waters into Lake Poopo, which is only a few hundred feet lower down nearer the sea. There are a dozen rivers that flow into Lake Titicaca, but the only one that flows out of it is the Desaguadero. This river connects Lake Titicoca with Lake Pampa Aullaugas, or Lake Poopo, as it is sometimes called. Lake Poopo is only one-third as large as Lake Titicaca, and it has no visible outlet. Lake Titicaca receives every minute more than 6,000 tons of water from the streams that flow into it, while less than sixty tons per minute are know to flow out. Lake Poopo is its only reservoir, and the Desaguadero is the downspout from one to the other. These two lakes receive the drainage

Balsa, Showing Sail and Boat of Reeds

of a great part of the Andean plateau. Their outlets must be subterranean.

A Magnificent Moving Picture

You can get no idea of these lofty lakes from the encyclopedias or geographies. They are represented on the maps as oval in shape and the authorities will tell you that Lake Titicaca is fifty-seven miles wide and 120 miles long. Some authorities state that the lake has an area of 3,600 square miles, while others put the area at more than 5,000. From some descriptions you might imagine it a great ellipse or a rectangle. The truth is the lake has never been carefully surveyed. I have a map of it made by the railroad that shows that it has as many great bays as the tentacles of an octopus. It has depths that never have been sounded. It is spotted with islands, and its waters wind in and out in places like a river, giving a moving picture of magnificent scenes, including the islands, mountains and coasts.

In crossing to Guaqui I went over places that were 1,000 feet deep, and right next to the famous Island of the Sun, where the Inca race had its beginning, I saw one where a depth of 2,000 feet has been reached. In landing upon the Island of the Sun one has to throw the anchor of his boat on the rocks of the shore, for the lake is so deep at that point that the grappling hooks cannot reach bottom.

Think of a body of water almost as big as Lake Geneva, rising and falling under the winds. Let it be more than 300 miles inland from the Pacific, and more than two miles and a half above the level of the ocean, upon a basin which, next to Tibet, is the loftiest inhabited plateau of the world. Remember that you must cross a mighty desert and climb one of the highest railroad passes on earth to get to it, and you have some idea of Lake Titicaca, and its sister, Pampa Aullagas. You must add that the waters are fed by the Andean glacers, for although the region has a slight rainfall, the greater part of the lake comes from the melting snow and ice of the mountain, brought down by the rivers.

Rapid Changes of Scenes

I have written much of the skies of the Andes as seen from the pampas and desert. Those that cover Lake Titicaca have also other beauties that are peculiarly their own. The clouds rise up from the shores like walls, fitting into a vault of heavenly blue, so that you seem to be shut off from the rest of the world. The scenes change every moment. The fleecy white masses are blown this way and that by the winds from the pampas. At times great storms come up. We had a rain last night just before the sun set, and a mighty bow of all colors seemed to rise from the mountains, spanning the lake, and to lose itself in the mountains bordering upon it. As I looked I thought of the vast treasure vaults of the Andes and the gold that may really lie at the two ends of that rainbow. A little later the sun went down. The sky was still full of clouds and the blazing god of the Incas covered it with a hundred tints of wonderful hues. The sunset was reflected in the waters of the lake, and we sailed through one maze of gold, copper and blue above and below.

As we rose the next morning the air was so clear that we could see for miles. The islands seemed to float upon the waters. They looked like blue balloons rising from a a sheet of silver rather than the outcroppings of the highest mountain chain on our hemisphere. Coati, the Island of the Moon, I remember, rose out of the lake in the shape of a gigantic mushroom of blue velvet. Another island looked like a huge whale, whose head and tail stood high above the water, and there were other optical illusions, due to the atmosphere, that seems to work here like the mirage over the desert.

Lake Contains Hundreds of Islands

There are hundreds of islands in Lake Titicaca. They are the tops of partially submerged mountains, the peaks of the Andes that are here up to their necks in the water. Most of the islands have hillsides covered with farms. There are many Indian huts. In places the hills are terraced so that they form great steps running around with the curving shores of the lake and covered with patches of potatoes, quinua and barley.

Upon these islands are ruins of the old Inca civilization. The Island of Titicaca, or as it is called the Island of the Sun, was where the first Inca appeared. It was there that the sun dropped down upon the earth the first representative of civilized man, and from there he directed this man, Manco Capac and Mama Oello, his wife, to take the golden rod he gave them and go forth and found a great city where it should sink into the earth. The Quichua Indians still reverance - that island, and you may see there today the ruins of the temples of the Incas, the walls of which were bedded in gold.

Titicaca Island was especially holy. The Indians looked upon it as a garden of Eden and thought that the grain grown upon it was blessed by the sun. They brought soil from the mainland to build up its terraces, and the corn grown upon it was considered so precious that it sanctified and preserved all other grains. Therefore it was carried about over the country, and small portions of it were put in the public warehouses. It was also said that man who could have as much as one grain of Titicaca Island corn in his storehouse would not lack for food during his lifetime. On this island is still shown the rock where Manco Capac, and his sister wife stepped when they dropped down from the sky. They were, you know, the Adam and Eve of the Incas, to whom this rock was more sacred than Plymouth Rock is to us. It is said to have been plated with gold and kept covered with a veil. The temples about it were decorated with gold, which the Incas looked upon as the solidified tears of the sun.

Island of the Moon

About six miles from Titicaca is the Island of the Moon. This island is now called Coati. In coming to Guaqui, as we wound our way around the peninsula of Copocabana, we skirted its shores, and with our glasses could see the ruins that still stand on the hillsides. Here was the Temple of the Moon and the palace of the wife of the Inca, and here also was the great convent where lived the virgins of the sun. The ruins show the remains of many rooms, surrounding a court. They are high upon terraces, the walls of which are put together without cement. The stones join as closely as those in the fortifications of Sacsahuaman, or in the temples of Cuzco.

It was inside that convent that were kept the loves of the Incas, who also acted as priestesses to the sun. According to tradition, none could be admitted to this life except maidens of royal descent, who in their earliest youth had been placed under the care of aged matrons and trained for the purpose. As the girls reached maturity they were

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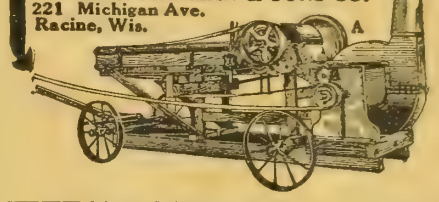

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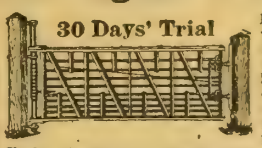

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Dep't Animal Industry. DETROIT, MICH.

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obliged to take an oath of perpetual seclusion, and were supposed to be the spouses of the sun. Some of the records say that not even the emperor was admitted to see them, but others allege that they are supposed to have been his secondary wives, and, in short, his harem.

More Interesting Now than in Past

The Lake Titicaca of today is more interesting than the traditional lake of the past. It is now the half-way station on one of the chief high roads of traffic from the capital of Bolivia out to the ocean and northward to the Panama canal. Right here at Guaqui they are now unloading flour from California. That flour has come up the Andes and over the lake, and it is now being put on the railroad train that will take it from here to La Paz. On the wharves are stacks of Oregon pine, and our ship, the Yavari, is loaded with mining machinery and other goods for Bolivia. The purser of the boat tells me that the steamers always run full, and that during his last trip he carried 120,000 pounds of tin across to Puno on its way to the sea. On our steamer we had rolls of paper from the United States for the dailies of the Bolivian capital, and also the boiler of a railroad locomotive destined for an interior railroad.

The greater part of the freight of Bolivia is now going this way out to the ocean. The distance from La Paz to Mollendo on the Pacific is about 500 miles, and the passenger trip from one place to the other costs just $20. There is an additional charge for the chair car from Mollendo to Lake Titicaca. The trip can now be made very comfortable and within considerable less than two days. The first stage of the journey is to Arequipa, whose altitude is about that of Mexico City. Here one stays over night. The next stage is an all-day ride, during which you cross a pass almost three miles in height, and then slide down to Lake Titicaca, where you are still 12,800 above the sea. The third stage is the trip across the lake, and the fourth is a four-hour ride over the high plateau of Bolivia to the great basin in which La Paz lies. I doubt whether there is a journey on earth that will show as great a variety of travel and so much magnificent scenery.

Added to this is the side trip to Cuzco. That is one of the wonder tours of the age. It requires two or three days additional, but it is well worth it, and when our canal is completed it will be undertaken by thousands of American tourists.

Titicaca has some fish, but none game enough to attract sportsmen. Mr. Horace G. Knowles, our former minister to Bolivia, has taken up the stocking of the lake with new varities, and our fish commission expects to send here the spawn and young of some of our lake trout, whitefish and river salmon. The Bolivian government is interested in the matter, and it may be that these high waters will eventually be populated with the best of our finny tribes.

Boats Are of Ancient Design

The boats now used by the natives upon Lake Titicaca are called balsas. They are exactly the same as those which were here when the Spaniards conquered the country, shortly after Columbus discovered America. They are made of certain reeds that grow near the shores of the bed of the lake. These reeds reach a height of ten or twelve feet, and a thickness of a man's finger. They are gathered by going out in a boat and using a long pole to which a knife is attached. This is thrust down to the root of the reed, so that it cuts the reed free from the bed of the lake. The reeds are carried to the shore and there bound with strings of long grass into rolls, which are often fifteen or twenty feet long. The rolls are sewed or tied together, forming the sides and bottoms of the balsas. These boats are shaped like a canoe. They have a beautiful curve, and their walls are so formed that they extend out at the top to keep the water from splashing in. Many of the balsas are so large that donkeys, llamas and mules are ferried in them from port to port about the lake, and even across the lake from one side to the other. The boats are propelled by sails made of reeds. They are also pushed through the water by poles from ten to twenty feet long. When far out from the shore and there is no wind stirring, the Indians use the poles as paddles; but where the water is shallow they shove the boat along from the bottom.

The balsa reeds have a pith full of cells like the stem of the banana. They are light when dry, but after they have been in use about six months they become water soaked. In this case the boats are no longer safe. They are torn to pieces and the reeds are dried and used for roofing the huts that form the homes of the people. The reeds are also used for making bridges, ropes and baskets. They are almost as important to the Titicacans as the bamboo is to the Chinese.

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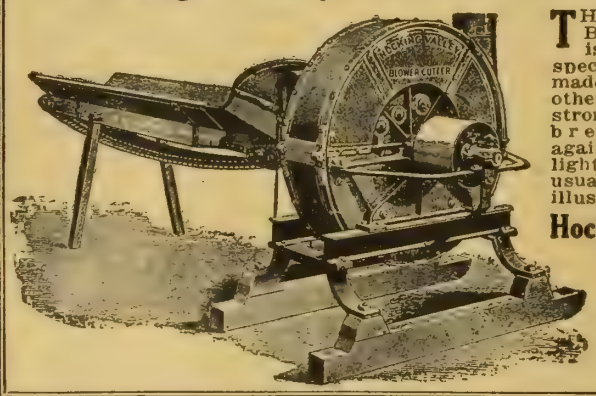

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(CONTINUED FROM PAGE FIVE)

should we do to be ready for this treatment, and how should we prepare our hogs?

Preparation of Hog for Treatment

Too little attention is paid to the matter of the preparation of the herd for vaccination by our hog owners. To begin with, a thorough cleaning up of all yards, pens and buildings should be made. The hogs should be confined in absolutely clean, sanitary quarters at least forty-eight hours before the operation. Have the bedding of good, clean, dry wheat or rye straw, or clean wild hay, free from dust. The feed should be reduced fully one-half or more before the operation. hogs should be replaced in these clean full stomachs. After the operation the hogs should be replaced in thees clean dry quarters, the bedding all having been first changed and the premises again disinfected with some reliable disinfectant. By taking these precautions you will save some of your hogs, and, we believe, materially assist in avoiding many abscesses.

Generally, when bad results follow the administration of serum, it is blamed entirely to the serum, when very often the conditions surrounding the animals operated upon are to blame. See to it that everything you can do is done to protect your herd and to make the operation as successful as possible. Don't, under any circumstances, let your hogs in a hog wallow after treatment or allow them to go around a manure pile.

How Long Are Hogs Immune?

One of the main questions that naturally comes to our mind is the length of immunity when using the serum-alone treatment. We very carefully investigated the length of time immunity will be carried by hogs receiving the serum-alone treatment. Different authorities place this time from two weeks to three months. There is no question but that some hogs inoculated with exactly the same serum will carry immunity longer than others. This is due to the fact that some hogs are naturally immune and carry the immunity through life. There is no question but some hogs are partially immune and consequently will carry immunity longer than will others when given the serum-alone treatment.

We have commented quite extensively on the necessity of keeping your herd in a condition to withstand an outbreak of cholera, should one occur, by careful breeding and feeding. There is no question but that hogs carefully fed will carry immunity longer when given serum-alone treatment than will hogs in a weakened condition or hogs improperly fed.

Then, again, some serum is more potent than other serum. There is no question but that some serum injected into a hog will carry immunity for a greater length of time than will other serum.

We bring out these facts to show that it is by no means certain that a hog or bunch of hogs will carry immunity for any certain length of time when treated by this method.

Immunity for Life

Another question is how long is a hog immune when given the serum-simultaneous treatment. Generally this question is answered, "For life." This, however, is not always the case.

It is held by some of our authorities and hog owners that pigs from immune sows carry immunity through life, especially if these sows were made immune either by having the cholera or by the serum-simultaneous treatment for hog cholera during the period of gestation. Careful inquiry into this matter from the most reliable authority shows this to be a mistake. Pigs farrowed from immune sows are generally considered immune during the suckling period. Sometimes, however, this immunity is not carried until weaning time. In such cases permanent immunity can be obtained by treating the pigs from one to three weeks after they are weaned, authorities differing in regard to the time of treatment.

Should your pigs become sick during the suckling period, it is best to give them the serum-alone treatment; a second treatment of serum alone is perhaps necessary. If you give your pigs the serum-simultaneous treatment during the suckling period, the immunity will probably run out in a few months. Pigs given this treatment soon after weaning sometimes lose the protection before maturity. Authorities differ as to when pigs should be given the serum-simultaneous treatment to best insure permanent immunity, ranging in weight from thirty to 100 pounds, and in age from one to four weeks after weaning.

Cases have been known where hogs weighing 125 pounds were positively immune and later developed cholera. We cite these facts to show how hard it is to be positive that our hogs are immune and that we won't have trouble. It is human nature to "let down the bars" and become slack in our methods when we feel secure. We can't but feel the necessity of urging all the time the absolute need of our keeping up our sanitary methods. By keeping everlastingly at it we can at least reduce our risk to a minimum.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Borers in Poplar Trees

Mrs. M. W., Oklahoma: I would like to know what to do for borers that work in trees. I have some poplar trees they worked in last year and have commenced again this year. I have used sulphur, but it does not seem to do any good.

Answer—There is no insect pest to which trees are subject harder to eradicate than borers. The birds, especially the woodpeckers, are a great help in killing the borers, but they should be prevented from coming back next year. Lime, in the form of whitewash, with paris-green mixed in it, put on about once in two weeks from early spring till late summer will help. A little glue mixed with the whitewash will make it stick better. Bands of sticky substance will prevent climbing caterpillars from reaching the limbs. Often bands of cotton batting are a great help.

Feed for Fattening Steers

J. H., Nebraska: Will you inform me, through the columns of your paper, what amount of oil meal should be fed to 1,100-pound steers that were started on corn the 15th of May and are now fed fourteen pounds of corn ond two pounds of oil meal once a day, with all the alfalfa hay and blue grass and prairie pasture they will eat? Oil meal costs $30 per ton and corn 60 cents per bushel. What time of the day is the best time to feed the grain? I want to market them about the 15th of August. I don't think I would care to feed them over sixteen pounds of corn per day, but what amount of oil meal should I feed, and what amount of gain should they make? They are fairly good quality and in good flesh.

Answer—Would not advise your making any change in the ration you are feeding your steers. For dry-lot feeding, would advise at least sixteen pounds of corn and two and a half to three pounds of oil meal, with all the alfalfa hay they will eat, but if they have fresh pasture they will not eat any more corn and meal probably than you are now giving them, and should make good gains. Feed half this ration in the morning and half at night.

Poisoned by Parsnips

W. H., Nebraska: Will parsnips of eight years' growth kill hogs? The hogs were in the pasture where the parsnips were for about three days when first noticed they were sick. They commenced to tremble and refuse to eat or drink and were bound up. Lived a few days and then died. Lost two old sows and a dozen small ones.

Answer—If parsnips are allowed to come up year after year, they become practically wild parsnips, which are very poisonous to cattle. We have never known of hogs getting wild parsnips, but have had this difficulty with cattle, and the symptoms are such as you describe in your hogs, so we have no doubt this was the difficulty. On account of this danger, parsnips are not a good crop to grow on the farm. If grown at all, they should be grown in the garden only and should not be allowed to make a wild growth the second year.

Duroc-Jersey Judges Chosen

The semi-annual meeting of the board of directors of the National Duroc-Jersey Association was held at the office of the association in Peoria, Ill., June 3 and 4. Beside routine business the matter of superintendent and judge of the Duroc-Jersey show at the Pan-American Exposition at San Francisco was taken up. President Maturn and Secretary Evans of the American Association met with the directors of the National to go over these matters.

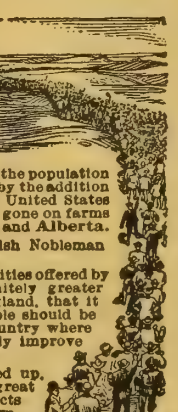
It was decided best to let Secretaries Pfander and Evans hold their present appointments as superintendents of the show. Their work will be to get exhibitors to exhibit and assist them in any manner possible. These men will have nothing to do with handling the show at the San Francisco end. The management will be requested to get some man out there to assist in the work on the grounds.

The management of the show has requested the two associations to recommend one or more men to act as judges. Several names of prominent Duroc judges were mentioned, but final decision was made to recommend the appointment of either Dean Burnett of the Nebraska School of Agriculture or Prof. Mumford, chief of the animal husbandry division of the School of Agriculture of Illinois.

The Twentieth Century Farmer feels more than pleased with the selections made by the two associations. The choosing of the right men to judge exhibits at any show is of great importance, particularly so at a world's fair. Duroc breeders are to be congratulated on the selections made and will now go to the show fully satisfied that the ribbons will be tied by a man who is thoroughly competent and whose integrity is above reproach. Both men have wide experience in raising and judging this breed of hogs.

We want to congratulate the management of the San Francisco show on the fact that they may be able to select a man for this important position who will go into the ring with the full confidence of every exhibitor, and every exhibitor will know that he will get a square deal.

400,000 Settlers a Year



Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in Manitoba, Saskatchewan and Alberta.

Lord William Percy, an Englishe Nobleman says:

"The possibilities and opportunities offered by the Canadian West are so infinitely greater than those which exist in England, that it seems absurd to think that people should be impeded from coming to the country where they can most easily and certainly improve their position."

New districts are being opened up, which will make accessible a great number of homesteads in districts especially adapted to mixed farming and grain raising.

For illustrated literature and reduced railway rates, apply to Superintendent of Immigration, Ottawa, Canada, or to the Canadian Government Agent,

W. V. Bennett, Room 4, Bee Building, Omaha, Neb.

160 ACRE FARMS IN WESTERN CANADA FREE

BEWARE OF MISLEADING ADVERTISEMENTS, published by irresponsible land dealers and companies, who have no interest farther than the profits that they make. It will be better to depend upon information obtained from reliable companies who own the lands they offer and whose first interest is to get settlers who will like their surroundings and who will make a success. This Railroad Co.'s object is to locate Satisfied Homeseekers on the lands it sells. These will bring other families after them. That is the way our country grows. Let us hear from you. Land Agent, C., R. I & P. R'y Co., 378 Wolvin Bldg., Duluth, Minn.

WEST FARMS
MODEL COLONY
IS WELL WORTH SEEING

Where I have put into virgin soil 1,000 acres of crop with my three Traction Engines. Where I am building a ranch house, store and creamery and where the town of Bashor will be established on the new Union Pacific "cut off" from Denver to Fort Morgan. I am also feeding a herd of thoroughbred "White faces" as well as a lot of Duroc-Jersey hogs. My crops rival Iowa or Nebraska this year.

The food we produce on West Farms and the fine water and invigorating climate are vital factors in raising stock as well as people.

We have far better roads than other places for there is not a hill from West Farms to Brighton and from there to Denver it is macadamized all the way; with rural delivery and telephone we have all the conveniences of the city and live in the country.

The climate allows out of door work practically all the year round. You don't have to urge the children to eat, they always have their appetites with them. You can produce eggs, butter, fruit and meat for much less money there than elsewhere, so that living is cheap and you have the very best food for home use.

Social and educational advantages will have particular attention in my colony for satisfied patrons is my aim. I am striving to attract Iowa and Nebraska farmers so that the neighborhood will be attractive and harmonious.

My lands are very low priced and the terms so that almost any one can meet them. But you should read my new illustrated booklet for it gives all particulars. It's free. It is so interesting that you will not lay it down until you have read it through.

Specially low rate excursions every day. We show our lands in the automobile so it takes only a few hours.

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N. P. WEST, PRES. 814 MAJESTIC BLDG. DENVER, COLO.

WE OFFER YOU FARM HOMES LIKE THIS

The soil of the Red River Valley is fine in texture and deeper than any bottom land you know. This is the secret of why so many wheat farmers of North Dakota can spend their winters in Europe and elsewhere living luxuriously. No wonder they get on so well when they can put an acre of wheat in the elevator for $7.40 and that acre is likely to yield anywhere from 30 to 45 bushels, bringing about 80c per bushel, making a net profit per acre of from $16.60 to $20.60 per acre so that a half section often yields over $6,000 net. Oats, barley, rye are equally profitable. The Legumes and all forage crops do remarkably well. The very best food and water can be had here in a very great abundance and of a higher food value than usual. For diversified farming there is no better place. We own and control 100 improved farms we want to sell to actual settlers at prices that will easily surprise any one

Like improved farms were they in Iowa would bring $150 to $200 per acre. You have got to see them to appreciate our offer. You are bound to be infatuated if you see them. Climate the most healthful. Railroad and markets handy, only a few hours' ride to the great primary markets. Your neighbors will be from Iowa, Illinois, Minnesota, etc. Roads fine; school 9 months in the year. Teachers are well paid. Not only a good and sure place to make money farming, but the lands will easily double and treble in value in a few years. Let us send you our fine illustrated booklet. It's free. It will surely interest you

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Advertised Goods Cost Less

The manufacturer who advertises, sells his product in a much larger volume than the non-advertiser and his manufacturing cost, therefore, is lower. While the consumer pays the cost of selling an article, whether with or without advertising, the selling cost is less with the advertised article than the one that is not. Standard advertised goods can usually be bought at a lower cost than others.

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BY USING A

Rogers Tent & Awning Company Stack Cover

You will save several times the price of one of our stack covers on one crop of alfalfa. Our prices are right and we guarantee the quality and workmanship to be of the very best. There are many uses to which these covers can be put, as well as the protection of your hay crop. You won't know how you got along without one. All orders are filled promptly. For prices address

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ORIGINAL Eureka Hog Oiler

The only rubbing post of which the valves will not open and waste oil when a hog lays down against it.

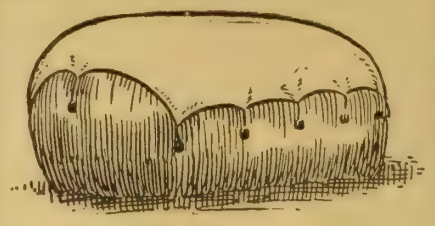
$1.00 a year buys the post and rids your hogs of lice, mange and skin diseases. Can you afford it?

Adaptable to hogs of all sizes.

The price is right, 30 days' trial. Send for circular and iron-clad guarantee. Agents wanted in every locality.

Eureka Mfg. Co.
Dept. 500, Council Bluffs, Ia.

SAVE THE HAY



A GATE CITY STACK COVER

Bought Direct From the Manufacturer saves enough on your hay crop to more than pay for it.

GATE CITY COVER is full weight canvas. You will find many uses for it. Let us give you our direct-to-the-farmer prices on the size you need.

Gate City Tent & Awning Co.,
OMAHA, NEBRASKA.

DUROC-JERSEY HOGS

DUROCS AND RED POLLS

25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed.

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RED POLLED CATTLE

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Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

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HOLSTEIN CATTLE

Purebred Registered
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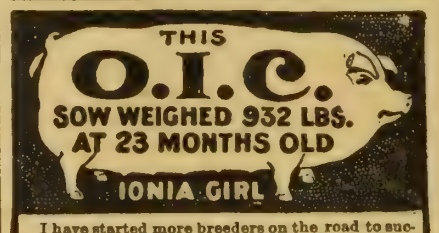
You can find no way to invest your money and effort so profitably as in the selection and use of a pure-bred Holstein sire of good individuality. In a few years' time you can grade up a very poor herd to a profitable basis.

The Illinois State Experiment Station has been testing a herd where the average production has been increased $41.65 per cow in four years by the use of a pure-bred sire, and by testing the idividual cows and disposing of the poor producers.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro, Vt.



I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **G. S. BENJAMIN** RFD79 Portland, Mich.

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Grade Up

Buy a Thoroughbred Jersey Bull

You can buy cows of high producing value or you may develop them. The bull is the most important factor in development. A thoroughbred Jersey bull pays big returns on his cost every year. Let us send you some Jersey facts.

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FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

PERCHERON HORSES

Part from 2400-lb. imported sire and part from 2200-lb. imported sire and imported dams, my 2, 3 and 4-year-old registered Percheron stallions would prove valuable breeders for you. With all their weight and bone they are dressy and straight sound. This is some of the most substantial and most attractive Percheron breeding material in the world. Farm raised and offered at farmer's prices. Just east of Omaha.

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Vegetable Hog Potash

A perfect worm expeller and preventive.

A bone but der, an appetizer and conditioner, a mineral balancer.

This is a most valuable product to feed the pigs at weaning time. It serves to keep the bowels regular, keeps the pig free from worms, aids digestion and keeps the pigs in a healthy, thrifty, growing condition, thereby giving them more resisting powers against disease A natural vegetable product, free from any injurious ingredients Can be fed with equally good results to brood sows suckling a litter, to suckling pigs and growing stock; in fact, any hog from birth to the slaughter house.

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Manufactured by Union Stock Yards Company of Omaha (Limited) South Omaha, Neb

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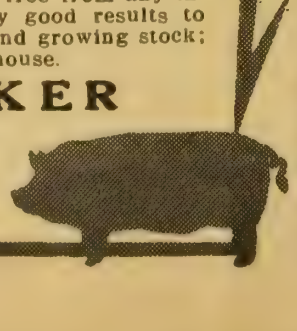


Review of Live Stock Market

By A. C. Davenport

ALL eyes are centered on the range. The time for corn-fed stock is rapidly drawing to a close and the cattle and sheep world is wondering and speculating as to what the dawn of the range season will disclose. Will it be a lean or a fat year, a year of large or small receipts, of high or low prices?

So many different influences must be reckoned with and so many different things may occur to change the course of events that it is hardly safe to hazard even a guess. Two facts though are pretty well established. All reports agree that the winter season was favorable and that cattle went through the winter with very little loss. This would at first thought lead to a belief in the supply of stock on the range being as large as last year, or larger. Those who take this view of the supply should bear in mind that prices for cattle were so high last year that rangemen shipped out very closely. To be sure, quite a good many young cattle were shipped to the range from the south, but most of them will likely be double wintered and not appear on the market before 1915.

Another fact to be kept in mind is that rangemen are all thoroughly convinced that cattle are good property and they are not likely to part with anything in the way of breeding stock. That of itself will have a tendency to reduce shipments of cows and heifers to a minimum, and must have a big influence on the total year's business. On the other hand, there is a feeling in certain quarters that cattle are as high as they could reasonably be expected to go and that any change in the future might, as a result of free cattle and free beef, be on the side of lower prices. Those who are imbued with ideas along this line may be expected to ship very freely, and some operators on the market anticipate that a good many will unload their 2-year-olds on account of that feeling.

The fat cattle trade just at present is not materially different from what it was a week or ten days ago. There has been some tendency toward improvement in prices on the good to choice prime beeves, and a corresponding tendency downward on the common to medium grades. It would not surprise anyone should the market continue along present lines for some little time to come.

Little Change in Hogs

Hogs have continued to fluctuate within narrow limits, showing during the last week or more little change in either direction. There is, however, a growing feeling among operators that the bottom has been reached and that hogs for the time being at least are not likely to go any lower than they were at the beginning of June. While no one is prepared to predict any immediate advance of any great extent, it would not be in the least surprising if values were to gradually crawl upward so far as the better grades of hogs are concerned. As a matter of course the season is at hand when large shipments of old brood sows showing grass are to be expected. They are never desirable property in the eyes of packers, and it would only be natural to see them work downward, or at least to see a much wider spread between the common and better grades of hogs.

Sheep Prospects Bright

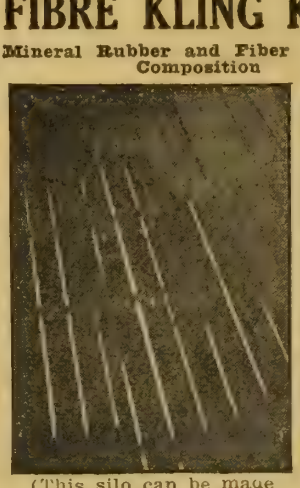
Sheep men are also studying the range situation very closely. A few carloads from Idaho and Oregon have already reached the market, the time of the arrival of the first shipments being about the same as a year ago. These first arrivals have sold at prices around 75c to $1 higher than a year ago, that is, on the basis of $9 and better for Idaho lambs at Omaha. As a matter of course opening prices may be expected to settle down rapidly as soon as the movement is under way.

Sheep, according to all accounts, went through the winter in splendid condition and the lamb crop is reported as unusually large. The more general use of sheds makes it possible to have the lambs earlier, and that of itself would have a tendency toward increasing early shipments. All advices would seem to agree that the range lamb business will be very large, if anything larger than a year ago, and as feed on the range is very good stock ought to come forward carrying considerable flesh.

The sheep and lamb market recently took quite a boom owing to the scarcity of fat stock, but at present writing is showing more or less weakness consequent upon a feeling that the market is becoming a little topheavy.

FIBRE KLING KOTE

Mineral Rubber and Fiber Asbestos Composition



handled with a trowel like cement, will make this or or any similar silo absolutely air tight.

(This silo can be made absolutely O. K.)

SEALS THE CRACKS

Makes cement silos alkali proof and metal silos rust proof.

Get Fibre Kling Kote from your dealer or direct from us, 12c per lb.

Send postal today for free sample, stating whether for wood, cement or metal silo.

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Famous Collins Saddles

Best saddle made. Have stood the test for 50 years. Write for free catalogue.

Alfred Cornisn & Co.
Successors to Collins & Morrison.
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ALFALFA

Now is the time to get ready to sow alfalfa. July and August good months. Get our book, Alfalfa, The Wonder Crop, Free. Full information on how to successfully grow alfalfa. How to prepare the ground, protect and harvest. Earn 7% net on $1,000 an acre. Also tells about "NITRAGIN," the famous inoculator. Write today.

Galloway Bros.-Bowman Co., 265 Galloway Station, Waterloo, Iowa

Value of Silos

(CONTINUED FROM PAGE THREE.)

this a little and give the cow a square deal.

One of the problems confronting our farmers on many farms each year is the proposition of putting fall wheat into the cornfield. Some years this can be nicely done when the corn has been well cultivated and the stands straight; but if too many weeds or grass were allowed to grow or wind storms came along and blew the corn over, wheat cannot be sown in these fields. If the cornstalks were removed from these fields and put into the silo, winter wheat can be readily sown. In this respect there is a profit made indirectly by the use of the silo.

American Poultry Association

The thirty-ninth annual convention of the American Poultry Association will be held at Chicago August 8 to 15, inclusive. Hotel Sherman, just opposite the city hall, will be the headquarters.

RATE—Five cents per word per issue. Cash must be sent with all orders

Count every word, initial and numeral, including the address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred five thousand farmers are regular paid-in-advance subscribers to TWENTIETH CENTURY FARMER. If you have any wants or if you have anything to sell, insert an ad. in this department.

POULTRY—Langshans

BLACK LANGSHAN EGGS—CIRCULAR. Jake Hetrick, Wahoo, Neb.

Leghorns

SINGLE-COMB WHITE LEGHORN eggs, 3½c each. Will Rockwell, Hubbard, Neb.

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ORPINGTONS—BUFF OR WHITE—Eggs, cockerels. List free. Frank Lewis, Gibbon, Neb.

CUT PRICE SALE IN CRYSTAL White Orpington stock. W. E. Crane, Tilden, Neb.

PRIZE-WINNING BUFF ORPINGtons—Eggs, $4 per 100; stock, $10 per doz. Mrs. Cook, Eddyville, Neb.

Plymouth Rocks

BARRED ROCK EGGS FOR HATCHing, 60c per 15, $3 per 100. Mrs. Anna Eklund, Waterloo, Neb.

Rhode Island Reds

HIGH-SCORING RED MALES, BLUE ribbon winners, cheap. Need room for young stock. Price list free. George Ainsworth, Fremont, Neb.

COVALT'S SINGLE-COMB REDS—This month, half price—yearling hens, fine breeders, $1 and $2 each. Scott Covalt, Council Bluffs, Ia.

Wyandottes

WHITE WYANDOTTES—EGGS HALF price. Best strains in America. White Wyandotte Farm, Oscar L. Bock, Prop., Council Bluffs, Ia.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

SEEDS

ALFALFA SEED—DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

I AM IN THE MARKET FOR CLOver, timothy, alfalfa, cane and millet seed. Send samples. I have a large, select stock of all these seeds for sale. Werter DeVaughn, 1614 Harney St., Omaha, Neb.

CEMENT MIXERS

WRITE TODAY FOR CIRCULARS and prices on the most complete, most compact and most simple concrete mixer on the market. Built for the farmer and sold at a price every farmer can afford to pay. Superior Manufacturing Co., 307 West Fifth St., Waterloo, Ia.

IF YOU WANT WHAT YOU WANT when you want it, place an ad. in the Market Place of Twentieth Century Farmer.

LANDS—Arkansas

80 ACRES RED LOAM LAND; 50 CULtivation, balance timbered; orchard, house, water; 4 acres clover; $20 acre, terms. Sessions Co., Winthrop, Ark.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

CASH FOR YOUR FARM OR BUSIness. I bring buyers and sellers together. Write me. Established 1881. Frank P. Cleveland, 1315 Adams Express Building, Chicago, Ill.

Minnesota

CORN AND CLOVER LANDS IN central Minnesota. Low prices. Reasonable terms. Write Murray, Wadena, Minn.

100 CHOICE FARMS IN THE GARden spot of southern Minnesota, where corn is king. Price, $75 per acre and up. Prices advancing rapidly. Come now. Free list. The Paffrath-Schmit Company, Springfield, Minn.

NORTHERN MINNESOTA—THE greatest natural cattle section; no drouths; alfalfa, clover, corn and potatoes are principal crops. Prairie or timber. Free information. We have no land for sale. Write W. R. Mackenzie, 904 Palace Bldg., Minneapolis, Minn.

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JUDITH BASIN, MONTANA, FARMS—Come to Lewiston. Can show you growing wheat yielding fifty bushels per acre. Write to Farmers' Land Co., Incorporated, Lewiston, Mont.

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IF YOU WANT FARMS OR ranches in the Ozarks of Missouri, write A. J. Johnston, 221-226 Woodruff Bldg., Springfield, Mo.

North Dakota

NORTH DAKOTA LANDS DIRECT to Purchaser—We have listed with us to sell several hundred thousands acres of choice North Dakota lands. In order to obtain settlers along our 1,200 miles of track in North Dakota, we will sell these lands at cost. Prices are about one-fifth those asked in Iowa or Illinois, and agricultural possibilities are just as great. Roads, schools, churches, railroads, all established. Very low excursion rates. For literature and full particulars write J. S. Murphy, Immigration Agt., Soo Line Railway, Minneapolis, Minn.

LANDS—Nebraska

160-ACRE, WELL IMPROVED FARM, 5½ miles from Arcadia, Valley county, Nebraska; 45 acres alfalfa, balance in cultivation. Price, $9,000, easy terms. John L. Maurer, Omaha, Neb.

Wyoming

COME TO PINE BLUFFS, WYOMING, where farming pays—where those who are here have made good—where on the average the crop on every acre under cultivation pays for the land each year—where oats yield 60 to 90 bushels per acre, wheat 20 to 40 bushels, flax 15 to 25 bushels—where 1,000 cars of grain are shipped out annually—where the land cultivates easily—where the climate is inspiring and the rainfall ample—where choice, level farm land can now be had at from $15 to $25 per acre, on terms as low as one-tenth cash and the balance in nine equal yearly payments—where you buy direct from the owner and save the agent's commission. Will refund your expenses if these statements untrue. C. L. Beatty, Pine Bluffs, Wyo.

GOVERNMENT LAND—GET 320 acres. We stock your land, buy your crop. Some means required. Particulars free. Wyoming Settlement, Janet, Wyo.

RANCH BARGAIN—640 ACRES deeded land in Converse county; 200 acres irrigated from largest creek in state; yielded, 1913, 300 tons alfalfa, 3,000 bushels grain; 1½ miles from C. & N. W. and C., B. & Q. Two sets improvements, in good condition. Price for quick sale, $18,750. Come to Douglas at once and see this; it's a bargain. William I. Winslow, Third and Center Sts., Douglas, Wyo.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

HOLSTEIN CALVES—BEAUTIFULLY marked, 15-16ths pure, 3 to 5 weeks old, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

POLAND-CHINA BOAR PIGS, 14 TO 16 weeks, big type, pedigreed. Davis Bros., Lincoln, Neb.

TYPEWRITERS

REBUILT TYPEWRITERS—SMITH Premiers, $13; Remingtons, $15; Olivers, $18; Underwoods, L. C. Smiths, Monarchs; 200 machines in stock. Order today. Central Typewriter Exchange, 307 So. 17th, Omaha.

MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

DAIRY FARM CO., 1201 FARNAM, Omaha, makes big inducements to practical farmers who believe in corn—silo—milk pail—hog—route for sure money in farming.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

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GOVERNMENT FARMERS WANTED—Make $125 monthly. Free living quarters. Write Ozment, 39 F. St. Louis, Mo.

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LEARN THE AUTO BUSINESS—Practical work. No books used. Stationary engineering. Special rate. Write for free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

MEN AND WOMEN WANTED FOR government jobs; $65 to $150 month. Vacations. Life jobs. "Pull" unnecessary. List of positions available sent free. Write immediately. Franklin Institute, Dept. H-94, Rochester, N. Y.

DOGS

50 FEMALE COLLIE PUPS TO LET on shares; 50 female Airedale pups to let on shares. Must have reference. Also have a few to sell. Snd for my large sales list. W. R. Watson, Oakland, Ia.

SCOTCH COLLIE PUPS FOR SALE—Well marked, $5 each. John Bader, Scribner, Neb.

FOR SALE—PEDIGREED SCOTCH Collies, grown and pups. Mike Abts, Bellwood, Neb.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Fred Wille's Polands

We called on Fred Wille, breeder of big type Poland-Chinas at Columbus, Neb., this week and found him, as usual, with a very select lot of spring pigs, coming along in first-class condition. Mr. Wille is one of the substantial Poland-China breeders of Nebraska. He has about seventy head of spring pigs at this time, sired by Wayside Jumbo, Wayside Jumbo 2d and Long Wonder 2d. Wayside Jumbo is a son of the celebrated Wade's Jumbo, and Wayside Jumbo 2d is a son of Wayside Jumbo. Long Wonder 2d is by Long Wonder, he by Longfellow, jr. The dam of Long Wonder 2d is Miss A Wonder, by A Wonder A, by A Wonder. We consider Long Wonder 2d one of the best young Poland China boars we have seen in a long while. He is of the correct type—big, smooth, heavy boned, strong backed and right up on his feet. His pigs are showing up in splendid form, and we have no doubt but what he will make good as a breeder. It is not likely that Mr. Wille will show this boar this year, but if he does, he is going to make some trouble for the other fellow. The dams of the spring pigs are by Big Wonder, Smooth Price, Wayside Jumbo, Exception Look and others. Mr. Wille will not hold a fall sale, but will have some extra choice young boars to offer at private treaty. Keep this in mind and watch these columns for further announcements.

Freiday's Durocs

C. A. Freiday of Rising City, Neb., is one of the younger breeders who is coming to the front with a splendid lineup of spring pigs this season. We called on Mr. Freiday last week and were greatly surprised to see as good a bunch as he has at this time. He has about 170 spring pigs, and among them are a number that give promise of developing out in good shape. These pigs are sired by Mascot Knight, a son of Mascot, and out of a Red Knight dam; Long Gano, the great son of Colonel Gano, at the head of the E. J. Brown herd; King Gano, a son of Long Gano; Gold Dust Crimson, a son of Gold Dust Chief, he by Ohio Chief; Big Chief, Colonel Knight and others. Mr. Freiday also has about fifty head of fall pigs sired by Gold Dust Crimson. At this time he has several choice fall boars that he will price worth the money. Keep this herd in mind and write him if you want anything in his line.

O. E. Wade's Poland-Chinas

O. E. Wade of Rising City, Neb., has about 100 head of Poland-China spring pigs similar in type and character to those usually found on this farm. Forty head of these are sired by his grand old herd boar, Wade's Jumbo, without question one of the best breeding big type boars in service anywhere today. The balance are mostly by Big Chief, by Big Price 2d. They are mostly of March farrow. When it comes to getting them with bone and size, there are not many herds anywhere that can be compared with this one. Mr. Wade is a constructive breeder. He has had a distinctive type in mind for a number of years and has been breeding to that end. As a result, we seldom visit a herd where there is as much general uniformity throughout as is to be found right here. Mr. Wade's son has around seventy head of choice spring pigs, carrying blood lines similar to those mentioned above. From these two herds they will have a lineup of stuff to offer later on that will give the purchaser a variety to select from that should prove an inducement indeed. Keep their herds in mind when you are contemplating the selection of a herd boar. You will find they have the right kind and also that they will give you a square deal. Kindly mention the Twentieth Century Farmer when writing.

Gilbert Johnson's Polands

Gilbert Johnson of Osceola, Neb., is one of the Nebraska breeders who has made rapid advancement in the breeding business during the last few years. At this time Mr. Johnson has a herd that will take rank with the best in the state, both in individual make-up and also in the popularity of blood lines which they represent. Seventy-five head was his quota of spring pigs this year, these being sired by Hather's Hadley 2d, Choice Orange and Colosum. Besides the spring pigs, Mr. Johnson also has about thirty head of fall pigs. Twelve head of these are males, and among them are several that would make valuable herd-heading material. Keep this herd in mind and write him when you are in the market for anything in this line.

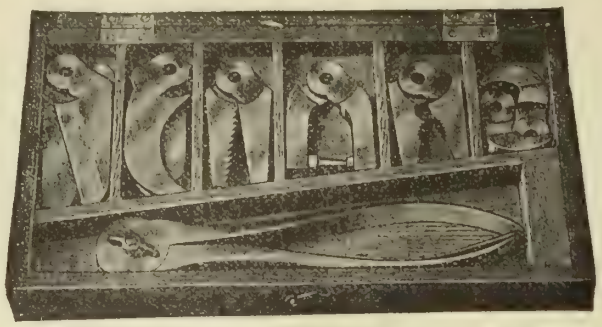
The Right Kind of Durocs

When it comes to producing a type of hog that will meet the demands of both the feeder and the breeder, we know of no one who comes nearer making it a reality than E. J. Brown of Osceola, Neb. Mr. Brown is one of the old-time breeders of Durocs in this state and his reputation for strict integrity and the class of hogs he has produced in the past have made him known wherever Durocs are bred in the west. We question whether there is a man in the business who is a closer student of pedigrees than Mr. Brown. Not only this, but he has a knowledge of the science of breeding, acquired through years of experience, that enables him to obtain the very best results in the selection and mating of his breeding stock. He has about 200 head of spring pigs this year, sired largely by his own boar. Long Gano, and by Crimson Gano, Fancy Chief and Col. Knight. Long Gano is a son of the celebrated Col. Gano. He is a hog with remarkable size and quality and has proven himself to be an outstanding breeder. Crimson Gano is a son of Long Gano, as is also Col. Knight. Fancy Chief is a son of Gold Dust Chief by Ohio Chief, and he is out of the dam Fancy Maid, one of the greatest show and breeding sows ever owned in Nebraska. Of the 200 pigs on this farm there is scarcely what might be called a runt in the entire lot. They are a strong, thrifty, uniform bunch, with plenty of stretch and bone and are the kind that will go out and make good in any man's herd if given reasonable care. If you are going to be in the market for something in the Duroc line in the future, keep this herd in mind and watch these columns for further announcement.

F. E. Merrick's Durocs

F. E. Merrick of Osceola, Neb., has about eighty head of spring pigs that take rank in size and uniformity with anything we have seen in some time. Mr. Merrick is one of our substantial Duroc breeders, is a splendid caretaker and is producing a class of hogs that are worthy of the attention of anyone wanting something in this line. The spring pigs are sired by King Gano and I Am A Crimson. King Gano is a son of King the Colonel and is out of a litter sister of the dam of the celebrated Col. Gano, this making him a full brother in blood to Col. Gano. He is a remarkably strong bodied, smooth, heavy boned individual, and his pigs are showing up in good shape. I Am A Crimson is a son of the grand old show and breeding boar, Belle's Crimson Wonder. Mr. Merrick has a number of very good outside litters, but the choicest stuff he has is mostly by his own boar. Keep his herd in mind for future reference.

If you have not saved all the copies of Twentieth Century Farmer containing hog cholera articles, write at once for our bulletin, with these articles complete.



Koeth Kombination Kit

One pair of handles for fifteen different tools

Koeth's Kombination Kit is an arrangement whereby one pair of plier handles is made to serve a number of different tools which come as sets of heads. The heads may be combined so that as many as fifteen or more different tools may be found.

The elimination of many different handles makes a saving in cost, convenience, and weight that will be appreciated by every plumber and machinist who is forced to carrry a bundle of tools in installing and repair work. And similarly in shop work the economy of bench space, convenience and the slight expense of replacing a worn-out part is a great consideration.

It is on the same plan as one brace for a set of bits, one handle for one set of taps and dies; and there is no more object in having handles for all the different plier-like tools than in having a brace welded to each separate bit.

The set consists of one pair of handles and six sets of heads, which give the following tools, ranging from 10 to 11 inches in length: Pincers, End-Cutting Pliers, Harness, Belt and Leather Punch, Pruning Shears, Tinners' Snips, Pliers, Wire Cutters, Adjustable Alligator Wrench, Pipe Tongs, Nut Cracker, Screw Driver, Tack Puller, Nail Puller, Calipers and Dividers. The heads are of tool steel, ground and polished, and are finished in blue or polished nickel. Each tool is fully warranted.

Here Is Our Offer

The Set of Tools and The Twentieth Century Farmer for one year for $3.50. The tools are delivered by parcel post. Old subscribers can take advantage of this offer just the same as new ones. Write us today.

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A BEAUTIFUL CARVING SET

Made for Those Who Appreciate Quality

Cleaver, 11¾ inches long, value $1.50.
Carver or Slicer, 14 inches long, value $1.50.
Fork, 12½ inches long, value 50 cents.
Butcher Knife, 10¾ inches long, value 75 cents.
Paring Knife, 7½ inches long, value 25 cents.
Spatula, 11 3-8 inches long, value 50 cents.

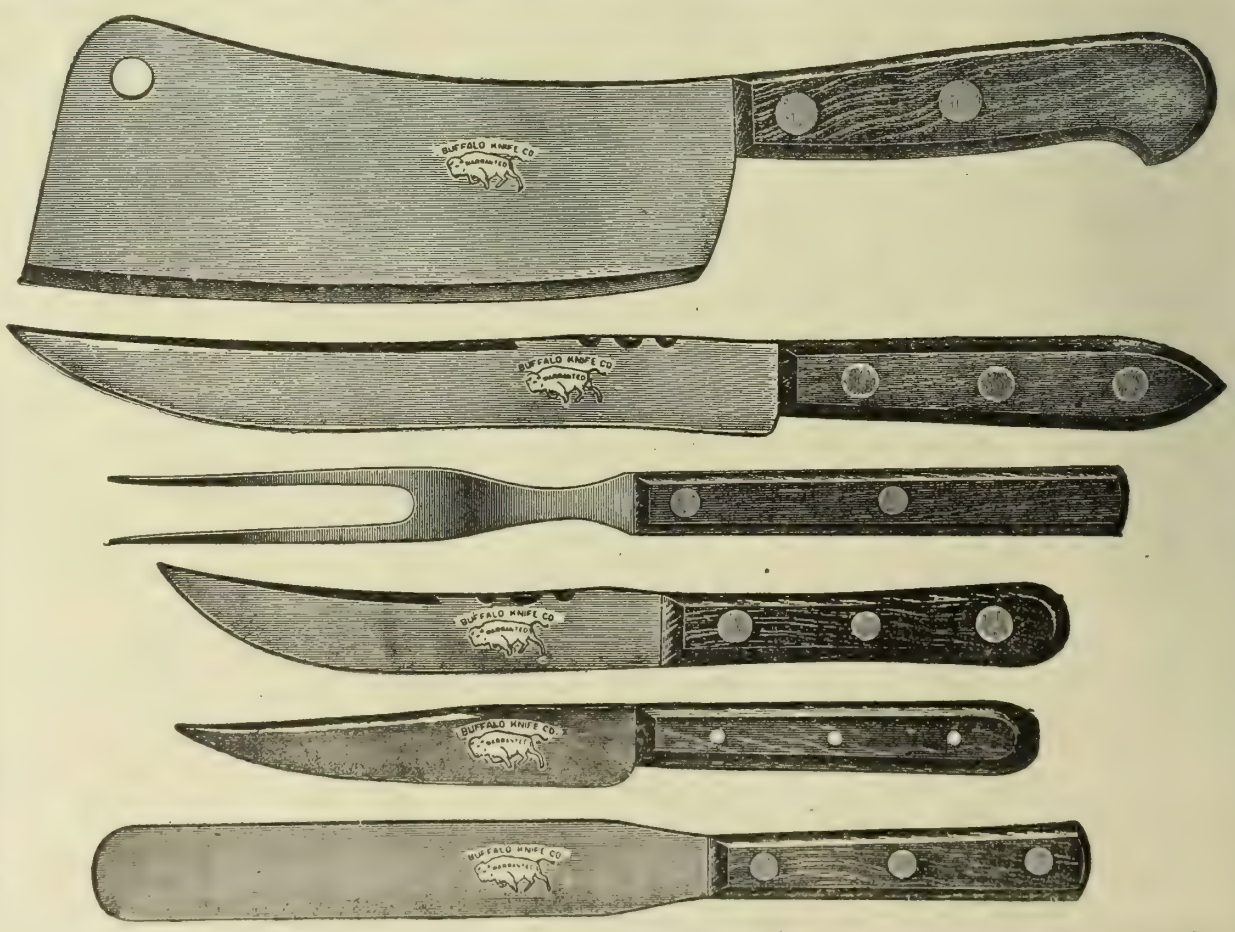
Description of Our Highest Grade Steel and Cocobola Handles.

The knives and forks in this set are made from the very highest quality crucible steel, oil tempered. The knives are each ground by hand on grindstones under water, which method of grinding produces a knife capable of holding a very keen edge, and this result cannot be obtained if they are ground on grinding machines or emery wheels, as is usually done.

Spatula is made from the best English steel, specially made and imported for particular use in this Spatula. There is no other steel so good.

The handles are made from West Coast Cocobola, and this Cocobola is brought in from West Coast of Costa Rica and Honduras, at a great expense. This Cocobola is used in this set, as it is the hardest, finest grained and most beautifully colored in the world and differs very materially from the usually so-called Cocobola. Handles are riveted on with heavy brass Rivets.

The Cleaver is full seven inch size and specially hardened and tempered made from steel manufactured especially for this use.



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TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, June 27, 1914 | Number 707

Prattle of the Youngsters

A Different Case

Visitor (consolingly to Tommy, who has upset a bottle of ink on the new carpet)—Tut, my boy; there's no use crying over spilt milk.

Tommy—Course not; any duffer knows that. All you've got to do is to call in the cat and she'll lick it up; but this don't happen to be milk, an' mother'll do the licking.—American Boy.

In the Minister's Family

She was the youngest of eight children in a minister's family, and, as his salary was not large, she already had learned that there were many things the family could not have. One day her father told her that she had a new baby sister.

"Well, papa," she said bravely, "I suppose it's all right, but it seems to me there were a lot of things we needed more."

Needed Another Band

Mary had been greatly interested in watching the men in her grandfather's orchard putting bands around the fruit trees, and asked a great many questions.

Some weeks later, when in the city with her mother, she noticed a man with a mourning band around his sleeve.

"Mamma," she asked, "what's to keep them from crawling up his other arm?"

Generous

A mother was trying to instill principles of generosity into her small son.

"Walter," she said, "papa has given you a nice new wagon. Why don't you give your other one to that little orphan boy who lives down at the end of the street?"

"No, I need both of 'em."

"But think of that poor little boy. He hasn't got any papa to—"

"All right. Give him papa then!"

Teacher's Troubles

A little girl was told by her teacher that ferment meant "to work" and was requested to write a sentence containing that word.

Her sentence was:

"I would rather play out of doors than stay in school to ferment."

Another small girl was told that superior meant "better."

Her sentence was:

"Yesterday I was sick, but today I am superior."

He Knew the Answer

His name was Tommy, and he came home from school looking so down in the mouth that mother asked him severely what was the matter?

Out of his little trousers pocket he fished a note from the teacher, which said: "Tommy has been a very naughty boy. Please have a serious talk with him."

"What did you do?" asked mother.

"Nothing," sobbed Tommy. "She asked a question, and I was the only one who could answer it."

"H'm," murmured mother. "What was the question?"

"Who put the dead mouse in her [illegible]?" answered Tommy.—Lippincott's.

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Ayrshires in Nebraska

PHOTOGRAPHS of fine cattle are always of interest to the man engaged in any farm enterprise. Especially are the pictures of dairy cattle interesting, for even if we are not in the dairy business most farms have at least one family cow. There is a man near Omaha who has brought into Nebraska from Pennsylvania a whole herd of a breed of dairy cattle that is practically unknown in many localities in the corn belt, although they are very popular on the west coast and in the eastern states; they are the Ayrshires. White, with dark red or brown spots, they stand out on the green landscape like the popular Holstein, giving an air of comfort and prosperity to the scene.

In our next issue we will show some photographs of these beautiful and productive Ayrshire cattle, telling the story of their importation into Nebraska and explaining the plans and methods of their owner. It is a story that should be of interest to any man who is in the dairy business, either on a large or small scale.

The third of the silo articles will also appear, giving the experiences of live stock feeders and breeders in the use of the silo and figures gathered from these practical farmers as tc the cost of putting up silage, also the results of its use as demonstrated by the condition of the cattle fed.

The booklet, "Hog Cholera, Its Prevention and Treatment," which is a collection of the series of articles we have been running, is now ready and may be had for the price of 5 cents to cover mailing and handling.

Bright and Breezy

Mean Thing!

She—It's raining at last, John!

He (to corpulent wife)—Well, come inside, then and give it a chance to get at the lawn.—Punch.

Had a Rule

Man—Have you a two-foot rule in the house?

Maid—Yes; it's to wipe all the mud off 'em before you come into the kitchen, and don't you forget it!

Swindled

First City Man—How are you getting on with your poultry venture?

Second Ditto—I've been swindled. I bought three incubators of different makes, and not one of them has laid an egg yet.

Not Samson

Sandy applied at the store for a job. The manager, after asking him a few questions, set him to work, bidding him lift a heavy cask up onto a stand. Sandy struggled vainly with the job for a few moments, then stopped and said: "A told ye ma name, sir, did A no?"

"Yes," replied the manager. "You said it was Tamson. Why?"

"Weel," said Sandy, mopping his brow, "I was just a-wunnerin' if ye thocht A said Samson."

For Rich and Poor

They had just become engaged.

"Oh, Will," she said, moving a trifle closer to him, "I am so glad you are not rich! They say that some of those millionaires receive threatening letters saying that something dreadful will happen to them if they don't pay the writers sums of money."

"Oh, is that all?" replied Will. "Why, I get plenty of such letters."

Found

This story in Everybody's Magazine tells of an absent-minded professor at Drew Theological seminary:

One evening, while studying, he had need of a bookmark, and, seeing nothing else handy, he used his wife's scissors that lay on the sewing table. A few minutes later his wife wanted the scissors, but a diligent search failed to reveal them.

The next day the professor appeared before his class and opened his book. There lay the lost scissors. He picked them up and, holding them above his head, shouted: "Here they are, dear!"

Severity

A very estimable widow in Germantown, Philadelphia, is the mother of a son who has given her much trouble by reason of his waywardness.

"I am afraid," said a friend one day, in speaking of the boy, "that you are not firm enough with him."

"On the contrary," said the mother, "I sometimes fear that I am much too harsh."

"Indeed!"

"Oh, I don't mean to say," the fond mother hastened to explain, "that I have ever really taken any summary action, but I have talked to him a great deal."

"And what have you said?"

"Why, I have said: Richard! Richard!' and other severe things."—Lippincott's Magazine.

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Every-Day Notes from a Missouri Farmer

Observations and Reflections on the Experiences of the Season's Work

By C. R. Esthaven

THERE is one thing that needs to be watched mighty sharp just this time of year, and that is the pitchfork. It is altogether indispensable in its proper use, but when handled carelessly it may become the means of very distressing injuries. Every harvest time we read in the newspapers of men meeting with serious and often fatal accidents in descending from stacks and coming down upon tines or handle of a pitchfork. One of the most pitiful accidents I ever knew of was caused by simply allowing a pitchfork to ride loosely on a load of hay. A man and his 12-year-old son were coming in from the hayfield and the boy slid down off the side of the load to open a gate. A pitchfork had been carelessly left upon the load in such a position that when the boy's weight depressed the side of the load the pitchfork slid off, too. As it slid off handle first, it beat the boy to the ground and was there waiting for him. The tines pierced his neck, one of them injuring the spinal column and rendering him a cripple for life. It all happened in a twinkling, just as such things always do. No one can forsee such accidents. The only way to guard against them is to watch the pitchfork, making it your business to know where it is—right end up and secure.

* * * *

Mower Dangerous When in Operation

Just a little less dangerous is the mowing machine, but I will take chances with the mowing machine before I will with a pitchfork. The mower is dangerous only when it is hitched up and moving, but a pitchfork may be in hiding where someone has carelessly left it, and in just the right position to cause you to injure yourself with your own motion by coming in contact with it. And yet when the mower is hitched to a team and in gear it is dangerous enough. Be sure you know where all the children are when you are running the mower. It doesn't hurt to be just a little too particular about such things.

* * * *

Divide with the Birds

Did you ever try mulberry pie? Many like it, but I think all will admit that a pie made of mulberries and cherries tastes much better. A better combination still is just cherry pie, with plenty of mulberries near so the birds will eat them instead of the cherries.

* * * *

Time to Wage War on Rabbits

It is well also to take a shotgun with you when you go out to mow the alfalfa. I recommend this, not as a protection against either of the haying-time dangers I have mentioned, but as a means of taking advantage of the rabbits. It is seldom one gets an advantage over these pesky little brutes, but in haying you get a good chance at them. They grow accustomed to the alfalfa field both as a mighty good feeding grounds and as a good cover under which to hide, and when you cut it down you have them at a disadvantage for just a few minutes, and then is when the gun comes in handy. Alfalfa-fed young rabbits are just as fine eating as spring chicken, too, so there are several good reasons for shooting them at this time of year.

* * * *

Spare the Weeds and Eat Small Apples

Are you getting those apples ready for next winter? If the soil of your orchard must furnish moisture for both the apple crop and a rank growth of weeds or grass, it is likely that the hot days coming will make little apples where you expected large ones. A mulch of cultivated soil is best, but if you have a rank growth of weeds drawing moisture from your orchard, it may quickly be turned into a very effective mulch by the prompt use of the mowing machine.

* * * *

A Fortunate Disappointment

Just about a year ago I bought a young sow, a full-blood of the previous fall's farrow. She was a nice gilt and according to the conditions of the purchase I expected a litter from her in September. The litter, however, never materialized and I was much disappointed. But this was a case in which temporary disappointment turned out to be good fortune. The gilt grew into a splendid sow, and this spring when she farrowed eight of the very best pigs I ever saw and raised them easily and evenly, I could not help but recognize my good fortune. I had made a permanent gain by allowing the sow to attain perfect maturity and a good growth, even if I had done so unwillingly. And why not? I expect to keep her for several years. Why sacrifice a little on all her litters just for the sake of crowding in an extra litter before she was a year old?

* * * *

Form Your Own Conclusions

A man who tries to reason or legislate dogs away from men is on a par in wisdom with the person who tries to keep a girl from marrying a man by telling her the man is trifling and no account. The attachment between dogs and men is just about as amenable to reason as the tender passion itself. Why some men keep those yapping, worthless curs about them is just as easily explained as why some women marry the men they do. It is just because they like them. A neighbor of mine has a dog that sucks eggs. "How are your hens doing?" I asked him one day. "Oh, just fine," he answered; "we've been getting about two dozen a day, but the pup beat us to 'em this week." "Great guns!" I exclaimed. "A 30-cent pup would soon eat his head off at that rate." "Well, I did have him tied up," was the answer, "but he whined and took on so I couldn't stand it, so I turned him loose."

* * * *

Fishing After Corn Planting

Did you promise the boys you would all go fishing as soon as corn planting was done? And you kept your word? Good! Some of the happiest memories of my boyhood are of those trips we used to make annually just after corn planting. The whole family would go. Equipped with a big picnic lunch and plenty of fishing tackle, we would drive away to some pond or mill dam for a day of fun. Those trips, as I remember them, were not less wonderful than the adventures of the Swiss Family Robinson, although I know they could not have been longer than five miles and back, and we never caught more than just an ordinary mess of mud cats. But somehow the things about home always looked better to us after we got back from these excursions; the rows of hoeing in the garden never looked quite so long and impossible. It doesn't take a great deal to make a boy happy, if you will just remember your own boyhood.

* * * *

A Unique "Family Play House"

I built a tree bunk this spring out in the old apricot tree, and it has been the source of a great deal of satisfaction to the whole family. It is simply a framework of poles fitted in the crotches of the spreading limbs in the center of the tree and scarcely six feet from the ground. It is floored with barrel staves, and when fitted up with cushions it affords a splendid seat for three or four persons and a comfortable couch for one. The spreading branches are so thick around it that there is little danger of falling out, and the distance to the ground so short that there is no serious danger to even the smaller children. It makes a fine "play house," and I think I shall try it out as a "sleeping porch" this summer.

* * * *

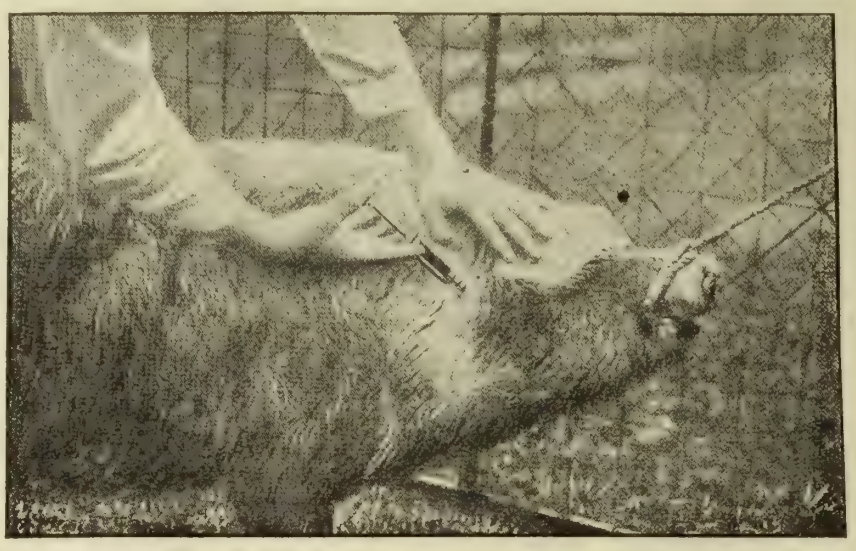
Phoebes as Fly Catchers

Man seems to think that he is the original fly swatter, but there are a pair of phoebes in my barn that hold a stronger claim to the title of fly catcher than even the official of that name in the flyless town of California. Their first brood left the nest on May 21. For eighteen days previous to that the old birds worked incessantly during daylight hours catching and bringing in the rations—mostly flies. During that same period I frequently read in the papers, "One fly now means 11,000,000,000 after a while." Whole some scientific man is figuring out how many billions of flies those phoebes nipped in the bud I shall go on encouraging the presence of the birds in every possible way.

Hog Cholera---Prevention and Treatment

XI--Does Treatment of Sows During Pregnancy Produce Abortion?

A HERD of hogs is liable to become infected with cholera at any time or any season of the year. It may catch us after our sows are bred and before farrowing time. What, then, should we do in the way of treatment for these sows? This subject is one of great importance, especially to the owner of a pure-bred herd. Sufficient time has not been had, nor can sufficient data now be obtained, to draw any positive conclusions on this subject. We have, however, given the matter very careful consideration, and a special investigation has been made along this line.



Method of Vaccination for Heavy Hog or Brood Sow

At the Kansas City meeting of the Missouri Valley Veterinary Medical Society Dr. Dorset, in his talk on the treatment of hog cholera, brought out some facts obtained in their field work in three different states. Four hundred and twenty-two pregnant sows were treated with serum alone. Of these ninety-one, or 21 per cent, aborted. The fact that these sows were treated with serum alone gives the inference that at the time of treatment these sows had cholera. Two hundred and ninety-five pregnant sows were treated with the simultaneous treatment. Of these seventeen, or 5.7 per cent, aborted. These sows were well at the time of treatment.

Proper Handling Prevents Abortion

From this inquiry we have drawn the conclusion that if sows generally are properly handled less than 10 per cent will abort. One authority says he vaccinated 300 at one time with less than 5 per cent abortions. This same party claims that if the sow is advanced in age there is less liability of producing abortion if she is treated with the simultaneous treatment during pregnancy. We have no way of knowing how these sows were handled while they were being treated. Every hog man knows that rough handling is liable to produce abortion in sows. The same serum and virus may be used by different operators with vastly different results, showing conclusively that the method of handling and not the treatment itself is at fault.

Recent information from the owner of one of the good pure-bred herds in the state of Nebraska is to the effect that he treated his sows simultaneously on the 24th of December last, some of them having been bred six weeks and some of them but recently. Nine sows farrowed seventy pigs, saving fifty-six good, strong ones. He has not had a single case of abortion, nor have any pigs been born dead. This party is a careful feeder and handler, and we believe this has materially assisted him in the results he has obtained from having been compelled to treat the sows at that time.

The veterinarian of one of our colleges told of treating nineteen pregnant sows with the serum-simultaneous method. These sows belonged to a farmer who was a splendid caretaker. He was on such friendly terms with his sows that he got them to lie down to be treated, it being necessary to tie but two or three. The result of the treatment was not a single abortion or dead pig.

Operator Must Know Potency

In this investigation one fact has been brought out that we believe of great importance in the double treatment of sows during pregnancy, and that is that virus of high virulency is more liable to produce abortion if serum of low potency be given at the same time, showing the strong necessity of the operator in knowing, if possible, the standard of potency of the serum he is using.

In another part of the discussion of this matter we take up the probability of producing virus of a higher virulency than other virus by special methods.

We are constrained to the belief that the sanitary conditions under which the herd is kept prior to the time of treating, and also after the time, has much to do with the question of abortion; also how the sow is handled in treating her. A sow should not be roughly handled, nor thrown in this operation. The best method is to get a small rope into her mouth, securely fasten it to the upper jaw and tie her to a post, inserting the needle behind the ear. The accompanying cut shows how this operation is performed.

Period of Gestation

There is a wide difference of opinion among our best men as to the per cent of abortions in the different periods of gestation, some holding that sows treated during the first two months are more liable to abort than if treated in the later stages, while some of our best authorities claim exactly the opposite. From our best information, based on the actual experiments we have investigated, we are brought to the conclusion that there is no difference in the results as regards the period of gestation, careful handling and sanitary conditions being most important. We would advise, however, that unless conditions seem absolutely to require it the serum-alone treatment should be used on pregnant sows. If this treatment is used and the sows carefully handled, there can be absolutely no danger of any bad results.

Does Vaccination Cause Sterility?

We have made inquiry into the subject of whether or not the use of the serum-simultaneous treatment of brood sows would have the effect of causing future sterility. Most authorities do not think the treatment will impair their breeding qualities. One party told us that in one trial six out of twenty-three hypers would not breed. A hog used as a hyper, of course, has a much larger quantity of virus injected into it than is used in the serum-simultaneous treatment. This is but one experiment in this line and but one trial in the experiment, yet it shows that it is possible that too large quantities of virus might impair the breeding qualities of an animal. More extended experiments along this line will no doubt give us more definite information.

Inquiry along this line from a number of farmers has shown in some instances quite a per cent of sows treated with the serum-simultaneous method before breeding failed to breed. One farmer in Illinois had about 15 per cent of his gilts so treated failing to breed the fall after treating, but about three-fourths of these have settled for fall litters.

Years of experience in breeding hogs have shown us, however, that some years and with some hogs we had plenty of trouble along this line before serum was used or known as a treatment. This is a matter of importance, and we would advise our farmers to make a note of it and get such information as they can in their neighborhood on this subject.

Serum Not a Cure

Let us keep it clear in our minds that serum is not recommended as a cure for hog cholera, but as a preventive or protection.

This again brings us to the importance of quick action when we first notice sickness in the herd and the importance of having tested serum available for immediate shipment.

Inquiry has revealed the fact that some operators have told hog owners that a large per cent of their sick hogs could be cured by the administration of serum. There is no question

Clean Pasture and Sanitary Conditions Are Preventives of Abortion

but that on this account some of our hog raisers have a mistaken idea of what serum is intended to do and have condemnd it because it has not effected a cure in a large per cent of their sick hogs. We do know, however, that some hogs showing marked signs of sickness have recovered after treatment.

We recommend that hogs not too far gone be treated. The cost is not much when everything is ready. We want it distinctly understood, however, that we do not recommend serum as a cure. If a small per cent of your sick hogs recover, you will be well repaid for the expense of treating them.

Statistics compiled by the government show that in the United States in 1887 we lost 120 hogs per thousand. The next few succeeding years show a much less per cent of loss. Then we suffered more severe losses up to 1897, when we lost 130 per thousand, dropping again immediately after. Figures are not yet available for 1913, but from the best information obtainable the percentage of loss will probably equal that of 1897.

If our farmers will take hold of this matter and co-operate with the authorities and use every means at their command to keep down the loss, we are firmly of the belief that never again will we see such terrible losses. The farmers have the clubs, sanitary and quarantine methods and serum when necessary. Will they make the most of it? We believe they will, and that success will crown their efforts.

White Grubs a Serious Pest This Year

By H. A. Bereman

AS THE wanton destruction of wild birds continues in this country the balance of nature topples and insects are becoming more of a menace than ever before. The current year is said to be one of the worst in history, and some varieties of bugs and worms have become a devastating horde in many sections.

One of the most expensive enemies of the farmer (part of the price we pay to the pot hunter, the feather hunter and the "sportsman") is the white grub (larvae of the June bug), which plays havoc among the cornfields, the pastures, the potato and strawberry patches and elsewhere. The white grubs are so numerous this year that entomologists warned farmers not to break sod for corn.

The beetle lays her eggs in sod or similar places where she can insure food for her young. The eggs hatch out in July, and the half-grown larvae (little white grubs) descend deep into the earth before frost. There they remain dormant during the winter and emerge in early spring next year. After they have done all the damage they can they spin their cocoons and remain dormant another winter in the chrysalis state. In the following year they come out of the cocoons as adult beetles, the females laying another crop of eggs in June and July.

In some places in the midwest the adult beetles, which feed at night upon the leaves of trees, have denuded many fine trees entirly of their foliage. Pastures infested with the grubs are likely to be more or less destroyed during the coming summer. Next year a new crop of grubs (hatched this summer) will grow to full size and be at their maximum power as root eaters and plant destroyers.

The white grub is becoming so serious a plague that systematic efforts toward its control (it would be presumptuous to speak of its eradication) must soon be made or the high cost of living will become acute, extending to rural as well as urban population.

In Europe the white grub is regarded as one of the "regular" pests which must be fought vigorously every year, just as we are learning to spray in this land for certain well recognized insect enemies, who, like the poor, we have with us always. In France the peasants form night parties and, after spreading sheets under the trees where the adult beetles are feeding, the trees are shaken by hooking long poles over the limbs.

Some American farmers and orchardists make effective inroads on the June bug population by placing under the trees tubs of water having a scum of kerosene on top. By hanging a antern about a foot over the center of the tub, the bugs are attracted by the light, blunder into the oily deep, and after a good "catch" the morning reveals literally gallons of dead beetles, each one of which might have otherwise produced thousands of eggs.

No great success has been achieved by fighting this pest in any other stage of its development. Turning hogs into infested fields and pastures will fatten the hogs and clear out the grubs. The hogs destroy the sod, but the grubs would have done that anyway, so it seems better for the swine to root the sod to pieces than to encourage further depredations from the insects.

Every farmer should begin an active campaign of protection for the common birds of field and grove. Game laws should be made more strict and enforced with more rigor than heretofore. If Audubon societies were more common among the boys and girls on the farms, all classes would soon learn how worse than cruel it is to wantonly kill a song bird, a game bird or any wild thing which helps to hold in check the insect hordes that are slowly but surely creeping upon our fields and gardens and orchards like a plague of Egypt.

Snakes, moles and toads are among the friends of mankind, and yearly consume vast numbers of bugs and worms. That we continue to regard them as foes and kill them on sight, illustrates the peculiar ignorance and stupidity of humanity regarding its brothers of the wild.

Most state experiment stations issue bulletins showing the horticulturist how to fight insect pests. These pamphlets are sent free to farmers and others within the borders of their respective states. Very simple and effective means can be employed to combat the ravages of many pests. A 2-cent stamp invested in a request for the latest information from state and national departments of agriculture will pay big dividends this summer.

Beware of Black Rot in the Vineyard

ON ACCOUNT of the excessive rainfall and the large number of cloudy days, black rot is liable to become a serious menace to the grape crop this season. This rot is generally distributed throughout the grape-growing regions, and is always liable to attack the crops when conditions are right, as they are at the present time.

Symptoms

The black rot fungus occurs upon berries, leaves and sometimes upon the young canes. The infection on the berries is more severe, although sometimes the disease shows first upon the leaves, where it appears as sharply defined, nearly circular brown spots. After a while these spots become roughened by the appearance of very small, pimple-like protuberences near the center of the spots. The berries are usually attacked when about two-thirds grown. The first sign of injury is the appearance of a purplish or livid brown spot, which later spreads over the entire surface of the berries. The affected part becomes darker in color and small, pimple-like raised places appear on the berry as on the leaf. Later on the fruit begins to shrivel. Bunches of berries affected with black rot often hang on throughout the season.

Control

The most effective remedy for the black rot is Bordeaux mixture. The vineyard should be kept as clean as possible. All old canes, litter, old berries, etc., should be burned, after which Bordeaux of the 5-5-50 formula should be applied. If spraying has not already been done, an application should be made at once, and in order to control insects at the same time three pounds of arsenate of lead should be added, making the formula 5-5-3-50. Every part of the leaves, both above and below, should be sprayed. Sprays should be applied at intervals of about ten days until there is danger of discoloring the fruit. These sprays do not need to be applied under heavy pressure, but enough liquid should be put on thoroughly to cover every part of the plant. Spraying so lightly that only a drop here and there lodges on the leaves is little better than no spraying at all. A combination of Bordeaux mixture and arsenate of lead, as above mentioned, if systematically applied during the remainder of the growing season should control the two pests which seriously menace the grape crop of Nebraska for this season—the black rot and the graperoot worm.

J. R. COOPER.

Hard Seeds in Alfalfa and Other Legumes

DURING the last four months many samples of alfalfa have been tested for germination by the Nebraska seed department, showing the presence of hard seeds in varying per cents. One lot germinated 25 per cent, with 65 per cent hard seeds. Other samples tested have shown 50, 44, 39, 36, 32, 25 and 16 per cent hard seeds, and still smaller amounts, some germinating 98 and 99 per cent, with no hard seeds. Practically all legumes carry these hard seeds.

One sees at once the great importance of knowing what percentage of such seeds a sample contains, both in determining the amount to be used per acre and the price to be paid. If one is going to use seed of which only 50 per cent will germinate, twice as much seed must be sown. It is true that some of these hard seeds may germinate in time under certain conditions. Seed sown in the fall and subjected to winter weather, freezing and thawing, would probably show an increase in germination, but this does not fulfill the requirements of high-grade seed.

(CONTINUED ON PAGE SEVENTEEN)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
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Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
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Education of the rural ministers as to the problems of their parishioners is now being taken up quite generally. California had a big meeting of ministers last winter. Several of the other states have had ministers' weeks, and Nebraska gave a week in June for this purpose, the farm college professors giving the ministers some idea of the farmers' work.

Luther Burbank is defending himself from criticism by admitting that he has nothing to do with the management of the Luther Burbank Society, which is putting out and advertising a number of more or less valueless plants under his name. He practically admits that he has sold his name to this society and is helpless to stop its use in the promotion of worthless creations. It is an unfortunate thing when a man of Burbank's undoubted ability allows his name to be commercialized in this way.

A series of articles on "Hog Cholera—Its Prevention and Treatment"—has been running for some time in the Twentieth Century Farmer and we have announced they are to be published in the form of a booklet. A stock food company in Wisconsin, however, has beaten us to it. It is advertising a booklet by this name for free distribution. This booklet is advertising matter, setting forth the claims of the company's stock conditioner. "You can prevent the cholera absolutely," it advertises. This is an extravagant claim, and such impossible claims are not made ordinarily by reputable firms.

Grain Storage on the Farm

The principle of protection for the grain-raising farmer is only common sense, a self-provided security against loss which every producer should aim to have, and to the full capacity of the grain crops produced. What estimate would public opinion place on the farmer in this age of building and improvement who would crib his corn out of doors, piling it on the ground, as in old pioneer days when corn was not worth anything, when land was selling at $10 an acre, and the corn-raising farmer had scarcely enough to keep himself and family alive? Pioneer days have passed and grains of all kinds are valuable, in fact, high priced compared with former conditions.

The need of the present time is system and economy in all matters of farm production. This is the only way the land owner can make his investment in farm lands pay. It will never do for the farmer to go backward and place himself at the mercy of the dealer and the overcrowded markets. The farmer must provide his own storage on his land where the crops are produced and thus protect it from weather and other features of damage that may arise while he is getting ready to sell it.

This is the only common sense, practical way to manage the disposition of farm crops. Such appliances as are needed for cribs, bins and garners for this storage on the farm are various. Some prefer large, securely constructed buildings made at considerable expense, while others prefer a cheaper, more temporary plan of storage, something that can be moved from place to place about the farm and at the same time offers all the advantages of perfect storage in the matter of weather and rodent security. This feature of storage is no doubt best provided by the metal grain bin, a device which also offers security against fire and the various other losses usual to temporary storage.

The idea is to get the best and most secure storage, that which is least subject to damage of the quality of the grain to be stored. The matter of economy in labor and expense in the handling of the crop at threshing time must also be considered. This is an important matter just now on the eve of harvest. It will pay to provide farm storage in advance of harvest.

College Horse Show

The students of the Missouri College of Agriculture have introduced a horse fair as an amusement feature during the week of the commencement exercises. Many of the business men participate by offering prizes in the various classes. Besides being a very ingenious scheme to draw to the college exercises, it has its educational value in instructing everyone who attends in the importance and worth of the horse, even in these days of the automobile.

The horse show has brought prominently to the front the light harness and roadster classes. Full classifications were given the saddle horse and single and double roadster. Make the occasion worth while, is the demand of the times. A great deal of amusement, interspersed with a small amount of education, is the formula that seems to be most satisfying. The college boys of Missouri have invented a plan of entertainment that will insure a good audience commencement week.

Crop Prospects Good

The prospects for good crops of all kinds, except in some lines of fruits, have never been much better at this season of the year. The moisture conditions are reported good over almost the entire corn-growing districts of the United States. Field crops generally are good color and growing rapidly. In the Missouri valley country there is plenty of moisture to encourage a healthy growth of all classes of vegetation. The rains have been uniformly distributed for the last month, except in some small districts where there has been reported an excess of moisture, and some damage to crops sustained. It is the seasonable shower, the continuous supply of moisture, that grows the successful crop. Heavy rains that flood whole districts of country ordinarily do as much damage as they do good to the crop interests. The season in which rains are in demand to grow crops is from the time the crop is planted until near harvest. It is the constant, continuous supply of moisture that the growing crop demands.

It is not an unusual thing to hear someone say following a heavy rain in the spring or early summer, "that crops are now assured, even if we have no more rain." Such expressions are not based upon the experience and sober judgment of one who knows how easy it is for a period of drouth in July or early in August to blast all hopes of a corn crop. It is only necessary to refer to the great prospect of the corn crop of 1894, on the 25th of July, when in forty-eight hours following all hope had been blasted and a great corn-crop prospect ruined.

The seasonable shower is the moisture that is demanded to grow a crop in any district of country where some system of irrigation is not in use. Moisture storage in the soil is practical and serves a good purpose under ordinary conditions of dry weather. But when continuous hot winds are experienced, such as swept over the country in July, 1901, and the blighting hot winds of July 26 and 27, 1894, there must be damage and disaster to crops follow.

The crop failure of the corn-belt country of the great central west is the exception, however, and all present indications point to an exceptionally prosperous crop year for 1914.

Kansas City reports the smallest receipts of live stock last May of any May since 1891. Shortage of live stock is assigned as one of the reasons, but the fact that farmers are keeping their breeding stock instead of rushing them to market is one of the hopeful signs of the future.

Root Crops for Farm Stock

The neglect of growing root crops for stock feeding purposes on the farm is a great mistake. Sugar beets, rutabagas, turnips, carrots and potatoes comprise the most important and valuable of this class of feeds for stock. It is a well known fact that on most farms there is a very perceptable shrink in farm animals in the late autumn season when taken off the pastures. This can measurably be avoided by the use of root crops in connection with the dry feeds, hay straws and fodders. The change from grass to cured feeds is the cause of many animals entering into a condition of decline that can be arrested only by substituting some succulent food, such as root crops.

It is also well known by those who have had experience in feeding root crops that all kinds of stock are benefited by their use. Animals given an occasional feed of roots are seldom out of fix or off their feed. The growing of root crops for stock need not be confined to any special kind or condition of animals. Every horse, cow, sheep and hog should be privileged to an occasional feed of roots. All root crops are easily grown in the corn-belt country and practically all over the live stock districts.

The sugar beet is one of the most profitable in the matter of feed value and in way of crop yield. It is also an easy crop handled and is readily preserved for feed purposes when stored in the root cellar. Turnips and rutabagas are also prolific yielders and are grown with practically no expense and very little labor. Where roots are to be fed in large quantities and to a large number of stock some system must be adopted in the feeding. Some advocate the feeding of the roots whole by being thrown out onto the ground on clean sod, while others recommend cutting up the roots, slicing on a machine and feeding in troughs. Experience and your feeding demands will soon solve these questions. In some cases it will no doubt justify the cooking of the roots. This will apply especially where any portion of the potato crop is to be fed.

The poultry yard has become an important part of the farm income on many farms. It therefore deserves the attention necessary to keep it in the best of working order. This can be done in no way cheaper or more satisfactorily than by cooking a few messes of roots each week throughout the winter for the fowls. The raising of the root crops is the first and most important thing to look after. It is not too late to sow and plant some of these crops. Provide a variety of feeds and provide plenty.

The Poland-China Journal, a semi-monthly publication, devoted to the interests of the Poland-China breeder, is to be launched next month The publisher is C. H. Walker of Kansas City, who is well and favorably known among hog breeders, especially those of Kansas and Iowa. The popularity of the Poland-China in the corn belt should be a strong factor in assuring the success of this paper.

Sheep Versus Dog

The most encouraging aspect in the promotion of the sheep and wool industry of this country is now manifest in the national agitation against the sheep-killing dog. The response of Secretary Houston to an appeal from the sheep growers of the country for legislation that will offer protection to the flocks against the depredations of dogs and predatory animals has given his department a very healthy boost as being in sympathy with this line of production.

The lack of interest in many states as to providing suitable laws regulating the dog nuisance in its reference to flock damage has been such as to discourage farmers from going into the sheep business and has forced many to relinquish the start they had already made. This is one of the most inconsistent features of neglect or lack of appreciation of business interests that any organization of lawmakers could be guilty of.

The worthless cur, the mongrel dog that has no canine virtues to present in defense of his existence, is valued more and given more consideration than the wool and mutton producing industries of a state. These worthless animals that cost thousands of dollars to feed and maintain are yearly destroying hundreds of thousands of dollars in value of mutton that the market needs to feed the people. This class of dogs is a strong factor in the increased cost of living on account of thousands of sheep that they kill and destroy annually in each state engaged in the sheep and wool industry.

If Secretary Houston can be the means of stirring up a national fight against the sheep-killing dog, whereby a tax may be assessed against the owner of such a dog that will fully recompense the sheep owner for all loss he may sustain in this way, there will be less complaint heard against free mutton and free wool.

Does She Pay Expenses?

Every owner of a milch cow should reflect every time he sees the cow, "Does she pay?" It is absolutely necessary to know your cows in relation to the quality and quantity of milk they produce and the kind of calves they produce. It sometimes happens that a cow is a good paying milker at the pail, but is a very objectionable breeder of calves, and vice versa. The poor milker may be a good calf producer, but most generally these two qualities of good milker and good calf producer go together.

It matters not what breed of cattle you keep, you want a good flow of good quality of milk. The sooner you get this kind the sooner you will be able to get results and to please the cow buyer. It is always proper to breed to suit public opinion or public fancy, for this makes popular demand, and you surely understand the importance of producing a product that everybody wants, or at least that is popular and desirable.

There was a time when a cow was a cow, worth so much per head, and there was no very close discrimination in their purchase or sale. Dealers in cattle have become close judges in quality of cows in these latter years, because there is a beef value and milk value now to every cow. They may not distinctly show this, but these properties of the animal are observed and a value placed on them accordingly by the prospective buyer, and many times these influence the selling price as much as one of the common, no-quality cows is worth.

The secret of improvement in quality lies with the breeder entirely. If all cow owners who keep cows and raise calves would exert their best efforts in securing the very best bred bulls for their herd and have some definite object and purpose in their breeding, both beef quality and milking quality could be greatly enhanced in the produce each year. Milk quality should be encouraged in all breeds of cattle. No cow is fitted for a mother who has not a good flow of milk, not necessarily excessive, but liberal for the breed she represents. Big milkers without constitution and good physical qualities are also objectionable and deserve censure by cow buyers.

The cow that does not distinctly furnish abundant evidence that she is paying a profit above her keep or expense should not have a place on the farm. Get rid of her; pass her on to the slaughter. Anyone at all familiar with cows can tell when a cow is profitable. A cow that inclines to be dry three or four months in the year cannot be profitable as a milk producer. A cow that is a light milker, though she keeps it up well toward calving, is not a desirable milker. The cow that pays is the big milker of rich quality of milk that sticks to business. You can find her. Do not be content until you get a few such cows, then raise the heifer calves and keep them.

At a big school celebration in North Dakota the children from one community were taken to the meeting place behind a high power tractor belonging to the father of one of the children. You never can tell what use an ingenious farmer is going to make of his machinery, but the more ingenious he is the more uses he is sure to find for it.

Why Men Quit

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Department of Animal Industry,
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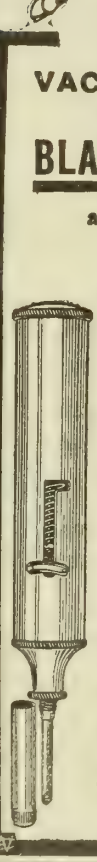


"OHIO" 1914 Model

The Silo Filler With the Direct Drive

Wonderful recent improvements of "Ohio" eclipse anything ever before produced. *One* lever controls *all* movements—reverses by wood friction *at finger pressure.* Self-feeder—with famous "Bull Dog" grip. Patented Direct Drive *Shear cut—non-explosive, non-clogging.* Enormous tonnage *on half inch cut*—50 to 250 tons a day—6 to 15 h. p. 20-year durability. "Ohio-cut" silage famous—cuts all crops. Used by Experiment Stations everywhere. Guaranteed. Many big new features this year.

Write for folder B, free, also send 10c for 264-page book, "Modern Silage Methods."

THE SILVER MFG. CO.
Salem, Ohio

WRITE FOR BOOK

KILLS HOG LICE!

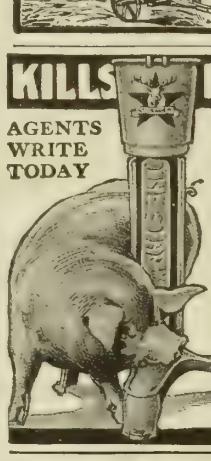
AGENTS WRITE TODAY

This wonder-worker rids hogs of lice and other vermin pests by automatically applying crude or medicated oil.

Works When Hog Itches

Double automatic feature makes double saving. No oil wasted---flows only when hog rubs and only enough for each dose. Gets right to the spot. Better than dipping. Costs only 4c per year per hog to keep your hogs healthy. Saves feed. Fattens quickly. Write today for prices and terms.

STARBUCK MFG. CO.
Dept. 75 PEORIA, ILL.



Hand-Crank Skimming

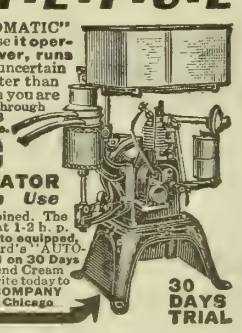
W-A-S-T-E-F-U-L

The crankless "AUTOMATIC" saves butter fat—because **it operates on its own power, runs absolutely even.** No uncertain handpower. Skims faster than ten men milking. When you are through milking you are through skimming. **Costs only 3 cents per hour to operate.**

AUTOMATIC CREAM SEPARATOR
Over 10,000 in Use

Engine and separator combined. The engine is a little wonder at 1-2 h. p. **No gears** to wear. **Magneto equipped,** unaffected by weather. Ward's "AUTOMATIC" guaranteed, **sold on 30 Days Trial at our risk.** Let us send Cream Separator Book No. 8 Write today to MONTGOMERY WARD & COMPANY
Chicago Avenue Bridge, Chicago

30 DAYS TRIAL



GRAIN BELT BRAND

Vegetable Hog Potash

A perfect worm expeller and preventive.

A bone builder, an appetizer and conditioner, a mineral balancer.

This is a most valuable product to feed the pigs at weaning time. It serves to keep the bowels regular, keeps the pig free from worms, aids digestion and keeps the pigs in a healthy, thrifty, growing condition, thereby giving them more resisting powers against disease. A natural vegetable product, free from any injurious ingredients. Can be fed with equally good results to brood sows suckling a litter, to suckling pigs and growing stock; in fact, any hog from birth to the slaughter house.

BIG TYPE MAKER

Manufactured by Union Stock Yards Company of Omaha (Limited) South Omaha, Neb

Distributed by
GRAIN BELT SUPPLY COMPANY,
SOUTH OMAHA, NEB.

Ask your neighbors to subscribe for Twentieth Century Farmer.

Hog Cholera Day in Nebraska

Large Attendance at University Farm Demonstration

THE first meeting at the University State Farm of Nebraska for the instruction of hog owners and others as to how to use serum and virus was held Wednesday, June 10. The meeting was voted a success, not only by those in charge, but by the farmers in attendance.

More than fifty hog owners attended this meeting and showed their appreciation of the efforts of the farm officials by taking a lively interest in what they saw and heard. The attendance was from many different parts of the state and from as far west as Scott's Bluff.

The morning was devoted to an inspection of the serum plant. The visitors were shown how serum is made and how a hog sick with cholera looks, the serum plant having on hand some hogs which had been made sick by inoculation to be used for the manufacture of virus. They were shown that it is not always possible to tell by the outward appearance when a hog has cholera. Some pigs having temperatures of 106 and 107 did not show visible signs of hog cholera. The only way the owner of these hogs could possibly know they had cholera would be to take their temperatures.

Post-mortem examinations were made of several pigs where lesions showed plainly that they had cholera, though they were not outwardly affected. Four of these pigs showed by the post-mortem examination that they had tuberculosis, giving those present an opportunity to see for themselves how hogs are affected with this disease and also showing the spectators how to know the disease when they see it in the carcass.

The afternoon meeting was in the dairy building. At this meeting those present were told of the great importance of sanitary and quarantine regulations as factors in hog cholera control, showing that, to a great extent, the matter of controlling the disease was in the hands of the farmer and not in the hands of the veterinarian or scientific man.

Practical demonstration was given as to how hogs are vaccinated and why; what hogs should have double treatment and what hogs the single treatment in herds where an outbreak has occurred. Particular emphasis was placed on the thermometer as the means by which the presence of the disease could be made known. The fact was brought out that when treatment is necessary the success of such treatment does not always depend on the operator. For successful treatment the hogs must be properly fed and housed, both before and after the inoculation.

It is the intention of Dean Burnett and Dr. Gain to hold one of these meetings on the second Wednesday of each month, the next one being on July 8. Put the date down and arrange your work so as to be there. Nebraska hog raisers, through the efforts of the men in charge of the agricultural college, have an opportunity fully to acquaint themselves with this disease and its treatment. They will be making a serious mistake if they do not make the most of this opportunity. Don't get the mistaken idea into your head that you know all about hog cholera. Our best informed and most learned men acknowledge that they have much to find out in this great work. A day put in at the state farm on one of these hog cholera days may be the means of saving you a serious loss.

Iowa Seed Men Meet

The annual meeting of the Iowa Seed Growers was held at Shenandoah June 11 and 12. There was a good attendance of seed men at this meeting. Matters of growing, transportation charges, laws pertaining to weights, measures, etc., were discussed. Henry Field, the well known seed man of Shenandoah, was elected president of the association for the coming year.

Co-operative Fire Fighters

Ranchers within and adjacent to the Sierra national forest, California, have formed a co-operative association for the prevention of forest fires. They need to use fire in clearing land for farming, and will do it on a community basis, with all members present to prevent the fires' spread.

OLD AT TWENTY
Return of Youth with Proper Food

Many persons who eat plenty never seem to be properly nourished.

That's because the food is not digested and absorbed. Much that is eaten is never taken up by the system as real food, and so the tissues simply starve and the individual may, as in a recent case, look and feel old in what should be the bloom of life, youth.

"At 20 I was prematurely old. The health and vigor and brightness of youth had been, as it seemed, stolen from me. I went to work in the morning with slow steps and a dull head.

"My work through the day was unsatisfactory, for my breakfast lay in my stomach like a hard lump. I was peevish and the gas in my stomach was very anoying. After supper I usually went to bed to toss half the night from sheer nervousness.

"This was all from indigestion—caused by wrong eating.

"Finally I tried Grape-Nuts and I cannot describe the full benefits received from the food. It gave me back my health. It has completely restored good digestion and my ailments have disappeared. I steadily improved and am now strong and in perfect health."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true and full of human interest.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

FEW are the farms that are not, to a greater or less extent, gape-infested. On some farms the chickens may not get these worms until they are, as you thought, entirely out of disease danger, and then all at once you notice some of these big, fully feathered chicks are humping up and acting as if frozen, and the feathers are ruffled, and they refuse to eat and stand about sleepy-eyed until some morning you find them dead. There are two ages when gapeworms are decidedly death-dealing to young chickens, and one time is when they are so very young they cannot gape, simply mope around, get smaller all the time, then die, and you wonder why. Then, say at from 2 to 3 weeks' old, they show signs of them. At this age the worms have come up high enough in the windpipe to set up a ticklish smothering, and the chick gapes for breath. This is the time when it is easiest to get the worms out and save the chicks.

But when they get the gapeworms at 2 and more months of age, then, like the very young chicks, they seldom gape at all, though some of them at times may sniff as if they had cold. They do not seem one bit short of breath, just simply weak. You will notice these weak, poor, blue-skinned chicks that a while back were so spry and big-bodied are mostly pullets. This must be due to the fact that the roosters are better able to throw out the worms and save themselves. There is one thing sure—when the gape-infested chick comes to this state it is in danger of dying. You may save it if you sit down in a sunny place, fasten its feet between your knees and, opening its mouth, which also opens up the windpipe, insert a twisted wire pulled from a screen wire into its throat, which after being twisted about far down several times will bring up a lot of blood which is mainly crushed worms; then place such weak chicks to themselves in a small coop and try to induce them to eat plenty of milk and bread and meat scraps. Smoking the flock from which these come with sulphur will often, at the first sign of the trouble, eradicate it. Smoke them in a roomy coop where enough air enters to keep them from smothering, but not from sneezing a long time. I have saved many by following in time this last rule.

Broody Hens

The nearer molting time comes, the fewer eggs most hens lay to the clutch. Sometimes it is but from 7 to 10, then off they go clucking again. Sometimes they break up in shorter order if you allow them two or three days' rest on the nest, but experience has shown that it depends on the breed. The best idea is to visit all the nests late each evening this time of year, and every hen found growling on the nest bear her away to a coop devoid of nesting material. Have the coop large enough to accommodate a dozen, anyway, and spare one rooster to the lot. Keep up three or four days, then turn out and in that many more days the majority should be starting another clutch of eggs.

Fattened Geese

Peasant women of France look after the geese that provide the livers for the famous Strasburg liver pies. Three times a day these women stuff food down the throat of the goose by the aid of one forefinger. It takes about an hour to feed twelve geese. These women must keep close watch on these stuffed geese night and day and have a sharp knife ready to bleed any goose showing a staggering gait, for when the stuffing has fatted the goose to the point where the liver enlarges rapidly, the goose may go off with apoplexy, and to let it lie several hours unbled would mean a big loss of both the body for market and liver for the pies. The goose on the market would not bring much more than the cost of the food put into it, but the livers bring as high as $4 a dozen. Then these women make a profit on smoked goose breasts, the delicatessen stores paying as high as 75 cents a pound for these. This reference to these peasant women keeping such close watch on the fowl liable to die of apoplexy may let in some light on so many sudden deaths in our own heavily-fed flocks. As these die usually at night, we do not notice the premonitory symptoms of apoplexy. If we did, and bled the fowl in time, we could safely use it on the table.

Baby Chicks

The demand for baby chicks this spring has had a phenomenal increase, for away out on remote farms the farmer's wife, in many cases, has sold the eggs laid by her hens on the market and invested the money in baby chicks hatched by these monster hatcheries. One woman sent $10 for 100 chicks a week old this last summer and raised ninety-five of the hundred to maturity. This spring her neighbors patronized that hatchery.

Distrust any medicine that is advertised as being an "absolutely certain" cure for hog cholera. There is no such thing. We are surprised to find that certain breed papers that should know better are carrying such advertising. One man not only makes such claims for his "remedy," but insinuates that state and government authorities are leagued against him to prevent the eradication of cholera.

The Powerful Smalley Cuts Silo-Filling Cost!

The day of the old slat-apron silo filler is gone. No wise farmer is going to use one when he can get a money-saving, **grip-hook, force-feed SMALLEY,** that does the work quicker, easier and at less cost. It handles silage, cow peas or alfalfa in a hurry. Cuts it fine and uniform. Packs silage tighter—gives more tonnage.

No Power Waste

One pulley and chain-drive on blower outfits replace power-wasting idlers.

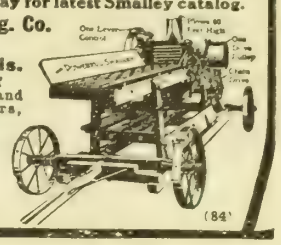
1914 Carrier

A 5 H. P. Engine will run a No. 12 force-feed and our 1914 enclosed carrier. Special alfalfa grinding screen furnished extra, protected by screen patent No. 721,246. Make your own meal.

Send postal today for latest Smalley catalog.

The Smalley Mfg. Co.
Box 344
Manitowoc, Wis.

Manufacturers of Ensilage, Alfalfa and Hand Feed Cutters, Combination Ensilage and Snapping Machines, Drag and Circular Saw Machines, Champion Plows, Cob Grinders and Feed Mills.



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ALFALFA

SOWN SUCCESSFULLY IN AUGUST

How to grow Alfalfa, how to feed it, how to harvest and care for it. Full information for corn belt farmers who wish to grow this most profitable hay crop will be sent free on application. Also samples of our Western Upland, Dakota and Turkestan seed of extra quality at low prices. Address

IOWA SEED CO., DEPT. 51 , DES MOINES, IOWA.

LEE'S LICE KILLER, Germozone, Louse Powder, Egg Maker and other Poultry remedies have a successful reputation of twenty years behind them. They have brought success to thousands of Poultry raisers and will to you. Lee's big "New Poultry Book", "Reading Symptoms of Disease" and "Poultry Pointers" free from all Lee's dealers, or write direct. The New Mandy Lee Incubator is a real automatic hatcher. Write for catalogue.

GEO. H. LEE CO., 961 HARNEY ST. OMAHA, NEB.

Reo the Fifth—$1,175 With Electric Starter and Complete Equipment

F. O. B. Lansing

This is the Super-Car

Reo the Fifth—Mr. Olds' great car—is not built by usual standards. It is built for men who want a super-car.

It is built for years of perfect service—built to withstand abnormal strains. It is built to bring troubles, upkeep and repairs down to the lowest notch.

The driving parts are one-half stronger than necessary. They meet the tests of a 50-horsepower engine. The steel is made to formula. The gears are tested for 75,000 pounds per tooth.

There are 15 roller bearings—190 drop forgings. There is a costly clutch to prevent gear clashing. There is a simple method of shifting gears.

We spend six weeks on each car to get utter exactness, and to properly test each part. No other car in this class was ever built so slowly, so carefully, in such a costly way.

The result soon shows. The parts stand the strains. There is freedom from trouble and repairs. The car stays new. It doesn't grow noisy. When lesser-built cars begin to show their shortcomings, Reo the Fifth shows its staunchness.

Rough Usage

Under normal conditions—on smooth roads—lesser cars may do. But the farmer, on the usual country road, needs a car like this. He needs these margins of safety, this vast over-capacity, this super-strength.

Men are finding this out. Every year, thousands of men who have owned other cars are buying Reo the Fifth. And every buyer tells other men to buy it.

New This Year

This year comes the new streamline body. There are many new ideas in equipment. The car excels in appearance now as it does in the hidden parts.

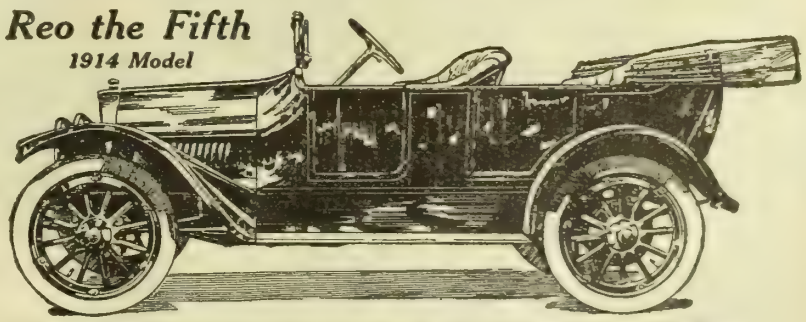
And there comes a new price—$220 less than last year with electric starter. So price no longer bars you from the utmost in a car.

A thousand dealers sell Reo the Fifth. Ask for our catalog and address of nearest dealer.

REO MOTOR CAR COMPANY, LANSING, MICH.

Canadian Factory, St. Catharines, Ont. Canadian Price, $1,575

Reo the Fifth
1914 Model



Electric Starter, Electric Lights, Mohair Top with full Side Curtains, Mohair Slip Cover, Clear Vision Ventilating Windshield, Speedometer, Electric Horn, Robe and Foot Rails, Extra Rim and Improved Tire Bracket, Pump, Jack, Complete Tool and Tire Outfit. Streamline Body—One-Rod Control—35 Horsepower—Tires 34 x 4
Also Handsome Roadster Body

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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

The June Wind

The June wind over the meadow sweeps,
Singing the little flowers to sleep,
And June is singing so sweet and low,
'Tis time for the summer flowers to grow,
The wind sweeps low, the wind sweeps high,
Hurrah! for the June days passing by!

The June wind into the garden goes,
Kissing each little baby rose,
And chasing the butterflies and bees,
Then singing goes through the leafy trees,
It sings to the children a merry tune
And it is a song of the joys of June!

—Selected.

The Editors Corner

Usually in the summer time there are very few letters sent to the story department. This summer, however, the stories are coming in very well. There are perhaps fewer boys writing, as the boys are always so busy with their fishing and games and helping father with the haying and harvesting. The girls have more time, and so we have a large proportion of girls' letters. Judging from the letters and stories, all the Twentieth Century Farmer girls and boys are having fine times—there are so many jolly accounts of picnics, parties given on the last day of school, camping trips and automobile rides.

And besides these letters about good times and the letters about the pet dogs and cats, lambs and colts, there was one this time from a little girl in Arizona who had not seen her parents and brothers and sisters for four years. Think of that, children! Aren't you glad it was not you? There was another from a little girl who said she didn't like to see her father shear the sheep, because he sometimes cut them. This same little girl has seven big brothers. Don't you suppose those seven boys are all pretty nice to their one little sister and proud of her? Another little girl tells of a trip she took to Oregon and says she is glad to be back in Nebraska again. Another very young lady says her mother has a good deal of work to do, so she helps by washing dishes and taking care of her little brother. And, by the way, it is better to write of some interesting experience of your own when you wish to send in a story than to rewrite one of the "Tanglewood Tales." No doubt the story writer who did this meant it fairly, and she rewrote it very well, telling it in her own words, but it is better to make the story entirely original.

HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Prize Story)

Our Picnic

By Phoebe Stearley, Aged 11, Chappell, Neb.

Last Sunday we went to some canyons about twenty miles north of our place. One other time when we went our team was tired before we got home, so we thought we had better take two teams, so we hooked two teams on the lumber wagon, one ahead of the other, and got there all right.

There were eight of us in the wagon. When we got there we sat around on the grass a while and then climbed a big cliff. One of the girls had a camera and she took our pictures while we were sitting on a big rock. After we had had our pictures taken we went down again and got a drink and ate our dinners.

They were going to have bucking bronchos about half a mile up the road, they said, so we started out. It seemed about a mile, and I guess it was. We had to walk back, too, only we walked over the top of the cliff instead of going around by the road. We got tired and thirsty before we got back to where the wagon was.

Soon we came to a spring where clear water rolled out into a basin of stones, which held the water so that we could drink. The water tasted better than it would have tasted out of any pump. We got a good drink and then went the rest of the way to the wagon and hitched up the horses and started home.

On the road we took there were two or three bridges. We had the horses going pretty fast over the second one, when the girls on the back seat gave a yell and we looked back. There they were, three of them, piled up in the road, with the seat on top of them. Two of them got up laughing, but the other one had the nosebleed. The driver told them to look out for the next bridge.

(Honorable Mention.)

My Feathered Neighbors

By Hazel Muirhead, Aged 11, Bradshaw, Neb.

One morning while swinging I heard a noise and, looking up, saw that a pretty pair of robins had built a nest on the limb which held the swing. I got out and tied up the swing so they would not be disturbed again. The next day I climbed the tree and found a sky-blue egg in the nest. For three days I repeated my visits and each time found another egg. I watched them for three weeks and, one morning I found one baby bird and three pecked eggs. Next day all were hatched. For a week I helped feed them, and when I would reach the nest all I could see would be four yellow mouths open expectantly, for they had heard me coming.

One morning upon reaching the nest I heard a flutter and saw that my dear little birdies had tried to fly and were scattered in all directions. I was disappointed and, fearing that they could not keep out of the way of Tabby, I shut her up. This morning I saw one of my robins fly from the branch of the apple tree to a telephone wire near by. I am sure that they are glad they can fly, and, for that matter, Tabby is, too.

Name the Dog

Myrtle Wolery of Whiting, Ia., writes that she has a fuzzy white puppy that is so beautiful she cannot find a name nice enough for him. She wants suggestions from the readers of Our Young People. If any of you care to suggest names for him, send them to her or to this department.

Additional Stories

Iris Armstrong, Helvey, Neb.; Lena Huebner, Hershey, Neb.; Frank Trivelpiece, Bladen, Neb.; Alice Jones, Inland, Neb.; Mildred Griffin, Fairmont, Neb.; Mildred Nalls, Eddyville, Neb.; Hazel Hart, Schuyler, Neb.; Mary Sistek, Ravenna, Neb.; Opal Voge, Portsmouth, Ia.; Mildred McVay, Anita, Ia.; Katherine Underwood, Dumfries, Ia.; Maybelle Noel, Dunlap, Ia.; Marie Carr, Lander, Wyo.; Grant Gordon, Masca, Colo.; Twila Wilson, Sapulpa, Okl.; Sarah Pollard, Yucca, Ariz.

Picture Contest No. 14

Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it interesting. Say the things you would think if you really saw these children. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than July 4.

Hills Are Easy

to climb if you are mounted on a

Pope Bicycle

When coasting you can safely "let go"—Pope construction will stand the strain. On the level, ease, comfort and class identify a Pope. Fifty different models, exclusive features. Backed by over 36 years experience. Pope Motor Cycles of Pope Quality at your dealers—5 Models, $150 to $285

Write for Catalogs

THE POPE MFG. CO.

24 Cycle Street Westfield, Mass.

EXTRAORDINARY OFFER—30 days one month's free trial on this finest of bicycles—the *"Ranger."* We will ship it to you on approval, *freight prepaid*, without a cent deposit in advance. This offer is *absolutely genuine.*

WRITE TODAY for our big catalog showing our full line of bicycles for men and women, boys and girls at *prices never before equaled* for like quality. It is a cyclopedia of bicycles, sundries and useful bicycle information. **It's free.**

TIRES, COASTER-BRAKE rear wheels, inner tubes, lamps, cyclometers, equipment and parts for all bicycles at **half usual prices.** A limited number of second hand bicycles taken in trade will be closed out at once, at $3 to $8 each.

RIDER AGENTS wanted in each town to ride and exhibit a sample 1914 model *Ranger* furnished by us.

It Costs You Nothing to learn what we offer you and how we can do it. You will be astonished and convinced. **Do not buy** a bicycle, tires or sundries until you get our catalog and new special offers. **Write today.**

MEAD CYCLE CO., Dept. S 180 CHICAGO, ILL.

Start Your Business Training Now

Gem City Business College
Quincy, Ill.
Established 1870
America's Greatest Commercial College

Take a business course or train for civil service, a secretaryship or for commercial teaching. Write for year book. Good positions waiting.

D. L. MUSSELMAN, Pres.
Lock Box 27 Quincy, Ill.

Grandmother Didn't Know

A good cook? Certainly, but she couldn't have cooked the Indian Corn, rolled and toasted it to a crisp brown, wafer-thin flakes, as we do in preparing

Post Toasties

They are delicious with cream or milk, or sprinkled over fresh fruit or berries.

From the first cooking of the corn until the sealed, air-tight packages of delicately toasted flakes are delivered to you, Post Toasties are never touched by human hands.

Grandmother would have liked

Post Toasties

—sold by Grocers.

Of Interest to Women Readers

A Modern Torch Bearer

Her name is Miriam, I think, or Alice or Susanne,
Or Lou or Lillian—perhaps it may be Mary Ann,
She is a helpful sort; she keeps her household going right,
And when her husband "tinkers" things, she always "holds the light"

Her part to hold a drippy dip, and his to hammer nails
In darkling cellar corners where the sunlight flags and fails;
And when he gets some sticks of wood to keep the fire bright,
She brings her little candlestick and helps him with a light.

Or when the furnace misbehaves—when anything goes wrong
That needs a manly arm to mend, and language good and strong,
She goes along; she holds her tongue, serene, sweet and polite—
She holds the hammer and the nails, her temper and the light.

Oh, you may laud the clever wife who really rules the house;
The brilliant wives, the beauties that society espouse;
But I shall sing another one, that cheery, blithesome sprite,
Who holds the baby, holds her home, who always "holds the light."—
Grace Stone Field in Woman's Home Companion.

Whose is the Fault?

There have been a number of letters sent to the Farmer lately from the readers of this department relating to the conduct of the home and the relations of the members of the family, one to another. Most of them have been published, and every time one is published it brings an answer from someone else. Most women say they and their husbands are partners and that the children willingly help with the work. They paint word pictures of happy homes in which each one does his or her share of the work and no one is overburdened. One tells of laborious duties that fall to her and to other women she knows. She tells of neglect and unwillingness to perform the daily duties of the home on the part of husband and brothers. Another tells of a husband who willingly does his own work and assumes a large share of hers because she is not strong and well.

"Is there any object in publishing all these letters?" someone has asked. "What good does it do?"

"Perhaps it does no good at all, but it should. It should make us think. If there is something wrong in the home, if we are imposed upon and unfairly treated by the members of our families, what is the reason? In nine cases out of ten where you hear one member of a family complaining about the others, the trouble is with the one rather than with the others. Some people are born complainers. When they ask assistance from any one in the family they do so in a tone that implies a complaint that it has not been done before. Frequently, when one does a little favor for such a woman she thanks him with a frown, if at all. Pleasant dispositions are not given to all of us. With some people they are inherited, but this is seldom the case. Most of them are acquired by smothering the bitter and unkind words that come when we are tired and cross, learning to think the pleasant thoughts that will find expression in kind words and acts. If our families are thoughtless and selfish, let us look into our own conduct and see whether or not we do not make thoughtfulness and unselfishness toward us a hard rather than an easy task.

HOME EDITOR.

Mutual Helpfulness

Dear Editor: I should like to give a picture of farm life, which differs considerably from that given by M. P., but is, perhaps, just as typical. All farmers are not alike, but this is not all in the way they are managed. I did not train my husband, but as I did not train him to do things for me, neither did I train him to be indifferent to my wants. I did not neglect his kindly offers of help until he got tired of making them. As a rule I accepted and showed that I appreciated his kindness. I never complained of the things he did not do, nor the things he could not buy.

He was used to seeing women milk and help in the field, but he knew a weak woman from a strong woman and was neither selfish nor lazy. When I proposed learning to milk he decided that it would not be worth while, as I never would be able to milk much anyway; so, when he is without a hired man, as most farmers are at times, he will rise at 4 o'clock, build a fire if it is at all cold, and milk eighteen cows before breakfast.

For months at a time he has taken care of the baby at night. He will take all three children to town with him on a fine day, especially if I am tired or overworked. He will take the baby with him on the plow or cultivator and return with him in an hour, fast asleep. When I have no girl he always washes the milk cans and either runs the washing machine for me or else sends the clothes to the laundry. He never makes a word of complaint if his meals are late or poor.

If the cattle get out when he is away, I drive them in if I can, and if not, I try to watch and see that no harm is done until he returns. Occasionally he asks for a little help in loading a calf, catching chickens or driving horses for the hay fork, and I am glad that, when he does so much for me, I can help him occasionally. I have seen other farmers very much like him in the home, too.

I think M. P. must live in a very poor neighborhood or else has been looking through colored glasses. Perhaps some of those women and girls she has been telling about enjoy milking, tending chickens and working in the field and are entirely able to do it. I know one woman who will help her husband in the field one day and another day leave him to take care of the children while she goes to town. They evidently enjoy helping each other that way.

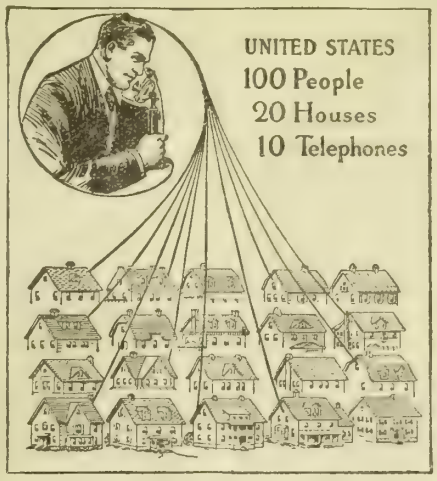
A FARMER'S WIFE.

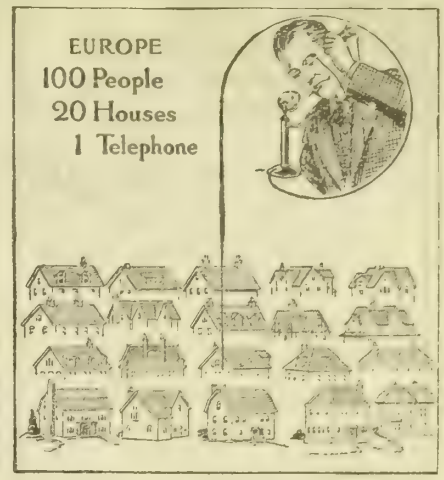
Minnesota.

Women's Voices

Cultured Europeans, we are told, complain that the voices of American women are both harsh and uncontrolled. Is the accusation just?

On a recent short journey these things were noticed: At a cerain station there boarded the train a party of six or eight women. They





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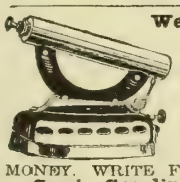

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were well dressed, ranging in age probably from 30 to 50. It was evident that they were from good homes and possessed of high intelligence. Their talk was refined, as the conversation of all women should be. But their voices were so shrill and stringent that they could be heard from one end of the car to the other. For the half hour or so this crowd was on the train it was impossible to read if you chanced to be sitting near them. You could do nothing but take in what was being said.

A few stations farther on another little group boarded the train. It was made up of five young women and three young men. I could not be quite certain, but gathered from their conversation that they were probably teachers. As for what they said, it would cause any mother to blush to hear her daughter telling and laughing over such vulgar jokes and taking and permitting such familiarities with boys. For three-quarters of an hour or so they kept it up—a constant stream of silly, gushing talk, harsh, grating laughter; and if they were teachers, as I suspected, what pity for the little children under their care!

At still another station a crowd of men got on the train. It was a glee club troup from one of the largest colleges in our part of the country, out on a vacation trip. This crowd was composed of perhaps sixteen men. It was impossible for them to find seats together, but there were groups of three or four. Some of them played games, some read. One bunch of four sang several songs. None of them made noise enough to attract undue attention. The songs were real music and well worth listening to; nor were they sung so loudly as to attract the attention of anyone who wished to read or talk.

After observing these three groups of people some very serious thoughts entered my mind. Are our girls and women more noisy than our men and boys? Are men more often quiet and gentlemanly when alone? Recently I read in some paper the fact that a crowd of men in a court room, usually rough and noisy, became quiet and mannerly when two women came in. There is little doubt that such would be the case with the average bunch of men, provided the women were of the right sort. But is it not a fact that, where our young people are together, the crowd is always far more noisy and reckless if it is made up of both boys and girls? Is it not true that in our homes we women are louder than our men folks?

It would surely be a good plan if each one who chances to read this article would carefully notice her voice and, if the inference is found true, tone it down.

Iowa. GENE HARRISON.

Styles for Home Dressmaker

Description of Patterns

6368—Ladies' waist: The surplice style is all the rage, and this model gives us this effect obtained by the use of a scarf-like front drapery, attached to a square collar. The balance of the blouse is plain and loose. It has the drop shoulder and a full bishop sleeve. The waist pattern, No. 6368, is cut in sizes, 34 to 42 inches bust measure. Medium size requires 2¾ yards of 36-inch material. Price of pattern, 10 cents.

6272—Ladies' waist: Linen or madras can be used to make this waist. The waist closes at the front and can be made with either the high or low neck. The body and sleeves are in one and the closing is at the back. The pattern, No. 6272, is cut in sizes, 34 to 42 inches, bust measure. Medium size requires 1⅞ yards of 44-inch material.

5160—Ladies' apron: For the lighter varieties of housework, such as dusting, arranging the bedroom and the like, this apron offers an admirable design. The front forms a bib and widens at the shoulders in collar shape, preserving this form also in the back. The skirt portion of the apron dips in front and slants upward toward the center of the back. The pattern, No. 5160, is cut in one size only. To make it only requires 2 yards of 36-inch material.

5722—Children's French dress: This dress is made in the long-waisted style, with a plaited skirt. The dress closes at the front and can be made with either the long or short sleeves. Any of the pretty wash materials can be used for this dress. The pattern, No. 5722, is cut in sizes, 2, 4, 6 and 8 years. Age 8 year requires 3 yards of 36-inch material and ⅝ yards of 27-inch contrasting goods.

4480—Boys' Russian dress: This dress hangs free from the shoulders and is made with standing band collar and long sleeves, which have three under box pleats at the wrist. The closing is at the right side of the front. For making this dress linen in white or colors, madras, pique or percale can be used. The pattern, No. 4480, is cut in sizes, 1 and 2 years. Two-year size requires 2 yards of 27-inch material.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Head Hunters of the Andes

By Frank G. Carpenter

GUAQUI, Bolivia — During my travels on the high plateau of the Andes I have heard many strange stories about the vast unexplored country that slopes down to the Amazon valley. In coming across Lake Titicaca I traveled with an American railroad contractor, who is building a line through the heart of Bolivia. He has been taking a vacation of two or three months, and has just returned from a gold prospecting tour in the regions of the Madre de Dios, one of the high tributaries of the Amazon. The Madre de Dios rises on the outer slope of the great mountain wall that skirts the northern side of Lake Titicaca. It flows in a winding course into the Beni, and on into the Mamore and Madeira, coming out through the latter stream into the Amazon below the city of Manaos. The region where it rises is wild, and much of that through which it flows is known only to the Indians. Mr. Avant traveled on foot down this river. He started out from Cuzco, at an altitude of over two miles above sea level, with a guide an interpreter and eight Indians, and he descended to regions that are less than a half mile above the sea. The mountains he crossed were more than 16,000 feet high, and his way led from the glaciers and perpetual snow down into a tropical jungle, with crocodiles, boa-constrictors, palm trees and rubber.

Cannibals Who Live Near the Source of the Amazon

Animal Life of the Region

As we sat in the rude hotel here at Guaqui this morning Mr. Avant told me something of the animal life of that region. He says that the country swarms with game. The woods are full of wild turkeys, that look like peacocks, each bird having a topknot and very bright plumage. The flesh is excellent, and it tastes like our wild turkey. Another bird of the same species is called the pabogil. This is twice as big as the largest American turkey, and its flesh tastes about the same.

I asked as to wild beasts, and Mr. Avant replied that he saw droves of peccaries, or wild hogs, and also tapirs and jaguars. The jaguars came around the camp at night, and were now and then to be seen as the party made its way through the woods. Much of the journey was along the banks of the streams and the party did not lack for fish. Whenever they wanted a fish dinner all they had to do was to explode a dynamite cap in the water, and a moment later the surface would be covered with dead fish. From one such explosion they took out 300 pounds. Some of the fish were as long as your arm and were of a delicious flavor. Among other inhabitants of the streams were alligators of various kinds. One had no scales and its enormous head was more like that of a fish than of an alligator. The skin was of a bluish cast, with a few specks here and there. These reptiles are said to be dangerous and the natives would not go into the waters where they live.

Indians Not Friendly to Foreigners

In talking of the Indians Mr. Avant said that the most of them are not friendly to foreigners. They are savages, who dress almost altogether in bark, and their chief weapons are bows and arrows tipped with poison. Some of the tribes are supposed to be cannibals and all are in a very low state of civilization.

It was at Lima that I met Mr. W. Bell Taylor of Boston, who had just come down from the coal mines in the high Andes near Cerro de Pasco, and had a chat with him about an expedition he had recently made from Ambato, Ecuador, down the eastern slope of the Andes into the Amazon valley. His trip took three months, and during this time he traveled on foot and in canoes for more than 1,400 miles through the wilds. It took him nine days to reach Canelos, on the Rio Bobanzo, during which time he walked and had men to carry his cargo. Each of the cargadores carried seventy-five pounds. The whole way was through the jungle. At Canelos the party took canoes and floated down one of the Amazon tributaries to the mouth of the Ucayali, which is one of the sources of the Amazon. The Ucayali flows into the Maranon, and the latter goes down into the main stream. Mr. Taylor visited Iquitos, the chief rubber port of the upper Amazon, and then came back overland through Peru. He describes Iquitos as a city of 25,000 inhabitants and as one of high prices. It cost him $5 a day there for his food alone.

Jivaros Indians Head Hunters

Among the most interesting stories told me by Mr. Taylor were those about the Jivaros Indians. These savages are head hunters who kill their enemies and preserve their heads as trophies of war. I have seen many of these heads during my travels and have made photographs of them. I was once offered a head for $100 in gold, but refused it for fear that the ghost of the dead man might haunt me for the rest of my life. This head was about as big as my fist. The bones of the skull had been removed and the skin so carefully shrunken that none of the features was lost. The skin of the face was black and the long hair which hung down from the skull was of the same raven hue. The nose was almost negroid in shape, and the lips were sewed together with long cotton strands that hung down like a macrame fringe.

Mr. Taylor told me the story of how these heads are cured, as he got it from the natives. He says it is a drying process. After killing a man they cut his head off close to the shoulders and as soon as they reach camp they open it and take out the bones of the skull. The skin of the head is then sewed together from the crown to the base of the neck. It is

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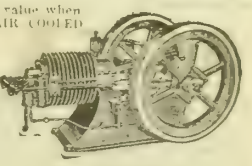

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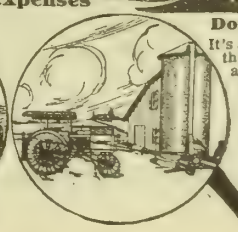

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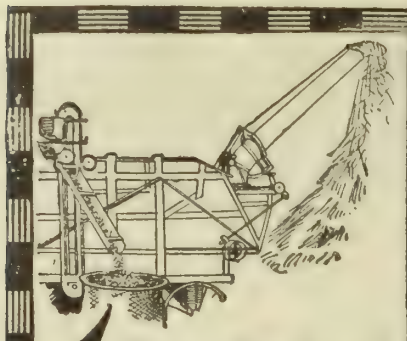

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now a kind of bag. This is filled with hot sand, but is kept as far as possible in its original shape. It is pressed inward during the drying, the sand being changed from time to time, until the head is reduced to one-fourth or one-fifth the original size. Before beginning the curing, the skin is painted with the juice of the huito, a fruit that looks much like an aguacate pear. This juice is a leather preserver. It is smeared over the head inside and out. As the head grows smaller a stone of the shape of a small skull is inserted and the skin is worked down upon it. This stone regulates the size of the head when it is cured. It is taken out before the skin has grown too hard, but after its features are fixed. The head is then hung up over the fireplace and allowed to cure in the smoke.

Feudists Sleep in Sitting Posture

Mr. Taylor describes the Jivaro Indians as a well made good looking people. He says they are polygamists, some of them having seven or eight wives. They multiply rapidly, but the population is kept down by fueds, during which one family will lay for another and shoot any of its members on sight. In order to be ready to defend themselves they sleep in a sitting posture, each brave having his spear between his knees. While visiting one tribe Mr. Taylor saw three Jivaros who had just come in from the hunt. They were thin and gaunt. They described a raid that had just been made on their family, during which all had been killed but themselves. Mr. Taylor took a canoe and went with a priest to the place of the killing. There were women and children and old men lying on the ground. The heads of all had been cut off, and the captors were probably curing them as I have described.

"Another interesting thing about the Indians of the upper Amazon," said Mr. Taylor, "is their use of the blowgun and the poisoned arrow. This is common among most of the tribes between the Napo and the Maranon. Their guns are long tubes just large enough around for the arrows, which are wrapped with cotton at the ends to make them fit close. The arrows are small, not more than a foot or a foot and a half in length, and not much thicker than a wooden toothpick. The poison is so deadly that it will kill almost anything that the arrow goes into. It comes from Brazil. The Indians can send these arrows from forty to fifty feet at a shot, and they can hit a monkey or a bird in a high tree. For their fighting they use spears much like those of the knights of the middle ages. There is a Spaniard who makes these spears and sells them to the Indians for rubber. Some of the tribes poison their spears with a venom which they make from a certain plant mixed with the juice from dead bodies in a state of putrefaction. The poison is put up in earthenware jars, or in joints of bamboo, and it forms an article of commerce among the Indians. It is also used on the arrows, and that for the killing of game. It does not injure the meat.

Witch Doctors' Dope Effective

The Jivaro Indians are superstitious. They have witch doctors, who make a drink called hiahuasa from the root and leaves of a shrub, boiled into a tea. This stuff is something like opium, and it makes one see visions and dream dreams. Mr. Taylor tried it. Shortly after he had drunk, spots came in front of his eyes, and a little later he saw pictures of saints. The witch doctors told him to concentrate his mind on his family. He did so and saw snakes, but a little later his family actually appeared before his mind's eye, and that far more real than in any dream he had ever experienced.

Another most interesting man with whom I have talked about the Indians of the eastern Andes is a German explorer named Kroehle, who spent three years in traveling among them. He had a camera with him, and I was able to get some prints from his negatives. Some of these I dare not publish, for the figures are entirely nude, being especially interesting from an ethnological standpoint. Mr. Kroehle was twice wounded with poisoned arrows, and he had some narrow escapes from the head hunters in the neighborhood of the River Napo. He describes the Napo region as full of queer people. Some of the Indians there have in the lobes of their ears plates of wood or metal, as big around as the bottom of an average tumbler. The holes for them are gradually enlarged by inserting bits of grass and twigs until they grow and become so stretched that they will hold the great ear plugs. The same custom prevails in Burma and in other parts of the orient. On the highlands of East Central Africa I have seen ear lobes so stretched that when the plugs were taken out they hung down from the ears like straps, and their owners would fasten them over the tops of the ear in order that they might not catch in the branches as they passed through the forest.

Many travelers who have made their way along the eastern slopes of the Andes assert that cannibalism still exists among some of the Indian tribes. Some of Mr. Kroehle's pictures are of Indians he calls the Cachiros, who live along the River Pachitea. These people are wild and are cannibals. They hunt with blowguns and arrows tipped with a poison so deadly that the scratch of an arrow will cause death. They do not use money, and all of their dealings are by barter. They wash the gold from the streams and bring it to the traders in nuggets and coarse dust. In defense of cannibalism the Cachiros say they would rather be eaten by men than by worms, and they believe that if one eats a man he acquires all the courage and other good qualities that the man eaten had when alive.

Others of the tribes cultivate the soil in a rude way. They have little fields of yucca, and sometimes of potatoes and corn. The yucca root tastes likes a potato. It is cooked over the coals and made into a cake; it is also used to make a beer which is somewhat like chicha. The Aguarunas are among the tribes that have houses and cultivate the ground. They are a warlike tribe who fight with poisoned arrows and built war-towers for defense. They are polygamists and one man may have a half dozen wives. These people, both male and female, wear short skirts of bark or of cotton.

Another curious tribe along the Madre de Dios river, down which Mr. Avant traveled, is the Huachipairis. These people generally go naked, their favorite suits being coats of red and black paint. They cultivate the soil and weave cloths and ropes of wild cotton. They are like the Aguarunas in that they have several wives. They frequently make raids on the Quichuas, the descendants of the Incas, who live on the high plateau of the Andes, and steal their women to replenish their harems. They also buy their wives, the price of a women being a knife or a hatchet. The Huachipairis make holes in the upper lip in which they put feathers or sticks. They are not friendly to the whites and the Catholic missionaries have been able to do very little with them.

Various Religious Views

Speaking of the religion of the Indians of the eastern Andes, it is of the most primitive nature. Some of the tribes believe in a God, and some have a belief in a future life, with the soul going through a series of transmigrations much like that of the Buddhists. Certain tribes have their own ideas of the beginning of man. One of their ideas of the creation is that when the world came out of the original chaos all mankind lived in a great cave, the entrance to which was guarded by a tiger. The human race was kept in by the tiger, until one day the liberator of mankind, a giant among his fellows, fought with the tiger and killed him. Then mankind came out and populated the earth. After living in a cave so long the human race had become very dirty. When they came into the light of day they realized this and decided to wash. They heated some water in a huge earthenware jar. Those who got the first bath came out white, and thus the white race was formed. Those who had the next bath came out brown and formed the brown race. The last to bathe had only the dregs and stains which were left in the jar, and they founded the blacks.

Some of the Indian tribes believe in two gods, one evil and one good. These two spirits fight for the control of mankind Sometimes one conquers and sometimes the other. Others, such as the Conibos, are sun worshipers, as were the Incas at the time Pizarro came; while others believe that the spirits of good people return to earth after death and live in jaguars and monkeys, while those of the bad go into reptiles and parrots. Nearly every tribe has its witch doctors, and all are honeycombed with superstition..

Altogether, the Indians of the eastern Amazon are comparatively few. The tribes are largely scattered, and many of them are rather families than tribes. Prof. Orton, one of the best authorities on the Amazon, estimates that there are not more than 40,000 people living along that river and the Maranon, and there are probably less than 100,000 on the eastern slopes of the Andes. The Royal Geographical society of Lima, Perú, recently estimated the number of savages in those regions as something like 150,000, dividing them into tribes that range in size from a few hundred to 2,000 to 3,000, the largest being the Huitotos, which are put at 20,000, and after that the Ticunas, numbering 15,000. Enock fixes his estimate as 150,000 or more, and classifies the Indians into 112 tribes, a large number of which have but a few members.

Inferior to North American Indians

None of these tribes is equal to the best type of the North American Indian. The most of them are short, and they vary in color from red to black. Nearly all have high cheek bones and all have long, straight black hair and black eyes. Some are very muscular, and a few are brave. The majority, however, are cowardly and so afraid of the whites that they have been practically enslaved by them in the work of rubber gathering.

Some of the tribes wear no clothes whatever. Others have clothes of bark cloth, and some wear short skirts made of the bark of a tree. Not a few make beautiful hammocks, also exquisite feather work formed of the bright-colored plumage of the birds of the Amazon valley.

Several of the tribes are musical. The Aguarunas have flutes of reed or bone and a kind of violin with three strings. They also have drums of tree trunks which they use for sending their wireless messages from one savage settlement to another.

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Lumps on Cow

I. W., Nebraska—Will you please put in this week's paper what you think is the trouble with this cow and causes these symptoms: Large lumps have raised on her neck and shoulder, and new one is on her breast. It is larger than either of the others, and when opened a large amount of pus flowed from it, although she is in good health.

Answer—We would suspect that this cow has not been in the best of condition, so that a bruise would result in the formation of an abscess. These should be opened very freely and swabbed out with pure dip. Very often large lumps full of thick, creamy pus and surrounded by a thick, fibrous wall form around the jaw and throat. These should have the same treatment. It is well to have all cows supplying milk to the family given the tuberculin test. Joint and intestinal tuberculosis are very often transmitted through milk to babies of low vitality.

Hog Cholera Control

Hog cholera is the most destructive of any disease affecting our domestic animals; the annual loss caused by this one disease alone is enormous. According to statistics compiled by the United States Department of Agriculture, the loss amounted to $73,000,000 in 1913.

Our own state of Nebraska has suffered fully its share of this enormous loss. The most reliable figures obtainable show that in this state there was a loss of 117 per thousand, or 17.5 per cent of all the hogs in the state. As there were 3,228,000 hogs in Nebraska, you will readily see the enormous loss by cholera, which amounts to over $5,000,000 in this state alone. All over the country there is being waged a vigorous warfare against this terrible scourge. In order that this state be prepared to more effectively cope with this dreaded disease and save as much of the enormous loss as possible, it was recommended that there be appointed by the Live Stock Sanitary Board a special veterinarian to do work in all animal diseases, but especially along the line of hog cholera.

I was appointed to do this work for the sanitary board, with headquarters in Lincoln, but to travel in all parts of the state and lecture on animal diseases and demonstrate the use of vaccines in the prevention of hog cholera among hogs and blackleg among cattle. These two vaccines are especially mentioned because at a meeting of the Live Stock Sanitary Board in Lincoln in the month of January, 1914, the farmers and stockmen of this state were granted the privilege to vaccinate their own hogs with either virus and serum or serum alone, and also administer the blackleg vaccine to their own cattle. At a later meeting, however, that ruling was modified by the sanitary board to include the right for farmers not only to vaccinate their own animals, but those of their neighbors.

There is no longer any doubt as to the effectiveness of vaccination of hogs against cholera, as so much satisfactory work has been accomplished along this line. The question that now arises is as to what are the best methods to pursue in combating this terrible disease. Inasmuch as I have been placed in charge of hog cholera work in this state of Nebraska, I cordially invite the co-operation of all farmers and stockmen in the discharge of my duties along the lines of controlling as far as possible all contagious and infectious diseases of animals in this state. I assure you that I will do all in my power to aid and assist the farmers and stockmen if they will only be free to write to the governor, president of the sanitary board, Mr. J. H. Bulla of South Omaha; Dr. L. C. Kigin, state veterinarian, or myself, and request that my services be given you in your county or immediate neighborhood.

My duties consist in demonstrating the use of vaccination, and I will be pleased to instruct any person in the state who wishes to learn the methods of vaccinating hogs, cattle or horses. These lectures, demonstrating and instructing, can be given to the best advantage when the farmers are gathered together in a meeting, where a public lecture and demonstration will be given at any time. The farmers can get together and have a meeting, and any person wishing private instruction may be given such instruction after the meeting.

At a meeting held at Imperial, Chase county, Nebraska, on May 16, there was a great deal of interest manifested, farmers leaving their work and coming a distance of from twenty to twenty-five miles to attend the meeting, which shows their interest in the subject, as the meeting was held for the purpose of discussing hog cholera and the possibility of this disease invading their county.

You are cordially invited to write to the above mentioned officers or to me and arrange for a meeting in your county. This is not at all to conflict with the work of the state veterinarian. We desire to establish the most cordial relations and co-operate with each other. The state veterinarian's office is busily engaged in a splendid work—the suppression of contagious and infectious disease in the state and especially in preventing the importation of disease from other states into our own.

In order to keep informed as to the prevalence of hog cholera in the state, I would be glad to have all persons interested write me at Lincoln and inform me of any outbreak of hog cholera in your vicinity, whether it be on your place or on your neighbor's, in order that such measures may be taken as will lessen the loss to farmers and combat as much as possible the advance of this disease by vaccination and sanitation.

C. M. DAY,
Field Veterinarian, Nebraska.

Soldering in the Farm Shop

E. J. M., Kansas—I noticed sometime ago in your paper a fine article on blacksmithing, and would like to ask a question. It is, how to keep soldering coppers in good shape for soldering. I can't get the solder to stick to the copper and make it run smooth. There is no tinsmith here and I would like to do my own soldering, such as water tanks, faucets in cream separators, tin pails, etc.

Answer—If your copper is a new one, it must be tinned. When hot file off the scale on both sides and ends for a quarter of an inch from the tip, so the metal will be clean and bright; dip the nose in the soldering fluid for a second and then apply it to the stick of solder. A globule will melt off onto a piece of asalimoniac (which can be obtained at any drug store), and which must be ready to receive it. Rub the nose of the bit in this solder, which will adhere to it as quicksilver does to zinc.

To solder two surfaces, they must be clean and dry and rubbed with emery cloth. Old work may require cleaning with hot water and soda to remove grease, and the solder runs along the joints and binds the two together. To clean the metal and allow the solder to work freely, a flux must be used.

The soldering fluid generally used is made by placing a few bits of scrap zinc in a jar and pouring on it a few ounces of commercial hydrochloric acid (spirits of salts.)

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TWENTIETH CENTURY FARMER

The Farm Flock in Summer

Practical Pointers by An Experienced Sheepman

THE hot months of July and August are a critical season for the young lambs. The lamb must be kept growing right along up to weaning time or its best opportunities for developing into a strong, healthy sheep are lost. The lamb and its mother are both liable to a great deal of annoyance during this period from the fly. The ewe should be kept clean about the udder so the lamb can nurse without coming in contact with anything that would lessen its appetite to take all the milk its mother affords.

Many ewes drop down in the amount of milk owing to poor pasture, lack of water in the pasture, or from a natural tendency to be light milkers. Their lambs should be supplied with ground feed; bran, shorts and meal, equal parts, mixed, makes a good lamb feed during the latter half of the suckling period. A pen or small lot in the pasture, with a creep so the lambs can get into the feed and the older sheep be excluded, is the proper thing to help keep the lambs in need of assistance up in flesh and vigor. There is nothing that will pay the sheep owner a larger profit for the time and trouble invested than to keep the lambs all growing up to weaning time. There is no excuse for having stunted lambs.

When the lamb comes up to 5 months old strong, healthy and well fleshed, you need have no fears of being able to carry it safely through to the next spring. It is the stunted, runty, half-starved lamb that is hard to winter. Avoid having late lambs, summer and fall lambs; they are almost certain to give you a lot of extra care in the winter. The early lamb, well grown, is the lamb easily wintered. You have only to give it a chance and it will take care of itself.

The Sheep Pasture

The summer pasture should be made dog tight, unless the flock is confined at nights in a tight corrall. It is very important that the pasture be supplied with plenty of good, pure water, easily accessible. It is a fallacy that the sheep does not need water during the summer grazing season. Sheep will drink each day when given access to water, but when pasturing on green grass can endure water privation probably longer than most other animals.

Salt boxes in the pasture where sheep can have access to them is the best plan of salting when it can be steadily provided. It will not do to furnish salt in this way unless the salt is regularly kept before them. Sheep are ravenous salt eaters and are liable to take an overdose and suffer serious injury. All outdoor salt boxes should have a cover to protect them from rain. Rock salt may be used and is less liable to waste from rains. Most sheep owners depend on salting their sheep once a week by scattering the salt on the ground.

The farm flock, where small numbers of sheep are kept, may be changed around for the purpose of cleaning up lots, lanes, roads and places where they can be turned just for the occasion. The regular sheep pasture must have a close fence, sheep-proof and dog-proof. It is just as necessary to keep the sheep in as it is to keep the dogs out. The sheep having the liberty of the farm is a great nuisance, and has been the means of bringing the sheep into bad repute with many farmers who did not understand the proper method of handling these animals.

Better Quality of Sheep for Range

It is generally believed that the flock interests of the range country will hold together as long as the present strong prices can be obtained for the lamb increase of the flocks. Anything that tends to increased cost of maintaining the flocks will cause cutting down in sheep production and changing to cattle. Cattle are much hardier and more easily protected in storms and winter disasters. There will be greater effort to breed a better and larger muttor sheep than formerly. The better quality of sheep appeals to the sheep man when he reads the reports o sales in weights and prices. The fleece will always be a factor in helping pay the expense of production We predict a much stronger sale among the pure-bred breeders of the better class of rams for the range flocks from this time forward.

The government is giving financial advice. "Five Rules for Borrowing Money" is the title of one o their late bulletins. Their advice i general seems to be "don't," but exceptions to this general rule ar noted.

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Review of Live Stock Market

By A. C. Davenport

LIVE stock markets have been looking up a little during the last week or ten days. In the first place the supply of strictly good to choice cornfed beef is not overly large and that of itself has been sufficient to cause a little stiffening in prices. The improvement, however, has been limited very largely to the better grades. On the other hand, the common to medium kinds of cattle have been sufficiently plentiful to prevent any material advance in values. Cattle of that description come into direct competition with Argentine and Australian beef, and are also influenced to a great extent by southern grassers.

As the season advances it is only reasonable to expect that the choicer grades of fed cattle will become less plentiful and it would be only natural to anticipate an advancing market. However, prices on that class of stock are already so high that it is a question if they can be advanced to any extent without greatly reducing the consuming demand. For this reason operators on the market are not anticipating very much improvement in the price schedule, but are pretty generally looking for good cattle to remain not far from where they are at the present time.

The arrival at New York City recently of a ship carrying a very heavy consignment of fresh and canned beef from Australia is causing more or less uneasiness among sellers of cattle. About the same time a large consignment of Argentine beef put in an appearance, and stockmen began asking themselves where it would all end. While they seem to feel that the west need not fear foreign competition when it comes to the best and choicest grades of cornfed beef, still there is no disguising the fact that stockmen are concerned as to what will be the future of the market on the lower grades of cattle.

One thing is very apparent to everyone and is being recognized by stockmen, and that is that the system under which cattle have been fed in the past must undergo an entire change. The scarcity of feeder cattle and the consequent high prices commanded by them, together with the high price of feed, has wiped out the profits of the big feeder. It is a significant fact that men who have topped the market, securing the extremely high prices paid for the choicest beeves, have been unable in many cases to figure out any profit whatever, even when they secured the feeder cattle at a comparatively low figure. On the other hand, in cases where the feeder cattle were purchased at the high time, heavy losses have resulted.

It is becoming more and more apparent that the combination of costly feed and high priced feeder cattle means that if the supply of beef is to be kept up, the cattle must be bred on the farm where they are fed. In other words, the day of the big feeder, according to the ideas of most stockmen, is rapidly passing, just as the days of the bonanza ranchman have already passed. Cattle fattened under farm conditions, where labor is not counted and where the manure is a valuable asset, may still make money.

The abundance of grass in the pastures and meadows of the west is an encouraging feature of the situation and will serve to put in good flesh all the live stock available.

Hogs are Up

Hog men are feeling very much better than a week or ten days ago. It has become apparent that packers really want the hogs and have bought with sufficient freedom to cause prices gradually to strengthen and they are at the present writing at the high point of the month thus far. But that is not all; the trade is getting to be quite bullish in sentiment, and a good many operators on the market are predicting still further advances. As a matter of fact, the market is at the present time a little lower than it was at this time in June last year. It is, however $1.00 per hundred higher than in 1912 and over $2 higher than in 1911. It will be remembered that 1910 was the high year, and hogs during June of that year averaged a little above $9.00, on the basis of Omaha, being, in other words, $1 per hundred higher than now. It will be seen from this that hogs at the present time are really very high for the month of June, current quotations having been exceeded only during the years 1913 and 1910.

Sheep Market Insecure

Sheep and lambs have improved along with other kinds of live stock and at the present moment are selling at the extreme high point of the season. The market, however, is regarded as dangerously high and before this can appear in print a break may have taken place. It all depends upon the receipts from the range country. It is pretty well understood that fed sheep and lambs are practically all marketed. Local supplies of native stuff surrounding the big markets are not plentiful and are being rapidly exhausted. At the same time, the Tennessee and Kentucky crop of spring lambs has proven a disappointment and is already showing signs of speedy exhaustion. There are still some Virginia and eastern lambs to be shipped to far eastern markets, but, all in all, the country from now on must look to the range for its supply of mutton. If, for reasons of their own, range men wait until the usual time of making shipments, there is a possibility that prevailing high prices may continue for some little time to come. On the other hand, should they take the other course and rush in a lot of lambs ahead of time with the hope of securing the extravagant prices now prevailing, it would surprise no one if the market should slump badly. The market, in fact, is in such a condition that it would be an easy matter for the packers to break prices $1 per hundred with the aid of liberal receipts.

Hard Seeds in Alfalfa

(CONTINUED FROM PAGE FIVE)

It is desirable to have seed which will give a high germination as quickly as possible in order to keep out the weeds.

Hard seeds are those which at the end of a six days' germination test have absorbed no moisture and consequently have not germinated. A sample of fifteen hard seeds was kept at about 20 Centigrade in a moist condition for a year, only two of them germinating during that time. Any method of scratching or perforating the seed coat will cause these seeds to germinate. Blowing seeds against steel needle points to break the seed coat and soaking in potasium hydroxide solution have been tried. However, no satisfactory method for treating large quantities of seeds has been found.

The cause of hard seeds is not definitely known. It seems to be due to climatic conditions and the tendency of the plant to resist drying out. Doubtless their frequency in seeds grown in the Missouri valley last year is due to the very dry condition which prevailed. The seed coat becomes so thickened that no moisture can penetrate it to start the process of germination.

A few years ago most Idaho grown alfalfa seed contained from 35 to 50 per cent hard seeds, 65 per cent being about the highest germination test obtainable. A special meeting was called and the standard for germination of alfalfa seed in the Idaho seed law was lowered from 80 per cent, so that home-grown seed might be sold on the market as "standard seed."

Usually, imported alfalfa seed shows fewer of these hard seeds, and some years domestic seed carries only a small per cent. It is, then, of considerable importance to know the per cent of germination of alfalfa, red clover, white clover seeds and those of other legumes, since all of them may carry large percentages of hard, ungerminable seeds and make a great difference in getting a good stand in the field.

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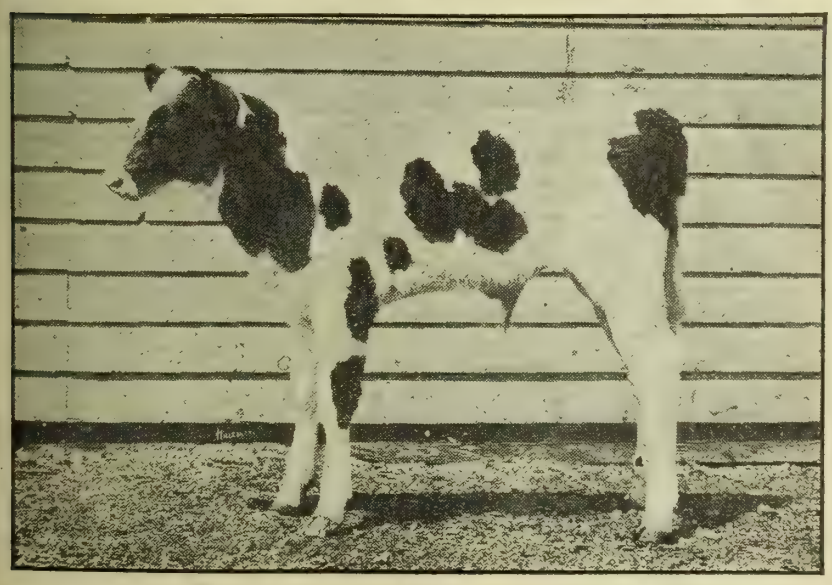

King Segis Pontiac Chicago, the 4-month-old Holstein calf that brought $20,000 in Chicago on June 5 last. He was sold to Spencer Otis, Spencer Otis, jr.; H. Stillson Hart and George E. Van Haegen, all of Barrington, Ill.

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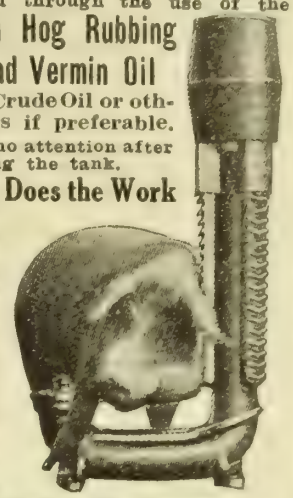


Write for Booklet and Read Endorsements.

AMERICAN HOG POST CO.

Dept. F. Peoria, Illinois.

THIS

O.I.C.

SOW WEIGHED 932 LBS. AT 23 MONTHS OLD

IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." C. S. BENJAMIN RFD 9 Portland, Mich.

DUROC-JERSEY HOGS

DUROCS AND RED POLLS

25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed.

GEO. W. SCHWAB, Clay Center, Neb.

RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

W. F. SCHWAB, Clay Center, Nebraska.

HOLSTEIN CATTLE

Purebred Registered

HOLSTEIN CATTLE

Large sums are put into land, buildings, horses, machinery and labor in order to maintain cows that are utterly unable to return a profit.

On a dairy farm the efficiency of the herd should be the first consideration. With good purebred Holstein you are sure to earn a generous profit on any intelligent investment of your money, time and labor.

After the cost of her feed is deducted a good Holstein will reurn a profit of $60 to $100 per year in addition to a valuable calf.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Sec'y. Box 179. Brattleboro, Vt.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

PERCHERON HORSES

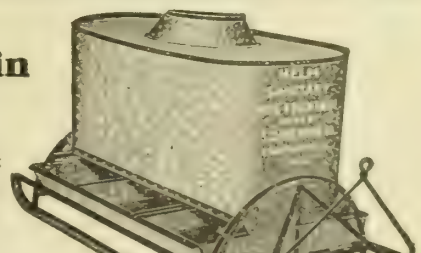
Part from 2400-lb. imported sire and part from 2200-lb. imported sire and imported dams, my 2, 3 and 4-year-old registered Percheron stallions would prove valuable breeders for you. With all their weight and bone they are dressy and straight sound. This is some of the most substantial and most attractive Percheron breeding material in the world. Farm raised and offered at farmer's prices. Just east of Omaha.

FRED CHANDLER, R. 7, Chariton, Ia.

The HELM Sanitary Hog Fountain

provides an unfailing supply of clean, pure water.

Can be removed from place to place as required. Can not be overturned or broken. Can never get out of order. No valves or floats; no exposed air holes; no complicated parts. The water can not flow back from the pan to defile the water in the reservoir. Drinking pan is removable and can be cleaned and replaced in a minute. At your dealers. If he hasn't it send for our free trial offer.



Write for free booklet, "Converting Water Into Pork."

Lasts a Lifetime

S. D. Helm Mfg. Co., 1028 H St., Crawfordsville, Ind.

RATE—Five cents per word per issue. Cash must be sent with all orders

Count every word, initial and numeral, including the address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred five thousand farmers are regular paid-in-advance subscribers to TWENTIETH CENTURY FARMER. If you have any wants or if you have anything to sell, insert an ad. in this department.

POULTRY—Houdans

PURE-BRED HOUDAN HENS FOR sale. George J. Wolcott, Central City, Neb. Box 773.

Leghorns

SINGLE-COMB WHITE LEGHORN eggs, 3½c each. Will Rockwell, Hubbard, Neb.

Orpingtons

CUT PRICE SALE IN CRYSTAL White Orpington stock. W. E. Crane, Tilden, Neb.

PRIZE-WINNING BUFF ORPINGtons—Eggs, $4 per 100; stock, $10 per doz. Mrs. Cook, Eddyville, Neb.

Plymouth Rocks

BARRED ROCK EGGS FOR HATCHing, 60c per 15, $3 per 100. Mrs. Anna Eklund, Waterloo, Neb.

BIG REDUCTION—BARRED ROCK eggs, famous "Ringlet" strain from Thompson's $10 matings, $1 per 15. Mrs. B. Taft, Norfolk, Neb.

Rhode Island Reds

HIGH-SCORING RED MALES, BLUE ribbon winners, cheap. Need room for young stock. Price list free. George Ainsworth, Fremont, Neb.

COVALT'S SINGLE-COMB REDS—This month, half price—yearling hens, fine breeders, $1 and $2 each. Scott Covalt, Council Bluffs, Ia.

Wyandottes

WHITE WYANDOTTES—EGGS HALF price. Best strains in America. White Wyandotte Farm, Oscar L. Bock, Prop., Council Bluffs, Ia.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTYthree pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

SEEDS

ALFALFA SEED—DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

I AM IN THE MARKET FOR CLOver, timothy, alfalfa, cane and millet seed. Send samples. I have a large, select stock of all these seeds for sale. Werter DeVaughn, 1614 Harney St., Omaha, Neb.

AUTOMOBILES

70 USED CARS—WE CARRY THE largest stock of used automobiles ever offered to the public. We are exclusive used-car dealers, which enables us to offer astonishing bargains. We can save you at least 50 per cent on any car you wish to buy. All of our cars are thoroughly overhauled in our own shop that we may know the exact condition of the mechanism. Write for our Bulletin No. 5, prices and large list of satisfied customers. Industrial Garage Company, 20th and Harney, Omaha, Neb.

Mention Twentieth Century Farmer.

LANDS—Arkansas

80 ACRES RED LOAM LAND; 50 CULtivation, balance timbered; orchard, house, water; 4 acres clover; $20 acre, terms. Sessions Co., Winthrop, Ark.

British Columbia

"OPENING OF A NEW COUNTRY"—You ought to have full information about Central British Columbia. The Grand Trunk Pacific Railway is finished. It runs through the Fort George district, the valleys of the Fraser, the Nechaco, the Bulkley and Skeena rivers. The land is productive, the climate is fine. First-class country for stock. Home markets for all you can raise. The chance for the farmer to become independent. The place for you. Write for information to Whitney Land Co., The Germania, St. Paul, Minn.

Crop Payment

IF YOU HAVE A TEAM OF HORSES and some cattle, you can buy a good farm in Minnesota, North Dakota or Montana on the crop-payment plan. For particulars address L. J. Bricker, General Immigration Agent, 377 Northern Pacific Ry., St. Paul, Minn.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87. Lincoln, Neb.

WANTED—TO HEAR OF GOOD farm or unimproved land for sale. Send description and price. Northwestern Business Agency, Minneapolis, Minn.

FARMS WANTED—WE HAVE DIrect buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

Montana

JUDITH BASIN, MONTANA, FARMS—Come to Lewiston. Can show you growing wheat yielding fifty bushels per acre. Write to Farmers' Land Co., Incorporated, Lewiston, Mont.

MONTANA PUBLIC LANDS AND Prosperity—Send 50-cent money order now for information booklets and colored map. Montana Information Bureau E, Lewistown, Mont.

Missouri

IF YOU WANT FARMS OR ranches in the Ozarks of Missouri, write A. J. Johnston, 221-226 Woodruff Bldg., Springfield, Mo.

Minnesota

COME TO OTTERTAIL COUNTY, Minnesota. Fine climate and pure water. Rich corn and alfalfa lands for sale on easy terms. Write for information. Fred E. Hodgson, Fergus Falls, Minn.

LANDS—Minnesota

NORTHERN MINNESOTA—THE greatest natural cattle section; no drouths; alfalfa, clover, corn and potatoes are principal crops. Prairie or timber. Free information. We have no land for sale. Write W. R. Mackenzie, 904 Palace Bldg., Minneapolis, Minn.

CORN AND CLOVER LANDS IN central Minnesota. Low prices. Reasonable terms. Write Murray, Wadena, Minn.

North Dakota

NORTH DAKOTA LANDS DIRECT to Purchaser—We have listed with us to sell several hundred thousands acres of choice North Dakota lands. In order to obtain settlers along our 1,200 miles of track in North Dakota, we will sell these lands at cost. Prices are about one-fifth those asked in Iowa or Illinois, and agricultural possibilities are just as great. Roads, schools, churches, railroads, all established. Very low excursion rates. For literature and full particulars write J. S. Murphy, Immigration Agt., Soo Line Railway, Minneapolis, Minn.

Wyoming

COME TO PINE BLUFFS, WYOMING, where farming pays—where those who are here have made good—where on the average the crop on every acre under cultivation pays for the land each year—where oats yield 60 to 90 bushels per acre, wheat 20 to 40 bushels, flax 15 to 25 bushels—where 1,000 cars of grain are shipped out annually—where the land cultivates easily—where the climate is inspiring and the rainfall ample—where choice, level farm land can now be had at from $15 to $25 per acre, on terms as low as one-tenth cash and the balance in nine equal yearly payments—where you buy direct from the owner and save the agent's commission. Will refund your expenses if these statements untrue. C. L. Beatty, Pine Bluffs, Wyo.

DOGS

50 FEMALE COLLIE PUPS TO LET on shares; 50 female Airedale pups to let on shares. Must have reference. Also have a few to sell. Snd for my large sales list. W. R. Watson, Oakland, Ia.

FOR SALE—PEDIGREED SCOTCH Collies, grown and pups. Mike Abts, Bellwood, Neb.

CEMENT MIXERS

WRITE TODAY FOR CIRCULARS and prices on the most complete, most compact and most simple concrete mixer on the market. Built for the farmer and sold at a price every farmer can afford to pay. Superior Manufacturing Co., 307 West Fifth St., Waterloo, Ia.

IF YOU WANT WHAT YOU WANT when you want it, place an ad. in the Market Place of Twentieth Century Farmer.

MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

DAIRY FARM CO., 1201 FARNAM, Omaha, makes big inducements to practical farmers who believe in corn—silo—milk pail—hog—route for sure money in farming.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

WANTED—A MAN TO SOLICIT SUBscriptions for Twentieth Century Farmer; salary $42 a week. Address Circulation Manager, Twentieth Century Farmer, Omaha, Neb.

GOVERNMENT FARMERS WANTED—Make $125 monthly. Free living quarters. Write Ozment, 39 F, St. Louis, Mo.

LEARN THE AUTO BUSINESS—Practical work. No books used. Stationary engineering. Special rate. Write for free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

MEN AND WOMEN WANTED FOR government jobs; $65 to $150 month. Vacations. Life jobs. "Pull" unnecessary. List of positions available sent free. Write immediately. Franklin Institute, Dept. H-94, Rochester, N. Y.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

HOLSTEIN CALVES—BEAUTIFULLY marked, 15-16ths pure, 3 to 5 weeks old, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

POLAND-CHINA BOAR PIGS, 14 TO 16 weeks, big type, pedigreed. Davis Bros., Lincoln, Neb.

REGISTERED GUERNSEY BULL for sale, from producing dam; an exceptional individual. H. E. Wimer, Blencoe, Ia.

MULEFOOT PIGS, 3 MONTHS OLD, $20 per pair; one late fall boar, $12. Geo. Sinn, Alexandria, Neb.

A SHROPSHIRE RAM AND TWO Shropshire ewes for sale cheap—University of Nebraska stock. Will sell separately. John Latenser, 632 Bee Bldg., Omaha, Neb.

Breeders' Notes

Dr. Davis Buys New Bull

Dr. B. B. Davis, proprietor of Friesland Farm Holsteins, Omaha, Neb., recently purchased of E. H. Dollar of Heuvelton, N. Y., a grand young bull, that is considered one of the best bred animals in the country. He is a beautiful individual—an intensely bred Pontiac Korndyke. He carries 62½ per cent of Pontiac Korndyke's blood and 50 per cent of King of the Pontiacs. The average of the records of his dam at 4 years 1 month and 1 day and his sire's dam, for seven days is 35.1 pounds butter, and for thirty days, 143.5 pounds butter. Dr. Davis is breeding him on the daughters of King Segis Lyons and expects great results from these crosses. It will make a close combination of the blood of Pontiac Korndyke, King of the Pontiacs, Hengerveld De Kol, Pieterje Hengerveld's Count De Kol, King Segis, Paul Beets De Kol, Abbie Hartog Clothilde and Old Blanche Lyons. This young bull is Rag Apple Korndyke Boon. His splendid individuality and the excellence of his breeding should make him a valuable acquisition to this great herd. Here is what Mr. Dollar says about this bull in the Holstein Friesian Register:

"I wish to report through your valuable paper the sale of one of the finest young bulls Fairview has ever produced, to Dr. B. B. Davis of Omaha, Neb. The young bull selected by Mr. Davis is a son of Rag Apple Korndyke 8th, whose dam, Pontiac Lady Korndyke, produced 35.03 pounds in seven days and 156.92 pounds in thirty days (both world's records when made), and her dam, Lady Korndyke Pauline DeKol, has a record of 29.14 pounds in seven days and 115 pounds in thirty days. Rag Apple Korndyke 8th is sired by Rag Apple Korndyke, the bull we sold to Mr. Jennings to head Jenningshurst herd, and still stands at the head of this magnificent herd. Mr. Jennings gave much time and attention to the selection of this herd, and his manager, Mr. Knickerbocker, personally visited Fairview and selected Rag Apple Korndyke, for whom he paid $5,000, to head the herd. The dam of the young bull selected by Dr. Davis is Fairview Korndyke Boon, with a junior 4-year-old record of 32.17 pounds in seven days and 131 pounds in thirty days. She is one of the best daughters of Pontiac Korndyke in our herd, and her splendid work year after year shows that she is one of the kind that can come back. As a 2-year-old she made nineteen pounds in seven days; eleven months after that she calved as a 3-year-old and made 26.70 pounds; about thirteen months later she again dropped a calf, and made a record of 32.17 pounds in seven days. Last year as a 5-year-old she again made a little better than thirty-two pounds, showing that she is a wonderful performer year after year. Her dam was a daughter of Junior DeKol, with a 4-year-old record of nineteen pounds and Junior DeKol was a son of Paul DeKol Junior, out of Hartog Netherland Pietertje, one of the best daughters of Inka Princess Pietertje Pledge. This exceptional breeding in the ancestors of Fairview Korndyke Boon has certainly proven itself of the best. The young bull purchased by Mr. Davis was selected by Wing R. Smith of Syracuse, N. Y. Mr. Smith spent considerable time in looking over the different young bulls whose breeding appealed to Dr. Davis and, after considering this splendid son of Rag Apple Korndyke 8th and looking over his dam and his sire and the numerous daughters we showed him by the same sire, he very quickly decided that nothing better could be found to place at the head of Dr. Davis' splendid herd than this son of Rag Apple Korndyke 8th, out of a thirty-one-pound daughter of Pontiac Korndyke. Certainly it seems to me as though this kind of breeding must be productive of great results, and Dr. Davis is to be congratulated in securing such a sire to place at the head of his already famous herd."

Ayrshire Cattle for Sale

In this issue of The Twentieth Century Farmer we are starting an advertisement for Loveland Farm Ayrshires, R. F. D. No. 1, Station B, Omaha, Neb. This is one of the largest herds of Ayrshire cattle in the west. At this time they have for sale several very choice young bulls that they are pricing worth the money. They can also spare a few females. Get in touch with this well known firm if you want anything in their line. They certainly have the goods and will treat you right.

E. R. Danielson's Durocs

E. R. Danielson of Osceola, Neb., has 120 head of spring pigs this year, sired mostly by Col. Dan by Queen's Colonel, he by Protection Colonel. He also has a number sired by Golden Rod Hero, he by Golden Model. Also other litters by Queen's Wonder Again, I Am A Crimson, and others. Mr. Danielson has one of the best arranged stock farms in Nebraska and is amply prepared to care for his hogs in the manner best suited to their growth and development for breeding purposes. He has plenty of individual lots with range and alfalfa, so necessary in the growth and development of young pigs. Everything on this farm will be immuned by the double treatment, so the purchaser will know that he is getting something that is safe as far as cholera is concerned. The pigs have plenty of stretch and bone and are coming along in good shape, and if nothing happens there will be some mighty good herd boar prospects. We will have more to say regarding his herd in the near future. In the meantime, keep it in mind. Mr. Danielson will have a winter sale. He will have about fifteen or twenty head of yearling and tried sows, and these, together with the tops of his spring gilts, will give him a lineup that will be mighty hard to beat. Watch these columns for further announcements.

Schwab's Durocs

We called on George W. Schwab of Clay Center, Neb., proprietor of Pleasant View farm, and found him, as usual, ready and willing to talk live stock. Mr. Schwab is an enthusiast when it comes to pure bred live stock. He believes that if an animal is worth keeping at all it should be a good one. Practically everything on this place is pure bred. Duroc Jersey hogs, Red Poll cattle and Percheron horses are his hobbies. He has one of the best equipped modern stock farms to be found anywhere in Nebraska and is amply prepared to take care of his stock in the best possible manner. At this time he has 175 head of spring pigs sired by Buddy K. 4th Wide Awake, a son of Buddy K. 4th; Cremo, a son of Queen's Wonder; Gold Bond by Golden Model 2d, and Crimson Pedro by Uneeda Crimson Wonder. These pigs are mostly of March and early April farrow and coming along in good shape. Mr. Schwab has several extra choice fall boars for sale yet and also a splendid lot of sows bred for fall farrow that he will price worth the money. He also has several Red Poll bulls that should be picked up at once at the prices at which he is offering them. One of these is an outstanding good individual and good enough to go into any pure bred herd in the country. This bull was sired by Onward, he by Edgar and he by Chicago. If you are looking for something in the bull line you had better get busy. Mr. Schwab considers this bull the best one he has ever had on the farm. Look Mr. Schwab's ad up elsewhere in this issue and write him for further particulars.

The Favorite of Your Favorite

CHRISTY MATHEWSON

"Tuxedo gets to me in a natural, pleasant way. It's what I call good, honest, companionable tobacco—the kind to stick to."

C. Mathewson

TEN chances to one, your favorite ball-player smokes Tuxedo. We have scores of testimonials from the *crack men* of the *crack nines* all over the country, saying that they enjoy Tuxedo and recommending it to *you.*

Also—look around you the next time you pick out that soft seat in the bleachers or grandstand and see *how many* of your *neighbors* are packing their pipes with fresh, fragrant, healthful Tuxedo.

Size up the men who are smoking and endorsing Tuxedo. They're *real men,* full of life and the joy of life.

ED. A. WALSH

"Tuxedo gives you that 'play-ball' feeling. Every pipeful is a bracer, because Tuxedo is cool, mild and pure, and has no harmful effect on the wind."

Ed A Walsh.

Tuxedo

The Perfect Pipe Tobacco

JOHN J. McGRAW

"Tuxedo gives to my pipe smoking a keen enjoyment that I have experienced with no other tobacco. Supreme in mildness and fragrance is Tuxedo."

John J. McGraw

Tuxedo is in a class by itself. It has many imitators—but *in the pipe* it has no equal. It is made of the best selected Burley Tobacco, the finest that Kentucky grows, ripened, cured and aged until it has reached the tip-top of mildness, mellowness and sweetness. Then it is treated by the original "Tuxedo Process" which takes out all the sting so it *cannot possibly bite*—even if you should smoke it all day long.

You simply cannot buy better tobacco at any price. Try Tuxedo today. You will see why these men are so fond of it.

"HUGHIE" JENNINGS

"After a red-hot finish in a ball game, a pipeful of Tuxedo makes victory sweeter or defeat more endurable. We-ah for Tuxedo."

Hughie Jennings

YOU CAN BUY TUXEDO EVERYWHERE

Famous green tin with gold lettering, curved to fit the pocket 10c

Convenient pouch, *inner-lined* with moisture-proof paper . . . 5c

In Glass Humidors, 50c and 90c

THE AMERICAN TOBACCO COMPANY

HIENIE ZIMMERMAN

"Ask most ball players their favorite tobacco, and they will be quick to answer—Tuxedo. I'm one of them; I consider Tuxedo unequalled in all around good qualities."

Hy Zimmerman

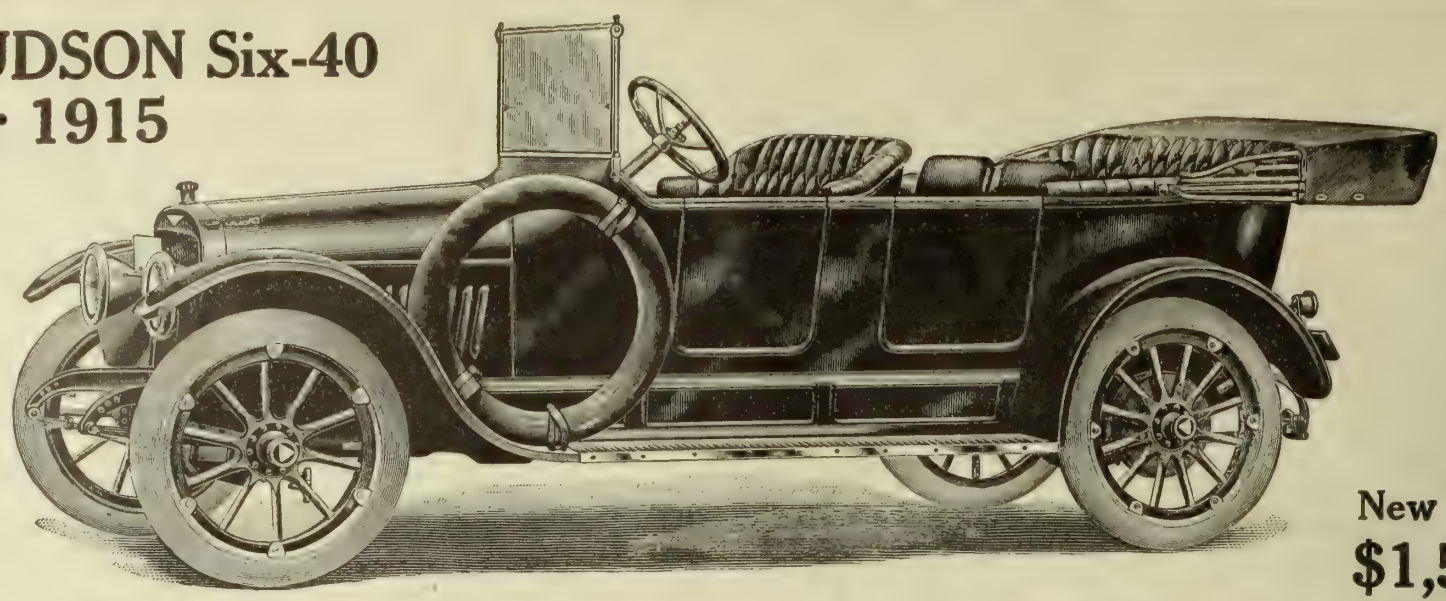
Illustrations are about one-half size of real packages.

LARRY LAJOIE

"Tuxedo and I have been friends for years, and the longer I use it the better I like its mild, soothing effects."

N. Lajoie

HUDSON Six-40
For 1915



New Price
$1,550

The Thoroughbred

We submit this new model of the HUDSON Six-40 as the typical modern car. It reveals the latest refinements in motor car building. In any group of high-grade cars it will seem the thoroughbred. No other car in so many ways meets present-day ideals.

Our Crowning Effort

The first HUDSON Six-40 came out last year. Our 48 engineers, headed by Howard E. Coffin, had devoted three years to the model. Their effort was to embody here the final conception of an ideal car.

They established new standards in Sixes. They brought quality Sixes, for the first time, into the price field of Fours.

They brought the weight under 3,000 pounds—for a roomy car with extra tonneau seats. That was 1,000 pounds less than average former weights on cars of like capacity. They did this by skillful designing and better materials, without sacrificing strength.

They reduced operative cost, for a car of this power, by from 15 to 30 per cent. They did this by employing a new-type motor and by building a light-weight car.

They made this car one of the handsomest, one of the best-equipped cars in the world. Then we fixed the price at $1,750—the lowest price that had ever been quoted on any type of quality car.

Last Year's Record 3,000 Oversold

That car was the year's sensation. Men flocked by the thousands to it. With the largest output in HUDSON history, the end of the season left us 3,000 unfilled orders. Men were offering premiums—as high as $200—for options on this HUDSON Six-40.

In a mechanical way the car proved itself the greatest of HUDSON successes. It has run for a season in thousands of hands, under all road conditions. And not a single shortcoming developed. So our whole engineering corps, during all last year, worked on nothing but refinements.

Now a New Model

Now comes a new model with all these refinements. There are 31 new features in comfort, convenience and beauty.

And there comes a new price—$1,550. This is due to the fact that the car's popularity has compelled us to treble our output. This trebled output reduces our cost about $200 per car.

Look back three years, when every Six cost over $3,000. When high-grade cars of any type cost around $2,000. Then look at the HUDSON Six-40—a better Six than men dreamed of then—priced at $1,550. You will realize then what HUDSON engineers have accomplished for motor car buyers.

This is just the car that tens of thousands want. It is a smooth-running Six, and men want that. In size and power it marks the sane medium. In quality, beauty, finish and equipment it reveals the best that's possible. In price, weight and operative cost it marks the bottom limit for this-class car.

As an ideal combination—as a typical modern, high grade car—you will not find a rival in sight of it. Most men will concede this—all things considered—the top place in the motor car field.

Hudson dealers everywhere now have these new cars on show. Our new catalog on request.

31 New Features Price $200 Less

Go see the new features—the 31 refinements—which our engineers have added in the past 12 months. Then note that, with all these, the price this year is $200 less—all because of our trebled output. These are some of the attractions which you will find embodied in this new-model HUDSON Six-40. And some of the best of them are not yet found in any other car.

A distinguished streamline body.
All hinges concealed.
Gasoline tank in dash.
Extra tires ahead of front door.
Seats for up to 7 passengers.
Extra tonneau seats, disappearing.
Hand-buffed leather upholstery.
20-coat finish on body.
123-inch wheelbase.
Wider seats—higher backs.
More room for the driver.
"One-Man" top, with quick adjusting curtains attached.
Integral rain-vision windshield.
Dimming searchlights.
Simplified Delco starting, lighting and ignition system.
Simplified wiring in metal conducts.
Lock on ignition and lighting switch.
Far better carburetion.
Speedometer drives from transmission.
Automatic spark advance.
Tubular propeller shaft.
All instruments and gauges within reach of the driver.
Trunk rack on back.
Still less weight—2,900 pounds.

New price, $1,550 f. o. b. Detroit.
Standard Roadster, same price.

Our Larger Six-54

The HUDSON Six-54—built on the same lines, with 135-inch wheel base and greater power—sells for $2,350. It is for men who want a big, impressive car.

HUDSON MOTOR CAR COMPANY, 8020 Jefferson Ave., Detroit, Mich.

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, July 4, 1914 | Number 708

Prattle of the Youngsters

A New Definition

"Mary," said the teacher, "what is the spinal column?"

"The spinal column," said Mary, "is what my head sits on one end of and I sit on the other."

She Could Punctuate

Returning from school, a little girl informed her mother that she had learned how to "puncshate."

"Well, dear," said her mother, "and how is it done?"

"Why, when you write 'Hark!' you put a hatpin after it, and when you ask a question you put a buttonhook."

Abominable Question

"What did they say to you?" asked little Harry's mother, after his first visit to the new Sunday school.

"The teacher said she was glad to see me there.

"Yes?"

"And she said she hoped I would come every Sunday."

"And was that all she said?"

"No, she asked me if our family belonged to that abomination."

Exclusive

A small boy who was sitting next to a very haughty woman in a crowded omnibus kept on sniffing in a most annoying manner. At last the woman could bear it no longer, and turned to the lad.

"Boy, have you got a handkerchief?" she demanded.

The small boy looked at her for a few seconds, and then, in a dignified tone came the answer:

"Yes, I 'ave, but I don't lend it to strangers."—American Boy.

Patient Chewers

A little Boston girl, who had frequently been admonished by her parents as to the evils resulting from hurried mastication of food, was, on a recent visit to New York, taken by an uncle to the zoo in the Bronx.

Among the beasts that particularly claimed her attention were the camels. She watched them long and earnestly as they munched huge bunches of grass, and then turned to her uncle.

"Uncle," said she, "what a treat it would be for father and mother and Prof. Fletcher to see those camels chewing all day."—Harper's Magazine.

By Way of Inducement

A youngster was one day suffering greatly by reason of an aching tooth. His mother was endeavoring to calm him against the necessary visit to the dentist.

"You'll have it out, won't you, dearie?" the mother pleaded. "It won't hurt much, and then the ache will all be over."

But the unhappy child continued to howl with pain. His brother, a year older, was likewise distressed and added his pleadings to those of the mother.

"Do have it out, dear," repeated the mother.

"Yes, Dick, have it out," added the brother. "It will be one less to clean, you know."—Lippincott's Magazine.

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Social Life in the Country

WHENEVER we speak of "Society" with a capital "S," we think of the city. Whenever we hear the "clubman" talked of we have a mental picture of a typically urban man in a dress suit. There are clubmen, however, who do not live in the city and who are not in the habit of putting on evening clothes every night when the sun goes down. These clubmen spend their days in the hay field, or cultivating corn, or harvesting wheat. In the evening the members of the club meet to talk over the affairs of the community, to listen to music or an interesting talk or an amateur play, or even to take part in a debate on some vital topic. Not every evening is spent in this way, of course, especially in the busy season, but the club house is there, and every two weeks, on Friday night, something of interest goes on in it.

In the next issue we will show a number of photographs of two club houses of this kind and tell you how they happened to be started and what they are doing. Life is worth living in the communities where these club houses have been built. Not only do the men enjoy them, but, unlike the city man, the farmer permits his wife and children to share his blessings. Provisions have been made for the women and children as well, and instead of being strictly men's clubs these institutions are both family clubs, where the whole family is at home.

You may want to start something of this kind in your community. If so, don't fail to read how it was done.

Bright and Breezy

Postal Dangers

"Is that a birthmark on that child's face?"

"No. That's where the canceling machine hit him when he was traveling by parcel post."

Appropriate Music

Minister (announcing from pulpit)—I will add that a lady's watch has been found in one of the aisles, which the owner can have by applying at the vestry. We will now sing the 117th hymn—"Lord, Her Watch Thy Church is Keeping."

Foolish Question No. 9999

A man entered a drug store in a hurry and asked for a dozen two-grain quinine pills.

"Shall I put them in a box, sir?" the clerk asked as he counted them out.

"Oh, no," replied the customer, "I want to roll them home."

Insult to Injury

"Well, did he pay you?" asked the wife of a dentist who had been to collect a bill for a set of false teeth he had made for a man almost a year before.

"Pay me!" growled the dentist. Not only did he refuse to pay me, but he actually had the effrontery to gnash at me—with my teeth."

A Vulnerable Point

"If you were an English statesman and were attacked by a militant suffragette with a horsewhip, what would you do?"

"Oh, I would halt her in her tracks."

"But how would you accomplish that?"

"I would say: 'Woman, your nose is shiny,' and while she was applying powder I would make my escape."

Startling Resemblance

"Mordecai Judson!" roared Colonel White, who had been aroused in the middle of the night by a suspicious noise in his poultry house, "is that you in there, you black thief?"

"No, sah," humbly replied a frightened voice. "Dis is muh cousin, Ink Johnson, dat looks so much like me and steals everything he kin lay his dog-gawn han's on. Ah's at home dis minute, sah, uh-sleepin' de sleep o' de jest."—Puck.

What Ailed the Senate

An old colored man from Virginia had received at last the position that fulfilled his ambitions. He held the job of sweeping the steps on the east side of the senate end of the capitol. Finding himself in this prominent place, he set about mastering the legislative and parliamentary phrases that are batted about so freely in the senatorial presence.

One day a party of tourists were disappointed when they found, upon arriving at the capitol, that the senate was not in session.

"I wonder what's the matter with the senators today," said a woman in the party to old John.

"I ain't sartin," he replied judicially, "but I spec' dey done took an abscess."—Popular Magazine.

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Hog Cholera---Prevention and Treatment

XII—Synopsis of Preceding Articles and Precautions Advisable in Dealing with Cholera

THIS series of articles closes with this issue. However, it will not be all we will have to say on this very interesting and important subject. Our investigations are being continued all the time, and our readers will be kept fully informed as to what is being done in the different states and how it is being done.

At this time we wish to go over to some extent some subjects taken up in our former articles. We pointed out the necessity of the hearty co-operation between all authorities having in charge hog cholera control. Further study of the subject convinced us even more strongly, if possible, of the absolute necessity of this co-operation if results are to be obtained.

The live stock sanitary boards must do their part; the veterinary department of the agricultural colleges theirs; the stock yards people and railways theirs, and last, but by no means least, the farmer and hog raiser must do his. Boiling it down, we are more convinced than ever that with the farmer lies the possibility of great and efficient work to be done. True, he can't do it all, but he can and must do a large part of it. The part the farmer can do is the adoption of methods in handling his herd that will result in the very best of sanitary conditions being maintained. He must see to it that his herd is kept in the best possible health, so that if his hogs come in contact with the germ of hog cholera they will be in such condition as to ward it off.

Keep Up Vitality in Herd

We have called attention to several of these things. Let us briefly review them. First, don't use immature males and females all the time in your breeding operations. If you do you are sure to lower the vitality of your herd, and whenever their vitality is low they are much more susceptible to an attack of the disease. Second, feed them such rations as is necessary to keep them in prime condition. You can't have your hogs so they will withstand an attack of cholera if they are not fed properly.

Two enemies of the hog must be closely watched—worms and lice. Don't think for a minute that by ridding your hogs of these pests once or twice you are through with them; it is a fight all the time. Again we repeat, for worms use santonin, four to six grains for a shote fed three days in succession, followed by a physic—glauber salts being a good one, or use some of the well known, reliable worm killers on the market. As for results, we don't care what you use, but we do say to be sure and use something. Many a herd of hogs has succumbed to an attack of cholera simply because they are in a rundown condition on account of being infested with worms.

Lice, likewise, are with you practically all the time. Your hogs may be entirely free from this pest, and you think the fight is over. Here is where you go wrong. Just let up the fight for a while and see how soon lice begin to appear. In the summer dipping or spraying, if properly done, is effective. Use crude oil or some reliable commercial dip. This should be done every four to six weeks. There are now on the market different kinds of rubbing machines in which oil or grease is used. You will find these effective in your fight against lice. We have seen hogs so run down by being covered with lice that they lost their appetites, and had they not been promptly treated would have died.

Keep Things Clean

The farmer must observe sanitary requirements in the management of his herd. We believe government and state authorities are looking more and more to sanitation and quarantine as they progress in the fight to control the disease.

Recent visits to Johnson and Gage counties in Nebraska, where the government is carrying on a hog cholera control experiment, in charge of Dr. Cosford, and to Montgomery county, Indiana, where the work is in charge of Dr. Bennett, found these authorities depending very largely on sanitation to do their work. They vaccinate only affected herds. On the farms surrounding this herd they are simply cleaning up and quarantining. Dr. Bennett told us he was personally going to every farm adjoining an affected herd and using a spray pump, whitewashing the fences, buildings, feed troughs, etc., raking and burning all rubbish and warning the farmer not to go onto the premises where the hogs are sick. Answering our question as to his success, Dr. Bennett told us in the two months he had been in charge of the work they had been successful in confining the outbreak to the herd in which the outbreak occurred.

If the government officials can do effective work in this way, state authorities and the farmers themselves can do it. In our third article we spoke of the usefulness of the farm demonstrator in hog cholera work. We are more convinced than ever that the farm demonstrator is going to be of very great value to our farmers in this work. He can't, however, do it all, and you must not expect him to. The farmers should band themselves together into anti-hog cholera clubs and lend every assistance to the farm demonstrator. In counties that have not yet availed themselves of the valuable assistance of the farm demonstrator the clubs can be formed, and the farmers can rest assured of the hearty co-operation of the live stock sanitary board, the state veterinarian and the department at the agricultural college.

What Nebraska Has Done

Since we began the publication of these articles some forward steps have been taken in Nebraska in the work of hog cholera control. When the matter was looked into it was found very necessary that reliable information be given to the hog raiser, veterinarian and others concerned in the work. Many of our progressive farmers saw this need. The farm papers actively took the matter up, with the result that the combined efforts of all these parties convinced the Live Stock Sanitary Board that at least one field man must be appointed. Dr. C. M. Day of South Omaha commenced work on May 1, and since that time has been a busy man. Dr. Day has gone into several different localities since his appointment, holding meetings with the hog raisers, organizing anti-hog cholera clubs, showing by actual work how a hog should be vaccinated and urging strict sanitary measuress as a means of controlling the disease. His services are free to the farmers, and our advice would be for the farmers in a locality to get together and ask Dr. Day to come to their locality, and when he does come see to it he has a good audience to talk to. It will be your loss if you don't hear him.

Those in charge at the state farm have seen the necessity of education. To that end Dr. J. H. Gain sent out a notice that June 10 would be the first anti-hog cholera day at the state farm. About fifty farmers availed themselves of this opportunity. They were taken through the serum plant, shown how serum was made, how it should be injected into a pig, told of the necessity of sanitation, etc. These meetings will be continued on the second Wednesday of each month. Make a note of this and plan to attend one or more of these meetings.

Serum Regulations

The Live Stock Sanitary Board has placed Nebraska in the front rank as far as protection to the farmers in getting potent serum is concerned. A rule was adopted requiring all serum plants selling their product in the state after August 1 first to have a license from the government. This means that after that date all serum sold must be tested under government regulations.

The board also said that all serum sold after July 1 not produced by a plant having a government license when the serum was made must be tested under the direction of the board, and the container in which it was sold must have the label of the inspector making the test. These are certainly steps in the right direction.

If the farmer can be assured of clean, potent serum and have it available when an outbreak occurs, he has a splendid chance to save a very large per cent of his herd should an outbreak occur. But don't forget that we feel that many an outbreak can be prevented if the owner of the herd will breed, feed and handle his herd as he should. In case of an outbreak, the sooner the herd is treated the better. We

(CONTINUED ON PAGE ELEVEN)

Introducing a New Breed of Dairy Cattle

Fine Herd of Registered Ayrshires Brought from Pennsylvania Into Nebraska

WHENEVER a new breed of animal is introduced into any community the farm on which these animals are raised always becomes a center of public interest. The dairy industry is rapidly growing to be of prime importance in Nebraska, and the introduction of a new breed of dairy cattle into the state is therefore an epoch in the history of this business. The Ayrshire is as yet little known in the corn-belt states, although this breed is fast rising in the estimation of dairymen in the eastern states. For this reason the purchase of the famous Ayrshire herd, known as the Blake Arkol herd of Paoli, Penn., by a Nebraska man is an important event in dairy circles in Nebraska.

This herd has recently been purchased by the Loveland Farms company of Omaha, the company consisting of Mr. and Mrs. A. J. Love, both of whom are enthusiasts and close students of the work they have taken up, as well as fanciers and admirers of the Ayrshire breed of cattle. Besides these essential qualities for success they have the means to devote to building up and establishing a perfect equipment for the carrying on of a breeding enterprise, such as the pure-bred industry of the present-day demands.

Home of the Ayrshires

Loveland farm consists of 280 acres of beautiful, high, rolling land, an ideal tract for successful operation of any kind of live stock or agricultural industry. It is located west of Omaha, two miles from the city limits, and in land values shares about equally between city property and farm land influences. It was practically bare of improvements when purchased by the Loveland company, and thus offered a clean, unbroken surface for the architect and landscape gardener to plan and picture to the highest possible degree of modern farm convenience and beauty—the future habitation of the Loves and their Ayrshires.

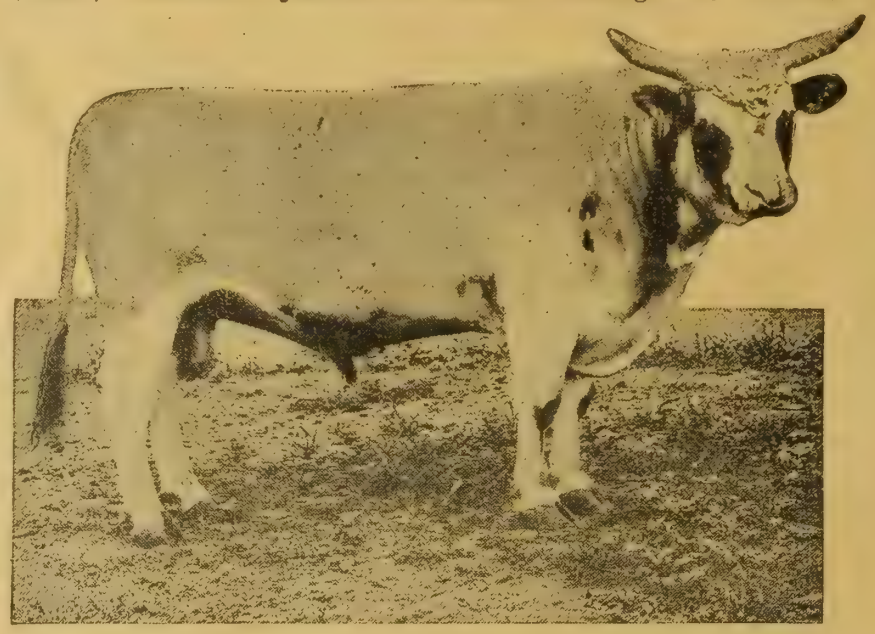
A word as to the equipment of this farm will give some idea of the plans and purposes of its promoters. The land, in the first place, is to be put in the highest condition of productivity for feed crops and pastures. Its present apportionment is seventy-five acres corn, seventy-five acres alfalfa, sixty acres pasture, forty acres winter wheat, twenty acres rye, five acres potatoes and five acres orchard. These apportioned acreages will be varied somewhat as the needs of the herd seem to require. This land has formerly been cropped under lease rental until it was greatly in need of rescue from the soil robber.

The ultimate system of management will be to raise nothing except what is designed for consumption by the herd, the family and the operating force employed on the farm. The produce of the herd is not only intended to pay the operating expenses of the plant, but to provide an annual surplus that may be applied on the original investment as a business proposition.

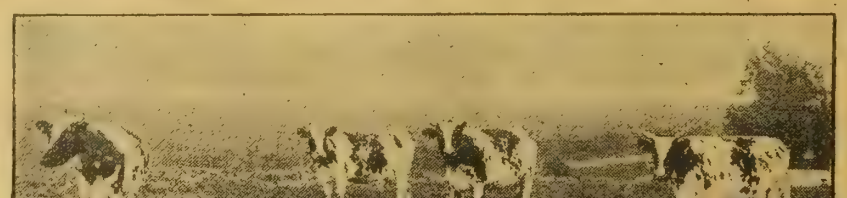
Business Management

The enterprise is subdivided into two main divisions or departments—the live stock department and the farm crops department. Each of these will be under the supervision of a manager, or foreman, who will be responsible for the safe conduct and success of his charge. The farm department will be charged up with all operating expense in the production of crops and credited at retail prices for all crops and produce turned over to the live stock department. The live stock division will likewise be charged with all feed and labor expense and credited with all sales or income of any character, such as sales of milk, surplus of herd disposed of, sales of hogs, poultry, eggs, etc. A statement as near perfectly accurate as possible will at the end of each year show what the farm has been doing in its various lines of work.

Clean, Comfortable Quarters and Modern Buildings Are Provided



Garlands Success, Herd Bull at Loveland Farms



Some of the High-Producing Cows

Mrs. Love, who was brought up on a New York stock farm and who is thoroughly imbued with the live stock spirit, is entering into the study of scientific cattle management and breeding with a great deal of spirit, and in point of Ayrshire history and pedigree is now one of the best posted breeders in the country. Mrs. Love, as vice president and secretary of the company, will also hold the position of resident manager and will have the general overseeing of the entire enterprise in all its bearings.

Improvements and Comforts

The present improvements consist of a three-story brick and frame cow barn, 44x66 feet. The first floor is brick, with cement floors, stalls paved with cork brick; modern metal stancheons and fixtures are used. The ventilation of this barn is perfect; five ventilators in the ceiling take in the fresh air, and in the southeast and northwest corners large aeriators take the floor air out through roof ventilators.

The horse barn has a brick and floor and otherwise is modern in all its fixtures, and has a capacity to take care of all the horsepower demanded on the farm. There is an ice house of 400 tons capacity, which is filled from an artificial lake near by. The water supply is from four large wells, and the lake is used mainly as a fish pond and ice supply.

The farm house and two bungalows comprise the present residences to accommodate the resident help. A new ten-room stucco farm residence will be erected this summer. The ground for this is already platted—five acres on the crest of a hill overlooking practically every acre of the farm. Here A. J. Love and family plan to spend the rest of their days.

The water system is not only abundant, but complete in all its distribution to every part of the farm where water is desired. There are some wind-power wells variously located, but the main source of water supply is from a big well sixty feet deep and seven feet in diameter, cement and brick walled, and has a 25,000-gallon capacity, from which there are 7,000 feet of underground piping distributing water. This is operated by electric motor, and the water is forced to all the yards and buildings on the farm. This distribution is regulated from the main power plant adjoining the mill house. All buildings on the farm are lighted by electricity, which is generated on the premises.

Handling and Sale of Milk

The original herd constituting Mr. Love's purchase was sixty cows and heifers of all ages, all recorded. From this basis of breeding operations it is proposed to reserve the greater portion of the heifer calves until bred and tested as to their milking qualities. The highest individual test is 5 per cent and the lowest is 3.8 per cent, the herd average of the cows being 4.2 per cent. This herd is a member of the Douglas County (Nebraska) Cow Testing Association.. The present output will go to the Union Pacific Railroad company for the dining car and hotel service, delivered each day in pint bottles, ice packed, and later on they will supply hospitals and leading hotels of Omaha. The appliances for handling the milk are first-class, modern and sanitary in every respect. The mechanical milker is installed, and the ease and comfort with which these high-bred, nervous animals are milked is astonishing to the hand milker, who believed that inventive genius could never get in sympathy with the sen-

(CONTINUED ON PAGE ELEVEN.)

Management and Practical Value of Silos

III--Methods of Putting Up Silage and Cost by Their Use

MANY of our farmers and dairymen have used and are using the soiling system of crops to supplement pasture during dry periods and in some instances to take the place of pasture entirely. This system is successful and has its many advantages. Investigation has brought us to the conclusion, however, that the soiling system is not as good as the silo. One of the disadvantages of the soiling system would be the possibility of insufficient rainfall to produce the crop, a shortage of pasture to some extent making a short soiling crop. In some sections of our territory this crop would not grow to sufficient height to be of any value.

Soiling crops must be fed daily, fresh from the field. Consequently it is necessary to cut the crop in all kinds of weather, making it very disagreeable work on rainy days, and sometimes the crop becomes so wet and washy that it may cause digestive disorders in the animal. With the silo the feed is always under cover, and can always be fed without great inconvenience, no matter what the weather may be. One of the great advantages of silage is that weather conditions do not make any change in the feeding qualities of the feed.

The Nebraska Experiment Station has undertaken an experiment as to the relative value of silage and soiling crops, commencing in the spring of the year 1913 and to cover a period of years. Prof. J. H. Frandsen has given out the figures for the first year, in which he says in conclusion:

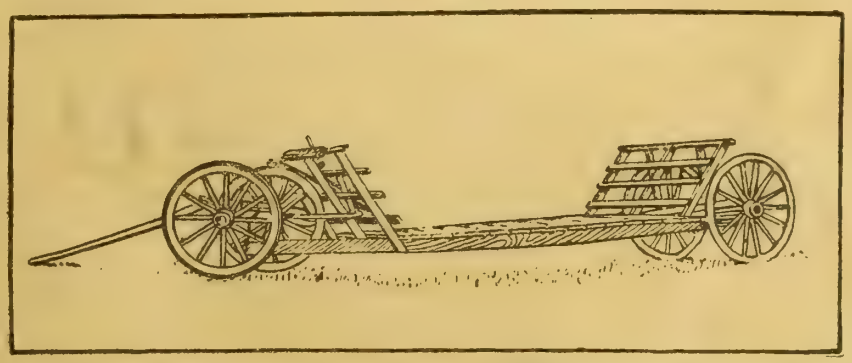
"The solution of this problem, which confronts nearly all Nebraska dairymen, lies in adopting preventive measures. In other words, Nebraska farmers must be prepared to supplement the pastures by means of soiling crops or by the use of silage. Owing to the cost of labor and the relatively low value of the land and the crop, soiling, with the exception of alfalfa, apparently is less efficient than silage under Nebraska conditions."

What Will Silage Cost?

The important item confronting the farmer who contemplates the erection of a silo is what will this feed cost when put into the silo? This, to some extent, depends upon the man who has charge of the filling of the silo, his ability or capacity for organizing his force and getting the maximum amount of work from them. Undoubtedly, the least expensive plan would be for a few farmers in the neighborhood to buy a cutter and binder in partnership.

The question of power must be taken into consideration, and whether or not you buy an engine or hire one is a matter that should be governed by the conditions in your vicinity as to whether or not an engine would be available when it was needed to run the cutter at a reasonable price. A cutter can be bought for something in the neighborhood of $200, a corn binder for about $150. Inquiries in a good many different neighborhoods reveal the fact that power is hired to quite an extent, farmers generally paying about $10 a day for the use of an engine and engineer, with an added $5 to $8 for fuel, oil, etc.

Where a neighborhood outfit is used, we believe the minimum cost can be obtained. The crew can be well organized, each man knowing his particular work and doing it readily. First, a cutter of sufficient size should be bought; then have sufficient help to keep the machine running steadily all the time. If the silo is not too far from the field, six to seven teams will do this. Use low truck wagons with flat racks, wide tires and no sides. The one shown in the accompanying cut is a very desirable wagon. Generally, an extra man is needed for unloading at the cutter and probably one or two extra men for loading in the field. However, this will depend to a considerable extent upon the men who run the wagons, the same as is true in a threshing crew. Some neighborhood threshing crews will get through much more in a day than will others, due to activity and ability to work. We have found some silo crews where no man is used to help load, each driver loading his own load. The total item of expense for filling the silo ranges from 50 cents to $1.25 a ton, with probably 75 to 85 cents per ton the average.



Low Truck Wagon, with Flat Racks, Wide Tires and No Sides, for Hauling Crop to Silo

How Much Silage Per Acre?

Careful inquiry has been made as to the tonnage per acre. This is not an easy matter to determine, due to the difference in yield of forage crops in different seasons. We have found, however, that as a general rule where a fair crop of corn—say, from thirty to fifty bushels per acre—is harvested, the crop can be figured on a basis of a ton of silage to five bushels of corn. In other words, a crop making forty bushels of corn per acre will make eight tons of silage, and fifty bushels, ten tons, etc. A fair way to estimate the cost of your silage would be to estimate the bushels of corn per ton for filling. Depending on the yield of corn, silage will cost from $2.50 to $4 per ton in the silo.

We have made quite an extended inquiry of farmers and dairymen as to the relative feeding value of this food as compared with alfalfa hay when fed together, many of them claiming the silage was about equal to alfalfa hay, ton for ton, when fed in this way. If this is true, it will readily be seen that considerable saving is made by feeding a reduced amount of alfalfa hay and what silage will be consumed. These are matters, however, that must be figured out by each individual feeder, and we mention it only to show those who have not availed themselves of a silo something of what they may expect in the way of the saving in their cost of feeding.

Into What Lengths to Cut

One of the various matters to be taken into consideration by the man filling his silo is the length into which the forage should be cut. This ranges all the way from one-fourth of an inch to an inch. Inquiry into this matter convinces us that the finer the silage is cut the better. It is more readily packed and more readily eaten and better digested by the animals. You can't get it cut too fine.

The next important step is the packing in the silo. A distributer is almost indispensable, assisting in an even distribution and also in making it much easier to pack well and evenly. For the ordinary-sized silo two men are generally used. We are inclined to believe that three would be better to pack the silage more thoroughly. The outside edges are most important, and to them the most attention should be paid. It is probably best to keep the outside a little higher all the way up than the center. Some men in filling a silo are using a tamper made of cement. This is possibly advisable.

Care in Filling Silo

A silo filled in one day, no matter how well it is packed, will settle considerably, probably from four to six feet within a week or ten days. To use the full capacity of your silo it will be necessary to refill. This can be done by going back and going the rounds again of the different farms where the neighborhood cutter is used.

We have found in the examination of different silos places in some of them where there is mold or waste silage on the outside, due to the air coming in contact with the plant. Care should be taken to have all the cracks well filled. This should be especially looked after around the doors. A cheap method for filling these cracks is to take clay and smear the mud over the crack with your hands. This does not cost much and is effective.

The question has been asked whether or not the corn should be planted a little thicker to make good silage than it is planted for the ordinary field yield. We find a few farmers who are planting it some thicker for silage use. However, a very large per cent of them are using the ordinary field planting. If sufficient rainfall is had a thicker planting will undoubtedly yield a larger forage tonnage and possibly a decreased yield of the grain.

Value of Silage and Dry Corn

Farmers are generally of the opinion that there is not much difference in the feeding value of corn run through the silo as compared to corn fed dry out of the crib. Some hold to the opinion that corn run through the silo is more digestable and consequently of greater feeding value. Others think that it loses its feeding value to some extent in the fermenting. There can be no question but that it is more readily digested. We are inclined to the belief that it is at least as valuable when run through the silo as when fed dry.

We find that farmers are feeding silage to cattle, horses, hogs, sheep and poultry. Generally we would not advise its feeding to work horses on account of its being too loosening. Some farmers have fed it very successfully to their horses in the winter time when they are not working; others have told us they have been more than pleased with it as a feed for growing colts. As a hog food it is probably worth very little, if any, more than the actual amount of corn contained in the silage. Hog feeders who have fed it, however, say they believe that it is a good regulator for the bowels of their hogs. Not very much information has been obtained from farmers as regards its value as a poultry food, as we all know that chickens having the run of the farm get all kinds of feed. However, some farmers who have fed it to poultry have told us that they liked it much better than dry feed, claiming that poultry in eating silage get practically the benefits derived from green feeds in the summer.

We have heard it said that the feeding of silage to dairy cows would make a difference in the flavor of milk. We have made careful inquiry into this subject from different dairymen who supply town people in their locality. In not a single instance have we found any of them saying that any complaint had been made

(CONTINUED ON PAGE ELEVEN.)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
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To all points in the United States and Mexico, per annum, in advance.....$1.00
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To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
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There is never an even division of blessings. While many of us have been complaining of too much rain interfering with the harvesting of an abundant alfalfa crop, southern Alberta (Canada) has been suffering from a drouth that has caused the loss of many sheep on the range.

If it were not for the Hessian fly, chinch bug, the army worm and kindred insect enemies, we would have more wheat and alfalfa than we would know what to do with. However, we do not need to worry about this happening, for as the bird population decreases the insect population rapidly increases.

It is perfectly legal to sell flour as ham. After a decision of a lower court upholding the pure food law in its contention that it was illegal to adulterate sausage with flour, the packers carried the case to the United States circuit court of appeals and the decision was reversed. At least the court said we had no right to have laws of this kind. Encouraging to the pure food people and the hog industry, isn't it?

Some time ago we quoted a speech of President Van Hise of the University of Wisconsin, saying that co-operative associations for the manufacture or sale of farm products were operating in violation of the Sherman anti-trust law. There is now a bill before congress exempting such organizations from the provisions of the Sherman law, and there seems to be good reason to suppose that it will be passed.

Increased Demand for Quality

Scarcity and high prices are not making room for inferior quality in animals, or in anything else produced on the farm. In fact, the demand is becoming more exacting as to quality and condition. This feature in trade is due to education more than scarcity. People are becoming better judges of the things they use and the articles they deal in. Education and instruction along all lines in the necessities of life are being discussed and published in a way that is helping people to an understanding that they never before had.

The public school is teaching agriculture in all its varied forms, so that the boy or girl of the public school has a better technical knowledge of soils, crops, etc., than the old pioneer farmer, though, of course, we must concede him, from a practical standpoint, in the lead so far as his skill of doing and operating is concerned.

The old admonition, "Breed better stock, keep better sires," is not so much in demand now as a few years ago. This may be explained by the force of education that has been constantly exerted, and intelligently, too, in the interests of pure-bred stock. The buyer of a bull at the present time is anxious about quality and good breeding. He is not content with a common animal just because he comes cheaper in price. The price is not so much a matter of consideration as the quality. The disposition expressed now is to get better stock and improve it. Very few farmers of this period feel comfortable under the realization that their new bull is not getting a much better lot of calves than his predecessor.

While the duty of every publisher in the land is to preach improvement in live stock and better farming, the general tendency is to absorb what others 'round about are doing when the evidence plainly reflects better methods and better results. A realization of this is all that is necessary to prompt better seed, better growth, better stock and the realization of better profits.

Killed by Lightning

Are we looking closely enough to our losses caused by lightning? Farmers each year suffer severe losses on account of stock being killed by lightning. What can be done to lessen this loss?

Generally the animal dead from lightning is along the fence row or in the barn. Very seldom do we find one dead in the open field on account of being struck by lightning. Observations and inquiry show that but a small proportion of the farm fences are grounded. It is a small outlay of either time or money to place ground wires on your fences, thereby reducing your loss from lightning to a minimum.

In building a new fence run a wire from the top of the post to the bottom, securely stapling the wire on the fence so that it will come in contact with the ground wire on the post. Place these posts on which the ground wire is stapled every five or six rods in the fence. The danger of stock being killed by lightning is very small in pastures which are enclosed with fences in which the steel or iron post is used. These posts act as ground wires.

The old-fashioned lightning rod was practically no good, but the rods now in use, properly placed on the buildings and properly grounded, are efficient. Without a doubt many a disastrous fire has been prevented by their use.

New Cow Herds

There are thousands of new cow herds being started all over the leading cattle-raising states. These represent from a few cows to several hundred. Besides these new herds, there are thousands of cows being added to old or previously existing herds. Where are these new recruits coming from? From all parts of the country. A very large per cent are being gathered up from the eastern states that heretofore have not been especially noted for their cattle reputation or population. They are coming from the milch cow districts, where a few cows are kept on each small farm and there are a few producers to be disposed of if occasion offers.

The cow buyer is now abroad in the land, offering to buy anything in the shape of a cow to ship west to help fill the demand for the small cow industry, the demand of the homesteader for the milch cow to help in the work of making a living in the new home.

Where is there a district of country west of the Missouri river that could not quickly absorb a few carloads of cows, and at strong prices? Cow shippers are busy now, and have been for the last year, in the work of distribution. It is not an infrequent remark from farmers in these localities that they are offered cows for certain prices and on easy terms, and, while the prices seem pretty strong, they believe there is money in buying, and a calf or two will soon pay the bill, and they can sell the cream at good prices. With many the credit feature is equal to a purchase. The note and mortgage are left with their home banker and the deal is closed.

Such investments may not be bad ventures just now, if the cows are all young, well bred and reliably tested and inspected for contagious disease. It is quite probable that cows will not be any lower in price than now for several years to come, but the buyer must be a good judge of cattle as to age, quality and condition of health. It will not do to pay $3 to $10 per head for cows more than they are worth in the regular market because of an opportunity to buy on time.

A co-operative cream collecting station has been started in South Dakota, with the object of selling all the cream of the district to the highest bidder. Such organizations are reported to have been started in Nebraska and to have met with so much opposition by the centralized creameries that they were unable to continue in business. If this is true, it would seem to be a short-sighted policy on the part of the centralizers.

The Aged Steer Class

The recent ruling of the directors of the International Live Stock Exposition to drop the aged steer class, carlot show, from their premium list, because of the doubt as to the practicability of this class as a profitable investment for the feeder and fitter, is a very questionable decision. The thousand-pound hog that gets up with ease and walks around with apparent comfort is possibly not the best quality of pork or the most profitable. Yet such an animal demonstrates vigor, vitality and strength of bone that cannot fail in being a good advertisement for his breed, his family and his ancestors generally for these essential qualities.

The carlot display of yearling or 2-year-old steers does not illustrate the possibilities of the breed in its ability to produce beef, but the big, mature, ton steer does, and such a show should be maintained to some extent, if for no other purpose than a feature of entertainment—something out of the ordinary for the common visitors to look at and educate themselves as to the possibilities of beef growth and cattle development.

The exposition is not alone to demonstrate the most profitable age at which cattle may be prepared for the packer, but also to show the possibilities of development and growth in animals that are normal. It is a feature of attraction for the abnormal animal to be given a place in the show, not as a prize competitor, but to help create an interest in live stock among that class of patrons who are only sight-seers and who are greatly interested by seeing the extremes which in many cases, as in the carlot of aged steers, we might term the possibilities of animal development. Keep up the display of the mature beef animal before the people in that most forceful, magnificent and convincing exhibit—the carlot show—even at the expense of cash prizes that will justify the farmer or feeder in preparing them for such exhibition.

School Teaching in Australia

If the farms were 25,000 acres and more in extent, what about the district school? This is the problem they have to face in Queensland, Australia. Naturally the children live so far apart that no considerable number could meet daily at any one place. To overcome this the government has engaged a schoolmaster for a section with a radius of 500 miles. He is supplied with an automobile of a well known American make and covers this territory, giving out lessons and instructing the children of the different families in turn. The car carries sixty gallons of gasoline, thirty gallons of water and 150 pounds of school books. During his first term the schoolmaster covered more than 4,000 miles and did not see a railroad track for six months. Think of the pleasure the children and their parents would derive from his visit, and consider what a wonderful thing the motor car is and what it has done for this country. Horsepower would not have made this possible.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

QUITE often in the past the editor of this page has been asked to give pointers in the raising of pheasants, or list of books on the same, and names of most popular breeds, with address of those who have them for sale. To all such readers a circular sent out by John W. Talbot, secretary of the Game Bird Society, South Bend, Ind., may be of some interest. The society of which Mr. Talbot is secretary, is organized to promote domestic propagation of Chinese pheasants, quail, pea fowl and other game birds, and to secure enactment of laws to encourage their raising and sale.

He says of the Ringneck pheasant that it is very hardy and will live in the open fields during zero weather without shelter. The pheasant hen averagess eighty-five eggs a year and her eggs can be hatched and reared by chicken hens. In six months they are mature and weigh about three pounds at maturity, selling at $1 per pound in market. Eggs hatch in twenty-three days, are easier to raise than chickens, do not require so much feed and have no diseases; they eat bugs, weed seeds and all manner of insects.

"But the trouble is," he continues, "in our country and Canada the law discourages the extensive raising of this profitable and prolific bird. In England there are associations of farmers making profit in the raising of these birds, and there is nothing to hinder the American farmer from making the same profit through the propagation of game birds, but the laws enacted against the shipping of these discourage this profit-making, and will until we get laws enacted something in accordance with the English game laws.

"For instance, New York state allows any person to raise and sell pheasants or any kind of game birds, but makes it a criminal offense to ship into New York such birds. Indiana allows the rearing and selling of pheasants, but forbids express and railroad companies to receive them for shipment. Anyone can judge how much encouragement this gives to the trade of raising game birds."

The above is the gist of the secretary's letter, and from the viewpoint of most poultry keepers such laws do seem somewhat tyrannical. However, not all states must be so restrictive on game shipments, or Helen Bartlett of Michigan, successful breeder of several kinds of pheasants and other game birds, could not ship these birds and their eggs to the game wardens and owners of estates and uncultivated districts as she does.

Small Hens of the Breed

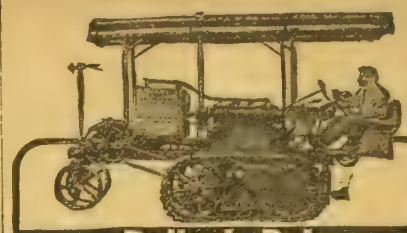
The Kansas Farmer, in a late issue, has an excellent article on the layer of any breed showing up as a rule below standard weight from three-fourths of a pound to often as much as three pounds, and asks: "Are we not bringing the standard too high as to weight in our laying breeds, not that one would encourage breeding small specimens of the breed, but we might overdo the matter the other way, and by breeding overweight for the standard breed out profitable production? In fact, we know ourselves of a breeder of Barred Rocks who has always made it a boast that his fowls weigh from one pound to three over standard weight. At present he is disposing of that flock because it does not produce enough eggs to pay the cost of their production. All of the phenomenal prize-record laying hens were under weight. Lady Showyou, White Rock, 281 eggs first year contest, weighed but six pounds. The highest record ever made by a Barred Rock was from a hen one and one-eighth pounds under weight. The best record made by a Black Langshan was made by one two pounds under weight; Black Orpington, two pounds under; Buff Orpington, two pounds under, and so on in varying number of pounds under, through Wyandotte, Leghorn, Minorca and other breeds."

The above is given because complaint so often comes in this wise: "I cannot get my flock up to standard weight, and my neighbor, with Barred Rocks, which are listed lower in the standard than the breed I keep, puts it all over me when it comes to selling his birds by weight." This statement, based upon facts from laying contests, should lead you to compare the laying quality of your below-the-standard flock with that of your neighbors. Your flock may be of a heavy laying strain, and this kind is often under weight. I have a laying strain of one of our breeds listed to weigh eight pounds for the hen when adult. At first it worried me because so many of my finest specimens and best layers would not reach this weight. When I realized why, I ceased worrying. Better plenty of eggs than a mere couple of pounds of meat.

Bacterial Enteritis

Bacterial enteritis usually shows up in its worst form at the summer's end, though it can come at any time. It is often mistaken for blackhead or cholera, but the bacillus causing the intestinal inflammation, isolated and examined under the microscope, shows to be of somewhat different character from the bacillus causing these other diseases. The germ causing the enteritis multiplies in the intestines and fills up the blood throughout the body, causing a quick, or at times slow, destruction of the blood, added to the intestinal inflammation. The sick birds are dull, listless, hate to move about, are not hungry, though very thirsty. The birds may die quickly at the onset of the disease, and the disease may spread no farther than the farm where it starts. Later cases will linger, often for four or five weeks, the bird losing nearly all of its flesh. There will be a greenish diarrhea, sometimes showing blood toward the end. Young birds are most susceptible. Ducks will take it from the chickens; pigeons will not take it; rabbits inoculated with the germs show no results; chickens fed the germs in ordinary food will not take the disease, but fed to them in animal food or foul water will soon show the symptoms. Inoculated with the germs through the skin they die in four or five days. This shows that the bacillus spreads first among the chickens through foul water or animal food. Without disinfection or eradicating means it will often stop short and die out, but not until it has taken from 50 to 80 per cent of the flock. To get rid of the disease in the speediest way, don't wait a day in cleaning up and using disinfectants in houses and on grounds. Make the fowls drink from scalded vessels, the water pure, changed often and charged with ten drops of sulphuric acid to each gallon of water, or any other disinfectant that you know to be good.

Quarantine or kill sick birds. If you treat the sick, let it be done away from the flock. Give one grain soda, three grains subnitrate of bismuth, two grains of powdered chinchona bark, three times a day. This is to check the diarrhea. After the diarrhea has been checked give a good poultry tonic. This last should also be fed to the flock at large. Give turkeys sick with it the same treatment.



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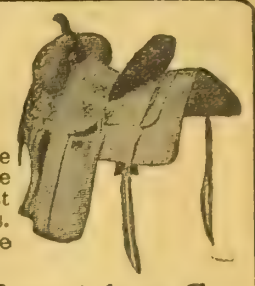

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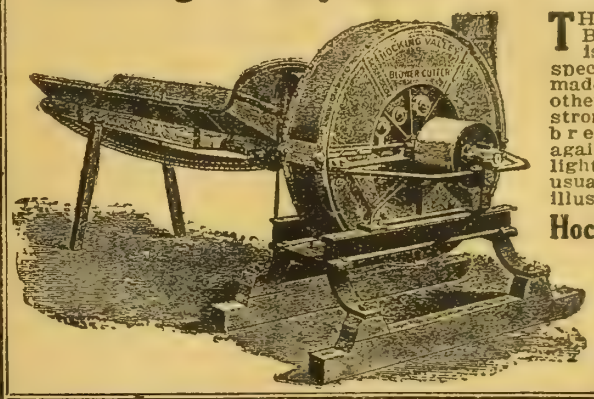

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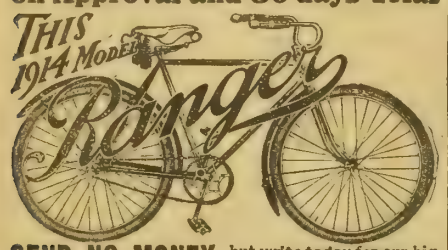

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Young man what have you made up your mind that you are going to be; a doctor, preacher, lawyer, merchant, or are you of a mechanical turn of mind? If so, how would you like to become a watchmaker and also take jewelry work? It is a clean business and a trade that commands good salaries, or you can get into business for yourself. Over five hundred watchmakers and jewelers in Kansas, Nebraska and Iowa have learned their trade at this school. Write to the Horological Department, Bradley Polytechnic Institute, Peoria, Ill., asking for latest catalogue.

The CLIPPER

There are three things that destroy your Lawns. Dandelions, Buck Plantain and Crab Grass. In one season the Clipper will drive them all out.

If your dealers do not keep them, let us know and we will send circulars and price.

Clipper Lawn Mower Co., Dixon, Illinois.

WHEN COMMUNICATING WITH ADvertisers on this page, kindly mention Twentieth Century Farmer, thereby favoring both advertiser and publisher.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Your Flag and My Flag

Your flag and my flag, and how it flies today
In your land and my land, and half a world away;
Rose red and blood red, the stripes forever gleam,
Snow white and soul white, the good forefathers' dream;
Sky blue and true blue, with stars that gleam aright,
The gloried guidon of the day, a shelter through the night.

Your flag and my flag, and oh, how much it holds!
Your land and my land secure within its folds;
Your heart and my heart beat quicker at the sight,
Sun-kissed and wind-tossed, the red and blue and white;
The one flag, the great flag, the flag for me and you,
Glorified all else beside—the red and white and blue.

* * * * * *

O what, O what, is this bruise I've got,
That stings like a thousand bees?
A cannon cracker under a pan,
That caught me, though like a deer I ran,
And battered my feet and knees.
If I just don't die I never will try
To keep another Fourth of July.
—Farm Journal.

* * * * * *

On the first of July
Johnnie thought he would try
To see how much noise could by powder be made.
The gardener next day,
It grieves me to say,
Picked up his remains on the edge of a spade.
—Canadian Farm.

July 1, 4 and 14

American children are not the only ones who look forward to the month of July because it brings them one of the jolliest holidays of the year. The Canadian children have just as good a time on the first of July, and the French children celebrate the 14th in the same way. Time and again you have been told about the signing of the Declaration of Independence, in which our forefathers declared they were able to govern themselves and were no longer slaves of a foreign government. We Americans consider this the most important event in our national life and we will celebrate it as long as we are a nation. Now don't you wonder what great events the Canadians and the French consider as important in their national lives as we consider the signing of the Declaration of Independence?

On the first of July, 1867, Canada became a united country, called the Dominion. Before that the Canadian provinces had each been separate countries, though all under English rule. They had quarreled among themselves until neither life nor property was safe, and business and farming could hardly be carried on profitably. By an act of Parliament passsed July 1, 1867, Canada became a united country, with a central government. This gave it freedom from civil war, and the rule of England protected it from outside interference and allowed it to grow into the great and prosperous country Canada is today. That is why Dominion day, as it is called, is celebrated with fireworks and speeches and general rejoicing.

On the 14th of July the people of France celebrate the fall of the Bastile. In the days of kings in France the Bastile was the prison in which people were shut up who had in any way displeased the king or any person in authority. Soldiers would come and take a man away from his home and family and shut him up in this great, gray prison, where he often stayed all his life, and sometimes no one knew what had become of him. No trial was necessary and the prisoners were not allowed to see or write to their friends. They were not criminals, but they were treated worse than we would dream of treating criminals now. The first thing the people did in the French revolution was to capture this prison and liberate the prisoners, and it has not been used for such a terrible purpose since. This was in 1789. The fall of the Bastile meant a great deal to the French people, as the Bastile was a symbol of the power held by the nobility over the people, and its fall meant freedom from tyranny and cruelty.

So you see that July is a month in which three great countries celebrate the beginning of peace and freedom. HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

Babies playing in the shade
In pleasant summer weather—
Isn't it a lot of fun
When there are two together?

(First Prize)

Joe

By Roy Schade, Aged 9, Glenwood, Iowa

One afternoon, while I was visiting my cousin, we found a nest of young crows. We each caught one and I brought mine home with me. I named him Joe. At first it was great fun to dig fish worms for him, but finally he got to eating so many that we began to feed him other things, but all he would eat was bread and fish worms.

Every evening we put Joe in a small house and left him there over night. Then we thought it would be better to let him roost in a tree, so we tied a small cord to his leg and also to the limb. Sad to tell, the first night we left Joe out of doors it rained, and when he attempted to fly to the ground his cord became twisted and he hung midway between the limb and the ground until morning. When I found him he was almost dead. We brought him into the house and placed him by the stove and at about 9 o'clock Joe began to caw for fish worms.

When I had kept him for about a week he flew away and was gone for almost an hour, but finally he came back. I have had him for two weeks and he shows no desire to fly away, although he is loose. He takes a bath every day and continually follows us about the yard.

(Honorable Mention)

Trip to Alaska

By Walker Wells, Aged 10, Selma, California.

My father is a trader in Alaska. One time my two brothers and their wives came to see us. We were all sitting around our big fireplace talking about Alaska, when my father said, "I am going to Alaska next Monday." I said, "Oh, papa! May I go, too?" My father said, "Yes, you may go." I was so glad when he said yes.

On the next Monday we took the train for San Francisco. There we got on the ferryboat Oregon. One day as we were looking over the blue water we saw a large whale. My father said it was a fin-back whale. We had been on the ship four weeks when we discovered we were near land. After that, in about four hours, we reached Nome, Alaska. There we stayed all night. In the morning we took the train for Reka, where we rented a room at the Hotel Vanhorn.

My father took me to a trapper's tent. There he traded beads for furs, and many different things for furs. The trappers are awfully cruel.

The Eskimo children have two games they like to play. One of them is: The children ask their fathers for the antlers of a deer: then they set them up and ride between them and shoot them as they ride. The other one is: They hold on to their feet with their hands and run across the floor.

Additional Stories

Mae Pearson, Doniphan, Neb.; Kate Heimer, Potter, Neb.; Dora Krecklow, Greenwood, Neb.; Lillie Ebel, Dakota, Neb.; Gerald Vader, Tekamah, Neb.; Minnie Kujath, Fairbury, Neb.; Florence Ashysole, Thompson, Ia.; Florence Harris, Nyssa, Ore.; Clara L. Schick, Westcliffe, Colo.; Margaret and Eunice Patterson, Grow, Okl.; Craigie Welsh, San Jacinto, Cal.

Of Interest to Our Women Readers

The Wicked World

's a wicked old world, I've heard you say,
A wicked old world, and I'll agree
That trouble and sorrow block the way,
And the sunshine is often hard to see.
's a wicked old world, but tell me, son,
re you trying to make it a better one?

re you adding your sigh to the mournful chant,
Or are you lifting a song of cheer?
re you lending your voice to the tone of cant,
Or are you scattering sunshine here?
's a wicked old world—but the work you've done,
Has it helped to make it a better one?

id the word you spoke tend to stop the tears?
Did your hand raise someone who chanced to fall?
id the hope you preached put an end to fears?
Did you rush to aid when you heard the call?
's a wicked old world, alas, my son,
ut have you made it a better one?
—Louis E. Thayer in Youth's Companion.

Safety and Sanity

The week following the Fourth f July is likely to be a busy one or doctors, undertakers and insurance adjusters. All this is because we generally celebrate this holiday with every faculty we possess except the exercise of our common sense. The children are allowed to buy firecrackers and toy cannon and play with them and with the necessary matches quite indiscriminately. This often results in blown-off fingers, eyes put out, skin filled with powder and a beautiful assemblage of burns, to say nothing of terrified horses and dogs that flee from the noise or defend themselves against mischievious children in a manner that means more disasters.

Even if we are careful with fireworks, we often go to some big picnic celebration, where we stand out in the hot sun, surrounded by a perspiring crowd, and listen to some impassioned orator thunder out the praises of the American flag, and then we retire to the shade and drink quarts of lemonade and pop and overeat of food on which flies from miles around have been collecting and depositing all the filth that has gathered on their furry feet. Then we wonder why we are cross next day, and more especially why the children are cross and behave so badly.

If we come back home on the night of the Fourth in an exhausted condition and are good for nothing the next day, or if our house or barn burns down, or our horses run away, or the dog bites one of the children, or a visit to the nearest doctor is necessary, then we may perhaps seriously consider a more sane celebration next year. Celebrate we should, and fireworks are all right in their place, which is in the evening and under the direction of a competent man, but toy cannon and dynamite crackers and matches in the hands of little children are never right. The lists of deaths and accidents that are compiled every year and the piles of reports of fires received by the insurance companies, all immediately following our Fourth of July celebrations, would have had their effect long ago were we not such a reckless and careless people as a nation.

For public celebrations the beautiful historical pageants that are being used more and more by progressive communities, and for private celebrations the gathering of families together for a restful visit, with father managing the fireworks in the evening for the pleasure of the children, or a well managed trip or picnic perhaps with congenial neighbors, from which we may return feeling as well as when we started—these are ways of celebrating our national freedom that are gaining in popularity more and more with every passing year. Better tears from the children at the denial of firecrackers on the 3d of July than a funeral on the 5th.

HOME EDITOR.

Styles for Home Dressmaker

Description of Patterns

6738—Ladies' Waist—In this waist we ave the novel and attractive large armole, which gives great looseness under he arm. The front and back are in one iece and the closing is placed diagonally. wide collar finishes the neck. The attern 6738 is cut in sizes 34 to 44 inches ust measure. Medium size requires 2¼ ards of 44-inch material and one-half ard of 27-inch contrasting goods.

6739—This is a two-gore sectional skirt, he upper part fitted to the figure by hort darts and ending in a deep hem, hich finishes the tunic section. The wer part has a tuck seam in the center f the front and has very little fullness. he pattern 6739 is cut in sizes 22 to 32 nches waist measure. Medium size reuires three yards of 44-inch material.

6731—Ladies' Waist—Suitable for soft aterials, such as chiffon, lace, voile, repe de chine and the like. It has a ng shoulder yoke, to which are attached he front and back, both gathered and ery full. The neck is open. The patern 6731 is cut in sizes 34 to 44 inches ust measure. Medium size requires 2¼ ards of 36-inch material.

6771—Ladies' Dress—Linen, serge or atine can be used to make this dress. he dress closes at the front and is made ith the sleeves extending to the neck dge. The one-piece skirt can have ither the high or regulation waistline. he pattern 6771 is cut in sizes 34 to 44 nches bust measure. Medium size reuires 3¾ yards of 46-inch bordered maerial.

6109—Child's Middy Dress—The blouse of his dress is made to be slipped on over he head and the side seams are left lightly open to allow of this. The kilt kirt is attached to an underwaist, which s sleeveless. The pattern 6109 is cut in izes 2, 4, 6, 8 and 10 years. Medium size requires 1⅝ yards of 36-inch light maerial, with 1¼ yards of 44-inch dark oods and five-eighths yard of 36-inch ining for the underwaist.

6017—Children's Rompers—Every small oy and girl needs a pair of rompers, nd here is an excellent pattern for makng such a garment. These rompers close t the back and can be made with either he long or short sleeves. Linen, gingham or chambray can be used. The patern 6017 is cut in sizes 2, 4 and 6 years. Age 4 years requires 1⅞ yards of 36-inch material.

4830—Ladies' Kitchen Apron—This is the apron for a real cover-all. It is a one-piece model, cut out in a large round at the neck and also at the armholes, and fastening with a single button at the shoulders in the back. A short underarm dart fits it to the figure and a patch pocket completes it. The pattern 4830 is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size requires 4¼ yards of 27-inch material.

All Patterns on This Page 10 Cents

Some Questions

A reader asks for a good way to preserve fresh flowers so they will keep when exposed to the air and not get brittle. We know of no way to preserve flowers except to press them. Arrange carefully between sheets of white blotting paper and place under a heavy weight for two or three days. The big dictionary is an excellent weight. She also asks how to get rid of the little red ants, and how to make cake icing that will not crack. Does anyone know a real way to drive out the red ants without driving the family out, too? Every cook book and household hints column tells of some method, but we have never had great success in following any of them. We would be glad to have some reader tell us if she has ever tried any of these methods with success. As to cake icing, any of it will crack if it gets old enough. Icings that will keep as long as the cake is fit to eat are the boiled icing and the powdered sugar and egg icing. Use the white of an egg and about a tablespoonful of water, slightly beaten together. Add powdered sugar until the right consistency is reached so that it will stay on the cake; flavor and spread. With a little practice an excellent icing may be easily made in this way.

Cool Drinks for Hot Days

Iced Cocoa—Boil half a cup of cocoa, three-fourths of a cup of sugar and one cup of water to make a rich syrup. Put this in a jar on ice and it is ready to serve at a moment's notice by adding a large spoonful to a glass of milk.

Grape Nectar—One pint grape juice, two lemons, one orange, one cup sugar to one pint ice water and one cup of chipped ice.

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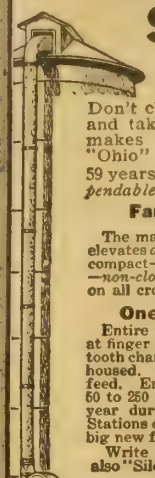

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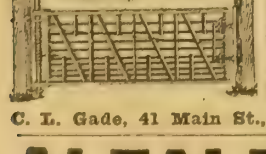

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Highest of the Andean Countries and Its Ruler

By Frank G. Carpenter

LA PAZ, Bolivia—I have just met the grand lama of the South American Tibet. His name is Senor Don Ismael Montes. He is the president of the republic of Bolivia, and his capital, La Paz, might be called the high Andine Lhassa. In his conduct President Montes pursues much the same policy as his prototype of the Himalayas. He keeps to himself and does not give out newspaper interviews for publication. He governs his people in his own way, and practically without let or hindrance: Like the centurion of the scriptures, "He says unto this man come, and he cometh; and to that man go, and he goeth, and to a third do this, and he doeth it." I am not sure as to the wording of this quotation, but it describes President Montes. He is the big man of Bolivia, and I am told he is doing all he can to advance it along the lines of the development of its great natural resources. Like President Wilson, he has all sorts of new schemes under way. He is building railroads, establishing banks and playing with other financial matters in such a way as to cause great annoyance to the bankers and brokers. He is like our president also in that he has big things to play with. Since I came here some weeks ago I have devoted my time to learning about the country and people. I have met men from every large city, and with the maps before me have gone over the country with Don Manuel Vincente Bolivian, the chief of the bureau of statistics. I am surprised at the size of the republic, and at its enormous undeveloped resources.

The Tibet of South America

I have called Bolivia the Tibet of South America. Of all the lands upon earth, it kisses the sky next below the Himalayan highlands. It has more high mountains than any other country outside of Asia, and its mighty plateau is excelled in altitude only by that of Tibet. Within its borders are more than a score of mountains that approximate four miles in height, and uphold by these, a great tableland twice as far up in the air as the high plateaus of the Rockies. Overlooking the plateau from the west are the snowclad peaks of Pomerape, Parinacota, Sajama and Huallatiri, all ranging from 20,000 feet to 21,600 feet high, and there are four other volcanoes that are almost as high. On the way to the ocean you pass several smoking volcanoes; and, scattered over the country, are mountains that surpass anything on the North American continent excepting Mount McKinley, in Alaska. The plateau itself is almost 13,000 feet high and in many places it rises far above that.

That gives one some idea of the general altitude of the republic. It must be remembered, however, that Bolivia has also vast tracts of lowlands. On the east the land slopes down to some of the large tributaries of the Amazon, giving it every fruit of the tropics and the temperate zones. Right here in La Paz you can buy bananas and oranges, and also apples, peaches and pears. Quinua, a grain that will grow only at 13,000 feet above the sea level, grows well on the plateau, and at the same time Bolivia has the rubber, cocoa and coffee which require tropical heat. The country has all altitudes, all climates and all sorts of resources. It can produce every crop known upon earth, and prospectively it is one of the richest lands of the world.

Bolivia Ranks Third in Size

I wonder if you have any idea of the size of Bolivia. Situated here in the heart of the continent, with a great desert between it and the ocean, it is the third largest of the South American republics. It contains altogether more than 700,000 square miles. It is one-fourth as big as the United States proper, six times as large as Great Britain and Ireland, more than three times the size of Germany or France, and three times as big as Austria-Hungary or the Spanish peninsula. The republic extends from north to south as far as from Canada to the Gulf of Mexico, and it is almost as wide as from New York to Detroit. All of our New England and middle states and all of the southern states except Texas, taken together, would just about cover Bolivia, and the high plateau upon which I am writing is so large that it would make more than eight Massachusetts, without touching the slopes of the mighty peaks that skirt some of its edges.

This mighty country is yet in the making. In other letters I shall describe its enormous resources in tin, copper, silver and gold, and also its vast pastures, upon which hundreds of thousands of cattle are now running wild. Bolivia is one of the most thinly populated of the good lands still left upon earth. It has, all told, less people than the city of Chicago, and the most of these are Aymara Indians, who work for the whites and mixed breeds, and who are of no creative force whatsoever. The country has only two or three people to the square mile.

Has No Large Cities

Bolivia has no large cities. This town of La Paz has perhaps 80,000, and the next town in size, Cochabamba, has only about one-third as many. This is so notwithstanding Cochabamba is located in one of the most fertile valleys of all South America. Sucre has less than 20,000, and Potosi, which has added more than $3,000,000,000 in precious metals to the wealth of the world, is still smaller. Cruro, the chief tin mining center, away down in the desert, does a great deal of business, but it has very few people, and altogether there are probably not more than 200,000 in all of Bolivia who are living in towns. Outside are large tracts that are given over to the Indians, and in eastern Bolivia are pampas covered with grass that are equal to the Argentine Republic in their wonderful fertility. Indeed, the whole of the republic is full of agricultural and mineral possibilities, and it awaits only the advent of capital and enterprise to make it become a live, active force in the work of the world.

The National Capitol

The movement toward the taking up of the wild lands of Bolivia and the investigation of their resources has already begun. I can see that great changes have been made within the last fifteen years. When I first came to La Paz I traveled across the plateau on a stage, and when I left here for Oruro, on my way to the sea, I rode for three days on the gallop behind a team of four mules. It was at Oruro that I caught the little narrow gauge railway that runs across the desert and nitrate fields to the port of Antofagasta. At that time La Paz had no railroads, and the most of Bolivia was accessible only by muleback and foot. Today there are three systems of iron tracks from the capital to the seacoast; and within a short time La Paz will be within three days by rail of Buenos Aires. The gap in the railroads at Argentina and Bolivia is now only about 100 miles, and this gap will be closed by iron tracks within less than a year from this writing.

Beginning of Railroad Era

The beginning of the railroad era here was the sale to Brazil of the Acre territory, near the headwaters of the Amazon. For this the government was paid over $10,000,000 and it was decided to use this sum for new railways. The money was taken to New York, and it was American enterprise and American engineers who laid down the first tracks of the system. Other moneys were borrowed and up to about a year ago more than $16,000,000 had been spent. There are now several lines under construction and the new roads projected are now more than 1,000 miles.

I can see great changes in La Paz. The capital has sprung into new life, and it seems to be more enterprising than Lima, although the latter is almost twice its size. New buildings are going up everywhere, and masons and carpenters are working in every part of the high basin in which the capital lies. The streets are full of traffic. As you go along them you are jostled by donkey trains and llama trains, and, I might also say, by trains of Indians as well, for much of the goods is carried through the streets on the backs of the natives. The city has now an electric car line, but the streets are so narrow that the cars have to run at one side, the trolley arms being fastened to the walls of the houses.

When I was last here there was not a public cab in the whole city, and you could number the private carriages on your fingers and toes. Now there are many four-horse cabs drawn by mules and also fine private turnouts that go galloping along up hill and down. When I came into the city my trunks were taken from the depot on the backs of Indian cargadores, who charged me about 20 cents each for carrying 200 pounds a distance of more than a mile.

La Paz Doubles Size in Decade

Within the last decade La Paz has practically doubled in size. It has extended out over the basin, and is beginning to climb the sides of the hills. The street car line now runs about two miles down the valley, through the crack in the sides of the hole where the city is built. There is one suburb called Baracas and another Miraflores. In the latter President Montes is said to own most of the property, and there Mrs. Montes is building an insane asylum as a charity for the capital.

The buildings in the heart of La Paz have been greatly improved. Right in the center of the city is a beautiful plaza filled with grass, flowers and trees, and on one side of this has been erected the new Bolivian capitol building, in which congress meets. On another side is the president's palace, or the white house of the Bolivian republic. It was there that I was received by President Montes. The building is being improved, and the masons are now working at it. I went up a staircase made of the purest white alabaster from the quarries of the Desaguadero river, not far away, and the magnificent parlor in which I was received was decorated with statues and paintings.

Just next to this palace building is the La Paz cathedral. It has been in course of construction for two generations and more, and parts of it have been torn down again and again. The walls are now about seventy-five feet in height, and there are some signs of their approaching completion. This cathedral is being built through a tax upon all the goods that come across Lake Titicaca. If I am rightly informed the levy is 10 per cent, and it is to be continued as long as the work of building goes on. There are some unkind skeptics who allege that the building will never be completed, as the makers are desirous of continuing the receipts from these imports. As to this I know not, but just now they are doing some work that seems useless, and the workmen are not pushing the job.

Business Increases Rapidly

The business of La Paz is far better than it has been in the past. Many of the stores that formerly were mere caves in the walls have put in plate glass windows, and large business buildings have gone up that would not be out of place in a town of the same size in our coun-

try. There are many fine residences on the outskirts. Some now building are like French villas. They are of two stories with very high ceilings. They are made of brick covered with stucco and, as usual, are of all colors of the rainbow. Others of the new residences are of Spanish architecture, running around patios in which are fountains and trees and beautiful flowers. Such buildings you find in the heart of the city. As you walk the streets you can look in through the front doors and catch a glimpse of the gardens. The rooms are built around patios, and nearly every one of them has a beautiful view. Many of the patios are used as the storehouses and stables for the donkeys and llamas that bring in the crops and other things from the country estates of their owners. Many of the business buildings were once residences, and their patios are now lumber yards filled with old boxes.

Some of the older stores are not unlike those I described in Cuzco. They are little more than caves lighted only from the front, the doors being set into the walls. Many of the people live on the second floors over such stores, the windows of which have balconies extending out over the street.

Painting Law Has Us Bested

There is one thing that adds to the brightness and business-like condition of the Bolivian capital. This is a law that requires every man to paint his house front at least once a year. The annual painting season has not long gone by, and just now everything is spick and span with bright colors. Another city provision is that every one must sweep the streets in front of the building in which he lives, and that every day.

And this brings me to the police and the soldiers. The government has a good army, which is organized and officered like the army of Germany. The soldiers are fine looking fellows. They are always on guard at the palace and capitol, and I see them marching back and forth through the streets. The police force is a good one, and the officials insist that each man shall give evidence that he is always on duty. One of the provisions causes a perpetual whistling throughout the night. Every quarter of an hour a shrill whistle is heard on every block. The noise comes from the policeman of that special beat. It is to warn the thieves of his presence and to show the authorities that he is awake. It reminds me of the cry of the policemen of Guayaquil, which is:

"El sentinel alerto," or in English, "The sentinel is on the alert." China has a similar custom in that the policemen there have a kind of a clapper with which they make a loud noise as they go about the streets, warning the burglars to keep out of their way.

Has Two Capitals

This country is in the singular position of having two capitals. The legal capital is at Sucre, where the supreme court holds its sessions and where is the seat of the archbishop. The real capital is La Paz. It is here that the president lives, here congress hold its sessions, and the real work of the administration is done.

The government of the republic is modeled much like that of the United States in that it has a president and a legislature who act as to federal matters; and a number of provinces and departments that are administered by prefects and subprefects, or, as we might say, by governors. There are nine departments and fifty-five provinces. The capital of each department has its municipal council, and the subdivisions have municipal boards. The territories in the northeast of the republic and in the Gran Chaco, on the border of Paraguay, are governed by two delegates.

The president of Bolivia has his cabinet just like President Wilson, and the legislature is composed of a senate and house, nominally elected by the vote of the people. The president receives a salary which at the current rate of exchange would be $7,200 a year. The senators get about $200 a month during the sessions, while the deputies or men of the lower house are paid $15 for each day they attend. These salaries are low, but I am told that some of the officials, like some we have in the United States, actually grow rich during their terms.

Mission Schools in Evidence

As to religion and education, Bolivia is rapidly changing. Roman Catholicism is the recognized religion of the state, but of late years religious liberty has been freely permitted, and there are now Protestant mission schools scattered here and there over the country. The Catholics receive from the state about $80,000 a year, of which $5,600 is devoted to the spreading of the faith among the Indians. The government gives some money to the Protestant mission schools. It annually appropriates generously toward the American institute of La Paz, and also to a similar school in Cochobamba I am told that it will give more to Protestant schools for girls as they are established. All of these institutions are under the American Methodist Episcopal church. They are doing great good.

As to the state schools, they are chiefly managed by the municipalities. Attendance in them is nominally obligatory, but practically only the whites and the Cholos go. Last year these schools numbered only 1,000, and they had only about 80,000 pupils. There are universities at Sucre and La Paz; and La Paz has a commercial school that is said to be good. It has an interesting museum devoted almost entirely to the history, archeology, ethnology and resources of Bolivia. There are also mineralogical museums at Potosi and Oruro.

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Management and Practical Value of Silos

(CONTINUED FROM PAGE FIVE)

by any of their customers regarding the flavor of the milk. So you need not be afraid to feed silage on this account.

Alfalfa as Silage

A good deal has been said and considerable inquiry has been made as to the value of alfalfa and other legumes as silage. We have in no instance found any farmers who have undertaken alfalfa in the silo. Some of the experiment stations have, however, conducted experiments along this line, and, while the experiments have not continued long enough to give any positive results, the opinion is that it is not profitable to put any of these plants in the silo when they can be cured for hay.

Prof. Reed of the Kansas Experiment Station gives it as his opinion that alfalfa put into the silo will make good feed for about three to four months, after which time it begins to lose its value rapidly as a feed. The Kansas station is making some varied experiments along this line, which will undoubtedly be of value for some definite information.

Hog Cholera--Prevention and Treatment

(CONTINUED FROM PAGE THREE.)

have urged farmers to form clubs and buy serum to be stored in the neighborhood, such serum to be used by the member of the club whose hogs have the first outbreak. In this way protection may be had with the investment of a small amount of money.

Best Methods to Use

In conclusion, we want to say we do not believe the continuous treatment by using the simultaneous method year after year is the best method of controlling or wiping out the disease. When the simultaneous treatment is used there can be no question but that in practically every herd so treated one or more of the hogs treated will throw off infection so it may be carried to other farms. If this is a fact, the ordinary hog raiser will not clean his premises thoroughly enough, which is pretty hard to do, to keep down the possibility of spreading the disease.

What we do urge is for every hog raiser to feed his hogs a good balanced ration. Use every sanitary precaution possible; keep the lice off them, the worms out of them; watch them every day, and when one gets sick take it from the herd immediately—just think the pig has the cholera, and if it hasn't you will be ahead. If you can't tell about this yourself, get some competent veterinarian. If your hogs have cholera, don't lose a minute in getting them vaccinated. If you have clean, potent serum available for use at once, you don't need to have any very great fear of much of a loss.

We wish to assure our readers that it has been a pleasure to the management of this paper to publish these articles, and if we may know their publication has been a benefit to anyone we will feel more than repaid for the time and money expended in the work.

Introducing a New Breed of Dairy Cattle

(CONTINUED FROM PAGE FOUR)

sitive cow as could the hand milker, who would whistle or sing in a low, mellow tone some enchanting tune, while the cow dozed off, half asleep under this magnetic influence. But the mechanical milker, if there be any difference, has surpassed the human hand with its gentle touch and its soothing influence.

Character of the Herd

Among the producing cows of this herd there are some very fine specimens—cows that stand behind records that are highly creditable to any herd. These cows, while well provided for, are not pampered or fed to see what they are capable of doing. They are treated like any herd of good, ordinary milkers, go out on the pasture and rustle for what they want, exercise to their hearts' content and show a vigor and activity that indicates health and comfort.

It will be of special interest to the breeders of Ayrshire cattle to know that this herd is being established under such favorable conditions of development, and in the very heart of the western dairy district where the improved breeds of dairy-bred cattle must sooner or later become a recognized factor in popularizing the farm dairy industry. That a high standard will be established in quantity and quality of milk, to which every cow on this farm must score if she maintains her place in the herd, is the avowed declaration of the managers of the Loveland Farms company.

By the Wayside

You cannot get a bushel of service out of a peck of ability.

Do not be content with following good advice; catch up with it.

When you see a man's wife sifting the ashes, it is not safe to conclude that he is washing the dishes.

Borrowing on your life insurance perhaps makes it easier for your wife, but undoubtedly harder for your widow.

The boy who can beat his father in a hundred-yard dash ought to be able to beat him in a sprint to the woodpile.—Youth's Companion.

Fresno county (California) creameries are reported to have paid out $75,000 to producers in that county in a recent month. And this in spite of the fact that only a few years ago there was no such thing as a creamery in Fresno county.

Nearly 3,000,000 young trees are being set out this spring on the national forests of northern Idaho and Montana. On the St. Joe national forest in Idaho 3,000 acres will be planted.

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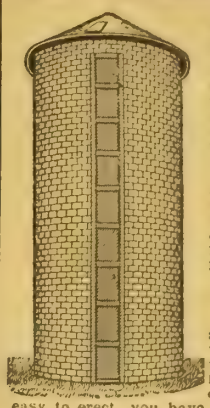

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silo is built of curved vitrified clay blocks, with channel steel door frame. It is the only one of its kind, it is easy to erect, you have a dead air space in the blocks, and they are made strong enough to place a water tank on top of silo, thus providing fire protection as well as water pressure anywhere you want. The value of this cannot be over-estimated.

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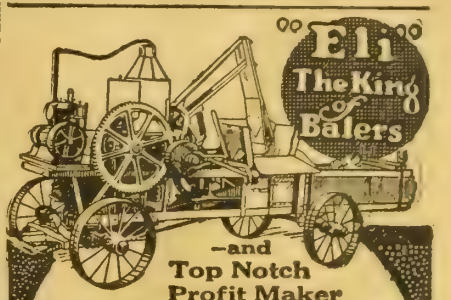

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Eureka Hog Oiler

The only rubbing post of which the valves will not open and waste oil when a hog lays down against it.

$1.00 a year buys the post and rids your hogs of lice, mange and skin diseases. Can you afford it?

Adaptable to hogs of all sizes.

The price is right, 30 days' trial. Send for circular and iron-clad guarantee. Agents wanted in every locality.

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Dept. 500, Council Bluffs, Ia.

GALVANIZED GRAIN BINS

These are the original and perfect Grain Bins and Corn Cribs.

Warranted to protect your grain against rats, storms and fires, never to burst, give perfect ventilation, made from best material obtainable.

Does not break, rot or burn, lasts a life time, COSTS LESS than a wood grainery or corn crib.

We make all sizes, from 150 to 2,500 bu. bin capacity at lowest prices.

Write now for free circulars of Grain Bins, Perforated Corn Cribs, Hollow-walled Metal and Wood Silos, Cypress and Metal Tanks, Culverts, etc.

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Now is the time to get ready to sow alfalfa. July and August good months. Get our book, Alfalfa, The Wonder Crop, Free. Full information on how to successfully grow alfalfa. How to prepare the ground, protect and harvest. Earn 7% net on $1,000 an acre. Also tells about "NITRAGIN," the famous inoculator. Write today.

Galloway Bros.-Bowman Co., 265 Galloway Station, Waterloo Iowa

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Do You Know Colorado Climate?

Most every Daily and Weekly paper is singing its praises and every one is urged to spend their vacation there.

Thousands have prolonged their lives many years by living there.

A large part of the people you meet have gone there for catarrh, asthma or consumption or some disease of the respiratory organs.

The constant breathing of the rich ozone gives new impetus to the flow of blood and ere long the whole system is invigorated.

An Ex-Congressman said to the writer: "I was a 'one lunger' when I came here twenty years ago. You see I have the promise of thirty years yet." No one would suspect he had but one lung. There are many thousands such illustrations there.

That Colorado climate is the greatest vitalizing tonic known is not questioned. If it's so good for the afflicted it should be equally good for the healthful. To rear a family no better place can be found. Good food, good water and Colorado climate makes stock raising easy and sure and very profitable. **West Farms** has all these in the fullest measure. The cost of **West Farms** is very little in comparison with where you are and yet the land will yield as much per acre and you can sell same for as high if not a higher price so that the profit is likely to be greater, and the upkeep is nowhere near as large, while the increase in value per acre will likely be a great deal more because of the new development.

Health, wealth and contentment is yours at **West Farms.** We make it easy to see our lands by standing part of the expense and showing same in our own automobile which takes only a few hours. Our folder is free. It will interest you. Write N. P. West, Pres't.

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Your Home in the Red River Valley Cannot Be Surpassed

Some reasons why you cannot be better situated.

FIRST—You have a deep rich fertile soil, producing a large range of crops most bountifully.

SECOND—There's a most healthful climate.

THIRD—Transportation is most favorable for your products can be taken to the great primary market in a few hours.

FOURTH—Timothy and clover grows luxuriously, alfalfa and other grasses also do well.

FIFTH—Your family can live on the "fat of the land" for it's a capital place to produce small fruits, eggs, milk, etc.

SIXTH—Here you have good roads, rural delivery and telephones—social and educational advantages are good.

Your choice of 100 improved farms at very low prices and on very easy terms. Write today for our fine illustrated booklet free.

RED RIVER VALLEY LAND CO., FARGO, N. D.

Big Crops in Colorado!

Last chance to buy land at present low prices. Winter wheat promises to make 40 bushels per acre on dry lands. We own 13,600 choice acres, Weld County, near Carr. Denver only 85 miles, Greeley 30. Near mountains. Fine climate, beautiful scenery. Your choice of lands at $15 to $30 per acre, easy terms. Smith estate lands being closed out. Don't miss this. Write at once for plat and particulars.

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Threshes Cow Peas and Soy Beans from the mown vines, breaking less than 2 per cent. Also threshes Wheat and Oats. "The machine I have been looking for for twenty years."—Prof. W. F. Massey. "A machine that will meet every demand."—Prof. H. A. Morgan, Tennessee Experiment Station. Nothing like it. Booklet J-K free.

KOGER PEA & BEAN THRESHER CO.,
Morristown, Tenn.

Binder Twine FACTORY TO FARM

Quick shipment. Free Samples.
AUGUST POST, Box 50, Moulton, Iowa.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Potatoes Caught by Hail

S. C. S., Nebraska: There was a destructive hail storm here yesterday. I was talking with a man this morning who has fifty acres of potatoes that have been hailed pretty hard and the stalks mashed up. I saw an article in your paper some time ago about a man in Scott's Bluff who had potatoes hailed and he went out with the mower and cut the stalks off and cultivated the stubs under and raised a large crop, where others were a failure. The stalks were about eight or ten inches tall and potatoes had started to set. Would you please advise what is the best step to take in this?

Answer—It could not have been our paper that published the article you recall. We have made inquiries among a number of best potato growers in Nebraska, who say they would not advise doing anything to the potatoes. If they were in blossom before the hail storm they will probably come out all right, and if not, these growers believe, nothing will be gained by plowing under.

Peanuts

L. F., California: I would like you to tell me about the raising of peanuts.

Answer—Peanuts are a crop that is not raised in this part of the country or the greater part of the corn belt. We would, therefore, be unable to give you any information except what we might be able to get out of books. The government has published a bulletin giving very careful and detailed instructions for peanut growing. This may be secured by addressing the Department of Agriculture, Washington, D. C., anl asking for Farmers' Bulletin No. 431. This bulletin shows that practically all of California is included in the peanut belt.

Goats for Milk Purposes

We are in receipt of inquiries as to where goats may be obtained for milking purposes. One of these inquiries is from Nevada. Information as to where milk goats may be obtained will be gladly received by this paper.

Sows Weak in Hind Legs

H. I., Nebraska: I wish to ask if you can tell me what is the matter with my sows. Just before weaning they get lame in the legs and are unable to stand. The hind legs are the worst. They have alfalfa pasture, corn and some milk. Suckled pigs about two months, but they did not get so very thin. Now their appetites are poor; they refuse alfalfa and eat little corn, but eat the weeds about the place I mow for them. They move around by dragging themselves, walking on their fore feet. I am a reader of the Twentieth Century Farmer and think it a fine paper. My wife says she would not be without it.

Answer—It is possible that the trouble may be rheumatism, but it is more likely paralysis. The causes for this are so numerous that it would be impossible to tell you what to do without an examination. Would advise that you secure the services of the best veterinarian possible. He may have to make a post-mortem examination to determine the cause of the trouble. If this is necessary, it would pay you to kill the sow worst affected to have the examination made. We have taken this up with a veterinarian here who has had an unusual amount of experience with hogs, and he says that it is impossible to give helpful advice in this case without being on the spot and examining the hogs. Thank you. We are glad the Twentieth Century Farmer is of value to you.

How Much Rent?

I. J., Nebraska: A friend of mine wants to make out a rental contract. Please advise me about the same in your paper. The farm is worth $150 per acre, with good buildings, orchard and good soil, well drained, and owner has offer of $5 per acre cash. What would the proper rent be under the following conditions, with both the owner's and the renter's interests taken into consideration: Owner furnishes farm, with 100 acres of plow land, sixty-five acres alfalfa and seventy acres pasture; twenty cows for milk, costing $125 each; ten brood sows, and the chickens. Renter furnishes the labor, horses and implements?

Answer: For this farm it would seem that $5 per acre would be a very small rent. It would certainly not pay the owner to rent at that price. Judging from past experience in renting farms, would say that, under such conditions a half and half division would be equitable. Agreement should be made that as much grain, forage, etc., as is needed be used for feeding the animals on the place, the balance to be sold and the proceeds of all sales from the farm

Fall and Winter Fair Dates

Date.	Name and Place.	Sec'y or Mgr.
Aug. 26-Sept. 4	Iowa State Fair, Des Moines	A. R. Corey
Sept. 7-11	Nebraska State Fair, Lincoln	W. R. Mellor
Sept. 12-19	California State Fair, Sacramento	J. L. McCarthy
Sept. 14-18	South Dakota State Fair, Huron	C. N. McIlvane
Sept. 14-19	Colorado State Fair, Pueblo	J. L. Beaman
Sept. 21-26	Montana State Fair, Helena	A. J. Breitenstein
Sept. 21-26	Interstate Live Stock Fair, Sioux City, Ia.	Joe Morton
Sept. 21-26	Interstate Fair and Live Stock Ass'n, St. Joseph, Mo.	H. L. Cook
Sept. 29-Oct. 2	Wyoming State Fair, Douglas	Anson Higby
Sept. 22-Oct. 3	Oklahoma State Fair, Oklahoma City	I. S. Mahon
Oct. 7-17	International Dry Farming Congress, Wichita, Kan.	Ralph H. Faxon
Oct. 7-17	International Congress of Farm Women, Wichita, Kan.	Mrs. Mary Pierce Van Zile
Nov. 16-24	American Royal Stock show, Kansas City	T. J. Wornall
Nov. 28-Dec. 5	International Stock Exposition Chicago	B. H. Heide
Jan. 18-23 '15	National Western Stock show, Denver	Fred J. Johnson

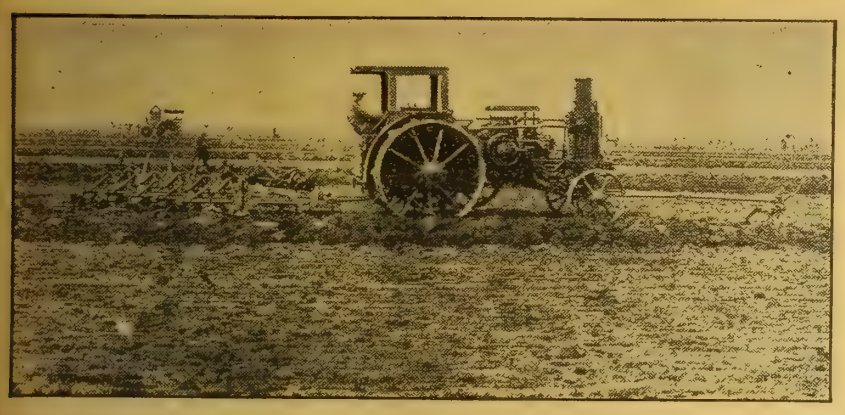
to be equally divided, or an inventory taken at the end of the rental period and equal credit given each party.

How Do Dandelions Spread?

C. G. C., Missouri: Please inform me, in your Readers' Exchange column, if dandelions, when cut off just below the surface of the ground will sprout again from the root? I had supposed that they would not, and that they were propagated from the seed only, until I saw the article on dandelions in your issue of June 20.

Answer — Dandelions will sprout from the root. It is a question just how much of the root must be left to grow a new top, but it is very certain that the plant will grow again unless at least two or three inches of the root are cut off. The dandelion is rapidly becoming one of our most serious weed pests, taking the meadows and pastures as well as the lawns. We have even heard of some parts of the west in which the alfalfa fields were suffering. For the lawns, digging the plants will help if it is done consistently and constantly, and if the lawns are not close to some field from which the seed blows. In this case it is worse than nothing, as it keeps the ground cultivated for the reception of the seed. The only way that seems practicable to keep down this pest is to let the grass mature and drop its seed before cutting. This will eventually choke them out.

Entries in Fremont Tractor Show



The demonstration of the various makes of farm tractors held at Fremont last year proved of great value to prospective tractor users, permitting them to see the different makes in operation and note the qualifications of each and decide what kind would be best suited to the conditions on their farms. This year the demonstration will be held at Fremont, Neb., August 17 to 22. A number of tractor and plow companies have already entered, and we will show you the photographs of each of these machines in future issues of this paper. The tractor shown above is the Avery.

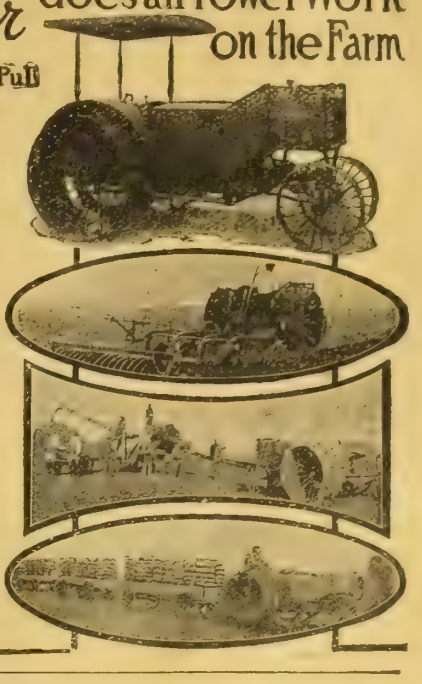
The lower photograph shows the work of the P. & O. gang plow, which will be seen at the Fremont demonstration.

Tractors in Use in North Dakota

In the Red river valley in North Dakota, tractors are used extensively to cultivate their large and prosperous farms. The wheat yield in this country is between twenty and forty bushels per acre, and barley, oats, rye, flax, potatoes and other root crops are correspondingly large.

The Sandusky Tractor does all Power Work on the Farm

The Little Fellow with The Big Pull



The real one-man outfit; powerful enough for 400 acres, handy enough for the small farm. We GUARANTEE:

More horsepower per pound than any other tractor built—15 tractive, 35 brake horsepower with 80% surplus for emergency; and that it exerts less purchase per square inch than man or horse, or any other tractor of equal power.

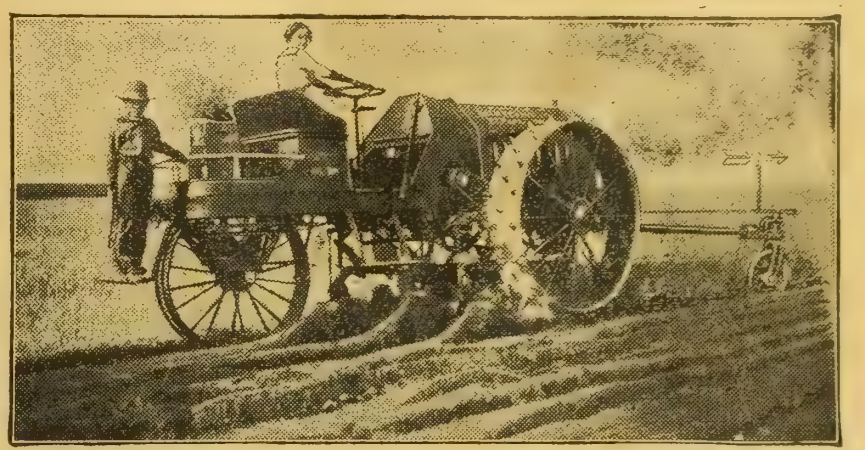
Does 5 times the plowing of horses and 25 to 50% deeper—think what that means in time saved and bigger crop yield!

Right size and power for 101 uses on the average farm, such as plowing, harrowing, drilling, mowing, threshing, hauling, pumping water, road building, etc.

Backed by 10 years of successful manufacture. 4 cylinder motor, 3 speed control. Simple design; absolutey reliable. We demonstrate to your entire satisfaction.

Our new booblet "Power on the Farm" contains information helping you to reduce farm operating costs and increase profits. Get your copy—it's Free.

The Dauch Mfg. Co., DeptTC-6 Sandusky, O.



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THE "ONE-MAN" OUTFIT

Gasoline-Kerosene-Burning Motor—Heavy Transmission—Leads the Word as a Combination Tractor and Farm Power Machine for Plowing, Seeding, Discing, Harrowing, Harvesting, Road Grading, Orchard work, Hauling, Grinding Feed, Sawing Wood, Threshing, etc. Send for our literature.

HACKNEY MANUFACTURING COMPANY, 574 Prior Avenue, St. Paul, Minn.

SAVE YOUR ALFALFA

BY USING A

Rogers Tent & Awning Company Stack Cover

You will save several times the price of one of our stack covers on one crop of alfalfa. Our prices are right and we guarantee the quality and workmanship to be of the very best. There are many uses to which these covers can be put, as well as the protection of your hay crop. You won't know how you got along without one. All orders are filled promptly. For prices address

ROGERS TENT & AWNING CO., Fremont, Neb.

GRAIN BELT BRAND

Vegetable Hog Potash

A perfect worm expeller and preventive.

A bone bui der, an appetizer and conditioner, a mineral balancer.

This is a most valuable product to feed the pigs at weaning time. It serves to keep the bowels regular, keeps the pig free from worms, aids digestion and keeps the pigs in a healthy, thrifty, growing condition, thereby giving them more resisting powers against disease A natural vegetable product, free from any injurious ingredients Can be fed with equally good results to brood sows suckling a litter, to suckling pigs and growing stock; in fact, any hog from birth to the slaughter house.

BIG TYPE MAKER

Manufactured by Union Stock Yards Company of Omaha (Limited) South Omaha, Neb

Distributed by

GRAIN BELT SUPPLY COMPANY,

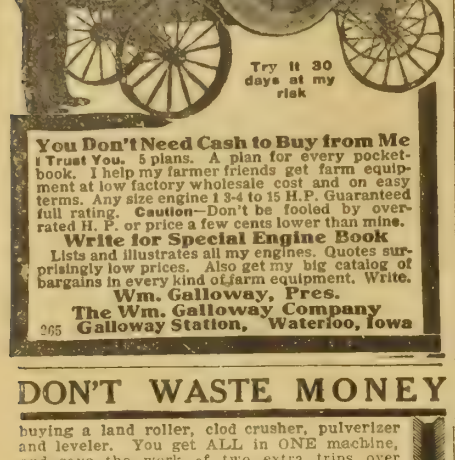
SOUTH OMAHA, NEB.

Save Engine Money

Galloway 15 H.P. Mogul Burns Gasoline Kerosene, Naptha, Motor Spirits.

Even burn Natural Gas. Saves you money because you can burn whatever fuel is cheapest or easiest to get. Starts easily, runs smoothly and gives full power, horse power that is horse power.

4-cycle water-cooled. Equipped with our famous Hercules cylinder head which insures perfect combustion, cooling compression and consequently perfect power. Don't buy an engine of any make or kind at any price without first getting my proposition. Make and break governor. Steel trucks and wheels. Used for thresher, ensilage cutter, any heavy farm work.



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Write for Special Engine Book

Lists and illustrates all my engines. Quotes surprisingly low prices. Also get my big catalog of bargains in every kind of farm equipment. Write.

Wm. Galloway, Pres.
The Wm. Galloway Company
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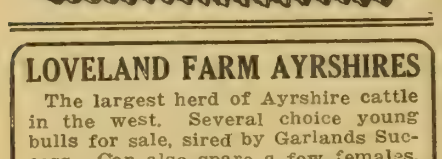
buying a land roller, clod crusher, pulverizer and leveler. You get ALL in ONE machine, and save the work of two extra trips over the plowed ground, when you buy the

IMPERIAL PULVERIZER

and it is the ONLY machine that packs the subsoil, and leaves the surface loose. Makes the best seed bed. Soil retains moisture and produces bigger crops.

Write today for Booklet

Peterson Mfg. Co., 174 River St., Kent, Ohio



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The largest herd of Ayrshire cattle in the west. Several choice young bulls for sale, sired by Garlands Success. Can also spare a few females.

LOVELAND FARM
R. F. D. No. 1, Station B, Omaha, Neb.

DUROC-JERSEY HOGS

DUROCS AND RED POLLS

25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed.

GEO. W. SCHWAB, Clay Center, Neb.

RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

W. P. SCHWAB, Clay Center, Nebraska.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

To promote general prosperity and their own business, bankers in many parts of the country are buying pure-bred Holsteins by the carload and selling them on time to the farmers of the community.

Every year it becomes clearer that with large-yield cows the cost of milk and butter production can be brought down to a point that makes dairying profitable.

A herd of pure-bred Holsteins is an investment that combines safety with large dividends.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Secy., Box 179, Brattleboro, Vt.

Review of Live Stock Market

By A. C. Davenport

WITH the year half gone, the figures, showing the movement of live stock for the first six months of 1914 are of great interest, giving, as they do, an idea of the course of business for the entire year. During the six months there has been a decrease in the receipts of cattle at the six big market points of 370,000 head, and there is nothing at the present time to indicate that this shortage can be recovered during the latter half of the year. On the contrary, if receipts do not show a still greater decrease by the end of the year, many stockmen will be surprised. The six big markets also show a shortage for the six months of 810,000 hogs, while eleven markets show a decrease of 595,000, as compared with last year, and of 1,710,000 as compared with 1912.

Whether the shortage in hogs will be made good before the close of the year no one can say, for the reason that there are so many contingencies that might increase or decrease the supply available for market during the next six months. The pig crop as a rule was large and should the corn crop prove to be as good as present prospects would indicate, the abundance of feed would naturally cause farmers to take good care of their hogs, especially as current prices are so high. On the other hand, cholera was very bad last year, and there are good reasons for expecting outbreaks of the disease the coming fall, as farmers' feedyards and pens must be in many cases still infected with the disease. On the other hand, hog growers are pretty well convinced of the efficiency of vaccination and it is believed that at the first signs of cholera outbreaks they will vaccinate their hogs. Taking everything into consideration it is only reasonable to assume that there will be very liberal marketings of hogs later on in the year, and especially during the first two or three months of 1915. The big runs, though, may not come in time to make good the shortage of 1914.

Receipts of sheep at the six big markets show an increase of over 500,000 head for the six months, and if reports from the western range are to be credited, receipts will continue large throughout the remainder of the year. It is more than likely that the increase shown at the present time will be well maintained, if not enlarged, before the close of the year.

Cattle Market High

Market conditions the country over have shown no very great changes during the last week or more. Cattle values so far as fed stock is concerned have been very well maintained. The market in fact has been in a good healthy condition, the best beeves selling well above the $9.00 mark at all the big centers. Grass stock has shown more or less weakness, but the decline has not been as sharp as usual at this season due to the moderate receipts. While buyers evidently have use for all the cattle coming forward at the present time, there is very little expectation that present prices will be materially advanced. As noted before in these columns the market is already so high that it would hardly seem possible that consumers can afford to pay much additional advance, and that if prices were to move upward it would very likely result in a reduced consuming demand. Very few grass cattle have as yet appeared at northern markets, but a few straggling shipments are expected during July. As a rule, however, range shipments for that month are very moderate, and August will likely be at hand before the markets of the country will really be on a grass cattle basis.

Gradual Increase in Hogs

Hogs have been fluctuating within narrow limits, little change having taken place during recent days. Still there has been a gradual creeping upward during the month of June, prices being around 30 cents higher than at the close of May. Packers of late have acted very much as if they wanted the hogs, although as a matter of fact they have fought tooth and toenail against every advance, being apparently afraid that the market if once started might run away with them. Thus, while the trade on some days has been slow, owing to the determination of the bulls in the selling crowd to force the market upward, and to the equally strong determination of the bears among the buying contingent to keep it down, still the market throughout the month of June has been in a good, healthy condition, with prices the highest for that month in the history of the trade, excepting only June, 1913, and June, 1910.

Slight Weakening on Sheep

Sheep and lambs are still bringing very strong prices, but the expected easing off in values mentioned a week ago has taken place. There has been a general weakening due to somewhat liberal receipts, but the market is still high and it would surprise no one should there be a still further decline. It will depend very largely upon the receipts. Packers evidently have use for a liberal supply and have been very good buyers for some time back. At the same time they feel, apparently, that the market is high and if range men send them in a little too rapidly there can be no question but what packers will do their best to secure a still further revision downward of current prices. The feeling among sellers, however, is very good, as they realize that range lambs can sell considerably below what they are now bringing and still be good money makers.

Hay is Now Big Commercial Product

HAY as a commercial product is gradually pressing its claims upon the attention of the farmer and producer. Not many years ago the native hay crop of all this western country was recognized as a farm and ranch feed only. It had no shipping demand. Each neighborhood and locality provided its own supply, and when this was done, hundreds and thousands of good hay grasses were burned because the hay was not needed and there was no shipping demand.

As towns and cities sprang up and the cultivated lands increased and the farms filled up with live stock, there grew to be a demand for this surplus hay. Hay lands that were viewed as valueless except for the low-priced feed they produced, began to be in demand and each year has observed a strengthening in prices, until now the hay valley is the most cherished acre on the farm.

The native prairie hay, as it is found all over the Missouri valley district, has a feed value that makes it quite popular throughout the markets of the country where it has been tested. The harvesting properties of these grasses are a strong feature in their adaptability to commercial uses. These grasses do not mature quickly and then deteriorate quickly after ripening, as is the case with most tame hay grasses; on the contrary, as soon as they acquire a hay growth, they may be harvested in their green form, and will cure into an excellent quality of hay. This slowly maturing property of the unripe native hay grasses makes it possible for a good quality of feed to be procured from the native haylands throughout a long season of harvest; thus the majority of the native hay grasses may be cut covering a period approximately from July 1 to September 1 and will make a good quality of hay.

The great demand for hay which has resulted from the building of cities and towns all over the western prairie country make a hay-growing industry for commercial purposes a necessity. Take it in all its relationships, as a feed product, and there is no other crop more extensive or important. The large native hay valleys along the streams are growing smaller and smaller in area, as the recognized more important and surer merchantable crops have influenced the plowing up of these acres.

The native hay meadow is decreasing, while the tame grass meadow is increasing. The thousands of acres of alfalfa that are being added each year to the hay production of the western country do not add proportionally to the shipping resources, except as the alfalfa is made to take the place on the farm of the native hay. Alfalfa is recognized as a good hay and feed for the cattle, sheep and swine on the farm, but as a shipping food and horse hay it has not been able to take the place in the city markets of the native prairie hay, except as it relates to city dairy demand. Neither has there been a hay of any tame grass variety baled and put on the market that will sell equal to the native hay; it seems to have established for itself a market that cannot be turned aside or influenced in the favor of rival grasses or fodders.

The commercial feature of the hay crop is not entirely a matter of one particular season, since the spring and summer shipments are used in carrying hay-fed stock through the entire year. The commercial hay trade will each year tend to improve and better methods of handling the hay will secure good results in quality. A close discrimination in quality and condition and a just scaling in prices will do much to raise the standard. The native hay is not susceptible to injury or damage from rain as tame hay, either in swath, windrow or stack. It is a compact, solid hay, but cures easily and has comparatively little tendency to mold.

The hay crop is one of the best money-making crops on the farm, when all features of investment and expense are taken into account. The only attention it demands, aside from the harvesting, is to be securely fenced clear of stock at all seasons of the year. Meadows may be pastured to advantage in the autumn season, but must be carefully guarded from damage by cropping too close and by tramping in wet, soft weather.

The hay farm should be supplied with the best up-to-date haying machinery and appliances; this reduces the expense and increases the chances for profit. Haying must be carried on systematically and intelligently, with enough help to keep everything moving, but no more. The important thing is to get the hay in stack without rain; stacks must be well built and securely topped to keep out all water-soaking, except a little wetting, which cannot be avoided. The saving of the native hay meadows and the giving of more attention to the putting up of an extra quality of commercial hay will justify the effort, as hay prices are destined to increase from year to year in proportion to other crops, instead of decrease. The crop of greatest value in all this live stock-producing district of these United States is grass, hay and pasture.

Ninety-Three Miles an Hour

A new Zeppelin dirigible which recently landed at Berlin after a thirty-six mile flight from Friederichshafen, made the amazing speed of ninety-three miles an hour. This is nearly twice as fast as any Zeppelin has hitherto traveled.

Dreaded Diseases Traced Back

It seems a little late to diagnose the diseases of Copts who died in Egypt fourteen hundred odd years ago, but a physician has done it. He has examined the mummies—they are not really mummies, for the bodies were preserved by the dry air of the Nile valley and not by artificial means—and finds that some of them died of tuberculosis and others of malaria. He finds also that most of them suffered from pyorrhoea, which is the same thing

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We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

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PERCHERON HORSES

Five from 2400 lb. imported sire and part from 2200 lb. imported sire and imported dams, my 2, 3 and 4 year old registered Percheron stallions would prove valuable breeders for you. With all their weight and bone they are dressy and straight sound. This is some of the most substantial and most attractive Percheron breeding material in the world. Farm raised and offered at farmer's prices. Just east of Omaha.

FRED CHANDLER, R. 7, Chariton, Ia.

as Riggs' disease of the teeth. Their teeth are thickly covered with tartar—a fact that shows they knew not the use of the toothbrush.

More Hog Cholera Instruction

Another hog cholera day at the Nebraska University farm has been set for July 8, to which every person interested is invited to attend. No charge will be made. At the first meeting, held recently, a representative number of hog raisers were present from different parts of the state. It proved to be so popular that the program of offering instruction on vaccination and other phases of hog cholera prevention on the second Wednesday of each month will be carried out as long as the demand warrants. The visitors on July 8 will inspect the serum plant, see the different processes of making serum and virus, and witness the vaccination of hogs. They will also examine cholera-infected hogs and the carcasses after the post-mortem examination is made. From the post-mortem examination the stockmen are expected to become familiar with hog cholera diagnosis. Lectures on cholera prevention, as well as on other topics of interest to hog raisers, will be given. Instruction will begin at 9 o'clock and last throughout the day.

Many of the fires attributed to railroads are caused not by sparks from locomotives, but by cigar and cigarette butts thrown from smoking-car windows.

Apple wood is the favorite material for ordinary saw handles, and some goes into so-called brier pipes.

Canada in 1913 shipped 1,270 horses, valued at $346,450, to the United States.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Van Patton & Son's Durocs

Gilbert Van Patton & Son, Sutton, Neb., were among those we called on last week, and as usual we found them with a very nice lineup of young Durocs on hand. They have something over 100 head of spring pigs, and, taking them as a whole, they are about as uniform a lot as we have seen in some time. It is always a pleasure to call on this firm, for we are assured in advance that we are going to see something worth while. No man in the Duroc business stands higher than the senior member of this firm, who is primarily responsible for the upbuilding of this great herd of hogs. Gilbert Van Patton is a constructive breeder in the strictest sense of the word, and no one herd in Nebraska has to its credit more show and breeding hogs that have gone out and made good than this one. It is a well known fact that in order for any breeder to be successful, it is necessary for him to have in mind at all times a distinct type, and it is also necessary that he bend his every energy to bring this type to the highest possible state of perfection. Mr. Van Patton has probably won more ribbons than any breeder in the west, and his hogs come about as near going out and making good as the next ones. The pigs this year are sired largely by that grand old sire, Uneeda Crimson Wonder, without question one of the greatest breeding boars living today. There are also others sired by Model Wonder, Chief Select 2d, High Model 2d, King the Colonel and others. These pigs are mostly of March and April farrow. Messrs. Van Patton & Son will be at the fairs this fall as usual. They have a choice lot of stuff coming on and will surely be in a position to make the other fellow sit up and take notice. They have several extra good junior and senior yearling sows and a junior yearling boar by Uneeda Crimson Wonder that is liable to cause someone some trouble. Keep this herd in mind and remember that when you are looking for a herd boar this fall, you will find something here that will surely please you.

Willard Robbins' Durocs

We called on Willard Robbins, breeder of Duroc-Jerseys at Lyons, Neb., last week and found him busy in the clover field, but still willing to take time to show us his herd of Duroc-Jerseys. We were agreeably surprised here, as we found one of the very choicest lots of spring pigs it has been our pleasure to look over for some time. Mr. Robbins has been in the breeding business for a good many years and been very successful in developing a type of hogs that meets the popular demand. His pigs this year, of which there are eighty head, are sired by Longfellow by King the Colonel, Crimson King by King the Colonel and others. Crimson King, in our opinion, is one of the best sons of King the Colonel we have seen in a long time. He is big, smooth, with strong arched back, good head and ear and just about as good feet and bone as it is possible to get. He is out of the great brood sow, Crimson Lady 2d, a sow strong in the blood of Crimson Wonder. One of the choicest litters we saw was by Crimson King. There are eight especially good ones in this litter. The other extra good litters are by Longfellow and out of granddaughters of Col. Tippy. Mr. Robbins has a nice growth on his pigs; they have plenty of stretch, extra good bone and are coming along in dandy shape. He will have some mighty choice young males to offer for sale a little later on. He wil also hold a bred sow sale, the date of which will be announced through these columns in a later issue. Keep this herd in mind and write him, when you want anything, mentioning the Twentieth Century Farmer.

E. H. Carpenter's Durocs

While E. H. Carpenter of Fontanelle, Neb., has only fifty-five head of spring pigs this year, yet he makes up in quality what he lacks in quantity, for he certainly has a dandy nice lot, and they are coming along just about right. They are of the correct type, with plenty of stretch and bone, and will have the size when the time comes to offer them for sale. Of this fact you can rest assured, because there is no man in the business in Nebraska who can grow them bigger than Mr. Carpenter. The pigs are sired by Carpenter's Golden Model by Golden Model 4th, Blue Ribbon Model Jr. and Wallace's Sensation. There are also some good ones by Valley Chief by Valley King. One of the best litters is by Blue Ribbon Model Jr. and out of a dam by Prince Critic. There are six extra good pigs in this litter. Another litter of good ones we want to mention is by Jumbo Colonel, a boar of considerable prominence in Iowa during the last season. Besides his spring pigs, Mr. Carpenter has about forty head of fall gilts, and among them are some corking good ones. He will select the material for his winter sale from among these, and if we are any judge he will have a lineup to offer that will certainly be worth looking at. Keep his herd in mind and watch these columns for further announcements.

Red Polls for Sale

Anyone in the market for an extra choice Red Polled bull will find it to his interest to write W. F. Schwab of Clay Center, Neb. Mr. Schwab has one of the largest and best herds of Red Polled cattle in Nebraska, or the west, for that matter. He has a herd that has been established for years, strong in milking qualities and possessing an abundance of scale and quality. His cattle are all of his own raising and are the strong, rugged kind that will go out and make good in any herd if given proper care. If you are looking for a bull or a few choice females, you simply cannot go wrong by getting in touch with Mr. Schwab. His cattle are right and he is pricing them worth the money. Kindly mention the Twentieth Century Farmer when writing.

Sale Dates

Duroc-Jersey Hogs

October 2—F. B. Nelson, Lindsay, Neb.
October 2—F. A. Lemmerman, Creston, Neb.
October 5—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.

The Market Place
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Count every word, initial and numeral, including the address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred five thousand farmers are regular paid-in-advance subscribers to TWENTIETH CENTURY FARMER If you have any wants or if you have anything to sell, insert an ad. in this department.

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COME TO OTTERTAIL COUNTY, Minnesota. Fine climate and pure water. Rich corn and alfalfa lands for sale on easy terms. Write for information. Fred E. Hodgson, Fergus Falls, Minn.

CORN AND CLOVER LANDS IN central Minnesota. Low prices. Reasonable terms. Write Murray, Wadena, Minn.

FOR SALE BY OWNER—QUARTER of the best lying land in Pipestone county, Minnesota; unimproved; all in timothy meadow; 2 miles north of Troskey. Would exchange for land farther north. For particulars write Jacob Ohlsen, Melvin, Ia.

Montana

JUDITH BASIN, MONTANA, FARMS—Come to Lewiston. Can show you growing wheat yielding fifty bushels per acre. Write to Farmers' Land Co., Incorporated, Lewiston, Mont.

Oregon

OREGON STATE PUBLICATIONS Free—Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions; they will have painstaking answers. We have nothing to sell. Address Room 110, Portland Commercial Club, Portland, Ore.

Wisconsin

SUCH BARGAINS ARE SCARCE—Only $32.50 per acre for a good 80-acre farm three miles from Centuria, Polk county, Wisconsin; 18 acres field, more cleared. Rich clay loam soil; neat frame house, 18x28; good barn, with room for 20 head; first-class hay shed, chicken house and hog house. Buildings in nice grove on main road. A bargain. Write Baker, D-67, St. Croix Falls, Wis.

POULTRY—Leghorns

FOR SALE—150 YEARLING SINGLEComb White Leghorns, healthy and good looking, including my winners. Good layers. Ivar Johnson, Fremont, Neb.

Orpingtons

PRIZE-WINNING BUFF ORPINGtons—Eggs, $4 per 100; stock, $10 per doz. Mrs. Cook, Eddyville, Neb.

Rhode Island Reds

COVALT'S SINGLE-COMB REDS—This month, half price—yearling hens, fine breeders, $1 and $2 each. Scott Covalt, Council Bluffs, Ia.

Wyandottes

WHITE WYANDOTTES—EGGS HALF price. Best strains in America. White Wyandotte Farm, Oscar L. Bock, Prop., Council Bluffs, Ia.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTYthree pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

SEEDS

ALFALFA SEED—DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

I AM IN THE MARKET FOR CLOver, timothy, alfalfa, cane and millet seed. Send samples. I have a large, select stock of all these seeds for sale. Werter DeVaughn, 1614 Harney St., Omaha, Neb.

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PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

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FORD OWNERS, READ THIS—THEN send for our free catalogue. Everything for your car. We sell direct. You save money. The Ford Supply Co., 2129 Farnam, Omaha, Neb. Ford supplies exclusively.

70 USED CARS WE CARRY THE largest stock of used automobiles ever offered to the public. We are exclusive used-car dealers, which enables us to offer astonishing bargains. We can save you at least 50 per cent on any car you wish to buy. All of our cars are thoroughly overhauled in our own shop that we may know the exact condition of the mechanism. Write for our Bulletin No. 5, prices and large list of satisfied customers. Industrial Garage Company, 20th and Harney, Omaha, Neb.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer. Omaha, Neb.

GOVERNMENT FARMERS WANTED—Make $125 monthly. Free living quarters. Write Ozment, 39 F. St. Louis, Mo.

MEN AND WOMEN WANTED FOR government jobs; $65 to $150 month. Vacations. Life jobs. "Pull" unnecessary. List of positions available sent free. Write immediately. Franklin Institute, Dept. H-94, Rochester, N. Y.

LEARN THE AUTO BUSINESS—Practical work. No books used. Stationary engineering. Special rate. Write for free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

HOLSTEIN CALVES—BEAUTIFULLY marked, 15-16ths pure, 3 to 5 weeks old, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

POLAND-CHINA BOAR PIGS, 14 TO 16 weeks, big type, pedigreed. Davis Bros., Lincoln, Neb.

REGISTERED GUERNSEY BULL for sale, from producing dam; an exceptional individual. H. E. Wimer, Blencoe, Ia.

MULEFOOT PIGS, 3 MONTHS OLD, $20 per pair; one late fall boar, $12. Geo. Sinn, Alexandria, Neb.

FOR CHOICE DUROC PIGS WRITE to Louis Haake, Warrenton, Mo.

DOGS

50 FEMALE COLLIE PUPS TO LET on shares; 50 female Airedale pups to let on shares. Must have reference. Also have a few to sell. Snd for my large sales list. W. R. Watson, Oakland, Ia.

FOR SALE—PEDIGREED SCOTCH Collies, grown and pups. Mike Abts, Bellwood, Neb.

FOR SALE—ENGLISH SHEPHERD Pups. James Cassell, Fremont, Neb.

FULL-BLOOD FOX TERRIER PUPpies, nicely marked, $3 and $5 each. Mrs. A. M. Johnson, Clarks, Neb.

CEMENT MIXERS

WRITE TODAY FOR CIRCULARS and prices on the most complete, most compact and most simple concrete mixer on the market. Built for the farmer and sold at a price every farmer can afford to pay. Superior Manufacturing Co., 307 West Fifth St., Waterloo, Ia.

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HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

DAIRY FARM CO., 1201 FARNAM, Omaha, makes big inducements to practical farmers who believe in corn—silo—milk pail—hog—route for sure money in farming.

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NEW SONG—"DOWN AMONG THE Whispering Pines"—15 cents, postpaid. Clifford Oldson, Pub., Bartlesville, Okl.

Hog Cholera

Its Prevention and Treatment

THE most complete and practical series of articles ever published on hog cholera has just been completed in the Twentieth Century Farmer. We have taken this matter up in the interests of the farmer and stock raiser. We have put at the head of this investigation a practical man—a man who has had twenty-five years experience in raising hogs and has been a successful competitor for premiums in the state fairs of Nebraska and Iowa, a man who is recognized by the hog raisers of these states as a practical hog man. He has not taken the matter up from the standpoint of the veterinarian, though he has consulted veterinarians in the employ of the government, the colleges and the states, as well as many veterinarians practicing independently among farmers, and has given careful consideration to their opinions. He has not treated the subject from the standpoint of any one farmer, or the farmers of any one locality, nor based his judgment on the experience of men under identical conditions. He has personally interviewed farmers and breeders in three states—Nebraska, Iowa and Kansas.

The writer's years of experience in the hog raising business have enabled him to weigh this great mass of information collected and draw from it conclusions that should be of great value to any man interested in keeping cholera out of his herd or combating it once it gets into his herd, in a rational and practical manner. The writer is not a scientist and has not written a scientific treatise; he discusses this vital subject in the plain, every-day language of the farm and market.

These articles have been so persistently called for that we have collected them into pamphlet form, and this pamphlet is now ready for distribution. We are making a charge of 5c each to cover postage and handling. If you want one of these bulletins, fill out and send the attached coupon before they are all gone.

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TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Omaha, July 11, 1914 Number 709

Prattle of the Youngsters

Of Course

"Well, sonny," said the patient druggist to the small boy who had been hanging about the store for half an hour, eagerly eyeing the candy counter, "do you want to buy some candy?"

"Course I wanter, but I can't. Mother sent me to buy soap."

Stowed Away

A little 4-year-old occupied an upper berth in the sleeping car. Awakening once in the middle of the night, his mother asked him if he knew where he was. "Course I do," he replied. "I'm in the top drawer."

He Didn't Mean To

Little Sister — O h, m a m m a, Georgie has just upset the tea table an' broken my dolly an' all your nice dishes.

Little Brother (badly frightened) —Yes, mamma, an' let's be sorry, but don't let's be mad!"—Harper's Magazine.

Breaking It Gently

Said the little boy, who stood at the door of the spinster: "Would you kindly let me get my arrow, madam? It has fallen in your garden."

"Certainly, my little man; but do you know exactly where it fell?"

"Yes—in—the side of your cat." —Youth's Companion.

And He Did

Father (left in charge)—No, you cannot have any more cake. (Very seriously) Do you know what I shall have to do if you go on making that dreadful noise?

Little Boy (sobbing)—Yes.

Father—Well, what is it?

Little Boy—Give me some more cake.—American Boy.

Mother's Tactics

Two Washington youngsters were visiting their father's country place in Virginia. One of them observed: "Marie, I don't see how cows can eat grass, do you?" Marie considered and then replied: "I suppose it's like this: When the cows are young the mother cow keeps saying to her children, 'If you don't eat grass you shan't have any pie.' "

It Does Sound So

"I understand that you have a very fine new baby brother," said the minister. "Yes, sir," replied young Percy. "He is a nice baby." "And," continued the minister, "I hope he is a good baby." "Oh, I guess he is," said Percy, dubiously "He don't smoke or drink any, but sometimes he seems to me to swear some."

Merely Moral

"Bless me!" said Tommy's great uncle. "Do you mean to say that your teachers never thrash you?"

"Never!" replied Tommy. "We have moral suasion in our school."

"What's that?"

"Oh, we get kep' in, and stood up in corners, and locked out and locked in, and made to write one word a thousand times, and scowled at and jawed at, and that's all."

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Small Tractors for Small Farms

THE man who has a big plantation or estate cannot afford to be without a tractor, and he usually buys a powerful machine, by the use of which he can perform all the operations necessary to prepare the ground for his crops at one time and do it quickly. The man who has a comparatively small farm—the farm of ordinary dimensions—would like to save the feed cost of a number of horses or mules and economize by doing his farming by machine power also, but he wants a smaller tractor—one which will fit his purse and his needs at the same time.

We know our readers are interested in the small tractor question. The many inquiries we receive and the attendance at the Fremont Tractor show last fall proved this. We expect that there will be an even larger attendance at the Fremont demonstration next August, and in the meantime the subject of the small tractor is one of great interest to the farmers of the corn-belt. In our next issue we will have an article on the small tractor, with a number of illustrations showing some of the types now on the market. This article should be of interest to any man who is considering the discarding of time-honored methods of cultivation and the adoption of the new and up-to-date time and labor-saving machinery.

Bright and Breezy

Just Polly

Jack—Bridget, did my wife just come in?"

Bridget—No, sir. That's the parrot you hear a-hollering.—Judge.

Found One

Agent—I am selling mining stock, couldn't I interest you?

Farmer—You sure could; I've allers wanted to see a sure-enough bunko steerer.

Economy

Farmer Jones (over the fence)—Does your cow give a lot of milk?

Father Town (lately from the city)—Well, I think she would give a lot, but my wife and I agreed we would be saving of it, and I only milk a pint or a quart, or just what we want to use, so there won't be any wasted.

The Sinner Stood

The late John Allen of Farmington, Me., was noted for his ready wit and cutting sarcasm. One day, while walking down the street, he slipped on some ice and fell. The Methodist minister of the town happened to be near and helped the old man to his feet with the remark:

"Sinners stand on slippery ground, don't they, John?"

"Yes," retorted Mr. Allen, "but I don't see how they do it."—Harper's Magazine.

Legal View

An attorney took a Mediterranean trip. It was his first time across the water, and he stated on his return that he would have had a perfectly glorious time but for the silly questions asked him by customs officials.

It was on the pier at New York that his woes came to a climax. "Open your trunk, please," commanded the customs house officer. "Have you anything in there but personal property?"

"What do you mean by personal property?" countered the lawyer.

"For heaven's sake, don't you know what personal property is?"

"I thought I did," answered the attorney. "And I can assure you that there is no real estate in my trunk."

Must Be Used

In a hotel the other day the manager was instructing a new arrival, who hailed from Erin's Isle, in his duties.

"Now, you see that sign, 'Gentlemen must use the spittoon.' If you notice any of the guests violating that rule report the matter to me."

"Oi will, sor," said Pat, and he kept a sharp lookout. After watching a gentleman for half an hour, he went to him and said:

"D'ye moind the sign over yonder, sor?"

"Yes," said the gentleman.

"Why don't you observe it, thin?"

"I'm not expectorating on the carpet," said the gentleman, astonished.

"Oi know ye're not," said Pat, "an' yer not usin' the spettune. nather. Spit, ye thafe, or Oi'll report yez."

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Why Do We Let Our Good Men Leave?

Nebraska Trains Them to Be of Great Service to the People and Then Lets Other States Take Them Away

IF NEBRASKA is anything, it is an agricultural and live stock state. We have no mines; we are not a manufacturing state; we depend almost entirely on our crops and live stock for our resources. Gradually each year we find our farm lands advancing in price We also find the grains we raise and the live stock we sell bringing good prices. Depending as we do on these resources, what, then, is our duty to ourselves to increase our wealth, our happiness and our standing as a state among states? Is it not to make the most of what we have and avail ourselves of every opportunity to increase the yield of grains and grasses grown on our farms, and to grow more and better live stock, to make careful study of what we may do and can do to grow more bushels of grain, more tons of hay and more pounds of live stock on every farm in the state? On our success in this line depends the success of practically every business venture in the state. How often do we hear the remark, "Give us a good crop and we can let Wall street scrap and feel little of the effect."

The question arises, "Are we making the most of our opportunities?" The Twentieth Century Farmer is inclined to the belief that in more ways than one we are letting opportunities slip. We feel that we have been in close touch with this matter. We feel that we are now in close touch with it. Consequently we feel that we know whereof we speak. The opportunity of which we are going to speak in this article is our school of agriculture and experiment station.

In every agricultural and live stock state the school of agriculture and experiment station is looked to very largely to tell our farmers what methods they can best pursue, what grains they had best plant and grow, what live stock they had best grow and keep, and how this stock should be fed the grains and grasses we grow to obtain the best results.

Is the Nebraska school and experiment station up to the high standard it should be commensurate with our standing as an agricultural and live stock state, considering also that we depend almost wholly on these resources for our income? This paper thinks not. Why? There are two reasons: First, because the Nebraska school and experiment station has too long been used as a kindergarten; it has too long found good men, kept them through the experimental stage, kept them until such time as they may become efficient in their line and valuable to our farmers and students as educators, then to have them go to some other school or station to give such school their valuable knowledge, simply because Nebraska wouldn't pay a sufficient salary to keep these men with us. We say advisedly that Nebraska wouldn't pay the necessary salary, for we certainly feel that we are amply able to pay the salary necessary to keep any of these men, especially when we see some of them going to schools in states that don't nearly measure up to us in agriculture and live stock.

How many men have come to the Nebraska school from other schools having had years of experience in their line and ready to go to the front at once? Practically none. Why? Salary.

The Nebraska school has been compelled to take one its own men or get a man from some other school and train him in the work. It speaks volumes for the men in charge of our school that they have been so successful in selecting good men. Few men taken into the Nebraska school have failed to make good, but many of them have been made so good that other schools wanted them to help raise their standard, and, of course, generally got them. This procedure has advertised the Nebraska school in one way at least—that Nebraska men are filling some very responsible positions in other schools. Does this method give the students who attend the Nebraska school the best that may be given them? Does it give to our farmers and live stock men the best advice obtainable? Are they not entitled to the best?

This paper knows to a certainty that no less than five men now connected with the Nebraska school and experiment station are considering propositions from other schools, and the reason for their consideration of these propositions is salary. These are each and every one of them good men, doing splendid work in our institution, and Nebraska can't afford to lose their services.

The question is, Will they be retained or will they go to other schools to give the students and farmers of other states the benefit of their knowledge of farm matters, such knowledge very largely being obtained at the Nebraska school?

The second reason why the Nebraska school and experiment station is not up to the standard it should be is the lack of funds to carry on experimental work. Go into the field as we do and hear the question asked by our farmers and others, "Why don't Nebraska undertake such and such an experiment, as is done by other schools?" The answer is, because they don't have the money with which they may carry on these experiments. It isn't because the men we have lack the brains to suggest these valuable experiments. It is because these men can't have the funds to carry on the experiment.

We don't want our position misunderstood. The Twentieth Century Farmer is not finding any fault with the men at the Nebraska station. We believe the men now in charge of the Nebraska college are thoroughly competent, and if we can keep them, and as necessity demands get other men of equal ability, this school will go to the front and take and maintain its proper place among schools, provided they are supplied with sufficient funds to carry on the work.

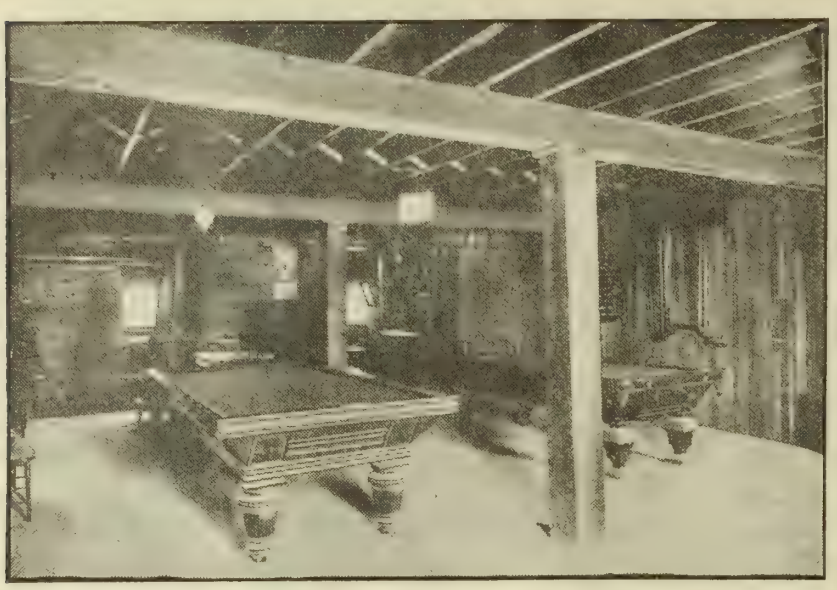
Why don't we pay sufficient salaries, and why haven't we necessary funds for carrying on this work? The Board of Regents has charge of the general work of the station, the salaries, expenditures, etc. Is it supplied with sufficient funds by the legislature? If so, why is it letting these men go to other schools? Surely the regents recognize the importance of agriculture and live stock raising in Nebraska and can see the necessity of having for instructors the best men possible to get. If they are not supplied with sufficient funds, why have they not more forcibly asked the legislature for the necessary amount that they may be able to pay sufficient salaries to keep the good men here and to carry on valuable experiments not now undertaken?

Every man in the state is directly or indirectly interested in the quality of the instructors at the college. It matters not whether he be a farmer, laborer, merchant, banker or interested in any other line of business. If our farms produce good crops, and our live stock makes profitable returns, he is prosperous.

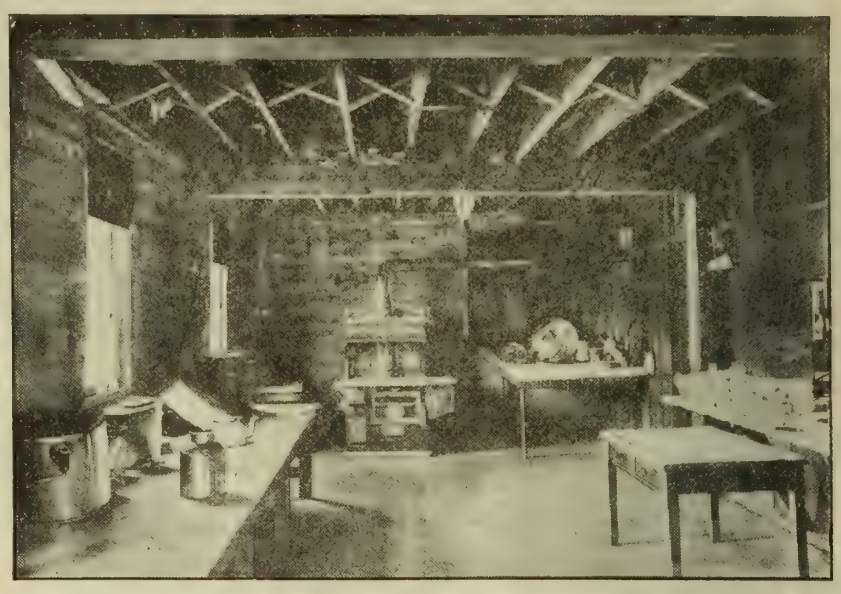
The Board of Regents is going to be expected to remedy the existing condition. Nebraska can't afford to take second place to any agricultural college or experiment station in the United States. In the next few years our standard as a college will be pretty permanently established. What will it be?

NATIONAL·POWER FARMING·DEMONSTRATION
August, 17 to 22, 1914 - Fremont, Nebr.

Farmers' Club Houses as Social Centers



Billiard and Pool Room in Rural Club House



Where the Women Prepare Big Feeds

RURAL club houses, built, financed, managed and enjoyed by none other than farmers, are the innovations which are making farm life more pleasant and satisfying in a half dozen states of the middle west. The movement has gained most headway in Kansas and Wisconsin, but other states are falling rapidly into line.

Tired of having to ride more than a half dozen weary miles to attend a "social," hear a lecture or witness a play, the farmers are building their own club houses, which combine the advantages of a recital hall and theater, and are bringing these formerly exclusively urban attractions to the very farm door. Best of all, they are doing this on their own hook, without any aid from the government, the state or any outside source.

Every Member of This Household Enjoys the Mud Creek Club

One of the most successful and inspirational of these rural club houses is the Valley Center-Mud Creek Community Club, located in the country, right among farms, seven miles southeast of Ottawa, in eastern Kansas. Less than a year ago the leading farmers of the community decided it was time to quit wishing and to begin doing. A few telephone conversations between Frank E. Crane, one of the leading farmers of the vicinity, and some of his neighbors, and a meeting to get things started was held. The result of that meeting is a $1,500 club house, right there in the country; not a school house or a church, but a real club house, with a stage and stage settings, a piano, a kitchen, a dining room, card tables and all the conveniences and attractions to be found in most city clubs.

Fifty families paid the annual dues of $20 in order to finance the proposition at the start. When the members met, however, there was a disposition to let the work of building go over until fall, because the spring rush of hard work was on. One of the farm women stepped forward at this juncture.

"If you men are too busy to haul lumber," she said, "we women will take the teams and haul it ourselves; we can do it. We want that club house this spring."

The men found the time to haul the lumber, all right.

The club house is 24x50 feet, with polished floors and a canvas floor covering to be stretched except when used for dancing. There is a fully equipped stage, an excellent furnace and gas plant, with rooms upstairs for a banquet hall and kitchen, besides card rooms and retiring rooms. A domestic science teacher has been employed to teach the women of the countryside, old and young, how to cook plain, sensible dishes with the common cooking utensils usually found in most farm houses.

A good piano has been installed and in addition to being used at concerts and meetings, a music teacher from Ottawa, seven miles away, makes regular trips to the club house, where the country children come for their regular musical instruction. Later on it is proposed to fit up a gymnasium for the benefit of boys and girls, men and women alike. Thus far, however, with corn planting and all the regular work of the farm, the men folks have had about all the exercise they have cared for or needed.

Every two weeks, on Friday night, there is something to go to at the rural club house—an amateur play, a "sociable," a literary entertainment or some traveling lecture or musical attraction. In addition there are many debates and discussions, one of the main objects of the founders being to give members training in public speaking. The Valley Center-Mud Creek Club is out of debt, self-supporting and is patronized solely and exclusively by farmers, who formerly had to travel seven miles or more for all such pleasures and attractions.

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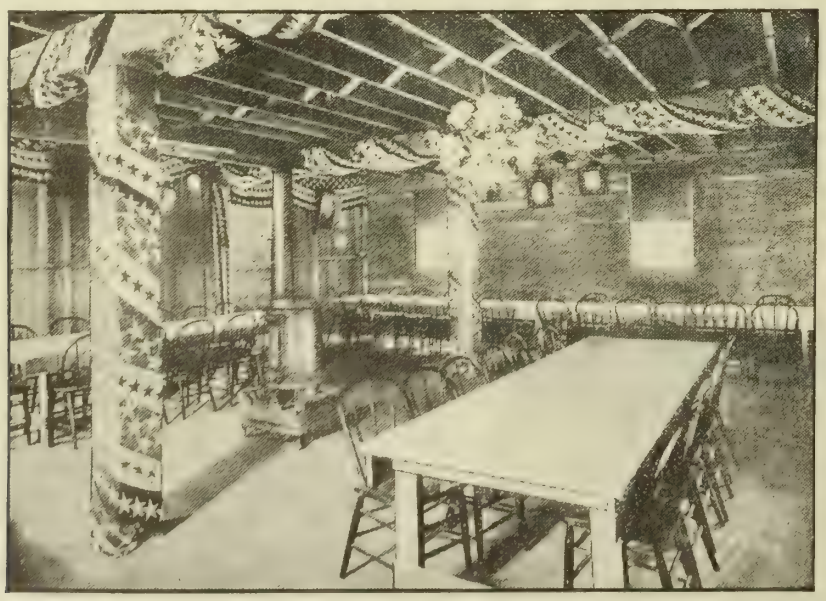

Dining Room Where Farmers and Towns People Fraternize

Men's Club at Nashotah, to Which Thirty Farm Families Belong

Nebraska Dairymen Discuss Live Questions

Report of Successful Cow Testing Association in Merrick County of Especial Interest

THE second annual rally of the Central Nebraska Dairymen's Association was held at Central City June 17 and 18. A program was arranged and carried out. Subjects pertinent to the dairying interests were discussed.

The time of year selected for this rally is hardly ideal for a good attendance, particularly this year. Numerous and heavy rains have retarded the farmers in their work; cornfields were badly in need of cultivation; but, notwithstanding all this, the attendance, especially the second day, was good. We were convinced in looking over the crowd that dairying was taking a strong hold on the people of Merrick and surrounding counties, and we predict the general welfare of the people in this part of Nebraska in the years to come will show the wisdom of looking with favor on the dairy cow.

A very interesting and instructive exhibit was arranged and shown by the University of Nebraska, under the direction of Prof. J. H. Frandsen. This exhibit was certainly very instructive and seemed to be appreciated by the farmers and others in attendance. Various kinds of dairying utensils were on exhibition, including milking machines, separators and silo construction.

On the grounds was an exhibit of dairy cattle, Nelson Bros. of Stromsburg, the Indian school of Genoa, C. W. Culver & Son of Albion and Badger & Frost of Central City showing Holsteins, Ernest Olson of Stromsburg showing Guernseys, and A. M. Templin of Palmer Jerseys.

At the business meeting of the association several men made short talks along the line of the value of such meetings to dairymen and farmers. It was the general opinion of those present that the meetings should continue and the field of work be enlarged. It was voted that this association should affiliate with the Nebraska Dairymen's Association, thus giving them more publicity and an opportunity to more thoroughly carry on their work.

The following officers were elected for the ensuing year: Dr. L. Little of Silver Creek, president; V. S. Culver, Albion, vice president; George E. Boches, Central City, secretary-treasurer.

In Merrick county the farmers and dairymen have a cow testing association, now in its second year. A report of the second year's work was made at this meeting by E. M. Little on the afternoon of the first day of the rally. We are publishing herewith the figures showing the results of the last year's work. This is a complete and detailed report. The figures given furnish some very interesting facts and are certainly food for thought, not only for the dairyman, but for the farmer, who gives the important matter of dairying altogether too little study.

We regard these cow testing associations as being of great value to the man who avails himself of the opportunity to join them. We were informed by the men in charge of this association that there were two members who dropped out this year and they had applications from about twenty men who wanted to take their places. This plainly shows that farmers in this vicinity see the value of belonging to an association of this kind.

The association is formed by getting twenty-four or twenty-five farmers milking twelve or more cows each to join. Each member pays into the treasury of the association $1.25 per annum for each cow he has in milk. A man is employed to go to each member's place at milking time once a month. He gets a sample of the milk of each cow, tests this sample and records the test. This man also carefully weighs the feed fed to the cows. The dairy department of the university furnishes the testers for testing the milk and the necessary blanks for keeping the records. Each herd owner, after using the tester, takes it to the place where it is next to be used.

There are but few of these cow testing associations in Nebraska. This paper is firmly of the opinion that Nebraska has the natural resources to make it one of the greatest of dairy states. It remains for its farmers to accept these opportunities and make the most of them. We have heard objections urged to dairying in some parts of Nebraska that pastures couldn't be depended upon. This is to some extent true, but this is being eliminated by the wide-awake farmer who provides himself with a silo of such capacity that he may be sure to have silage to feed during any dry spell we may have in the summer.

Look up the proposition of forming in your locality one of these cow testing associations. If you do you will almost sure be selling some of the cows in your herd, for the simple reason that they are not paying for what they eat. The way to find these robbers is to test their milk and weigh their feed. Write to Prof. J. H. Frandsen at the university farm, Lincoln, Neb., about how to go about forming an association. Prof. Frandsen is not only an authority on dairying, but an enthusiast as well, and will take pleasure in giving you any assistance he can.

Report of Second Year's Work of Merrick County Cow Testing Association

Herd Letter.	Days in Lactation.	Lbs. Milk Per Year	Lbs. Fat Per Year.	Price of Butter-fat Per Lb.	Value of Butter-fat.	Cost of Feed.	Profit.	Feed Cost of Producing 1 Lb. of Butter-fat.	Returns from Each $1 Invested in Feed.
A	335	10,712	326	$0.50	$163.02	$61.71	$101.29	$0.18	$2.64
R	310	6,897	250.1	0.52	130.06	37.83	92.22	0.15	3.43
Q	282	7,329	250.8	0.56	140.38	50.21	90.17	0.20	2.79
G	308	9,387	298.9	0.37	110.59	50.79	59.80	0.17	2.17
H	318	7,218	220.5	0.42	93.06	36.11	56.95	0.16	2.58
N	331	5,156	208.9	0.36½	77.87	26.87	51.64	0.12	2.94
M	303	6 318	223.6	0.372	82.31	31.06	51.14	0.139	2.65
F	318	7,135	262.9	0.30	79.66	39.13	40.53	0.15	1.96
E	316	6,450	238.8	0.35	82.21	41.75	40.46	0.17	1.97
L	311	4,846	188.1	0.32	60.54	23.47	37.07	0.13	2.59
D	328	6,776	267.3	0.29	77.01	37.93	36.43	0.17	2.17
P	326	5,513	190.9	0.30	57.19	20.83	36.36	0.10	2.45
B	309	6,090	219.2	0.31	68.10	32.07	36.03	0.14	2.12
C	221	5,292	192.9	0.32	61.50	37.93	23.56	0.20	1.62
K	270	3,775	136.4	0.32	44.27	30.27	14.00	0.22	1.46
J	262.5	3.151	129.9	0.276	35.85	27.82	8.03	0.21	1.22
Average of the 16 herds Containing 209 Cows..	307½	6,378	227.7	.....	85.22	36.75	48.48	0.16⅔	2.32

Figures are average production of cows in each herd given. J herd only one fed no silage.

Blackleg and Brands Interest Cattlemen

IN PAST years there has been difficulty experienced in making the meetings of the Western Nebraska Cattle Growers' Association of sufficient interest to attract and hold the presence of the members. Amusement features were employed; brass bands, wild west shows, etc., were put on the streets, through the enterprise of the citizens of Alliance, to entertain the ranchmen on these occasions, until the cattlemen's convention has become a week of carnival, amusement and sport of the most exciting character, and yet it has failed to arouse the interest in these meetings that such an occasion should command.

It was plainly demonstrated at this year's meeting that this body of men is interested in matters pertaining to business, and that a purely business session will insure a large attendance where amusement features will fail. This association is a business organization, formed primarily for the purpose of protecting its members from loss by lost or stolen stock. The 1914 meeting, held at Alliance June 17, 18 and 19, was a business session, and in point of attendance and interest was one of the best meetings held in years, there being present approximately 100 active, interested owners and operators.

To Co-operate with Cattle Feeders

It was decided to send a delegation to the meetings of organized agriculture at Lincoln in January, 1915, to represent this association and get into close touch with the Nebraska Feeders' Association, which meets in Lincoln at that time. The committee was appointed, consisting of R. M. Hampton, S. P. Delatour, John Bachellor and G. H. Tully. They will make an effort to become more closey allied with the Nebraska Feeders' Association, with the idea in view of supplying direct the feeder demand of the eastern part of the state. It was suggested that the secretaries of each association furnish the other association with a list of the membership, that purchases of feeder cattle might be made direct from the producers, this co-operation proving highly profitable to both parties.

Dr. C. M. Day, special field veterinarian of the State Sanitary Board, was present and talked on blackleg in cattle. This talk was well received by the audience, composed mainly of men who had had years of experience with this disease. The doctor exhibited a thorough knowledge of his subject and explained the importance of observing sanitary rules in the administration of vaccine. This observance and the securing of the vaccine without delay were most important in the treatment of this disease, he said. The interest taken in this talk was shown by the promptness with which questions were poured in on Dr. Day as soon as the meeting was open for discussion. The varied experience of the cattlemen present would have furnished material for an experience meeting of several days' duration, but this interesting discussion had to be cut short to allow opportunity for essential business.

Business Meeting

The business meeting of the association showed a membership of 360. Receipts for the year were $5,312.25, which, with the amount on hand at the beginning of the year, made a total of $8,000; balance on hand at the time

(CONTINUED ON PAGE THIRTEEN)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

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New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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To all points in Canada, per annum, in advance 2.50
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The harvesting of the presen bounteous crops should be conducted with as much care and exactness as though every sheaf and every forkful would be needed for market or the feeding of the stock on the farm next winter. Economy should be practiced as a system and principle on the farm in its business operations, whether there be much or little produced. It is the saving of the little things, the systematic methodical operation of the detais that makes farming pay.

The wet season has influenced as much in favor of weed growth as corn growth, or even more. It will take active work from this time forward to get the bottom land cornfields into a good state of cultivation. The urgency of harvest and the urgency of corn cultivation, with the intervention of excessive rainfall, have been some of the perpexities that the valley land farmer has had to contend with this season, but at the close he may be fully repaid by a large yield.

We all take a shot at the newspapers occasionally. In fact, it is rather a popular form of conversation to rail at mistakes they make, their inacuracies and the weakness of their policies. The farmers of the wheat-producing regions have occasion at the present time, however, to be grateful to them for the publicity given the need of help in the harvest fields. This absolutely free publicity has turned this way thousands of men in search of work, which will materially lessen the harvesting problem. Since we always see the faults in our daily papers, let us give them the credit for this.

Marketing Milk

It will be worth while to give careful study to the table given in another column of this paper showing the results of the year's work of the Merrick County Cow Testing Association. The first question that enters one's mind after a careful study of this table is, "Why is there so much difference in the price received for the butter-fat from these different herds?" We have investigated this matter and found that the three herds receiving the highest price sold whole milk and sweet cream at retail. The four or five herds receiving the next highest price sold whole sweet milk and a high quality of sweet cream at wholesale. Those getting the lower prices put out a poorer class of product, not taking the care they should, and in some instances delivering less often, thus reducing the quality of the product.

This is something certainly worth consideration. If a little extra effort and care on the part of the dairyman will bring the added price, as shown in this table, the dairyman can well afford to give it the necessary added attention.

The Merrick County Cow Testing Association has the highest average profit of any association in America for the first year for all herds entered in a testing association. This is certainly a high honor and shows the energy and determination of the owners of the various herds in this association.

Farmer and Business Man

The Fremont (Neb.) Commercial club about five months ago organized a farmers' section. Under the auspices of the club and its farmers' section, a meeting was held for the farmers on Saturday, June 27. The particular subject discussed at this meeting was hog cholera.

Dr. C. M. Day, field veterinarian, and Dr. J. H. Gain, chief of the veterinary department of the Nebraska Agricultural College, were present. Dr. Day spoke on sanitation and general hog cholera work in Nebraska—what to do and how to do it to prevent the disease getting a foothold in the herd. He also explained the use of serum and virus, when and how these remedies should be used.

Dr. Gain told how serum and virus were manufactured and what might be expected from the proper use of these remedies. After the meeting in the hall Dr. Day gave a practical demonstration of the use of the syringe in injecting serum and virus and held a post-mortem on a pig that had been given virus some days before. He showed how to tell hog cholera by an examination of the internal organs, explaining how and where they were affected with the disease.

One thing was evident—the farmers were interested. A more busy time for farmers could hardly have been selected. The late heavy rains made their presence in the cornfields necessary in many instances. There were present, however, a hundred farmers, who paid close attention to what was said.

This is the first hog cholera meeting to be promoted by any commercial club in Nebraska. We are pleased to see the business men, through their commercial clubs, taking up this very important work. The formation of these farmers' divisions of commercial clubs appeals to us as being practicable and sensible. It will bring the farmer and business man into closer co-operation, just as they should be.

There has been in far too many commercial clubs the thought that their business was to promote their own particular interests, often to the detriment of the farmer. This has led the farmer to the belief that he should investigate closely any move of the commercial clubs to see whether or not his own interests were being jeopardized. The plain facts are that the interests of the city man belonging to the commercial club are almost identical with those of the farmer. The success of the city man depends first on the success of the farmer, and he should fully realize this fact. The city man may in many ways be of assistance to the farmer, and he should be broad enough to recognize this and accept the opportunity.

The farmer should in turn recognize the business man in the city as being a necessity and as being an assistant to him in his work. Co-operation is the keynote. The farmers' division of the commercial club is one medium by which this co-operation may be brought about.

These farmer divisions have separate bylaws, separate officers, different fees, dues, etc.

We hope to see a much more general movement along this line.

Opportunity in Cattle Raising

Many articles urging cattle raising are now published in our daily and weekly journals. The sentiment seems to be contagious with publishers and certainly is well directed in the face of the declining cattle population of the country. A shortage of such a universal necessity as cattle, involving the needs of practically the entire population of the country in their demands for the staple articles of meat, milk, butter and cheese, is sufficient reason why public sentiment should assist in arousing to activity the available means of production.

Production in any line of manufacture where scarcity of product exists is promptly relieved by increased activity in furnishing supply. In the present case of shortage the relief cannot be so promptly applied, nor the means of organizing a reverse movement in sentiment quickly put into operation. An educational campaign must first be set in motion. The incentive of higher prices covering a period that will justify investment and activity in breeding must become in a measure general among producers in order to get results.

This has been fully discussed throughout the country. Those in position to buy cows and start breeding herds are in line for the advantage to be had under the pressure of a scarcity of cattle of all kinds and a constantly increasing demand. Such opportunities for profit in cattle raising are not presented every day, and seldom in the history of cattle growing.

Water Supply for Hogs

The hot weather is now with us and will be with us for some time. During this time the water question for hogs is a very important one. Many valuable hogs are lost each summer on account of insufficient water or on account of the hog being compelled to drink warm, dirty and slimy water.

The man who has not watched carefully does not realize how much water a hog drinks in the hot season or how often he requires it. Let us remember that the pig is not like the cow or any cud-chewing animal. He has no storage capacity for his water supply. He can take but little at a time; this is quickly used up and he soon requires more. If this supply is denied him he begins to lose in weight and general physical condition, making him much more susceptible to an attack of hog cholera should be come in contact with the germ of this disease.

Inaccessible water supply or a supply of dirty pond water is undoubtedly the cause of the failure of many of our farmers to get satisfactory returns from their hog feeding. If you expect to get full returns from your hog-feeding operations you must have plenty of water accessible at all times for your hogs. This supply of water must not be full of filth and slime, but must be clean and pure. Without question, a polluted water supply is one of the causes of outbreaks of disease in our herds. Stop this cause by seeing to it that good, pure, clean water can be had by your hogs whenever they want it.

Where is the Straw Pile?

What about the straw pile? Are you going to have it out in the field or are you going to haul the bundles to the barnyard either to be stacked or threshed from the shock?

It's handy to stack the grain in the field, to set the machine in the field or to thresh from the shock, but what about next spring, plowing, planting, harrowing, etc., around this old straw pile?

Next winter when the wind is high, the snow covering the straw pile, it is necessary to haul in straw for feed and bedding. Wouldn't it be much better to have this straw pile around the barn, handy to feed or use for bedding without hauling?

How many of us figure on the waste incurred by hauling this straw from the pile in the field in the winter time—the waste by not getting the most manure possible from our straw, the waste by not always having sufficient bedding for our stock? You know if the straw is away out in the field, and the day is cold and stormy, we are liable to think we have enough straw to get along with until tomorrow or some other day when the weather is better; but if the straw was handy we would go out and put a lot more in the barns and sheds for bedding.

A stack yard on a farm is one of the most valuable yards or lots we have. Stack the grain in this yard if we stack, or put the straw pile here if we thresh out of the shock. It won't cost you much more to put the straw here at stacking or threshing time. Try it once and see how you like it.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Wishes

I wish I were a daisy,
A-bobbing in the sun;
I wish I were a little horse,
Let loose to prance and run;
I wish I were a swallow;
But most of all I wish
That I were one long, silver-specked
And flickery, finny fish!

Oh, if I were a daisy,
I'd nod and bow all day;
And if I were a little horse,
I'd gallop far away;
And if I were a swallow,
I'd fly. But oh, I wish
The most to wriggle in the sea,
A cold, queer, silent fish!

—Fannie Stearns Davis, in Youths' Companion.

Rose and Harry Spray the Peas

"Where are you going with that sprayer?" asked Uncle Jack of Rose and Harry. His agricultural college was over for the term and he had come to spend the summer on his brother's farm, to the great joy of all concerned, for Uncle Jack liked the farm work and was the best kind of helper for the grown folks, and he was very popular with Rose and Harry, because he willingly answered all their questions and joined in their play. Even Shep and Don liked him, and would lay sticks at his feet to be thrown for them every time he sat down to rest.

"We are going to spray the peas with kerosene emulsion," said Harry. "The plant lice are very bad this year, and mother says if we want any canned peas next winter we will have to save them now."

"Are plant lice insects?" asked Rose.

"Yes."

"Well, I know there isn't anything interesting you could tell us about them; they are just stupid little eaters."

Uncle Jack glanced at his waiting team, which he had hitched to a fence post. "It won't do them any harm to rest a while," he said, and went to work with the children while he talked. "Plant lice are among the most interesting insects we have," he said. "They are generally called aphides and sometimes green flies; they attack almost every kind of plant and suck the juice from it. Most insects are hatched from eggs, and aphides are, too, in the late summer, but in the spring and early summer they are born alive. See that big, fat one, surrounded by a lot of tiny ones? Well, that is a mother and her children."

"Some have wings and some haven't," said Harry. "Why?"

"No one knows. Sometimes they just seem to grow wings and fly. Often when the sap in a plant begins to dry up the aphides grow wings and fly to another kind of plant. These little bugs are greedy eaters; they eat more than they can hold and probably they would burst if there were not two little tubes sticking up out of their backs. Through these they unload the plant juice when they eat too much; that is the sticky stuff you often find on the leaves. It is sweet, and the bees and wasps like it. The ants are especially fond of this honey-dew, as it is called."

"Is that why the ants climb the plants?" asked Rose. "I thought maybe they ate the aphides."

"Indeed, no. They protect them. They pick up the eggs they find in the fall and take them into their underground houses and hatch them out. If it were not for the care the ants take of them, a cold winter, followed by a late spring, would be likely to kill all the aphides."

"Why do they do it?" asked Harry.

"For the honey-dew. Sometimes the aphide is called the ants' cow, because the ants stroke them and coax them to give up honey-dew as we coax the cows to give milk."

"Is that really true?" asked Rose.

"Indeed, it is," said Uncle Jack. "Here, you, Billy! Stop jerking that halter!" And, dropping the sprayer, Uncle Jack ran to untie his team and left the children to finish their work alone. HOME EDITOR.

(Prize Story)

I Forgot

By Helen B. Barnhouse, Aged 12, Lane, S. D.

Mamma's bird's name was Pearl; she had had her almost six years, and she would not have parted with her for anything. But one day I put her on the table while I went to get her some food. When I returned I put it in her cage and she was so pleased she chirped with joy. I saw the cat on the porch, but did not think about Pearl being on the table, and went to get my hat in the other room where mamma was sewing. I heard something drop to the floor. Then mamma said, "Girls, you had better go see what that noise is about," so we ran to see what it was, and it was little Pearl's cage lying on the floor empty; no little bird was there.

We ran to the door and saw the cat disapearing with the bird in her mouth, all except the wings, which were sticking out of each side of her mouth. I felt very bad because I did not put her back in her place. We all miss her very much because she was so much company to us. But we never saw as much as a feather of her after that.

Note—The winning of this prize makes the author a member of the honor department, as she wrote the prize story in the issue of August 30, 1913. We now have five honor members, three girls and two boys.

(Honorable Mention)

A Cloudburst

By Emily Gould, Aged 11, Sidney, Neb.

One evening just before dark the sky showed signs of rain. We were all in bed by 8 o'clock. About 9:30 I was awakened by a loud noise. At first I did not know what it was, but when I was fully awakened I knew that it was raining and thundering and lightning very hard. I put my fingers in my ears so I could not hear the noise.

I did not get up right away, but after a while, as the storm had not abated any, I got up and dressed. Mamma and papa were already up. We sat around, listening to the storm, when suddenly mamma asked, "What is that?" We listened and thought the sound came from the cellar. We opened the door and, sure enough, the cellar was about one-third full of water. We could not see where the water got in.

Papa went out of doors and looked

(CONTINUED ON PAGE TWELVE)

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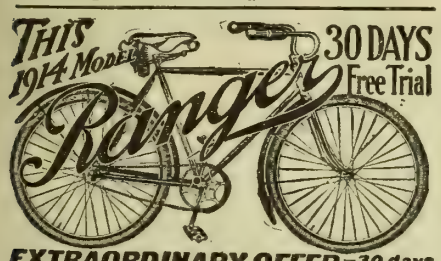

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Picture Contest No. 15

Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it interesting. Say the things you would think if you really saw this little girl. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than August 8. Answers to contest No. 14 will appear next week.

HIT THE SPOT
Postum Knocked Out Coffee Ails

There's a good deal of satisfaction and comfort in hitting upon the right thing to rid one of the varied and constant ailments caused by coffee drinking.

"Ever since I can remember," writes an Ind. woman, "my father has been a lover of his coffee, but the continued use of it so affected his stomach that he could scarcely eat at times.

"Mother had coffee-headache and dizziness, and if I drank coffee for breakfast I would taste it all day and usually go to bed with a headache.

"One day father brought home a pkg. of Postum, recommended by our grocer. Mother made it according to directions on the box, and it just "hit the spot." It has a dark, seal-brown color, changing to golden brown when cream is added, and a snappy taste similar to mild, high-grade coffee, and we found that its continued use speedily put an end to all our coffee ills.

"That was at least ten years ago, and Postum has, from that day to this, been a standing order of father's grocery bill.

"When I married my husband was a great coffee drinker, although he admitted that it hurt him. When I mentioned Postum he said he did not like the taste of it. I told him I could make it taste all right. He smiled and said, 'Try it.' The result was a success; he won't have anything but Postum."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum now comes in two forms:

Regular Postum—must be well boiled—15c and 25c packages.

Instant Postum—is a soluble powder. Made in the cup with hot water—no boiling—30c and 50c tine.

The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.

—sold by Grocers.

Of Interest to Our Women Readers

Which Are You?

There are two kinds of people on earth today;
Just two kinds of people, no more, I say.

Not the sinner and saint, for it's well understood
The good are half bad, and the bad are half good.

Not the rich and the poor, for to rate a man's wealth
You must first know the state of his conscience and health.

Not the humble and proud, for in life's little span
Who puts on vain airs is not counted a man.

Not the happy and sad, for the swift flying years
Bring each man his laughter and each man his tears.

No, the two kinds of people on earth I mean
Are the people who lift, and the people who lean.

Wherever you go you will find the earth's masses
Are always divided in just these two classes.

And, oddly enough, you will find, too, I ween,
There's only one lifter to twenty who lean.

In which class are you? Are you easing the load
Of overtaxed lifters, who toil down the road

Or are you a leaner, who lets others share
Your portion of labor and worry and care?

—Ella Wheeler Wilcox.

Family Responsibilities

At a farmers' week meeting at one of the central western colleges last winter there was much discussion among the management as to why the women did not take advantage of the splendid opportunities offered them. One woman asked several of the farmers why they had not brought their wives. Without exception, the men asked replied: "Well, we couldn't both be away from home at once at this time. We can't trust to hired help to look out for the stock in case of emergency." Many added: "Next year I am going to make arrangements to stay only part of the week and let her come the rest of the time."

"It is a very unfortunate situation," remarked one of the women in charge.

In a way it was, and is. In another way it is not. It suggests that there is an ideal partnership between the husband and wife when one can look out for the family interests during the absence of the other. Where the farmer and his wife were both present at these meetings in almost every case there were grown children at home who were old enough to be entrusted with the responsibility. Perhaps it meant quite a sacrifice to the wife to have to give up her holiday and the pleasure and stimulation of these very enjoyable meetings, but is any woman who shares her husband's responsibilities, and whose husband is willing to give up part of his week's holiday that she may have her share, a drudge, as some have been saying the farm women are? We do not think so. HOME EDITOR.

Farm Versus City Life

The farmer's wife is having a chance to tell her story of trials and overwork at present. There is no end to the different phases of life on the farm. I lived on a farm over fifty years and know all the various trials a farmer's wife meets. But is it any harder to rise early in the morning to the song of birds than to the blowing of whistles calling the men to work at an early hour? And they must be there on time or lose their places in the works. The wife or mother of the workman in the city gets up at 4:30 sometimes to get his breakfast, Sundays excepted, and not even these exceptions in the case of railroad and street car men. You may say they get big wages and cash down. Yes, perhaps, but they also have to pay cash for everything they wear, or use, or eat, or drink. The city has many attractions and conveniences, but you must pay cash for them all. And appearances must be kept up. It is harder for people to live within their means when crowded so closely together than when more isolated.

The farm is the place for the children, where mother can be their companion in their walks and work, where they can wear comfortable clothes and work in the garden and tend the chickens and feed the calves. The city child longs for pets and often cannot have them because they are a nuisance. If he loves a

(CONTINUED ON PAGE TWELVE)

Styles for Home Dressmaker

Description of Patterns

5917—Ladies' House Dress—This garment can be used for either a house dress or a work apron. The garment closes at the front and can be made with either the square cut or round neck. Neck, finish, collar, cuffs and belt are of contrasting material. The pattern 5917 is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size requires 5¼ yards of 36-inch material and five-eighths yard of 27-inch contrasting goods.

6734—Ladies' Skirt—Many of the newer skirts have the very long tunic, with a slight ripple above a straight underskirt, like the one shown above. Both foundation skirt and tunic have two pieces, and this brings the closing at the side. The pattern 6734 is cut in sizes 22 to 32 inches waist measure. Medium size requires two yards of 44-inch plain material and 1¼ yards of 36-inch striped goods, or 3¼ yards of 36-inch plain material if made all of one material.

6061—Misses' and Small Women's Dress—Linen, gingham or serge can be used to make this dress, with the collar and cuffs of contrasting material. The dress closes at the front and can be made with either the high or regulation waistline and the long or short sleeves. The skirt is cut in three gores. The pattern 6061 is cut in sizes 14, 16 and 18 years. Age 16 years requires 3⅝ yards of 44-inch material and three-fourths yard of 27-inch contrasting goods.

6062—Children's Dress—Any mother can make this dress in an hour, as it is very simple. The dress closes at the front and can be made with either the long or short sleeves and the high or low neck. The pattern 6062 is cut in sizes 2, 4, 6 and 8 years. Age 8 years requires 2¼ yards of 44-inch material and five-eighths yard of 27-inch contrasting goods.

6737—Children's Rompers—This simplest of garments may be worn over the underwear. The closing of the waist is in the back and the trousers button across the back at the waistline. In front there is a seam from the neck edge straight down, without division at the waist. The pattern 6737 is cut in sizes 2, 4 and 6 years. Medium size requires two yards of 36-inch material.

4616—Boys' Dress—Boys' styles are very much the same. This little dress is for the small boy who has not yet worn the regulation trousers. All boys like pockets and one is inserted in the left side of the front, which is sure to please the little fellow. The pattern 4616 is cut in sizes 1, 2 and 3 years. Medium size requires 1½ yards of 44-inch material.

6745—Child's Dress—A decided novelty is offered in this dainty frock, which has no opening except at the neck and along the shoulder seams. It is slipped on over the head and has a small plait at each side seam. The sleeves may be either long or short. The pattern 6745 is cut in sizes 2, 4, 6 and 8 years. Medium size requires 1⅞ yards of 36-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

All Patterns on This Page 10 Cents

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

Incubator Chicks

F. M. C., Illinois: I rented an incubator listed on your poultry page from a neighbor. Set it along or near the middle of May. It held 140 eggs, and on the 20th of May the chicks began popping out of the eggs until there were 110, spry as crickets. I tell you I was proud of that pile of chicks, for this was my first trial at running an incubator. I put them out in a pen in the yard and for four days I did not lose a chick. I thought, too, what a fool I had been to go fussing with hens when here, without any extra trouble, I had such a nice little flock, and the incubator again filled. But at the end of the fourth day I found three droopy; next day they were dead, but with no signs of diarrhea. After that, day after day, I would find a few dead, until now I haven't half the number. Is that the history of the incubator hatched Would like an answer.

Answer—That is the history of the incubator hatched if the owner does not do his part after the incubator has done its part. You do not say how you fed or cared for them. You were at fault instead of the incubator, and if you had taken the same number of chicks warm and as young from under hens and put them out in the back yard in boxes and given the same care you would have lost just as many, maybe more, for the hen might have imparted some trouble the incubator could not. That the chicks hatched on time and so many were spry and lively, showed plainly that the incubator was doing all right under your care. That they came off lively showed it had not overheated them at the last, for when you allow the incubator to get too hot for the newly hatched chick it comes off feeble, refuses to eat and dies quickly. You do not think they had white diarrhea, and if this had been the trouble it could have been stopped after the first cases had you tried. A parallel case in my late experience showed that the woman, taking off a first big hatch from her new incubator, placed them, as you did, in a pen in the back yard. Though the days were sunny, the ground was shaded and the nights were cool, yet she flung a coarse chick feed to them on the bare ground, put them in their boxes at night, with no more over the box than an old dress skirt. They soon lost their spryness and began to die; for even in summer a newly hatched chick must be hovered and kept warm at night. Besides this, the feed was not right. She lost nearly all of them. Did you treat your incubator hatch in this way? If you did, no wonder they died. It isn't all in the hatching; it is how you care for them afterward. I saw an even hundred brooder chicks a week old in a heap dead the other day. Their owner set their pen out in the broiling sun and then forgot it for three or four hours, with this result. A little lack of care often works big disaster with young life of any kind.

May Keep Cockerels

G. E. B., Nebraska: Nearly every year I change roosters. Is this necessary? My roosters for this season are not yet quite a year old. Can I keep these over another year? I expect to build my future flock mainly from the pullets hatched this year. I have the pure single-comb Rhode Island Reds.

Answer—As you say, it is costly to buy new stock every year, and poultry keepers of experience seldom do this unless they want some extra birds. You can keep the cockerels bought, say this year, over for as many years as they will live if you want to. These cockerels you speak of, bred to their own progeny, are known to produce the best marked and strongest stock. It is the crossing of brothers and sisters that brings down the flock finally.

Cut Off Spurs

S. S., Nebraska: I am having trouble with the feathers being torn from the backs of my hens. I am nearly sure it is the fault of the rooster's spurs. Would they do this? They are very long.

Answer—Indeed, they might, and tear the flesh, too. Get a small, sharp saw and saw them off nearly to the beginning of each. It will not hurt the rooster. Roosters have no use for spurs, anyway, unless they are kept for fighting purposes. Taking off the spurs may also take some of the bossiness toward other roosters out of them.

Rhineland Breed

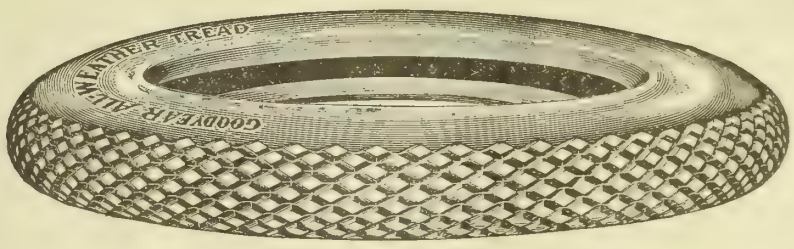
Mrs. I. C., Colorado: What kind of a breed is this Rhinelander breed spoken of in some of the farm papers as leading in the national laying contest at Mountain Grove, Mo., and what is the average of eggs per month for all?

Answer—The Rhineland breed as layers is merely represented by one hen that has been keeping in the lead, I judge. This breed is not in our standard, though it may be in that of other lands. It is something like the Minorca, I am told. The English White Leghorns are yet holding up the winning pen. Twenty eggs a month is the average for each, though many are laying an average far beyond this to make good for the laggards.

Immunity from Roup

F. B. C.: I have heard that if fowls recover from roup they never have it again. Is this true?

Answer—I think not. At least not in my experience. Chickenpox may be mistaken for roup. Such cases do not occur twice in the same fowl.



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No other tire at any price has ever offered these four features.

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No-Rim-Cut Tires
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The reasons for present Goodyear prices are just these:

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A modest profit. Last year our profit averaged only 6½ per cent.

No-Rim-Cut tires at present prices are even better than they were at high prices. They excel other tires just as far, and in just as many ways.

Up to now men bought these tires because of their hidden economies. They bought millions of them because of their known mileage records.

Now you have in addition this visible economy—this saving which comes at the start. You have a price from $5 to $15 lower than many other tires.

Any dealer will supply you Goodyear tires at Goodyear prices. If he is out, he will get them from our nearest branch.

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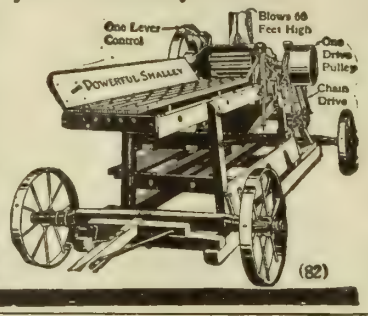

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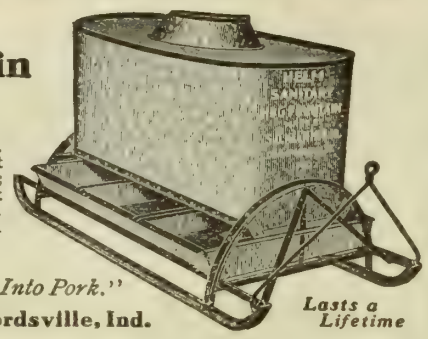

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Whenever you see an Arrow think of Coca-Cola.

D 8-F

La Paz Markets Busy on Sunday

By Frank G. Carpenter

LA PAZ, Bolivia—I want to show you how our Sabbath is spent in this, the city of peace. The capital of Bolivia is one of the most interesting of all South American cities, and Sunday is its great day of the week. The town lies far back from the ocean, across the highest of the Andes, and on one of the highest plateaus of the earth. In the Gulbert hotel, where I am writing, I am almost two miles and a half above the sea, and I can see from my window the perpetual snows of Mount Illimani, one of the highest peaks of this hemisphere. All about are other high mountains, and walling me in are the great ramparts, three times as high as the Washington monument, that guard the basin in which La Paz lies. I have climbed the walls of Jerusalem, and have tramped for miles upon the great wall of China that separates that country from Mongolia. Neither of these walls is over fifty feet high. The walls of La Paz are thirty times higher. They extend upward for 1,500 feet and in a plateau that is more than 13,000 feet above the level of the ocean. The plateau of Bolivia is as big as either Virginia, Ohio or Kentucky, and on one side of it are mountains, some of which are more than four miles in height. The city lies in a depression in that plateau. It is in a little hollow, way up here on the topmost roof of the world. Mr. John D. O'Rear, our American minister, says the site of the town is shaped like a washbowl whose top is three miles in diameter and whose sides are 1,500 feet deep. This bowl is almost circular except for one end, where is a great crack, out of which the La Paz river runs. And, indeed, that gives a fair idea of the city. Its site was a depression in the bed of the great inland sea that once covered this mighty plateau. Then the earth rose and the water broke through at the crack and ran out, leaving the dry hollow that now holds the capital of the Bolivian republic.

We rode down the sides of the walls on an electric trolley in winding curves, our train zigzagging this way and that. Here the cars flew around a loop, and there they cut a great figure 8, while further on we could see a half dozen tracks above and below us. As we descended the town grew larger, and the buildings that were merely toy houses when viewed from the Alto, became of respectable size. We could now pick out the streets as they climbed down the hills, and could recognize the buildings about the great central plaza, where stands the national capitol, in which congress meets. We could see the palace where the president lives, and at its left the unfinished cathedral, upon which the people have been working for two generations, and where I am told they will still be working for a generation to come. At the same time we began to notice the crowds of the streets, and our eyes caught the maze of bright colors, which, of a Sunday, paint waving ribbons on the thoroughfares of La Paz.

Types in the Market Place

From Stage to Railway

When I last visited La Paz I rode from Lake Titicaca across the plateau on the top of a stage drawn by eight mules, which were changed every three hours. This time I came on the railroad. I took the train at Guaqui, on Lake Titicaca, and within three or four hours had crossed the high plains. I could see no sign of a city until the cars stopped at the Alto. This is at the edge of the basin, where the motive power for the train is changed from steam to electricity. Here our engine pulled up on the brink of the precipice, and there below us was this mighty hole peppered with houses, roofed with red tiles and galvanized iron. We could see the walls of green, made by nature, and the patches of cultivation clambering their sides; and right in the center, away down far below us, were the two and three-story houses

Markets Teem with Activity

On week days La Paz has a mixed population of perhaps 80,000. On Sundays this number is increased by tens of thousands of Indians. The Aymaras come in for many miles over the country around, choosing this Lord's day of all others as their one and only trading day of the week.

I have seen most of the great market sights of the world. I have haggled over the prices in Calcutta, Bombay and Benares. I have dickered with the orientals in Cairo and Tunis and have fought with the Slavs at the fair of Nijni Novgorod on the Volga, where Europe and Asia annually meet to buy and to sell. I have seen the open-air markets of Africa and the mighty bazaars of Siam and Burma, but nowhere have I found so much activity as right here in La Paz.

The Indians are dressed in the gayest of reds, yellows, purples and greens. They bring their families with them and there is a mass of moving men, women and children which throngs the streets from one end to the other. Every one has merchandise with him and many have traveled forty, fifty or more miles, carrying their wares on their backs. In addition to the crowd on the cobblestone roadways are two long lines of women sellers who take up the sidewalks. Every one sits down where she is and spreads her wares out before her, so that there are literally miles of vegetables and goods on one kind of other lining the streets. In addition to the Indians are the many Cholos or half breeds, and mixed with the whole is the white population of the Bolivian capital, women and men who have come out to buy or see the strange sights.

Indians Add Gay Colors to Scene

The chief colors come from the dress of the Indians. The children and grownups

wear about the same costume, and even the babies are clad like their parents. The men and boys have on ponchos which cover the upper parts of their bodies. The poncho is a blanket of the brightest of colors, with a short slit in the middle through which the head goes, so that the cloth rests on the neck and shoulders and falls to the waist. Under the poncho is an embroidered vest, and the suit is completed by pantaloons that reach half way down the calf and are slit up to the knees at the back. Many of the Indian men are barefooted, and many wear sole-leather sandals tied on with strings. The most of them have on little felt hats with round crowns, and under them knit flaps that cover the ears and fall to the shoulders.

The women also wear hats of much the same shape, and some of them are bareheaded. All are barefooted. They wear gay blankets pinned around their shoulders, covering a white waist or vest. They have very full skirts of red, yellow, pink, green or blue. Everything is of the gaudiest nature, and the cheap dyes of Germany have aided in making the hues and tints swear at one another.

The Cholas and Cholos

Mixed with the Indians are the Cholos and Cholas and the Cholitos. The Cholas are the women, and Cholitos is a semi-affectionate term for the girls. The cholos are the mixed breed made by the crossing of the Spaniard and the Indian. The Cholo men dress much as we do, but the women and girls have the same costume they have had for a generation or more. They delight in delicate colors, and seem to have robbed the gorgeous Andean sunsets for the tints of their shawls and dresses. They have skirts of rose-red and sky-blue. Hundreds of them wear skirts of sky-green, and not a few have short dresses as red as the sun as its setting. They have shawls of the finest of silk of the most delicate hues, and these are so draped that they stand out over the skirts, which are propped out with hoops. The skirts themselves reach only to the ripe curve of the calf, whose plumpness is brought out by the high shoes of white, cream or blue kid that form the fashionable footgear. The Chola shoes have very high heels. They are buttoned high up, but are always tied at the top by a cord with a tassel that hangs half way to the ankle.

The girls have white straw hats with tiny black bands around the crown and bows on one side. The bands seem to be pasted on the hat, and sometimes they are merely streaks of black paint. As the Cholito struts along the street on her high heels she rests her hat rakishly on one side of her head and walks with a swing. Sometimes she flirts her skirts a little to show her green or blue colored stockings; and often you notice that she has no stockings at all and that what you thought was knitted hose of rose-colored silk is the bare, rosy pink of the leg.

Home of World's Chief Vegetables

The variety of the vegetables, fruits and meats is great, and the quality is especially fine. This high plateau is the home of some of the chief crops of the world. It is known that the potato came from the Andes, and it is a question as to whether this is not the birthplace of our Indian corn. Bolivia has maize, the grains of which are twice as large as any grown by our farmers. Some are of a bright yellow color, every grain as big as my thumb nail. Others are white, of twice the size of a lima bean, and so floury that they could be mashed to a powder between two stones. Some of the corn is of a mulberry color, other kinds are red or even jet black.

As to the potatoes, they are red, white and yellow, and some are as pink as the toes of the babies playing among them. Some of the potatoes are as big as your fist, and other varieties not more than the size of a thimble. They are all sold by the pile and a half dozen or ten make up the average purchase.

Nearly every potato seller has chuno among her wares. They are potatoes so treated that they look like bleached bones, and are almost as hard. When you break them apart you find them fibrous and tough. They are ordinary potatoes so frozen and dried that they can be kept for years without spoiling. The usual method of making chuno is to soak the raw potatoes in water, night after night, and then lay them out on the ground to freeze. When the skins are rubbed off by treading them with the bare feet. After that they are dried in the open air. Potatoes so treated become as hard as stones. They form one of the chief foods of the Indians, who store them away for the winter. They have to be soaked before being eaten. They are served in the form of a stew. I have tasted them, but they are insipid and not at all appetizing.

Many Strange Fruits and Grains

Going on with our walk through the market we see many fruits and grains that are strange to our eyes. Here is a woman who sells quinau, or the seeds of a plant akin to our pig weed. The seeds are as large as grains of mustard, and as white as snow. They are sweet to the taste, and make an excellent gruel. There are also wheat, barley and oats, sold in infinitesimal quantities. There are sweet and sour lemons and white grapes as big as ripe damson plums. There are paltas or alligator pears of twice the size of those that come to our markets, and the pieae, a fruit that looks like a mamoth bean pod. It has a green skin, and inside it a pulp like the finest of white spun silk, which when cold tastes like a finely flavored ice cream. There are also oranges, apricots and bananas as well as tunas, the fruit of the cactus. All of these come from the Yungas valley, which is reached through the break in the great basin in which La Paz lies. Going down through that break you rapidly descend until you reach a tropical climate, where the vegetation is dense and where there are bananas and pineapples, royal palms and wild cotton trees. There are also coffee plantations and gardens in which the coca leaves are raised to give the Indians their favorite chew. Bolivia has every product under the sun, and its tropical valleys supply the highlands with fruit.

Some of these Indians have come from those regions. Here is one woman selling coffee beans, fresh from the grove; next her is one with a pile of artichokes, while further on a third is peddling sections of sugar cane, half as long as my arm. She sells them for 5 cents a stick.

All of the vegetables and meats in this market will be cooked with llama manure. There is no other fuel used in La Paz, and that notwithstanding it is a city of 80,000 inhabitants. The reason for this is the great cost of coal. The freight rates from the coast from where all the coal comes, are $27.50 a ton, and this brings the price of that fuel here to about £10 per ton, or $50 gold. This makes it prohibitive for ordinary use, and the result is there is not a furnace or hot-water heating plant in the whole city.

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PRICES
40 lbs., $2.25; 100 lbs., $5; 200 lbs., $9; 300 lbs., $13; 500 lbs., $21.12. Never sold in bulk; only in Trade Marked Sal-Vet packages. *Shipments for 60 days' trial are based on 1 lb. of Sal-Vet for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular size packages. Get the genuine SAL-VET.*

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Horses Eat Posts

E. C. B., Wyoming: I have received much valuable information through the columns of your paper. Now I want to know why my horses chew the posts and any wood they can get at. They run in an alfalfa pasture and I feed hay also. They have access to salt. They are fat and seem to be in the best of health. My neighbor's horses do the same thing. The posts are of white cedar and look as if beavers had been working on them.

Answer—There is something in the wood that appeals to their appetite. We have seen horses eat both cedar and pine posts, even though they were in the very best pasture. There is nothing wrong with the horses and there is nothing that will prevent this as long as they remain in the pasture.

Possibly Hog Cholera

H. H., Aurora, Nebraska: We are in receipt of a postcard with the foregoing initials and address, but unsigned. This man wants to know what is the matter with his hogs. He says they seem to cough, have scours and get thin, eat fairly well, but lie around between feeding times. Very likely they have cholera, though it may be only worms. This man should have his hogs examined at once by a competent veterinarian. When writing for information to the Twentieth Century Farmer it is positivey necessary that you give your name and address for prompt service. It takes two to three weeks to get an answer through these columns, but we reply at once by letter where the name is signed if the nature of the case seems to require a prompt answer.

Horses Poisoned by Weed

A. E. J., Nebraska: There has been considerable trouble in this locality the last few years with a disease among horses. Can you tell me what it is and whether there is any cure or preventive? At first they seem dull, with loss of appetite, and stand around the pastures; later they commence walking around in circles with their heads down and ears leaning forward. The brain must be affected, as they do not hear, feel or see very distinctly. They will go through wire fences or blunder through or over anything that lies in their path, some cases being so bad that they will bite anything that gets in their way. One colt bit off the neck of the bottle when I was trying to give him medicine, and chewed the glass, while blood ran from his mouth.

I had one horse that had it late in the summer, but did not seem very sick. She did not do very well, however, and could not stand hard work. I quit working her and she seemed better, but the next spring got worse and died. Their eyes get bloodshot and they seem to see only some large, dark object and blunder toward it, get over, through or around it, but keep going, with unsteady gait, regardless of bumps, bruises or cuts.

A neighbor has lost four head this spring. Three of these were mares about to foal. Two of them seemed to get better until their colts came, when they took worse suddenly and died in a few days. Three were running on grass all the time and the other one part of the time.

Very few get well. One team that I know of seemed to recover, but could never stand hard work after that. It seems to affect horses of all ages, though I believe the majority have been mature horses. They generally live two or three weeks; some live much longer, but in severe cases they sometimes live only a few days. I have lost two head of horses this last week.

Answer—This trouble is in the nature of poison by loco weed, or the so-called "bottom disease" that has been prevalent in some years. It is without doubt caused by eating some weed. The only thing that can be done is to take the horses off pasture and put them into the barn, feeding them on dry feed, as in winter. This will prevent their getting any more of the poisonous weed.

A Cloudburst

(CONTINUED FROM PAGE SEVEN.)

around. Presently he discovered a hole in the front yard that had been dug by a coyote before the house was built, and the rain had washed it out. This was the only way we could see that the water could get in the cellar.

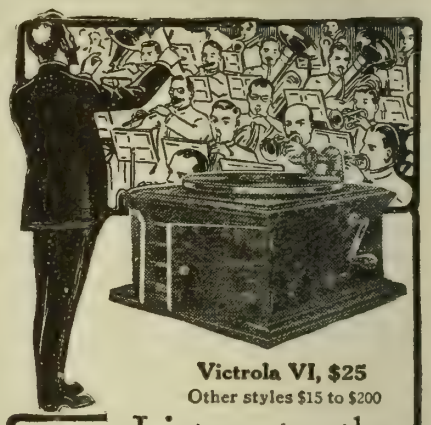
When the storm was over we went to bed and slept for the rest of the night in peace.

Farm Versus City Life

(CONTINUED FROM PAGE EIGHT)

dog there is the tax, and often he has to be muzzled; a cat becomes a prowler on others' premises; chickens crow and disturb the neighbors, and even children are ruled out in many places. I would endure much privation to stay on the farm if I were a young woman. A. E. E.

Oklahoma.



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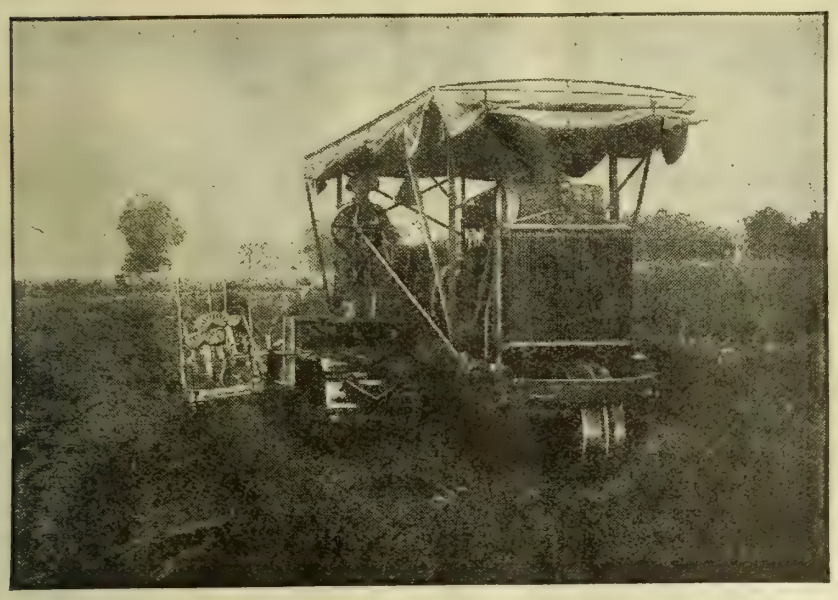
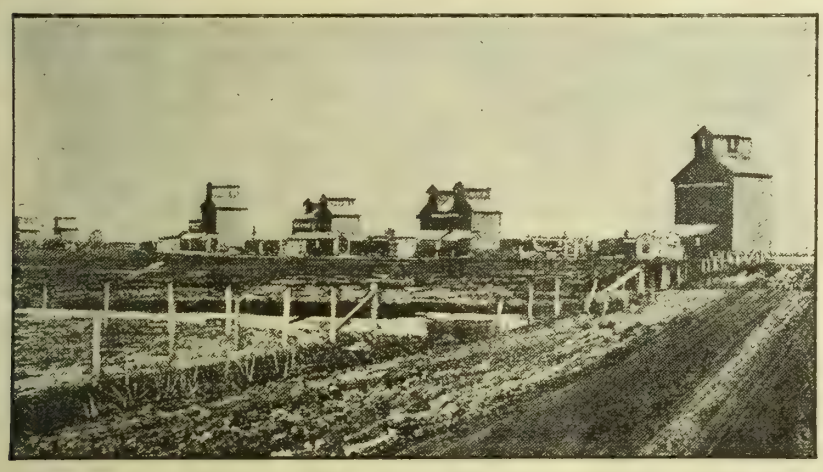


Last week we showed pictures of a tractor and a plow that had been entered in the Fremont Tractor show. Above we show the Holt Caterpillar, another tractor that will be seen at Fremont this year. In succeeding issues we will show other machines. Don't forget the date—August 17 to 22. The leading makes of tractors and plows will be seen at work, and the prospective purchaser given an opportunity to judge of their qualities.

Seventy-Three Elevators in One County



These six elevators, with a capacity of 1,401,064 bushels, are located in Langdon, the county seat of Cavalier county, North Dakota. There are sixty-seven other elevators in this same county, and in 1911 these elevators held 8,665,083 bushels of wheat.

Blackleg and Brands Interest Cattlemen

(CONTINUED FROM PAGE FIVE)

of the present meeting, $3,000. The election of officers for the ensuing year placed the following persons in charge: President, Robert Graham of Alliance; vice president, A. T. Davis of Hyannis; secretary-treasurer, C. C. Jamison, Ellsworth; members of executive committee, C. H. Tully, Alliance; E. P. Myers, Omaha; Reuben Lisco, Lodge Pole; J. H. Bachellor, Valentine; Herman Krause, Long Lake; J. H. Monahan, Whitman; A. R. Modisett, Rushville; E. M. Eldred, Orlando; J. H. Orr, Llewellyn; E. M. Searle, Ogallala; John Diemer, Hyannis; A. Metzger, Merriman; J. H. Quigley, Valentine E. M. Brass, Grand Island; Daniel Adamson, Lake.

The efficiency of the brand inspection at South Omaha to the members of the association was illustrated in the number of cattle caught up during the year, which closed March 31, 1914. The following saving to the membership is given in the brand inspector's report: Calves, four; bulls, thirteen; steers, 208; cows, fifty-three; total, 278; value, $18,556.39. This amount shows the proceeds returned to the secretary of the association, with instructions as to ownership, based upon the brands the cattle carried.

The proceeds sent direct to the owners by commission men in whose hands the inspector found the cattle were $65,815.50, representing forty-one calves, thirty-seven bulls, 519 steers and 389 cows, a total of 986 head. The grand total by both sources of returns was 1,264 head, valued at $84,371.89.

$1,000,000 Saved by Association

A summary of the brand inspection work for the Nebraska Cattle Growers' Association for the last fifteen years at South Omaha is one of the startling features of this line of information. There were caught up by the brand inspectors 24,229 head of cattle, valued at $998,309.28. Almost $1,000,000 have been saved to the membership of this association in fifteen years. This conservation of Nebraska cattle resources has been conducted by C. L. Talbot, head of the brand inspection department at the South Omaha stock yards.

The South Omaha Live Stock Exchange for many years has been sending a delegation of its representatives to this meeting, composed mainly of commission firm representatives, stock yards officials, bankers, etc., whose business is co-ordinated with the cattle-growing industry. The South Omaha representatives this year were: John S. Walters, superintendent, and W. H. Schellberg, traffic manager of Union Stock Yards; B. F. Roth, representing Wood Bros.; E. W. Cahow, National Live Stock Commission; Allen H. Dudley, Allen Dudley & Co.; A. W. Tagg and E. J. Wright, Tagg Bros. Company; Bruce McCulloch, Drovers' Journal-Stockman; Walter B. Roberts, L. E. Roberts & Co.; T. J. Donahue and A. J. Randall, Donahue, Randall & Co.; J. O. Alsworth, Great Western Commission company; C. L. Talbot, brand inspector; G. W. Hervey, Twentieth Century Farmer; A. E. Rogers, Omaha Live Stock Commission company; Frank J. Coad, jr., Packers' National bank; Dr. C. M. Day, special state veterinarian; James Owen, Stock Yards National bank; A. F. Stryker, secretary South Omaha Live Stock Exchange.

The Western Nebraska Cattle Growers' Association is a business organization. Its purpose in getting its members together once a year is to promote the interests of cattle producers. The kind of meeting that was held this year is the kind that will best promote these interests. Each year they should have a short program within their membership, where appointed members may be called upon to introduce discussions of very vital subjects pertaining to the successful handling of certain diseases of the herd or methods of breeding, or the development or marketing of the stock produced, etc., as the occasion would seem to warrant. An old-fashioned experience meeting, where the members would be instilled with the spirit of getting up and relating their experiences of success and failure, would, we believe, come nearer to filling the demand and requirements of a live stock convention of this sort than any other disposition of the time that could be devised.

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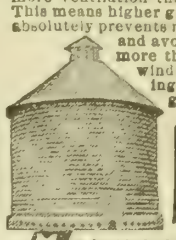

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18 decided advantages set out in our new catalog which you can have free. The permanent crib for modern farmers. Circular form prevents racking. Cone spreader spreads evenly, forcing moisture to evaporate. The Adel Tile Crib has all the advantages of the wooden crib and none of the disadvantages. Tile cribs are built with or without granaries, from various plans.

Drain Tile—Drained land pays bigger profits. Our vitrified drain tile are frost proof. Write for our general catalog and get a glass cutter free.

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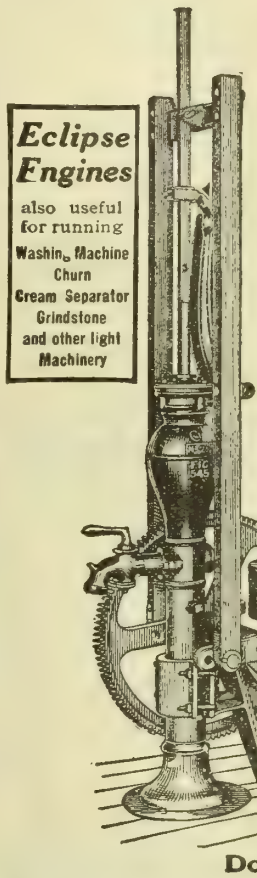

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When you start doing chores you won't have to stop long at the pump if a

Fairbanks-Morse *Eclipse Engine*

is attached to it. Your boy can easily start it. Complete instructions with every engine. Water for the stock and the household is supplied regardless of wind or weather. It's the only economical way of pumping — the only way consistent with the use of your other labor-saving machinery. You'll be surprised to find what a lot of water the ***Eclipse Engine*** pumps for each pint of gasoline used.

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WORLD'S STANDARD FOR OVER 30 YEARS

The Freeman Ensilage Cutter is the strongest, safest, most durable, convenient and capable cutter ever perfected. Force feed type—handles biggest bundles with remarkable ease. It runs smoother and faster, cuts cleaner, uses less power than any other machine. *Cuts cost, saves time, stops waste.* Has adjustable knives, large feed rolls, *safety fly wheel, safety stop lever;* can be brought to a standstill instantly. Enclosed Steel Carrier (Patented) is *steel enclosed*—fills silo quicker, reduces running expense, prevents feed blowing away.

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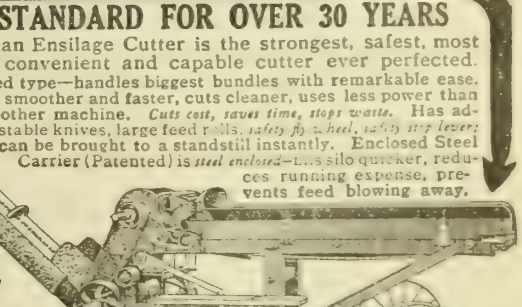

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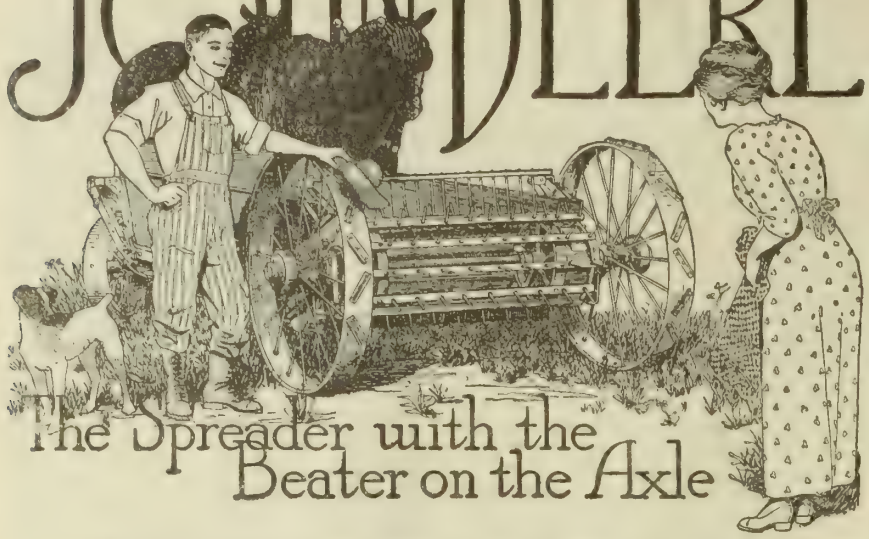

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Only hip high to the top. Easy to load. You see where to place each forkful. The result is an even load that spreads uniformly.

Light draft because the beater runs on roller bearings and the center of the load is comparatively near the team. Staunch, strong and easy to operate.

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RED POLLED CATTLE

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Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

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Do you consider dairy farming a real business, a man's job or simply a side issue? Are you keeping high-producing Holsteins or just cows?

A good Holstein is little short of a perpetual motion milk-making machine, that while in milk uses her food for milk production and when dry stores up body fat to be converted into milk fat as soon as she freshens. She will earn 50 per cent on the cost of her feed. Why not keep this kind?

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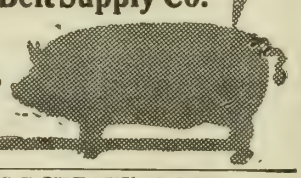

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The largest herd of Ayrshire cattle in the west. Several choice young bulls for sale, sired by Garlands Success. Can also spare a few females.

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Last year [illegible] imported sire and part from 2200 lb. imported sire and imported [illegible] 2, 3 and 4 year old registered Percheron stallions would prove valuable breeders for you. With all their weight and bone they are drossy and straight sound. This [illegible] of the most substantial and most attractive Percheron breeding material in the world. Farm raised and offered at farmer's prices. Just east of Omaha.

FRED CHANDLER, R. 7, Chariton, Ia.

Review of Live Stock Market

By A. C. Davenport

THE live stock markets of the country have been singularly free of late from any developments of importance. The trade in fact for the last two weeks or more has been running along in a very even sort of way. While a market without changes may be a very tame affair from a news standpoint, it is in one way at least satisfactory to stockmen. They rather enjoy a market with few changes, as they can better judge what to expect from day to day. In the present instance the market has been particularly satisfactory to the sellers in that prices, which were already very high on pretty much all kinds of stock, have been well maintained.

A somewhat better demand for the high grades of corn-fed beeves has been noted at all market points, and prices on such cattle have been firm from day to day, being possibly a trifle higher than they were ten days or two weeks ago. As the season advances grass steers become more plentiful, and they naturally enough have been easing off; in fact, grass cattle of all kinds are showing more or less weakness, as usual at this season of the year.

As noted before in these columns, there is nothing in sight to warrant a belief in any very marked change in values on good beef steers. It is well understood that the supply of finished steers is rapidly becoming smaller in the country as the season advances, and were prices low it would be only reasonable to anticipate a strengthening in values. However, with the market already very high, no one is anticipating much change, the feeling being that consumers would hardly stand for additional advances.

Hogs in Good Demand

Hogs, like the better grades of cattle, have been in good demand for the last week or more and have sold very freely at current prices. The market, however, has been featureless, aside from the usual slight fluctuations from day to day. Packers, while continuing to fight any advance, are evidently anxious for the hogs, as shown by the freedom with which they buy on all weak spots.

The future of the market is a sealed book, from which little information can be secured. The trade as a rule is not looking for any lower prices during the month of July, while a good many feel that some further advance may be made before the close of the month. During July last year hogs, which sold at the beginning of the month at about $8.50 on the basis of Omaha, advanced quite rapidly until the middle of the month, when packers drove cost to a little over $8.90 on the high day, but from that point on the market eased off until at the close of the month prices were about where they were at the beginning. It will be remembered, however, that the market during July of last year was the highest that it ever was for that month in the history of the trade. The next best July was in 1910, when hogs averaged around 20 cents higher than they were at the opening of the present month. It will be noted from these comparisons that the market is already high for this season of the year and even the most persistent bulls can have little room for complaint if only present prices are maintained.

Range Supplies Sheep

Sheep and lambs have been moving forward to market quite freely for this time of year. So far as western markets are concerned, the supply has come largely from the range, as there are very few natives in the hands of farmers, and fed stock is practically exhausted. Eastern markets have been drawing their supplies largely from local farms, the bulk of the receipts at those points consisting of natives.

While the market on both sheep and lambs has shown some weakness, as predicted in these columns, the market, under the influence of a splendid buying demand, has held up remarkably well, the trade being in a most satisfactory condition from a seller's standpoint. Prices, in fact, have been so high that it has been a big inducement for flockmasters to hurry forward anything ready for market, with the result that receipts have been quite liberal. The demand, however, has been sufficiently brisk to prevent any big slump in prices, and the market is still very high as compared with last year.

The immediate future of the market must depend very largely upon receipts. Everyone feels that values are dangerously high, and anything like large receipts could hardly fail to result in a revision downward of prices.

All advices from the range country, both as regards cattle and sheep, continue most encouraging. There would appear to be a heavy growth of grass in all western states, with stock starting out in better condition than usual. Stockmen everywhere are predicting a good season on the range, with a larger proportion than usual of fat stock among shipments. This may not be good news for the man in the cornbelt who is figuring on buying feeder cattle or sheep, as it will sound to him like another season of high prices for feeder stock.

Farmers' Club Houses as Social Centers

(CONTINUED FROM PAGE FOUR)

An equally successful club, but one in which towns folk are allowed to belong as well as farmers, is the Men's Club at Nashotah, Wis. This is a little town of only 150 inhabitants, twenty miles west of Milwaukee. The club was established and the building erected three years ago, two-thirds of the members being farmers. The president and treasurer are farmers, while the secretary is the local station agent.

Three evenings a week and on Sunday afternoon the farmers of the vicinity may be seen driving or walking into the little village. They have billiard and pool tables there and most of the farmers have their own special cues, which they carry home and put away carefully. The club rooms are filled on meeting nights with a jolly crowd, indulging in games of cards, billiards, pool, checkers, or in relating wholesome incidents of the community life. One of the articles of the club declares that no liquor shall ever be brought into the club house, and the men stand firmly by this rule.

The club house is 36x72 feet, and now, in its third year, is self-supporting and practically out of debt. Dances are held frequently, while once a year an old folks' dance is given, which is one of the banner entertainments of the countryside for the whole year. The dances are all old style—the round waltz, the schottische, the Virginia reel and so on. During the evening a supper is served, each of the guests bringing a basket of food for this purpose.

Last winter it was decided to have an entertainment course. Nashotah is probably the smallest town in the country to have such a course, and this is made possible only by the club. Season tickets for four entertainments were sold at $1.50. Seventy-two tickets were sold in advance, a charge of 50 cents being made for single admission.

One farmer came in with his daughter to attend one of the musical entertainments. He found the admission price to be 50 cents and said if he had not thought it was only a quarter he would not have come. When he was leaving the building he was in a different frame of mind. He declared he would not have missed the "show" for a couple of dollars, and added that he intended to take in every attraction of the entire series.

With rural club houses dotting the countryside, farm life will have lost much of that isolation and loneliness which formerly caused the young folks to desert it, and farm prosperity will advance with leaps and bounds, because farming will then be carried on by a happy, contented and ambitious people.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Hinkle Heard From

S. M. Hinkle, breeder of Duroc-Jersey hogs at Genoa, Neb., reports everything coming along in ship-shape with him. He says his pigs are the best he has ever raised at this time of the year and that he is going to have a splendid lineup of stuff to show this fall. His bunch this year is not overly large, but he is taking excellent care of them and will make up in quality what he lacks in quantity. Mr. Hinkle is one of our younger breeders who is intensely in earnest in the breeding business. Keep his herd in mind and watch these columns for further information as to what he has for sale from time to time.

Holsteins at South Omaha

On October 19 and 20 H. C. Glissman, proprietor of Rock Brook farm, Station B, Omaha, Neb., will hold a sale of 200 head of registered and high-grade Holstein-Friesian cattle at Union Stock Yards, South Omaha. Mr. Glissman is too well known to need any particular mention from us, and the cattle he has put up in his past offerings are the best evidence of what may be expected at the coming sale. Mr. Glissman says himself that they are some of the choicest cattle he has ever had to offer for sale. Keep this herd in mind and remember these dates. Further information regarding the offering will be found in these columns in later issues.

Boesinger's Durocs

Dave Boesinger, the well known breeder of Duroc-Jerseys at Cortland, Neb., has about 200 head of spring pigs this year, coming along in first-class shape. Mr. Boesinger has been one of our best buyers of first-class breeding stock, and has succeeded in building up a herd that will take rank with the very best. He has not only paid the strictest attention to the individual merits of the animals, but has also been insistent on getting the very best blood lines obtainable. The pigs this year are sired mostly by Lincoln Lad and Widle's Wonder. Lincoln Lad is a son of Lincoln Wonder and out of a dam by that grand old sire Higgins' Model. Widle's Wonder is a son of the Nebraska prize winner and breeding boar Crimson Wonder 4th. Of course, Mr. Boesinger has a number of litters by other sires, but the bulk of his pigs are sired by these two boars. He will be at the fair this fall, if all goes well, with a nice lineup of stuff and will have something to sell later on that will be worth keeping in mind.

C. P. Jones' Polands

C. P. Jones of Cortland, Neb., has fifty head of spring pigs this year that are coming along in good shape and making a splendid growth. Mr. Jones has been producing a type of stuff that meets the popular demand, and he has been a consistent prize winner at the Nebraska State Fair every time he has shown. His pigs this year were farrowed in March and early April, except one or two litters of February farrow. They are big and growthy, and there will be some young boars for sale here later on that will certainly be worth looking after by anyone wanting something in this line. The pigs are sired by Highland Jumbo and Big Logan. Highland Jumbo is by Jumbo Junior by Nebraska Jumbo. Big Logan is a son of the great show and breeding boar Big Columbus. Keep Mr. Jones' herd in mind and write him when you want some of the big, smooth Poland-Chinas.

Sale Dates

Duroc-Jersey Hogs

October 2—F. B. Nelson, Lindsay, Neb.
October 2—F. A. Lemmerman, Creston, Neb.
October 5—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.

Holstein-Friesian Cattle

October 19 and 20, 1914—H. C. Glissman, Station B, Omaha. Sale at South Omaha.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.

In compliance with the recent order of the Nebraska Live Stock Sanitary Board, Dr. L. C. Kigin, state veterinarian, is sending out to all railway agents and owners of private stock yards who buy hogs for shipment to the market cards to be tacked on these yards stating that no hogs may be removed from them except for immediate slaughter.

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By Not Glutting the Market.

The unusually large crop is going to make wheat low at harvest time.

Store your wheat and get the extra profit, by being able to sell at right time.

Congested traffic is going to cause trouble and delay in getting cars at threshing time.

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Corrugated. Can't Cave In. Rat-Proof. Fire-Proof.

Can be used for store house. Capacity increased by additional sections. Keeps grain perfectly. Large door removable shoveling board.

Ask for prices and descriptive Booklet Showing Letters From Satisfied Users.

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Always ready for use. Placed inside the crib in the dry. Easy running, durable and strong. Elevates oats, wheat, or ear-corn, 50 bushels in three minutes.

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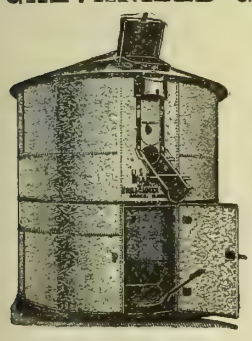

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Does not break, rot or burn, lasts a life time, COSTS LESS than a wood grainery or corn crib.

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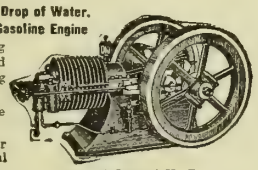
Get descriptive Folder explaining this wonderful engine at once.



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BIG CROPS IN SHALLOW WATER district, Northeastern Colorado, winter wheat yielding 35 to 45 bushels; emmer, 90 bushels; oats, 60 bushels per acre. Have 75 farms to select from at $15 to $35 per acre, easy terms. Land pays for itself in two years. Don't miss these bargains. We are closing out this summer the last of the Murray and Johnson ranches, scattered amongst improved farms selling at $30 to $55 per acre. Watch for our wheat and farm home cut in next issue. Write for circulars. Agents wanted. Platte River Valley Land Co., 5th floor State Bank Bldg., Omaha, Neb.

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SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87. Lincoln, Neb.

FARMS WANTED—WE HAVE direct buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

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FOR SALE—260 ACRES 45 MILES from Minneapolis, one mile from town; 160 acres under cultivation, balance used for pasture; can practically all be cultivated; heavy soil; good set buildings, consisting of 8-room house, large barn, granary, corn cribs, etc. The land will produce sixty bushels of corn per acre; telephone in house; country thickly settled; complete set of machinery; 27 head of stock, consisting of eleven cows, balance 1 and 2-year-olds; six good horses, 25 hogs, chickens. One-half of this year's crop and everything on the farm goes at $50 per acre, half cash. Schwab Bros., 1028 Plymouth Bldg., Minneapolis, Minn.

COME TO OTTERTAIL COUNTY, Minnesota. Fine climate and pure water. Rich corn and alfalfa lands for sale on easy terms. Write for information. Fred E. Hodgson, Fergus Falls, Minn.

FOR SALE BY OWNER—QUARTER of the best lying land in Pipestone county, Minnesota; unimproved; all in timothy meadow; 2 miles north of Troskey. Would exchange for land farther north. For particulars write Jacob Ohlsen, Melvin, Ia.

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MISSOURI FARM FOR RENT—235 acres, well improved; 6-room house, barn 40x42 and outbuildings, all in excellent condition; everlasting water. First year, $1,000 cash; possession this fall. Also Henry county, Missouri, farms for sale. Write for description and list. W. S. Duncan, Clinton, Mo.

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WE ARE THE "SNAP" MERCHANTS on eastern South Dakota farms. We get them direct. Write us for big list of great bargains. Hansen, 326 Brandeis Theater, Omaha, Neb.

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NORTH DAKOTA LANDS DIRECT to Purchaser—The crop outlook in North Dakota was never finer than now and land prices are bound to go up soon. To obtain settlers along our 1,200 miles of track here we have obtaintd listings of several hundred thousand acres of choice lands ready to farm and will sell these at cost. Prices will never be so low again. Roads, schools, churches, railroads, all established. Very low excursion rates Mondays and Tuesdays. Come and see lands yourself, or write for full particulars. J. S. Murphy, Immigration Agt., Soo Line Railway, Minneapolis, Minn.

WRITE FOR ILLUSTRATED BLUE book describing my rich, black Red River Valley farms. Corn, clover and alfalfa successfully grown. Wm. McRoberts, Casselton, N. D.

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GOVERNMENT LAND—GET 320 acres. We stock your land, buy your crop. Some means required. Particulars free. Wyoming Settlement, Janet, Wyo.

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MULEFOOT PIGS, 3 MONTHS OLD, $20 per pair; one late fall boar, $12. Geo. Sinn, Alexandria, Neb.

FOR CHOICE DUROC PIGS WRITE to Louis Haake, Warrenton, Mo.

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FOR SALE—ENGLISH SHEPHERD Pups. James Cassell, Fremont, Neb.

FOR SALE—PURE-BRED ST. BERnard pups, also one 3-year-old registered St. Bernard female. L. R. Confal, Howells, Neb.

WILL UNDERSELL ANYBODY ON female collie pups; also a few males, cheap. Pups eligible to pedigree. Justus Johnson, Loomis, Neb.

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FOR SALE—150 YEARLING SINGLE-Comb White Leghorns, healthy and good looking, including my winners. Good layers. Ivar Johnson, Fremont, Neb.

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COVALT'S SINGLE-COMB REDS—This month, half price—yearling hens, fine breeders, $1 and $2 each. Scott Covalt, Council Bluffs, Ia.

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WHITE WYANDOTTES—EGGS HALF price. Best strains in America. White Wyandotte Farm, Oscar L. Bock, Prop., Council Bluffs, Ia.

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Platt Adams

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Matt McGrath

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Omaha, July 18, 1914 Number 710

Prattle of the Youngsters

Marked

Mother—Don't cry, dear. Which one of the twins hit you?

Dear—The one with the black eye.

Self-Sacrifice

Father (sternly)—Bobbie, did you go to Sunday school this morning, as I told you to?

Bobbie—Yes, father, I did—but it spoiled the whole day for me.—Life.

No Longer Existing

Teacher—Can you name a bird that is now extinct?

Small Pupil—Yes, ma'am; our canary. The cat extincted him yesterday.

No Weapon Required

Teacher — Why, Jimmy, Jimmy! Have you forgotten your pencils again. What would you think of a soldier going to war without a gun?

Jimmy—I'd think he was an officer."

Explained

"Why should we say to Satan, 'Get thee behind me'?" asked the teacher.

"So that we shall get ahead of him," returned the bright boy.—Puck.

Those Silent Lies

The mother of a conscientious little miss wishing to rid her of the fear of some cows in a field through which she had to pass told her to go right by and pretend she didn't see them. "But mamma," protested the small maid, "wouldn't that be deceiving the cows?"

Not Taking Sides

George, the sexton's youngest, was recounting the prowess of his grandfather to Herbert, the rector's son, who was properly impressed, and asked:

"Your grandfather on your father's or mother's side?"

"Oh, he sticks up for both of 'em," said George.—Harper's Monthly.

Would Be Too Late

Little Ross, aged 7, had been around the corner inspecting the fire station. He came home to tell his mother of what he had seen there. He said: "And, mamma, even if they are just in the middle of sweeping the floor, they drop the broom and rush off to the fire; and even in the night time, when they are in bed, if the bell rings they jump up and dress and go to the fire—'cause if they didn't do that, when they got there the fire would be all out."

Volunteer Information

Little Jack, aged 5, had accompanied his mother on a trip to the city.

When the conductor came around to collect the fares he asked the usual question:

"How old is the boy?"

After being informed of the correct age, which did not require a fare, the conductor passed on to the next person.

The lad sat quite still, apparently pondering over something; then, concluding that full information had not been given, he called loudly to the conductor at the other end of the car:

"And mother's 35!" — Harper's Bazar.

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Co-operative Creamery Problems

THE Farmers' Co-operative and Educational Union is seriously considering the establishment of a centralized co-operative creamery in Nebraska. We want to say here and now, and to say it emphatically, that we are in favor of co-operation in creamery and all other matters among farmers; but we want to add that we believe any co-operative institution that is established and fails gives a greater setback to the cause of co-operation than can be experienced in any other way. The mistakes of the people on the inside are of more vital importance than any efforts of enemies on the outside.

For this reason we believe that in starting a co-operative institution so large and so unique as a centralized co-operative creamery the greatest care should be taken that no mistake is made. The failure of this institution would be a blow to co-operation from which it would take years to recover. This great creamery enterprise has enemies, powerful ones. It has many weak places in its plans and possibilities. At these weak spots the enemies of co-operation will strike.

In our next issue we will tell farmers of Nebraska, or of any other state where co-operation is one of the topics of the hour, what we consider the weak places in this centralized plan and how we believe these weak places may be strengthened. Some of this has been said before. We will quote what has been said by a good authority on this subject. Some of this is the result of the thoughtful consideration of creamery matters and the information that was gathered at the time we published our series of creamery articles a year ago, and the careful consideration we have been giving to this subject since that time.

Bright and Breezy

Out of Order

"I understand you went over to Crimson Gulch and lynched the wrong man?"

"No," replied Three-Finger Sam. "You can't lynch the wrong man in Crimson Gulch. We jest got Piute Pete a little bit ahead of his turn."

Brain Shortage

Girl friends love one another. One day two of them met.

"Fred didn't blow his brains out because you jilted him the other night," said friend No. 1. He came over and proposed to me."

"Did he?" replied friend No. 2. "Then he must have got rid of them in some other way."

Not Masquerading

A strapping German, with beads of perspiration streaming down his face, was darting in and out among the aisles of a department store.

His excited actions attracted the attention of all the salespeople and they hardly knew what to make of it. A hustling young man of the clothing department walked up and asked:

"Are you looking for something in men's clothing?"

"No," he roared, "not men's clothing; wimmin's clothing. I can't find my wife!"

Distrusted at Home

Mr. John A. Hennessy, who has had some exerience in looking into official corruption in New York, tells the Washington Star this story of a certain politician, whose reputation was no better than his deserts:

"He used to farm, you know. Well, I met an old farmer neighbor of his last month.

" 'Si,' I said, 'would you call him an honest man?'

"Si scratched his whiskers and smiled, but he made no answer.

"Well, Si,' I went on, 'would you call him a liar, then?'

"Si scratched his whiskers again, and then he said:

" 'Now, Mr. Hennessy, I dunno's I'd go so far as to call him a liar, but them as knew him hereabouts do say that when he wanted his pigs to come for their feed he had to git somebody else to call 'em.' "

All Made Clear

A woman missionary in China was taking tea with a mandarin's eight wives. The Chinese ladies examined her clothing, her hair, her teeth, and so on, but her feet especially amazed them.

"Why," cried one, "you can walk and run as well as a man!"

"Yes, to be sure," said the missionary.

"Can you ride a horse and swim, too?"

"Yes."

"Then you must be as strong as a man."

"I am."

"And you wouldn't let a man beat you—not even if he was your husband—would you?"

"Indeed, I wouldn't," the missionary said.

The mandarin's eight wives looked at one another, nodding their heads. Then the oldest said, softly:

"Now I understand why the foreign devil never has more than one wife—he is afraid!"

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Management and Pactical Value of Silos

IV—Can We Raise More Cattle by Feeding Silage and How Large Should Silo Be?

ONE of the objects the Twentieth Century Farmer had in making the investigation on the silage question was to find out whether or not a much larger per cent of cattle could be maintained on the farms of the country by the more extended use of the silo and silage year after year.

We have asked the question of numerous farmers who have had from one to seven or eight years' experience in feeding silage what per cent more cattle could they profitably keep on their farms year after year if they had sufficient silo room in which they could be sure to have silage to supplement the pastures in dry periods, and also to have plenty of this feed for winter time. While none of them had definite figures they could give us on this subject, they all had some ideas based on their feeding experience. The answers to these questions from probably fifty different silo users have been that they could keep from 50 to 100 per cent more cattle by the use of the silo than they could without.

If this is a fact, and we believe it is, it certainly seems to us that there is no investment the farmers of this country can make that will more surely put dollars into their pockets than will an investment in a good silo. It is a matter to which this paper strongly urges its readers to give careful attention. Investigate the matter on your own account. Look at it from every viewpoint. Make personal investigation and inquiries if you can from those having had practical experience in feeding this feed. We feel confident that if you do these things you will desire to build a silo, and that when you once have one on your farm it will be something that you under no circumstances will dispense with.

One Man Said Too Expensive

In making inquiry of the owners of silos we found one man who claimed the feed was too expensive and he did not recommend any farmer to build one, although he had three on his place, built at different periods. This man claimed that alfalfa was a much better and cheaper feed, and he believed better results could be obtained by feeding more alfalfa and less silage. We found him, however, plowing an alfalfa patch, putting it to corn and not seeding any new alfalfa this year.

Inquiry revealed the fact that this man had a motive in saying what he did to us. We found that he had bought up during the last winter from his neighbors who did not have silos and were compelled to sell a lot of calves and young cattle, feeding them on the silage he had stored in his silos and making a very nice profit on the deal. In one way of looking at it we do not blame this fellow for not wanting farmers in the neighborhood to build silos. There may be possibly other dry years in his country, and he can again reap a benefit from the unfortunate condition of his neighbors.

Don't Build Silo Too Large

One thing to be given considerable attention in the erection of a silo is its size. We find many silos have been built too large in diameter and not high enough. To have good silage a certain amount must be taken out each day. When the silo is made too large in diameter for the number of animals kept on the farm, quite a little loss is sustained in this way. It would pay better in the long run to erect two or more silos, if necessary, and take out more feed each day, than to erect one and have it too large in diameter.

We have found a considerable number of silos eighteen and twenty and as much as twenty-four feet in diameter. We are satisfied that the more economical way in the long run would be to build these not to exceed sixteen feet, and in many instances fourteen feet would be better. You may have on hand sufficient cattle to take off the necessary amount of feed each day for a twenty or twenty-two-foot silo. But conditions may arise by which some of these cattle may be sold, not leaving on hand a sufficient number to eat up the required amount of food each day. If you had a fourteen or sixteen-foot silo and were compelled to take off ten or twelve inches per day, your silage would not be hurt. At least two inches should be removed each day in the winter to have the best of feed, and three to four inches in the summer time.

In case you do find that you have a silo of larger capacity than necessary, and from which you can't remove the necessary amount of feed each day, take the feed from just half the surface, going down two or three feet, and then take off the other half. There will be much less spoiled silage in this way than by removing from the whole surface. It would be well to cover the half from which you are not taking the feed with tarpalin or heavy canvas.

Table of Capacity

The following table, given by W. H. Barr of the extension department of the Oregon Agricultural College, gives the capacity of silos of various dimensions, the number of feeding days for a given tonnage, the minimum amount of silage that should be removed daily, the number of dairy cows, fattening cattle or sheep that may be fed:

Inside Diameter, feet	Inside Height, feet	Capacity, tons	No. of Feeding Days	Min. Lbs. Removed Daily	No. of Stock that May Be Fed. Dairy Cows	Fattening Cattle	Sheep
8	20	17	121	280	7-10	11	90
8	24	20	142	280	7-10	11	90
10	24	34	130	525	12-15	21	175
10	28	42	160	525	12-15	21	175
10	32	51	190	525	12-15	21	175
12	26	55	132	755	18-25	30	252
12	30	67	177	755	18-25	30	252
12	32	74	195	755	18-25	30	252
14	30	91	175	1,030	26-30	40	340
14	32	100	193	1,030	26-30	40	340
14	36	118	228	1,030	26-30	40	340
16	32	131	181	1,340	34-40	54	...
16	36	155	230	1,340	34-40	54	...
16	40	180	270	1,340	34-40	54	...
18	36	196	230-300	1,700	42-50	68	...
18	40	229	230-300	1,700	42-50	68	...
18	42	256	230-300	1,700	42-50	68	...

Some people have the opinion that it is necessary to place in the bottom of a silo a well or drain by which excess juices may be drawn off. This is a mistake. If the plant is put into the silo at the proper stage of its growth, there will be no excess juices and the drain in the bottom is unnecessary.

Making Land Pay Profits

On a recent trip through some parts of Illinois and Indiana we could not help noticing the larger number of silos on the farms in those states as compared with the states further west. Why is this?

Farmers in these eastern states are living on land of much higher value than are we of the western states. To make their investments pay these farmers must avail themselves of every opportunity to make the most of what they raise. Investigation and experience have shown the eastern farmer that the silo is one of the structures on the farm that will help him to make the amount of money he should to pay him to own his farm.

If it is true that the farmers of Illinois and Indiana can make an added net income by using the silo, it is equally true that the farmers of states farther west and south can do the same thing.

We find some farmers taking the position that alfalfa or red clover are good enough for them. We quite agree with them that these legumes are fine forage, but the question remains, "Are these men making the most of their opportunities?" Alfalfa and clover hay sell in a large part of our territory at from $8 to as high as $15 per ton. If you could make a ton of silage, which would cost you from $2.50 to $4, take the place of a ton of alfalfa or clover for anyway half the feed, wouldn't it be good business to do it? Some experiments have shown that when this was done better gains in cattle have been obtained.

Stray Plants

Always keep the silo of morality filled with the ensilage of sober industry.

Some men would refuse to plant grain because they can't tell why the sun shines.

Record every successful experiment. One may forget many a dollar's profit.

Plants have a language all their own. Be careful not to write your record in weeds.

Spray the tree of life with the impulses God gave you—and the fruit will be good.

—J. H. Mackley, in Ohio Farmer.

Practical Tractors for Use on Small Farms

Of Many Makes of Small Machines Choose One Suited to Your Needs

One of the New Makes

Do Less Work and Are More Expensive than Tractor

THE tractor has performed an unusually large per cent of the work on many Missouri valley farms during the last season. Its work has not been limited to plowing and pulverizing the soil, as in the past, but in most cases the tractors were seen plowing, disking, pulverizing, seeding, ditching, pulling stumps and sawing the season's supply of wood.

The farmers who are operating tractors contend that they are not only accomplishing more and better work than they formerly did with horses, but they are disposing of many horses and thereby decreasing the cost of crop production. In a number of cases where the farmer used to keep from ten to twelve head of horses the number has been decreased to four head, and the farm work is now done better and more quickly.

Tractor farming is here to stay. When we see fields sown to wheat and oats and others prepared for corn that have not had a horse-drawn implement on them we begin to realize something of the vast possibilities that await development by this new method of scientific agriculture—tractor farming. In only a few instances does one see fields in which horses have to be used to plow out or seed the corners where the small and medium-sized tractors are used. It is only a question of a short time until the farm tractor will become so modernized that you can plow closer to the fences and get into the fence corners better with them than you can with horses.

Small, but Efficient and Powerful

The farm tractor is fast becoming very popular throughout the entire farming world. It is no longer looked upon as a mere luxury for the 1,000 and 5,000-acre farmer, but is becoming a labor-saving and practical machine on the average American farm.

One deplorable condition during the past has been that many tractors have been purchased haphazard, without reference to the kind of machine needed, the size of the farm, the kinds of farming done and the financial means of the purchaser. These men have now learned that they should not have purchased their tractors without first taking into consideration the size of their farms, the kinds of soil the tractor was to operate over and the character of work to be done and methods of farming, and last, but not least, the financial consideration. All these points should be considered if we are to get the tractor upon a practicable basis.

Many purchases of tractors during the past have been made without regard for any of these points. In several cases a farmer on a small-sized farm purchased a very heavy machine, capable of doing from twenty to forty horsepower belt work and a similar amount on the drawbar where there was no belt work to do, and an eight horsepower drawbar pull would have done all the regular farm work. The farmer learned, after a year's experience, that he had purchased the wrong type of machine; it was larger than his farm required and the financial obligation was more than the income from the farm could meet. This is not a proof that the tractor of today is not practicable, but it certainly is evidence that a good machine was put in the wrong place.

It goes without saying that the tractor business in this man's locality received a setback, not because the machine was impracticable, but because some unscrupulous salesman was more desirous of making an immediate sale than of building up a permanent business.

Farmers, manufacturers and salesmen should work together in developing this important phase of agriculture. Tractors should be sold on the same basis as any other farm machinery, and at least forty-nine out of every fifty machines would give perfect satisfaction on the farm if

Adapted to the Average Sized Farm

Sun and Heat Do Not Affect It

Not Limited to Plowing

Built for Orchard Cultivation

rightly sold and if purchased with reference to the particular conditions existing on the farm on which they are to be used. Farmers in this and every other progressive community are looking forward to the time when machine power will supplant horse power in more than 80 per cent of their farm operations.

It is not enough to have a machine that will plow as a one-man outfit and then require two men to do the seeding and harvesting. What is demanded in the Missouri valley states is a machine adapted to the average-sized farm, that will do the work with a minimum amount of labor and expense and develop a maximum amount of power for all necessary farm operations.

Is Straw Stack An Asset Or Liability?

It All Depends on Where it is and What You Do with It

HOW often in the springtime when plowing our ground, planting and cultivating our cornfields, do we solemnly promise ourselves we will never again stack our straw in the field, but when threshing or stacking time comes we are busy and the stacks are again made in the field.

This is one practice the average farmer has that we believe bad, for several reasons. We are going to give some of these reasons, any one of which should be sufficient for discontinuing this practice.

Each year our straw is becoming more valuable. It is more valuable in price as a feed than a few years ago, and as our farms become older the straw is much more valuable for the manure it produces. If this straw is stacked in the field, to be largely used for feed, too much of it is wasted by letting the stock run around it and in hauling to the barn and feed lots.

Old Straw Pile is Weed Patch

The straw pile in the field left to rot for manure never produces the manure it would if stacked in the barnyard. It will take several years for it properly to rot down for good manure; it is a waste of ground each year, as well as a waste of time in plowing, planting and cultivating. An old straw pile is always a weed patch and is a detriment to any farm as being a source of spreading weed seed.

Harvest time is a busy one and threshing time equally as busy. This is undoubtedly one of the main reasons farmers have for stacking or threshing in the field. Do we properly count the cost? We think not. On the average farm, if the grain is threshed from the shock, one more team hauling will generally be sufficient to keep the machine going if the grain is threshed in the barnyard. Suppose it would take two more teams; it would certainly be money well spent. You would save more than enough time in the winter in hauling to offset the added expense, besides getting more feed, more manure, more plow land next year and helping to keep down the weeds.

If you stack your grain, an additional team will haul the bundles to the barnyard. Right here let us say a word about the question of whether the grain should be stacked or threshed out of the shock.

Stack or Shock Threshing?

We have handled it both ways, but prefer to stack. We know that a great many of our farmers shock thresh. It looks as if stacking might in a few years be a lost art. It is, however, a splendid way to take care of the crop, and we believe in the long run the cheaper way. Before one tries it, however, he wants to know how to stack or employ someone who does. If you get a poor job of stacking and a wet season follows, you will probably always want to shock thresh. Stack-threshed grain is much brighter, by reason of having gone through the sweat in the stack, and makes cleaner feed than grain threshed from the shock.

Then, again, if you stack your grain, it doesn't require so much help; two men can work at it very handily, but four make a better and more economical crew. Often the grain will be ready to thresh and you can't get the machine; then it will rain and delay you, and the rain on the grain in the shock doesn't help it any. Often have we seen grain in the shock get so much rain that it would sprout. Often have we seen grain shock threshed so wet it would have to be thrown out and re-shocked. This is expensive in more ways than one. It costs money and loses grain in the process of the extra handling.

True, there are localities where one or even two farmers who might want to stack cannot do so because the balance of the neighborhood thresh out of the shock. In this business it is to some extent a proposition of "when in Rome do as Romans do."

We don't intend in this article so much to raise the question of what method to pursue—shock or stack threshing—as we do of making the most of what we have in the by-product—straw.

Straw Lot Valuable

One of the most valuable lots on your farm is a lot for the straw pile. Have it handy not only to feed from, bu handy to get into with wagons from the various fields. Being handy in this respect saves money in two ways—hauling in the bundles and hauling out the manure.

In two respects are the methods of too many of our farmers weak on the manure question. One is in not using every effort to save the manure and save everything possible to make manure, and the other is in the method of spreading the manure saved. You don't by any means get the full benefit of the manure you do have if it is not properly spread.

The manure accumulated on any farm is far too valuable to be spread upon the field in any way except by the use of a spreader. Don't put it in piles and later scatter it with a fork, probably at plowing time. If you scatter it on the field with a fork, no matter how careful you are, you can't do the job as well as the spreader.

Our advice to the man who hasn't a spreader, especially to him who thinks it no good, is to borrow your neighbor's spreader and try a small patch beside what you do with a fork and note results. If you do this, another machine will be in the list of implements on your place next year, for a manure spreader once used is always used.

Spreading Straw

There are many of our farmers so situated that they don't need nearly all their straw for bedding, nor can they find ready sale for it. The implement manufacturer has been alive to this fellow's interests, and put on the market a straw spreader, a machine with which straw can be successfully and properly spread over the field.

The straw spreader is of value to the farmer in more ways than one. After spreading the straw it is necessary to go over the field behind the spreader with a sharp disk, cutting the straw and to some extent mixing it with the top soil that it may decompose.

How many of our farmers disk the stubble before plowing in the fall? Not many. We believe the time and money spent in following the binder with a disk will make as good returns as will any field work of the season.

The harvest season is generally hot and dry. The sun beating down on the stubble saps up many tons of moisture that should be retained in the ground, and much of it could be kept there if the binder was followed with the disk. The man who has not tried this plan doesn't realize the difference in plowing and the indirect benefit to the next crop.

On many farms a few years ago (and, we regret to say, on a few of them now) the old custom prevailed of "bucking" the straw away from the machine at threshing time and burning it. This is an expensive custom. Every farm on which small grain is grown needs as much nutriment as possible returned to the soil. You are not doing your part if you burn your straw.

If you don't need your straw for feed or bedding during the fall and winter following threshing, get a straw spreader and make the most of your resources in the straw line with this implement. If you are not acquainted with its workings it may be of benefit to you to acquire some knowledge along this line.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Congressman Kinkaid has succeeded in getting through the house his bill permitting entry women who have married aliens to take patent to their homesteads.

Dairy interests in Kansas went forward a long step when eighty creamery men in convention pledged themselves to pay for cream according to quality.

Have you mowed the weeds along the public highway adjoining your place? If not, it should be done at once, as they not only look bad, but help to seed your farm with weeds next year.

Co-operative laundries in connection with the local creamery may soon be general throughout the country. Milltown, Wis., has followed Chatfield's example and established one of these laundries for the benefit of its patrons.

Some farmers make a practice of salting their cattle every Sunday, and also make a practice of forgetting it some Sundays. A little roof placed over a good, permanent salt box, kept filled with salt, is a good investment. Don't think the cattle will get too much salt if they have it fixed this way.

Recent rains have put our stubble fields in fine condition for fall plowing. If you can't do this plowing soon, it will pay you to go over this stubble with a disk. This will help keep this moisture in the ground. You may need it before fall. And when you do plow don't neglect to harrow the ground plowed before leaving the field.

Who Has Authority?

The Nebraska Live Stock Sanitary Board met at South Omaha on July 1. Generally, matters of a routine nature were taken up. The question of placing a quarantine on four and a half counties in the Scott's Bluff country, as requested by the farmers and stock raisers of that district, was one of the subjects under discussion. The board, at its previous meeting, discussed this matter and requested Governor Morehead to sign the proclamation, thinking this would be necessary to make it binding. The governor attended this last meeting and gave his reasons for not signing this proclamation, which the Twentieth Century Farmer thinks are good and sound.

Because of a constitutional provision, the governor is technically the state veterinarian and has general charge over these matters. The last legislature created the Live Stock Sanitary Board. The governor at this meeting stated that in his opinion it was the intention of the legislature in creating this board to take these matters out of the hands of the governor, relieving him of this routine work and responsibility. This is exactly what this paper thinks the legislature intended to do, and we are very much pleased, indeed, to note the governor taking this position. We believe the Live Stock Sanitary Board should have full control over all matters in this line, the state veterinarian's office, the field veterinarian and other employes.

The Live Stock Sanitary Board is certainly awake to the work in hand for it. It was decided at this meeting to hold more frequent meetings of the board and to give the dates of such meetings publicity, that live stock men interested in these matters may be present at such meetings and take up with the board matters of interest to them.

We want to say to farmers and others who may be interested in any of this work that they may rest assured the Live Stock Sanitary Board will be pleased to hear from them or to have them at any of its meetings and take up with them any matters of interest along this line.

Hog Cholera in Wyoming

Efficient work is being done in many states to control and eradicate hog cholera. Dr. B. F. Davis, state veterinarian of Wyoming, is among those who believe hog cholera can be kept out of his state, and he intends to do his part to keep it out.

One instance in particular shows how thoroughly he is doing his work. Some time ago an immigrant came into the state of Wyoming with three shotes in his wagon. It was reported to Dr. Davis that these pigs were affected with hog cholera. He sent one of his deputies on horseback to locate the immigrant; after two days' hard riding the immigrant was found. In his wagon were two pig showing visible signs of cholera. The deputy soon convinced the man that the pigs were sick, and they were killed and the carcasses burned.

Inquiry revealed the fact that the other pig had died and its body had been thrown out of the wagon. The deputy retraced the trail until he found the dead pig, burned the carcass and disinfected the premises.

Dr. Davis recently made the statement that there was not any hog cholera in Wyoming. We don't wonder at this when such steps are taken to eradicate the disease. True, there is not such a large number of hogs in Wyoming as in some of the states east of there, but more drastic measures might be taken in some other states than are taken. In some instances, without doubt, the legislatures are at fault in not providing sufficient funds for state officials to do the kind of work they should do along this line.

Chance for Breeders

While the Panama-Pacific International Exposition is more than a year off, it is none too soon for our breeders to begin to give the matter their attention. No question exists but that there will be a large and very important exhibition of live stock.

The breeders in the Ohio, Mississippi and Missouri valley states are the men who now are the main producers of the best of the live stock. If they are awake to their best interests they must recognize the fact that the great Rocky mountain country and all that part of the United States lying west of the Rockies is coming to the front rapidly. The farmers and breeders out there want good animals, many of them for foundation stock and many want to improve their herds. They are looking east for these animals. The breeder who takes advantage of this opportunity and shows some good individuals at San Francisco in 1915 is very likely to meet with ready sale for the animals he has for sale at the show, as well as to lay a good foundation for future business.

The live stock premium list is now ready for distribution. Send for one. Very liberal premiums are offered by the exposition people, and in addition to these premiums, practically every breed record association has made very liberal appropriations for additional premiums.

We are pleased to note the liberal offerings in the fat stock divisions. Look up the premiums offered for fat cattle, sheep and swine, in both carlot and individual classes. This paper is a strong believer in the showing of fat stock at our fairs and expositions. The finished product ready for the block is the end, and breeders should aim to breed the best individual they can for this purpose. If they are not doing so, they are not going right in their breeding operations. Why not make the showing of fat stock at our state and county fairs more popular?

Oil instead of coal ranges will be used on the newest United States battleships because of the greater cleanliness in cooking.

The ice cream consumption of the United States is estimated at five quarts per capita annually.

JOHN DEERE

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Describes the John Deere full line of farm implements. This book should be on every farm. Tells how to adjust important tools.

Ask for package P 15 Address your letter to

JOHN DEERE, PUBLICITY DEPT., MOLINE, ILL.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Swing Time

The oriole swings in her nest,
The bough swings high in the breeze;
Mother swings Bud in the hammock,
And I swing under the trees.
It is up, and up, and higher!
With toes 'most touching the skies;
Then down, and down, and sl-ow-er,
The old——cat———dies.
The butterfly swings on a rose,
The gull swings low on the seas;
A little boat swings at anchor,
And I swing under the trees.
It is up, and up, and higher!
With toes 'most touching the skies;
Then down, and down, and sl-ow-er,
The old——cat———dies.

—St. Nicholas.

The Editor's Corner

The list of additional stories is long this week, as it includes last week's list, for which there was no room. Among these stories are some excellent ones. It is remarkable what a lot of good bird stories there are, besides the ones published. I am so glad to see you taking an interest in the birds. There are a number of stories abount thunderstorms; there is one about a badger that caught the little chickens, and one about a party that had to be postponed on account of chickenpox. There was also a beautiful description of a California garden, and there were some good stories of cats, dogs, ponies and pigs. One little girl said, "Please do send me the prize." Sorry, but, of course, there are only a few prizes to a large number of writers, so there are ever so many who must just try again, perhaps quite often, before they succeed. Helen Garten of Pickering, Mo., sent a description of a bird, asking what it was. We think, from her description, that it must have been a sapsucker, which is a woodpecker having red markings on head and breast. Another bird she asked about, which sat by the river and called, "What do you know?" over and over, we are unable to name; the description is not definite enough to enable us to place him. The following names were suggested for Myrtle Wolery's little white dog: King, Snowdrop, Ring and Scott. THE EDITOR.

(Prize Story)

Our Birds

By Florence E. Whitmore, Aged 12, Litchfield, Neb.

I live in Custer county, Nebraska, among the hills. There are a good many different kinds of birds here, and I thought I would tell you about some of them. We have thrushes, catbirds, flickers, quail, owls, prairie chickens, blackbirds, martins, cowbirds, wild canaries, meadow larks, red-headed woodpeckers, bluejays, swallows, sparrows, hawks, crows, turtle doves and others I do not know the names of.

This spring we found a flicker's nest in the hollow stump of a cottonwood tree. There were eight light blue eggs in it, not quite as large as pigeon's egs. When the little birds hatched they had no down on them and were very homely. They grew to be quite big and more than filled the nest. Just before they flew away they had to pile on top of each other, but the ones beneath did not seem to mind. When they were hung ƒ they made a queer hissing noise. They made quite a disturbance when anyone came near. When fully feathered they were brown, with red on their wings and heads.

The eggs of martins are white, with brown spots on them. Those of a thrush are also white, with freckles of brown over them. I think the thrush is a beautiful singer.

My little brother just found a nest in the hayfield. It had five little blue eggs in it and belonged to a tiny bird that likes to build its nest in the alfalfa. The mower went over it and broke one of the eggs.

Note—This nest must have been that of the dickcissel, which lays four or five pale blue eggs in a nest built on the ground. It is a tiny, yellowish bird, with a chirping song, and it eats an unbelievable number of insects that would harm the alfalfa otherwise.

(Honorable Mention)

A Meadow Lark

By Annie M. Major, Aged 11, Thermopolis, Wyo.

This spring when mamma and I were after the little turkeys (we have forty) we found a meadow lark's nest; it had five eggs in it. The next day I went out and she flew off, but after that she did not seem to be afraid of me, and I never frightened her, though I went to see her often.

One day I went out and gently put my hand on her and petted her, and she never moved. I also put my hand under her and she did not fly off. All of the eggs were hatched but one and it afterward hatched. I went home and told mamma, and a man that was there, and they said they never heard of such a thing. The man that was here said, "Now, that shows what kindness does." When papa came in from work I told him and he had never heard of such a thing either.

After that the mother came to our yard for feed, and we were afraid the cats would get her, but they didn't. The little ones grew very fast, and one day I went out and they were gone. You may not believe this, but it is true.

The Brown Thrush

By Ada Cole, Aged 11, Sac City, Ia.

One day this summer mamma and

(CONTINUED ON PAGE NINE)

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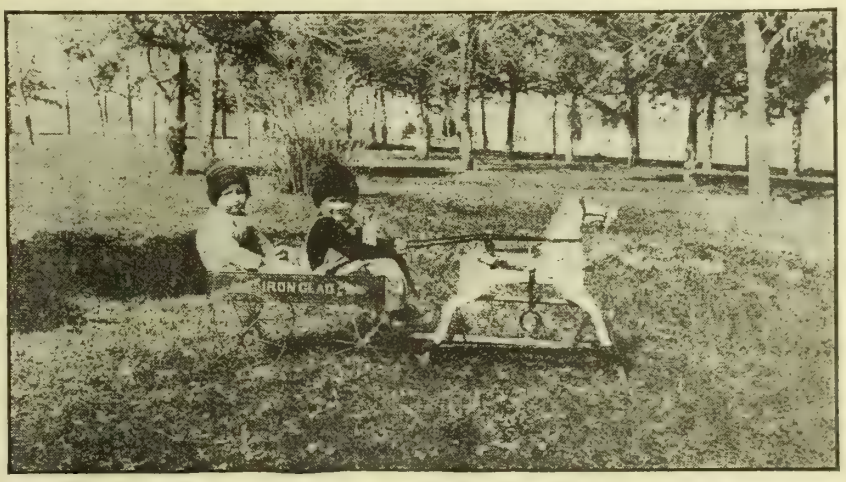
Awards in Picture Contest No. 14



The number of answers to this contest was barely over the 100 mark, but that is pretty good when we consider how busy you all must be at this time of year. It always seems a pity that more of the verses cannot be printed out of the hundred or more we receive, but we use all there is room for. We are always glad to be able to award a prize to someone who has tried a number of times before, as the writer of one of the prize verses in this issue has done.

(First Prize)

By Marie Austin, Aged 12, Norfolk, Neb.

I met these two upon the street,
And they were looking very neat.
I said, "Those two are feeling big;
I'll bet a cent that's a new rig."

(Second Prize)

By Belva Smelser, Aged 13, Julesburg, Colorado.

These boys are playing with a horse,
And they are having fun, of course.
If the horse should start and run,
They would think it still more fun.

By Russell Pulse, Aged 11, Missouri City, Missouri.

What are you doing,
Way out in the park?
You'd better get home
Before it gets dark.

By Sammy Morgan, Aged 8, Emerson, Ia.

Tommy and Joe, one bright summer day,
Went out in the search of fun;
They hitched old Prince to the wagon, gay,
And played till the set of sun.

By Pearl Smith, Aged 10, Crofton, Neb.

Out on the lawn,
Where the grass is green.
Two little boys
With their toys are seen.

By Gladys Matthew, Aged 13, West Plains, Mo.

Will you come and play horse with Billy and me?
For an iron-clad wagon is ours, you see;
Our horse is strong and can pull us with joy.
Now, don't you think you'd as soon be a boy?

WRONG BREAKFAST
Change Gave Rugged Health

Many persons think that for strength they must begin the day with a breakfast of meat and other heavy foods. This is a mistake, as anyone can easily discover for himself.

A W. Va. carpenter's experience may benefit others. He writes:

"I used to be a very heavy breakfast eater, but finally indigestion caused me such distress I became afraid to eat anything.

"My wife suggested a trial of Grape-Nuts, and as I had to eat something or starve, I concluded to take her advice. She fixed me up a dish and I remarked at the time that the quality was all right, but the quantity was too small—I wanted a saucerful.

"But she said a small amount of Grape-Nuts went a long way and that I must eat it according to directions. So I started in with Grape-Nuts and cream, two soft-boiled eggs and some crisp toast for breakfast.

"I cut out meats and a lot of other stuff I had been used to eating all my life and was gratified to see that I was getting better right along. I concluded I had struck the right thing and stuck to it. I had not only been eating improper food, but too much.

"I was working at the carpenter's trade at that time and thought that unless I had a hearty breakfast, with plenty of meat, I would play out before dinner. But after a few days of my "new breakfast" I found I could do more work, felt better in every way, and now I am not bothered with indigestion."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Our Women Readers

Then Laugh

Build for yourself a strong-box.
Fashion each part with care;
When it's strong as your hand can make it,
Put all your troubles there;
Hide there all thought of your failures,
And each bitter cup that you quaff;
Lock all your heartaches within it,
Then sit on the lid and laugh.

Tell no one else its contents,
Never its secrets share;
When you've dropped in your care and worry
Keep them forever there;
Hide them from sight so completely,
That the world will never dream half;
Fasten the strong-box securely—
Then sit on the lid and laugh!

—Bertha Adams Barkus.

Our Home Chat

Visiting nurses in rural districts have been advocated by the Red Cross society for some time. Recently this experiment was tried in a county in Alabama and is proving a great success. A nurse certified by the Red Cross society was hired by the county and people. She visits the rural schools, where she looks into sanitary conditions and talks on health to the teachers and pupils; she attends women's meetings, talking to them on sanitary conditions and care of the sick; she watches for signs of contagious or infectious diseases, inspects the eyes and teeth of the children and assists the physicians in bringing patients through the crisis in case of serious illness.

Most city schools have long had physicians to watch for contagious diseases among the children, and in many cities the eyes and teeth are looked after. In the city it is easy to get a nurse on short notice, and if the illness is not serious a nurse may be obtained for a short time each day or for a day or two at a time. In the country the expense of getting a nurse from the city is so great that unless the case is very serious, indeed, it is usually not done. The mother of the family takes charge herself, even in such critical diseases as typhoid, pneumonia, etc. Some women have a natural talent for caring for the sick; they obey the physician implicitly and know by former experience or by instinct what to do in case of emergency. Most women, however, are not thus specially gifted. Many a life has been lost that might easily have been saved had the right thing been done at the right time. The graduate nurse has been put through a hard course. She has been taught what to do in every emergency, and before she has been in practice long most possible emergencies have come within her experience. Sickness is a matter of business with her, and she is not under the nervous strain of worry that the mother or sister is in caring for the patient.

There are many children in the schools that are considered stupid or vicious, when in fact there is nothing wrong with them outside of some physical imperfection, such as slight deafness, adenoids, defective vision or something of that kind. A nurse to examine the school children and discover these defects might prove herself of great value in the country, as they have often done in the city, and she would be of inestimable value in case of sudden and serious illness.

HOME EDITOR.

Book Reviews

Ten cents a day buys enough food to keep up the bodily activities. Whatever else we spend for food goes for flavor to make eating enjoyable. This is the statement made by Henry T. Finck in the preface to his new book, "Food and Flavor," which he claims is the first book ever published in any language treating of the flavor of foods. This book is not only so intensely interesting that it holds the reader's attention like a novel, but it is characterized by sound, common sense and practicability. It is not a cook book, nor a domestic science treatise, though no cook nor domestic manager could read it without profiting by it. But it is wider than this in scope. The chapters relating to the raising and marketing of food products are particularly full of valuable suggestions. It is a book that might well serve as a guide to anyone interested in the production and selling of food products, preparing food or consuming it. In fact, it is hard to imagine any woman or man to whom this volume would not make an appeal in a practical way. It is beautifully illustrated with photographs and artistic drawings.

"Food and Flavor," by Henry T. Finck; 581 pages, illustrated. Published by the Century company, New York. Price, $2 and 18 cents for postage.

* * *

For the man or woman who raises vegetables for home use or for the market, Adolph Kruhm has written a little manual on the preparation and treatment of the soil, management, rotation, etc. He devotes the

(CONTINUED ON PAGE TWELVE.

Keep Cool and Comfortable

Don't spend so much of your time cooking during hot weather; and your family will be healthier without the heavy cooked foods.

Give them

Post Toasties

They're light and easily digested and yet nourishing and satisfying. No bother in preparation — just pour from the package and add cream and sugar—or they're mighty good with fresh berries or fruit.

"The Memory Lingers"

Styles for Home Dressmaker

Description of Patterns

6717—Ladies' Waist—This pretty bodice is cut with body and sleeves in one piece. The closing is in surplice effect and there is a handsome roll or standing collar at the neck. The model is good for crepe de chine, cotton voile, plain and embroidered crepe and similar materials. The pattern 6717 is cut in sizes 34 to 44 inches bust measure. Medium size requires 1¾ yards of 36-inch material.

6023—Ladies' Skirt—In this model we have a splendid five-gored skirt for separate wear or for costume development, as the design is equally suitable for either. It is cut in five gores and closes at the front. It may be made in the empire or regulation waistline. The pattern 6023 is cut in sizes 22 to 30 inches waist measure. Medium size requires 3⅞ yards of 36-inch material.

6021—Ladies' Shirt-Waist—Linen, gingham or crepe de chine can be used to make this shirt-waist, with the collar and cuffs of contrasting material. The shirt-waist closes at the front and can be made with either the long or short sleeves. The pattern 6021 is cut in sizes 34 to 42 inches bust measure. Medium size requires 1⅝ yards of 44-inch material and ¾ yard of 24-inch contrasting goods.

6753—Ladies' House Dress—Any of the wash materials can be used to make this dress. The dress closes at the front and can be made with either the long or short sleeves. The five-gored skirt can be made with either the high or regulation waistline. The pattern 6753 is cut in sizes 34 to 44 inches bust measure. Medium size requires 3¾ yards of 44-inch material and ⅝ yard of 27-inch contrasting goods.

5991—Girls' Dress—Linen, gingham or ratine can be used to make this dress. The dress closes at the right side of the front and can be made with the long or short sleeves. The skirt is cut in three pieces. The pattern also provides for a removable shield. The pattern 5991 is cut in sizes 6, 8, 10 and 12 years. Age 8 years requires 2½ yards of 44-inch material.

6065—Children's Dress — Any of the checked ginghams can be used to make this dress, with the belt and cuffs of contrasting material. The dress closes at the front and can be made with either the long or short sleeves. The skirt is cut in two pieces. The pattern 6065 is cut in sizes 4, 6, 8 and 10 years. Age 8 years requires two yards of 44-inch material and three-eighths yard of 27-inch contrasting goods.

6789—Ladies' Apron—This apron is just the thing for wearing around the kitchen, as it covers the entire dress. It closes at the back and has a pocket on each side of the front. The pattern 6789 is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 4⅛ yards of 27-inch material.

All Patterns on This Page 10 Cents

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

I HAVE never had half the trouble saving the brooder-kept chickens from drowning by the dozens in a heavy, quick-coming summer or fall rain that I have with the hen brooded. Let a dashing rain come upon the hen and her brood far out, and she usually sits right down and attempts to hover all the chicks that can get under her, which is not many after they get to be some size; then let the rain continue in violence, and, without fail, a panic seizes the hen and she starts out seeking shelter of some kind, to the loss of even the big, strong chicks that fall over drenched and soon are beyond bringing back to life unless you get to them quickly. My brooder-kept chicks never wander far from the brooder, and they all stay together and sprint for the brooder at the first sprinkle of rain, and they usually reach it in time, and if a few fall short of it I can find them in time to bring them to.

Let the Girls Raise Poultry

Considerable stress is placed on devising ways for keeping the boys on the farm and but little said about keeping the girls there, safe from the dangers that, too long hidden for shame's sake, beset her path in the city. A thousand and one times better let the boy go than the girl. One mother that I know solved the problem by demanding that the father allow their girl to have charge of all the poultry raised on the farm and that, outside of the eggs and poultry needed for the table, all the proceeds be her own. The groceries hitherto bought by the poultry money must be purchased with money from some other line. This appealed to the father so strongly that he did all in his power to make poultry raising easy for the daughter by building good poultry houses and fixtures. She was not only kept at home, but later took her father into partnership with her in the raising of poultry for exhibition and breeding purposes. She is now a happy, busy girl. Other farmer mothers and fathers might do something right in this very line for their girls. Often it is only the desire for some pin money of her own that sends the girl flitting into the store or more dangerous factories. Goose and turkey raising alone will bring her plenty of pin money. Give her strong encouragement to stay away from the city. Divide up profits with the young people who work for you. If the merchant or manufacturer takes his children into his work he pays them fair wages.

Profit in Raising Poultry

There is no crop habitually raised on the farm that, with knowledge of how to do the work, you can be surer of profit from than raising poultry for a living. If you start in to make it from hay, wheat, corn or potatoes alone, there will be years in which climatic conditions over which you have no control will make either one of these crops, taken alone, a complete failure for you. Not so poultry to any great extent. The hen herself is your business partner. Just think how quickly she comes to maturity and how soon she is making a profit for you. In going into the business for a living select a site near a good market; select a dry and if possible high, sandy location. The location, coupled with common sense on your part, is often nearly all the battle. Build simple, but good, houses. Go slowly at first. Keep one good breed. Nothing is ever made by constantly changing breeds. Don't get discouraged. You are bound to have some bad luck, but let it be a lesson to you—a good one, not a discouraging one. There is a living in poultry.

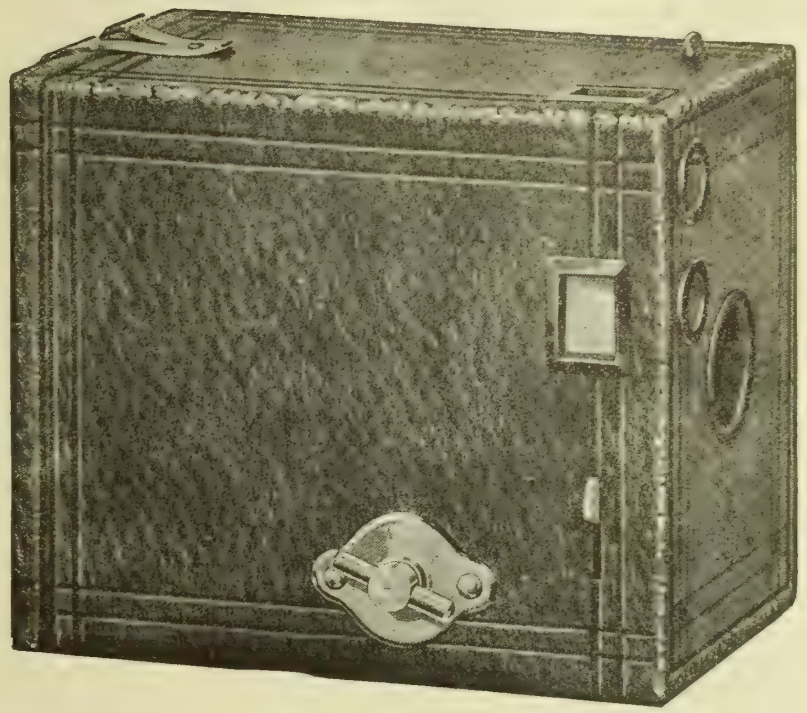
Our Young People

(CONTINUED FROM PAGE SEVEN)

I went to the woods. We were going by some bushes when we saw some baby birds. Their mother was in a tree calling to them. Mamma said she was teaching them to fly. I wanted to touch them, but mamma said it might frighten them. We went a little farther and saw a bird fly out of a bush. I looked and there was a nest with four little blue eggs. I showed one to mamma and then put it right back. It was getting late and we started home. I hope the little birds soon learned to fly.

Additional Stories

Eleanora Ehlers, Hebron, Neb.; Marie Austin, Norfolk, Neb.; Mae Pettigrew, Wayside, Neb.; Edith Ritz, Wilsonville, Neb.; Glenora Young, Halsey, Neb.; Vernon Wertz, Star, Neb.; Flossie Ogburn, Hubbard, Neb.; Jefferson Mowrey, Lexington, Neb.; Blanche Tichy, Wilbur, Neb.; Ruth Williams, Arcadia, Neb.; Winifred Puryeas ,Brunswick, Neb.; Margaret McCorkle, Tilden, Neb.; Russell R. Hill, North Loup, Neb.; Mary E. Grevson, West Point, Neb.; Vivian Daughhetie, Oakdale, Neb.; Barbethe Miller, Gray, Ia.; Beulah Baker, Sand Springs, Okl.; Julia Hiatt, Columbia Falls, Mont.; Naomi Sparre, Blythe, Cal.; Walter Cheney, Turlock, Cal.; Lylwynne Metcalf, Bayou, La.; Charley Passmore, Pecos, Tex.



The little camera that does big things.

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No. 0 Brownie

MADE by Kodak workmen in the Kodak factories, it is accurate, reliable, efficient. So simple that anybody can make good pictures from the very start and is economical to operate, the film cartridges for eight exposures costing but twenty cents.

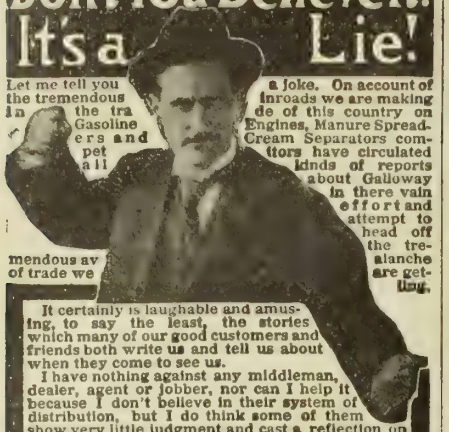
The No. 0 Brownie has an automatic shutter for snap-shots and time exposures, a carefully tested meniscus lens, and has two view finders, one for vertical and one for horizontal exposures. The pictures are 1⅝ x 2½ inches, the same size as those made by the famous Vest Pocket Kodak. Like all the Brownies it loads and unloads in daylight with Kodak film cartridges. You can do your own developing and printing (without a dark room if you like) or your dealer will do it, or have it done for you.

With each camera we give without any extra charge a complete manual of instructions and a year's free subscription to our monthly photographic publication "Kodakery"—a beautifully printed and delightfully illustrated 32 page magazine that is full of helpful hints to the amateur photographer. You can take good pictures. It is part of the Kodak service to help everyone of its customers to successful results.

Ask your dealer to show you the No. 0 Brownie or write us for catalogue of Kodaks and Brownies.

EASTMAN KODAK CO., ROCHESTER, N. Y., *The Kodak City.*

Don't You Believe It! It's a Lie!



Let me tell you a joke. On account of the tremendous inroads we are making in the trade of this country on Gasoline Engines, Manure Spreaders and pet Cream Separators competitors have circulated all kinds of reports about Galloway in their vain effort and attempt to head off the tremendous avalanche of trade we are getting.

It certainly is laughable and amusing, to say the least, the stories which many of our good customers and friends both write us and tell us about when they come to see us.

I have nothing against any middleman, dealer, agent or jobber, nor can I help it because I don't believe in their system of distribution, but I do think some of them show very little judgment and cast a reflection on the intelligence of some of my farmer customers when they try to get away with some of the yarns they are spreading and have been spreading for the last seven or eight years.

When they tell you

Galloway don't have any factory—don't you believe it! **It's a lie! When they tell you** Galloway has gone out of business—don't you believe it! **It's a lie! When they tell you** Galloway don't make his own Gasoline Engines, Manure Spreaders, Cream Separators and other implements—don't you believe it! **It's a lie! When they tell you** there is no such man as Galloway—don't you believe it! **It's a lie!** Come to Waterloo and I'll show you around. **When they tell you** their goods are better than ours—that Galloway goods are cheap and not worth the money—don't you believe it! **It's a lie!** And I'll give

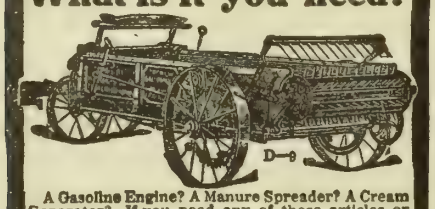
$10,000 REWARD

to anyone who can prove their statements.

All I ask you to do with my goods is try them before you pay for them, and if I can't give you the biggest value and the best Gasoline Engine, Manure Spreader or Cream Separator for the money that you ever saw, regardless of make or kind, then it's time enough to try the other fellow's goods.

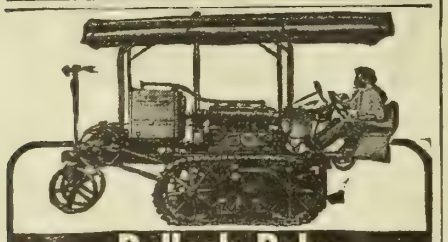
But remember I am with you. I am a farmer myself—was raised on a farm—went into business, learned the true trade conditions, and then came out and resolved to sell goods direct. The result is, I am saving the farmers of this country millions upon millions of dollars, and I repeat what I have often said in conversation with many of my farmer friends all over the country. It is simply this: If every farmer in the United States realized the truth and realized the tremendous values we are giving in the lines we are offering we could not build goods fast enough if our factories were ten times as large.

What is it you need?



A Gasoline Engine? A Manure Spreader? A Cream Separator? If you need any of these articles or other implements which I sell, let me quote you a price and send you my descriptive catalogs and give you my 5 new selling plans, cash or credit, and let you try the goods at my expense.

WM. GALLOWAY, Pres.
The WM. GALLOWAY COMPANY
267 Galloway Station - Waterloo, Iowa



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One important feature of this tractor is that it steers with the creepers at the same time with the front wheels, permitting short turns and operating close into fence corners; the machine can turn within its own length.

Interesting literature describing the Bullock Baby 20-20 H P.—also 3 larger sizes with prices sent on request. Address

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Works Easy On Any Job

Especially Adapted for Small Farms and Orchard Plowing.

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Famous Collins Saddles

Best saddle made. Have stood the test for 50 years. Write for free catalogue.

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Successors to Collins & Morrison.
1210 Farnam St., Omaha, Neb.

How Panama Canal Will Help Trade with Bolivia

By Frank G. Carpenter

LA PAZ, Bolivia—By the Panama canal Uncle Sam has brought Bolivia into the market place of the United States. This means much now. It will mean more in the future. Bolivia is almost one-fifth as big as Europe. If spread over the main body of the United States, it would cover one-fourth of it. It is an undeveloped empire of natural resources. Situated on the roof of South America and shut off from the seacoast by a great strip of desert, it has until lately been almost inaccessible. Of its vast mineral resources, only those could be mined and shipped abroad that were valuable enough to pay enormous freight rates. They have to get out to sea over a single railroad and then go down through the Straight of Magellan to Europe. Now there are three railroads, and by the Panama canal Bolivia is brought within about 4,000 miles of New Orleans, and within almost 4,500 miles of New York.

Aymara Indians

The country is the great tin reservoir of the world. It has been sending its tin ore through the Strait of Magellan to England, where the metal has been smelted and refined, and sent across the Atlantic ocean for the making of American tin plate. The tin ore will now probably come to us direct, and a smelting industry may grow up to handle it. As to the present trade with Bolivia, Great Britain comes first, then Germany, and then the United States. Even under the hard conditions of present transport we are sending Bolivia more than one-seventh of all it consumes and we buy one-third of all that it sells. With the canal, our sales increase enormously and our purchases will probably make us its best customer. As it is now the total foreign trade of the country is about $50,000,000 and of this the exports exceed the imports by more than $10,000,000.

American Industries Growing Fast

Within the last six or seven years American interests in Bolivia have been rapidly growing. In 1902, when Brazil paid to Bolivia something over $10,000,000 for the territory of Acre, the government decided to put the money into the building of railroads for the development of the country, and the contracts were given to Speyer & Co. and the National City Bank of New York. The amount all told was something like $27,000,000, and this resulted in the building of a number of new lines and the extension of the old system, giving the country the improved transportation service which it has today. Later on the Farquhar Syndicate, incorporated in the United States with a capital of $25,000,000, received concessions for the building of roads in eastern Bolivia, and, although as yet nothing has been done on account of the hard financial conditions throughout the world, the concession may be revived as times improve.

Associated with the Speyers and the National City Bank in the first railroad building was the firm of W. R. Grace & Co. of New York. It was through this company, which has long been a power in South America, that the great railroad loan was contracted, and through it came large importations of American machinery, rails and rolling stock, and also the American civil engineers who laid out the lines and superintended the construction.

Boosting Sale of American Goods

At about the same time the firm of W. R. Grace & Co. established an American house in La Paz. It had long been known for its work in all the countries along the west coast, but until then had not paid much attention to Bolivia and the interior. Since then it has established selling agencies in every part of the republic, and is now pushing American goods everywhere throughout the high Andes. It has divided up Bolivia just as our great wholesale firms map out their respective territories, and it has its commercial salesmen drumming and pushing American goods in every part of the country. The La Paz establishment of Grace & Co. is the biggest wholesale house in Bolivia. It has a business corner that covers about one-tenth of an acre and its counting room looks like a government department. It has scores of clerks seated at American desks, and the clicking of a score of American typewriters fills the air. Business is done just as in the states, and the success shows that American methods will work as well south of the equator as they do north of it.

Chat with Local Director

During my stay here I have had a chat with Mr. Jorge Zalles, the local director of this American firm. He was born in Bolivia, and thoroughly understands the people and their trade. He is also well posted as to our American interests, having had some experience in the United States in a diplomatic capacity, and also as to the importation and exportation of goods from this country to the United States and Europe. Said he:

"There should be a great increase in the business done between the United States and Bolivia. As it is now, the most of the trade goes on through Grace & Co., but there is plenty of room for others. We have to fight the English, the French and the Germans, and the only way to do business is to go after it and get it. You cannot sell goods here by letter. You need good men on the ground, and establishments that will come to stay. As it is, much of the business is in the hands of the Germans, and they are so pushing their trade that they supply nearly one-third of all the goods imported into Bolivia."

"What kind of goods do we sell in this country?"

"We sell 90 per cent of all the flour that comes in," replied Mr. Zalles, "and 99 per cent of all the lumber. Flour comes from the Pacific coast, and nearly all the lumber consumed is Oregon pine. We are also selling a great deal of mining machinery and of galvanized steel sheets for roofing. American shoes are worn by the middle and upper classes, and they are the best shoe in the market. We are also selling cotton sheeting, American typewriters and American hardware. In all of these branches the trade might be greatly increased, but only by having men on the ground who can drum up the business."

No Trouble with Collections

"But how about credits in Bolivia? Do merchants pay for what they order?"

"Yes. They are as honest as we are, and there is no more trouble in making collections. The national credit is also good, and it has grealy improved since the contract was made through W. R. Grace & Co. with Speyers and the National City Bank for the building of new railroads. Before that time it was almost impossible for us to get money from Europe. I can remember that I went to London about ten years ago to borrow a million dollars to build the railroad from Lake Titicaca to La Paz. I could not get any one to listen to me. After the loan was made by the Speyers the financial powers of Europe began to wake up. They decided that if the credit of Bolivia was good enough for the Americans it ought to be good enough for them, and since then we have had no trouble in borrowing. There is today a great deal of English, French and German money invested in Bolivia, and we get a loan at any time for any reasonable amount. Our public debt is not large, considering our population and our resources."

"What kind of interest rates does money bring here?"

"The rates are much higher than in the United States. Ordinary loans yield 10 per cent, and for special loans 11 per cent and more are received. Our money rises and falls, according to the demand and supply, just as it does everywhere. At present money is scarce and high all over the world. The government is making some changes in its financial arrangements. It has recently given one bank the exclusive right to issue notes, and the rate of interest has been raised. We have a number of banks in the country and the most of them are prosperous."

Investment Opportunities Good

"How about the opportunities for the investment of American capital?"

"They are good," replied Mr. Zalles. "Bolivia is at the beginning of its development, and it has vast resources in lands, mines and petroleum. The most valuable part of our country lies east of the Andes. In that region we have an area bigger than Texas, consisting of high plains that will raise wheat, corn and cattle. Those lands are between the River Pilcamayo and the Paraguay, and they extend northward into the plateau of Matto Grosso. The climate is fine and well suited to white men. That region will some day have a large population. As to mines, Bolivia has produced quantities of silver, copper and tin, but it is still on the edge of its mineral development. We have petroleum fields that promise to revolutionize the fuel problem in South America. These are

east of the Andes. They are said to be very rich."

"But is capital so invested safe," I asked.

"Yes, just as safe as in Europe or the United States. You people should realize that conditions in the great countries of South America are far different from those of Central America and Mexico. Investments in Chile, Argentina and Bolivia are on a firm basis, as far as the governments are concerned. We have not had a revolution in Bolivia for more than thirty years, and we are in a good financial condition. Capital is protected, and I venture that a man's life is safer at any hour of the night here in La Paz than in New York or Chicago."

Railroad Era Just Beginning

"How about your new railroads?"

"Our railroad era is at its beginning. Within the past decade the chief cities have been connected by iron tracks, and we are building extensions that will complete the basis of the system. Our railways are now within about 100 miles of those of the Argentine, and within a short time we shall have direct railroad connection with Buenos Aires. Indeed, we can today go to Buenos Aires staging the space between the roads.

"What we especially want," continued Mr. Zalles, "is railroads to open up eastern Bolivia. That part of the country is well fitted for immigration, but it cannot be developed until it has better transportation. The region is rich beyond conception. It is one of the largest blocks of good, undeveloped land that yet remains to the world. It is far different from the high Andean plateau, which is, to a large extent, a mineral proposition. Eastern Bolivia is agricultural. It is like Argentina. Here on the plateau cities are increasing in size and a steady growth is apparent. If you look about in La Paz you will find that new construction work is going on in every part of the city. Why, we start a new building almost every day. Settlements are also springing up along the lines of the railroads, and even the Indians are increasing their wants."

Young Indians Quick to Learn

"Tell me something about the Indians," Mr. Zalles. Many of the foreigners I have met say they are little more than animals, and that there is no possibility of improving them."

"That is a mistake. The Aymara Indians, who form the majority of the population, are much like the Japanese in their aptitude for new things. The older men and women, whose brains have been deadened by overwork, and by alcohol may be dull and sodden.

It is far different with the young men. They are bright and quick to learn. You will see them working upon the buildings here in La Paz. Everything is done by Indian labor. We have a large shoe factory in Oruro. The shoemaking machines are American, and they are all operated by Indians. We have Indians who are experts in handling mining machinery. Some of the Aymaras are learning to read, and I can see that a radical improvement has begun. The most of our Indians are landowners. They are interested in the country by owning a part of it, and as they become more enlightened they will be fairly good citizens.

The new American minister is doing what he can to push our trade with a view to the opening of the canal. The minister comes from the Mississippi valley. His name is John Davis O'Rear. He was practicing law at Mexico, Mo., when Secretary Bryan elevated him to the diplomatic corps and to the top of the Andes. Since coming here he has established excellent connections with the Bolivians, and I find him popular. He lives in the house that was occupied by the former minister, Horace G. Knowles. It faces the Prado, or chief public park and promenade of the capital, and is in the official and social heart of the city. Mr. O'Rear tells me that American exporters should establish permanent agencies in La Paz and send their own men down here to push their goods.

Mineral Development Company

Mr. Knowles, the former minister, is so confident of the future of the country that he has established a company for the mineral development of Bolivia. This is chartered in Portland, Me., and its authorized capital is $25,000,000. It has its engineers and prospectors, who are traveling over the Andes looking for good propositions, lands and mines, which, when found, are to be developed by Bolivian and American capital. Mr. Knowles is the president of the Incaoro Mining company, which, he tells me, is doing wonders. I have already spoken of the gold bricks—real gold, not imitation—that he showed me from this mine, and his story is that it grows better and better. Mr. Knowles does not hesitate to urge the investment of American capital in Bolivian mines. He thinks this country is to be the treasure vault of the next generation, and it is a part of his business just now to induce Americans to come to it. Personally I believe every man ought to investigate such propositions carefully before putting any of his hard-earned American dollars into them.

Americans Doing Much for Education

I find that the Americans are doing much in Bolivia along the lines of education. I have already written of their Indian school on the banks of Lake Titicaca. This is thriving and it promises to work a revolution in a race that sorely needs it. Here at La Paz is the American institute. This is a college for the higher education of Bolivian youth that is making a big impression upon the country. It is supported by the Methodist Episcopal church of the United States, but the Bolivian government esteems it so highly that it makes an appropriation every year for it and encourages it in every possible way. This school was founded in 1907 at the request of the Bolivian government by the missionaries, and it is under their control. It is not sectarian in its teaching. When it was first opened it had an attendance of 120 pupils, and since then the number has grown to 300 and more. The students come from all parts of Bolivia and even from over the borders in Brazil and Peru. Not a few of the boys have to travel a month by mule, stage coach and train to get to La Paz.

During my stay here I have visited this institute and had talks with its teachers. They are all Americans and the school is run on the American plan. The head is Prof. McBride, and among the teachers are the graduates of the best of our colleges.

Chance for Philanthropist to Donate

The American Institute is situated near the Prado and not far from our legation. It still occupies rented grounds and buildings, and it would be a good investment for some one who wishes to lay up treasures in heaven to give from $50,000 to $100,000 to the buying of land and the erection of buildings for the institute. When Secretary Bryan was here, six or seven years ago, he started a movement toward the raising of this money; but so far as I know he was not altogether successful. I know of no place where money could be better spent. As it is now all of the buildings are crowded and there are more applications from students than can be filled. The Methodist church has established a secondary school at Cochahamba, a city of 30,000, in the heart of Bolivia, about three days' journey from La Paz. This school will have a like appropriation from the government as that of La Paz.

The American Institute is organized after the model boys' boarding schools of the United States. It has all the features that make school life pleasant, and it has taken to some extent the part of a Young Men's Christian Association in the encouragement of games and the development of athletes. It has its literary society and its school publications. It has a Boy Scout movement and athletic tournaments, with running, jumping and foot ball matches. I have before me the program of the tournament of last year. The language is Spanish, but it can be easily translated by those understanding the sports. The tournament was divided into three classes, the first of which was composed of the alumni and others above 15 years of age. The second class was of all those between 11 and 15 years, and a third class was for boys under 11. The prizes were gold, silver and bronze medals, and they were presented by the American minister at the end of the games.

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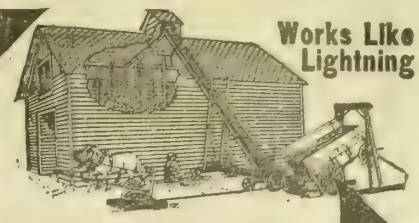
Get Double Value—Buy Your Sandwich Elevator NOW!



Works Like Lightning

Cut Out Drudgery in Hot Harvest

Store your small grain with a Sandwich this summer, then let it crib your corn next fall.

Every farmer who buys his Sandwich Elevator before harvest gets double work out of it! And double value too, besides saving him work and worry, and giving him health and comfort.

You, too, can get double value—you, too, can cut out that useless drudgery of shoveling load after load 'till you drop. You, too, can add 3c to 4c a bushel to the profits of your field.

"The Sandwich Farm Elevator is the best investment I ever made in hard labor-saving machinery," writes Herman Frey, Melvin, Iowa,—one of a vast army who say the same.

Behold! The Noiseless Elevator

Sandwich (Eternal Cypress) Farm Elevator

No Rattle and Din—No Shaking to Pieces

Beware of the elevator that rattles, for that deafening rattle and din means a steady vibration—a steady loosening and finally the dropping out of the nuts, bolts and rivets.

The Sandwich works silently—bolts do not loosen. It is built of Cypress, though steel lined, and will be everlastingly on the the job when the steel kind is bent and broken—when pine and poplar have rotted and fallen to pieces.

Cannot Sag

Straight and firm all the time. Here's how we do it. Elevator is made in two sections with strong malleable hinge couplings. Hinges extend 20 in. on elevator sides. This is doubly re-enforced by 4½ in. bolts that hold the sections closely and firmly. Every four feet on bottom and sides, rigid heavy band strap-iron braces and trusses are placed.

Experimenting All Done

before a single Sandwich was sold. **We built it right at first!** That is why every blessed farmer who bought a Sandwich swears by it. And now many of our most enthusiastic customers are farmers who became disgusted with other elevators and cast them aside for a Sandwich.

This is proved because we have sold more elevators in six years than any other manufacturer.

Does the Work of 7 Men

A few years ago people would have laughed at the idea that one boy could store as much grain and crib as much corn as 7 men. But now an army of progressive farmers own Sandwich Farm Elevators, and the boys and girls can do the storing and cribbing.

One man writes, "My 11 year old boy runs my Sandwich Elevator as well as I can."

No Leg-Breaking Platform

The Sandwich wagon-jack is over head. "Works to perfection," says A. J. Anderson, Boone, Iowa. You drive right under—with even the tallest load. And it dumps it in the hopper in a jiffy. Then hitch on any power—horse or engine—and it's off with a flying start for a bin and crib full—clear to the top.

Sandwich Bucket Elevators

We also make Bucket Elevators with 18 in. cups and No. 77 chain. Send for **Free** Booklet giving full information.

Send Today for Free Catalog

And the name of a dealer nearby who will show you the Everlasting Sandwich. This book pictures it—tells the inside facts of Elevator construction—why we built of **Cypress**, "the wood eternal," line it with steel and give you the best though it costs us more, for Cypress is a costly wood; yet we have always used it.

This book also gives you measurements of cribs and granaries. You'll want them if you ever build. Sent **Free.** Postage paid by us.

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WRITE QUICK FOR FREE CATALOGUE

The Powerful Smalley Cuts Silo-Filling Cost!

"We have just finished filling four silos with the Smalley No. 18. It's not only a force-feeder, but a self-feeder. We do away with one man by using the Smalley."
JAMES W. WILSON, Director, State School Agr., Brookings, S. D.

Hurry-up calls for the Powerful Smalley to replace broken-down, flimsy silage machines happen every day. The Smalley works on the *grip-hook, force-feed* principle; it does work that no cheap machine can stand up under. The grip hooks and extra paddle roller *force* the corn, alfalfa, oats or peas into the knives as fast as you can throw it on the table. And it cuts that silage *fine and uniform.* No uneven, coarse pieces. Your silage packs tight—you get more tounage.

The Powerful Smalley Force-Feed Silage Cutter

One-pulley and chain-drive on blower outfits replace power-wasting idlers. Large journals. Hard-oil cups mean easy running, no burned-out bearings. Blower operates separate from cutter—no chance of sudden stoppage of cutter causing breakdown. **Send a postal for the latest Smalley Catalog,** and get all the facts today about the fastest, cleanest Cutter and Filler in the world.

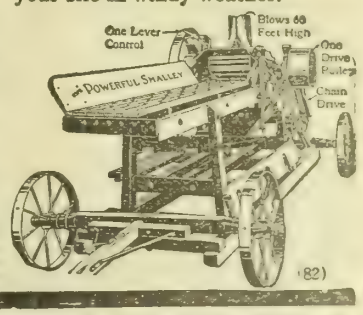
The Smalley Mfg. Co., Box 346 Manitowoc, Wis.

Mfrs. of Ensilage, Alfalfa and Hand Feed Cutters, Combination Ensilage and Snapping Machines, Drag and Circular Saw Machines, Champion Plows, Cob Grinders and Feed Mills.

Alfalfa-Grinding Screen

Another great Smalley feature. Grinds 100 to 400 pounds of alfalfa meal per hour. More fattening than wheat bran, at half the cost. Screen detachable. Protected by screen patent No. 721-246.

Don't fail to get prices on our new Enclosed Carrier, if you operate a 5 or 6 horsepower engine. Fills your silo in windy weather.



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BY USING A

Rogers Tent & Awning Company Stack Cover

You will save several times the price of one of our stack covers on one crop of alfalfa. Our prices are right and we guarantee the quality and workmanship to be of the very best. There are many uses to which these covers can be put, as well as the protection of your hay crop. You won't know how you got along without one. All orders are filled promptly. For prices address

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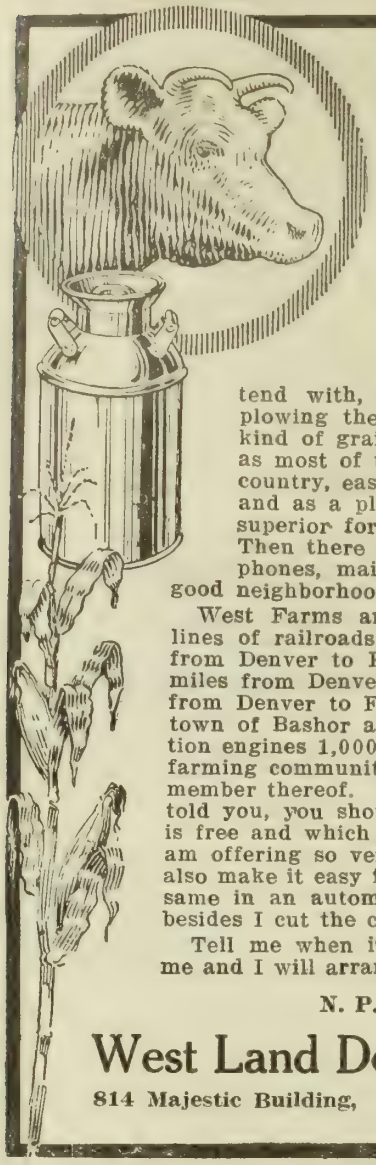

West Farms

IS WHERE

Milk Makes Money

Crop, is certain, plenty of rain good soil and subsoil. No swamps, no stone, no gravel or shrubs to contend with, neither hot winds. You can begin plowing the day you arrive. You can grow any kind of grain crops, vegetables or grasses as well as most of the fruits. It's a capital stock raising country, easy to cultivate, has the best of markets and as a place to raise a family it really has no superior for the water is fine, climate healthful. Then there are good schools, churches, rural telephones, mail delivery, good roads, low taxes and good neighborhood—mostly from Iowa and Nebraska.

West Farms are situated between two great trunk lines of railroads on the north, and the Union Pacific from Denver to Kansas City on the south, only thirty miles from Denver on the new Union Pacific "cut off" from Denver to Fort Morgan. I am building here the town of Bashor and farming with my three great traction engines 1,000 acres. I shall establish here a model farming community, one that will be an honor to every member thereof. To really appreciate what I have here told you, you should get my illustrated booklet, which is free and which gives you many views of the farms I am offering so very cheap, and on very easy terms. I also make it easy for you to inspect my land, for I show same in an automobile, which takes but a few hours; besides I cut the cost of making the trip in other ways.

Tell me when it will be convenient for you to visit me and I will arrange everything to suit.

N. P. WEST, President

West Land Development Company

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Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Dead Spot in Cornfield

G. S. H., Utah: I would like a little of your good advice. I have a patch of corn, planted the middle of April, which has a spot in it where the corn has died out. I dug down to the roots of some of the dying stalks and found little yellow worms. These worms were about three-quarters of an inch long and tough. They bore into the stalks just above the root. I planted squash in the same place and after it was sprouted they kept the tender shoots chewed off. What can I do to do away with them?

Answer—This may be either the corn-root worm or the wire worm. The fact that you say it is hard inclines us to the belief that it is the wire worm. It is a very difficult thing to get rid of. Would advise you to take sweetened cornmeal dough and mix it with arsenic or strychnine, or soak some kernels of corn until soft in water containing one of these poisons. Sow them in the ground in this patch, covering with boards to keep birds and chickens from getting the poison. This will kill some of the worms. Plow your field in the fall, which will break up some of the cells in which the pupae are hibernating and allow them to freeze, and there will be fewer beetles to lay eggs again in the spring. The "click" beetle is the adult of this worm. Corn, wheat, potatoes and other vegetables are especially liable to injury by this worm. Alfalfa and clover are less subject to attacks, and would advise rotation with one of these crops.

Feed for Belgian Hares

C. S. R., Arizona: I am writing to ask you to give me some information on the feeding and care of Belgian hares. I am a reader of the Twentieth Century Farmer, but have never seen anything on Belgian hares. I have had bad luck with my little ones, as they come out and start to eat and I find them dead in a few days. I have a big number of them every hatch, but since January I have not raised 1 per cent of them. Do the little ones have to have water? Also, does the alfalfa hay and barley hurt them, as that is what I have been feeding the big ones, and the little ones eat with them?

Answer—We do not know why the little rabbits should die, as they are usually very easily raised. Causes of lack of vitality are ordinarily too frequent or too early breeding, lack of proper feed and damp or dirty quarters. The bucks and does should be kept in different hutches. Do not breed either buck or doe before the age of 8 months. Keep two bucks that are unrelated, as inbreeding causes lack of vitality among hares, as among any other kind of animal. Do not breed the doe again until the young are 2 months old. The doe, both before and after the birth of the young, should be given plenty of food. The best thing to feed her is good bread with sweet milk. Besides this, alfalfa or clover and grain should be fed in abundance. We have never heard of feeding barley. Oats are the best grain, but corn, rye and wheat are also good. A small lump of rock salt should be placed where the hares can always reach it, and plenty of fresh, clean water should be supplied. All animals need water. The Belgian hare is not subject to many diseases, but "sniffles," which really means colds, are often caused by damp, dirty quarters. The hare is a very dainty animal and cannot endure filth. As soon as the young come out let them have the bread and milk, hay and grain that is fed the mother.

Chronic Garget

W. J. C., Nebraska: Can you tell me what is the matter with my cow, and what to do for her? She was fresh in March and when all right gives a twelve-quart bucketful of milk twice a day, but sometimes one back quarter of her udder will be caked hard at night, and sometimes the whole back half of the udder. Then in the morning the affected parts give very little milk, and the first is nasty looking and lumpy. This will happen sometimes every few days, and then she will be all right for a week or maybe for two weeks. When it is caked badly she seems to feel bad and will not eat much or chew her cud and walks as if it hurt her and doesn't want the affected parts touched. She wasn't fresh last year and was all right, and the year before she was fresh and I had some trouble with her, but not so often. I always milk clean and am careful with her. This cake always happens at night and is gone in the morning, and we never can tell when it is going to be caked. I have put turpentine on it, but it does not seem to stop it.

Answer—This is chronic garget, a trouble that sometimes occurs with heavy-milking cows. You cannot cure her, but you can relieve the condition by securing good quality witchhazel at a drug store and massaging the affected parts; also, while she is giving so much milk it is well to milk three times a day. This trouble will always come back on her when she is giving a large amount of milk and will go away when the milk flow begins to lessen. Turentine is not the proper remedy in this case. Would advise cutting down the feed to some extent and thereby cutting down the milk flow.

Mule Eats Leather

P. K., Nebraska: I would like to know what to do to prevent a mule from eating leather, rope and fly covers.

Answer—Very likely your mule needs salt. This is generally the reason animals chew such things.

Our Women Readers

(CONTINUED FROM PAGE EIGHT)

latter half of the volume to a comparison of different varieties of vegetables and advice as to which is more profitable to raise.

"The Home Vegetable Garden," by Adolph Kruhm; 104 pages, twenty-four full-page illustrations. Published by Orange Judd company, 315 Fourth avenue, New York City. Price, $1.

Old-Fashioned Harvest Drink

To each quart of cold water add a tablespoonful of sifted ginger, three heaping tablespoonsful of sugar and one tablespoonful of vinegar or lemon juice.

Entered in Tractor Show

Last week and the week before we showed photographs of machines entered in the tractor demonstration to be held at Fremont, Neb., this year. In succeeding issues we will show other machines. The above cut shows the Bull tractor, one of the new small machines now on the market. Don't forget the date of the demonstration—August 17 to 22. The leading makes of tractors and plows will be seen at work, giving prospective purchasers opportunity to judge of their qualities.

Feeding Sheep Ticks

IT IS very bad management to keep ticks in the flock. There never has been known a case where ticks or lice have been of advantage to stock. On the other hand, they are a great annoyance and cause serious damage to their health and comfort. What farmer or ranchman would permit himself to be the breeding ground of head lice or body lice? Yet there are farmers and ranchmen all over the country who permit their stock—cattle, sheep, hogs and poultry—to be litterally devoured by lice.

This is possibly the worse condition of live stock negligence that can be charged up to the owner of animals. If there was any apology or excuse for this condition of cruelty and neglect, it would be different, but there is not; it is the result of downright laziness and lack of sympathy for the dumb brute. The presence of lice or ticks on any kind of animal or fowl is readily detected by the uneasiness and discomfort displayed practically every moment.

In a flock of sheep the eye of the sheepman observes the biting at the sides, rump, belly, twisting uneasily, rubbing against the feed troughs, hayracks, fence, often rolling on the ground in their effort to obtain relief. In this condition lambs and sheep suffer untold misery. In the spring shearing and dipping is the best relief, and may be done as soon as there is warmth enough in the air so as not to chill the sheep. It is often best to heat the dip so as to take the chill off the water, and after dipping crowd the sheep into a tight stable where they will soon generate enough heat to keep them comfortable until the wool is dried out sufficiently not to give them colds.

Every sheep owner should have a dipping tank. In this he may dip his hogs and calves also. It is a good plan to dip all these animals every few weeks through the spring, summer and autumn months; especially should dipping be practiced as long as there is the least suspicion that there is lice on any of the stock.

The live stock business is all right when properly handled. Any active, observing man can make money raising stock, but we have yet the first man to find who has made money raising lice, no matter how he may have applied himself. We have known many sheep owners who went broke raising ticks. They, of course, called it something else, would try to put it onto the country, climate, loan sharks, bad luck, etc. Of course, ticks cause bad luck. Every breeder and feeder of lice succeeds in that industry, but eventually discovers it is bad luck.

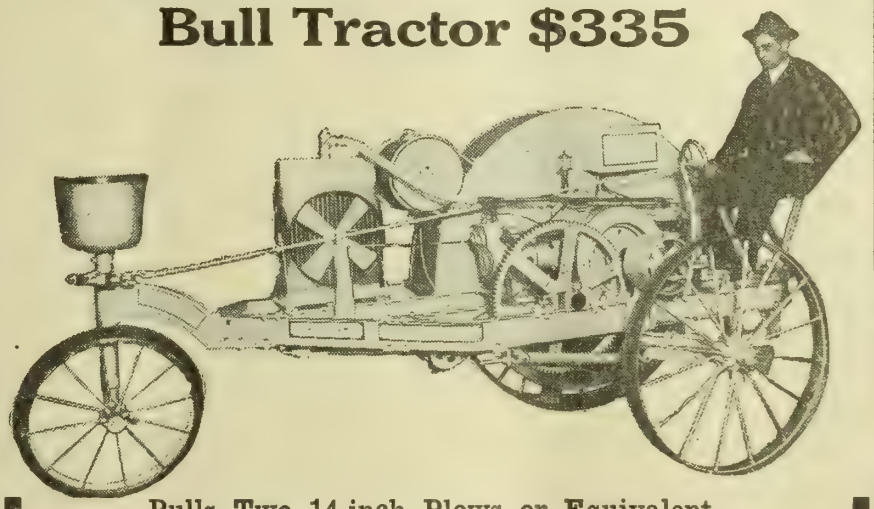
We want to set you right on this one feature of loss—breeding, feeding and maintaining a crop that has no value has only one ultimate result, and that is loss. No breeder of live stock or owner of live stock can afford to keep lice on his animals. The time to awaken on this subject is in the warm season when dipping is available. Never start into winter with a tick on sheep. This is the critical period; there is yet time to exterminate them. Active, energetic work is often demanded in order to get results, but it pays big. One dipping will not do; two may, but three is better.

If you buy lambs or sheep to feed, be sure that they have been properly

(CONTINUED ON PAGE FOURTEEN)

This Man Saved His Alfalfa in Spite of the Rainy Season

Bull Tractor $335



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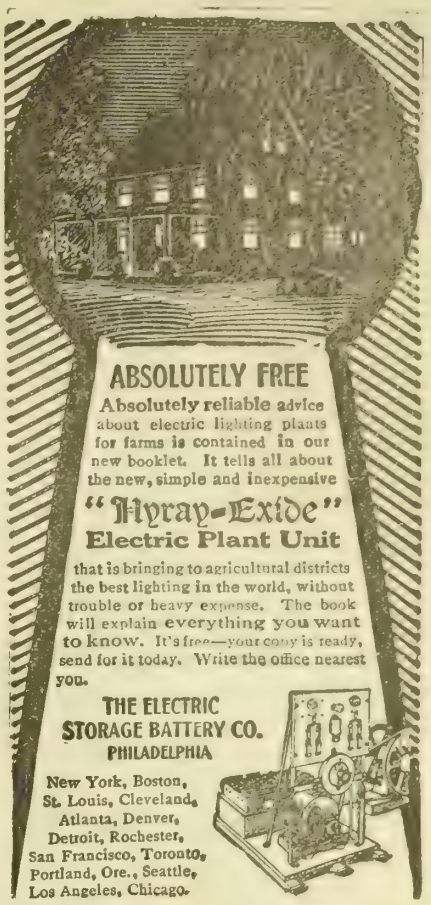

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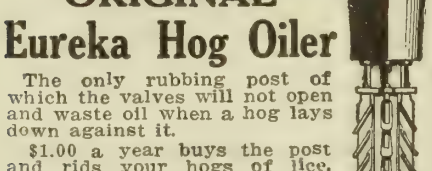

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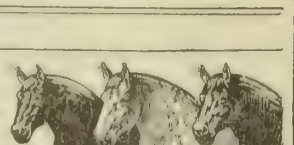

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Review of Live Stock Market

By A. C. Davenport

BULL markets dominated the live stock trade of the country throughout the whole of last week. Prices on all kinds of stock raced upward at such a rapid pace that it was no easy matter to keep track of them. The bulls in consequence were jubilant, while the bears took to the tall timber.

The upward movement in cattle prices, while regarded as possible for some time back, was not expected by most operators to come quite so early in the month, nor was it expected that the advance would be so rapid. It has been very well understood all along that corn-fed steers were becoming scarcer every day, and that with anything like a good demand prices might show more or less firmness. On the other hand there was a feeling that the market was already so high that consumers could hardly be expected to stand for very much additional advance and a good many were of the opinion that prices would run along about where they had been for the last few weeks. The trade even yet is not thoroughly convinced that the recent advance of 25@40c will be long maintained. On the contrary, it would surprise no one should receipts become somewhat more liberal, to see prices ease off again. This assertion is based upon the assumption that business conditions in the country generally are not such as to encourage extremely high prices for beef. It is also assumed that western ranchmen will try to get in a few grass cattle in order to take advantage of the ruling high prices, which would also have a tendency to relieve the scarcity of beef.

Bulls Predict Advance.

Still the most pronounced bulls in the cattle trade are not yet satisfied and many of them are predicting that cattle will go $1 higher before the end of the year and they are pointing to the fact that in July, 1912, as high as $9.65 was paid for choice beef on the basis of Omaha, while the highest price on record at that point, $10.35, was paid in August of that year. They argue that present prices are still low compared to two years ago. In 1913 the extreme high price paid on the basis of Omaha was $9.60. During last week choice cornfed heifers sold at Omaha at $9.00, which was the highest price ever paid for she stock on that market. Prices at other markets have been relatively just as high.

After analyzing all conditions carefully it must be conceded that the future of the cattle trade must depend largely upon two propositions, first, the general business conditions in the country at large, and, second, the available supply of range beef. It would hardly seem possible that the market could advance very much and maintain the advance unless business conditions in the large consuming centers should be good. Men out of work do not consume much beef. If the western ranchman has sufficient cattle and a disposition to part with them early in the season, prices could hardly fail to be largely influenced. Most advices from the west, however, indicate a scarcity of cattle and a feeling of confidence on the part of the holders that is not likely to cause them to unload except on strong markets.

Sharp Advance in Hogs.

While cattle were making their spectacular advance last week the hog market, figuratively, took the bits between its teeth and ran away. Prices, which during the previous week had shown considerable strength, continued to advance so that the market for the first ten days of July is around 30c or more higher. It will be realized that this is a rapid advance when it is remembered that during the whole month of June values gained on an average only a little better than 40 cents. The sudden upward movement has been due apparently to moderate receipts and to a feeling that receipts will continue light during the next two months. The ranks of the bulls have been greatly strengthened and one hears very little in the hog trade other than bull talk. It is claimed that advices from the country indicate a scarcity of mature hogs, and the trade would not be surprised should still further advances be scored in the near future. Some of the bulls have set their figure at $9.00 for a drove of hogs on the basis of Omaha before the first of September, although hogs have never sold that high at that season of the year. The market is really in a very interesting condition and developments will be closely watched during the next thirty or sixty days.

Good Market on Sheep.

As noted a week ago in these columns, the sheep market has been dependent very largely upon the receipts from the range. As these have been very moderate at all points prices instead of declining have actually mounted upward. Spring lambs from the range have sold at the highest figures ever paid during the month of July. There is no question but what ranchmen have made every effort possible to send forward all the sheep and lambs available in order to take advantage of the prices prevailing, but they have not been able to forward a sufficient number to hold prices down.

As noted a week ago the feeling on the market is that prices are dangerously high, and that they must come down whenever stock begins moving in anything like liberal numbers from the range. Just when that time will come no one as a matter of course is prepared to say, but the expected decline, now long overdue, might put in an appearance most any day.

The favorable condition of the wool market has given great encouragement to flockmasters, as has also the high market for lambs. It is safe to say that conditions at this season of the year never were more favorable for sellers than right now.

Feeding Sheep Ticks

(CONTINUED FROM PAGE THIRTEEN)

and abundantly dipped. Most any of the commercial dips will kill the sheep ticks or lice. The important feature is to get after them in earnest. Did you ever feed a few thousand ticky western lambs? They did not seem to have so many ticks in the fall when you put them into the feed lots, but how were they before you got them fat? How much corn, oilmeal and alfalfa did it take to carry these ticks and their increase through the four or five months you had the lambs on feed? This might be a very profitable experiment for some of our agricultural and experiment stations to work out. We have no doubt but they could give an approximate estimate, and, of course, we would be glad to take up anything that would help down the tick and create an active sentiment against lice of all kinds no matter on what kind of animal they are found.

Keep Better Stock

The motto, Keep Better Stock," should be adopted by every farmer, and its application should extend to all kinds and classes of animals on the farm, even to the dogs. The dignity that pure-bred stock gives the farm instills pride into its owner, as well as admiration into the passersby.

Good Prospects for Hog Show

Prospects were never better at this time of the year for a big hog show at the Nebraska State Fair. Superintendent Russell of the swine division reports about 400 pens already taken.

Dayton's Durocs

Mr. V. L. Dayton of Wayne, Neb., has 135 head of Duroc-Jersey spring pigs this year. These pigs have all been vaccinated and are coming along in splendid shape. They are a particularly uniform lot and should be kept in mind by prospective purchasers. They are of the big, roomy, stretchy type—the kind that farrows big litters and takes care of them. As an illustration of this fact, we have but to mention that Mr. Dayton had 184 pigs farrowed from eighteen sows. These pigs were sired by Blue Ribbon Model 10th by Blue Ribbon Model, and Chief Select 1 by Chief Select 2d. They are out of sows sired by Challenger by Krueger Lad, Iowa Choice, Colonel Tippy Again and others. Mr. Dayton has one of the best lots of big, roomy sows that we have seen for some time. Keep this herd in mind when you are looking for something in the line of breeding stock.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

J. N. Forbes' Durocs

We called on J. N. Forbes, breeder of Durocs at Plainview, Neb., last week and spent a very pleasant hour or so looking over his herd of Durocs and incidentally partaking of a very nice supper prepared by Mrs. Forbes. Mr. Forbes has seventy head of spring pigs, sired by Crimson Wonder Select, Sweet Rose's Wonder, Carpenter's Golden Model, Crimson Wonder 10th, Crimson Agitator, J. I.'s Wonder by Sioux Wonder, and others. Mr. Forbes has one of the nicest farms in that part of Nebraska and one that makes an ideal hog farm—just rolling enough to have sufficient drainage, and plenty of alfalfa and other necessary equipment. Some of the choicest pigs he has are sired by his own herd boars, Crimson Wonder Select and J. I.'s Wonder. Crimson Wonder Select is a big, smooth, strong-backed fellow, with good bone, right up on his feet, and is proving himself a particularly strong breeder. Mr. Forbes is going to have some mighty choice males to offer in a later issue of this paper. We hope you will keep his herd in mind and watch these columns for further announcement concerning what he will have to offer for sale from time to time. One thing you can rest assured of, and that is that he will treat you right and give you value received. Keep this herd in mind, and when writing mention the Twentieth Century Farmer.

Roy Fisher's Hampshires

No breeder of Hampshire hogs in the west has attracted more attention by the quality of stuff he has produced during the last few years than has Roy Fisher of Winside, Neb. Mr. Fisher is a young man possessing the energy and ability so necessary to the developing of a business of this kind. His winnings at the large shows of the country last year were the best evidence of the class of stuff he is producing, for he certainly was in competition with the very best herds known to the breed, and in each show he was able to come out with his share of the ribbons. This year he has 120 head of fall and spring pigs. Among these are twenty-five fall and twenty-five spring males, including quite a number of herd-header prospects that it will pay anyone to investigate before buying elsewhere. The fall stuff is sired by Winside Star, a boar that has never been below third in any show in which he was exhibited, and Fisher's King 5th, grand champion bred by exhibitor at Nebraska State Fair in 1913. The spring pigs are mostly by Tatro's Messenger and Paulsen's Choice. Mr. Fisher will be at the various fairs this fall with a complete lineup. Keep his herd in mind and watch these columns for further announcement.

J. J. Kane's Durocs

While at Plainview, Neb., last week we called on our old friend J. J. Kane, who moved from Wisner, Neb., to Plainview last spring. We found him admirably located on one of the nicest lying farms in that whole country. When Mr. Kane completes the equipment he intends to put on this farm he will have one of the very best hog farms in Nebraska, for it certainly has every advantage that anyone could ask for in the line of drainage, soil and everything else. Mr. Kane experienced more or less loss in his spring pig crop in the process of moving. As a result his spring pigs are considerably less in number than usual. However, he has a great lineup of fall and yearling stuff that will be splendid material for a bred sow sale. One of the particular attractions here is a litter by Golden Model 4th and out of Fancy Advance 2d, grand champion sow at Nebraska in 1913. This litter is very growthy and is coming along in tip-top shape. There are five saved in the litter, and there are sure some good prospects among them. If you are looking for a herd boar, better keep this litter in mind. Mr. Kane also has several other especially good boar prospects.

Tidrick's Polands and Durocs

Harry Tidrick, the well known breeder of Durocs and Polands at Winside, Neb., has over 200 head of spring pigs this year that are coming along as well as could be expected. One half of these are Durocs and the other half are Poland-Chinas. The Durocs are sired by Golden Model 4th, Colonel Wonder, Fancy Chief and Dusty Crimson Wonder. There are twenty-five litters by the last named boar. This pig was sired by Dusty Crimson by Belle's Crimson Wonder. He was one of the best pigs in the sale of Robert Leisy at Wisner last fall. He possessed remarkable size and an abundance of quality along with it. Some of the best pigs Mr. Tidrick has are sired by this boar. Unfortunately, he lost him shortly after the breeding season closed. The Poland-Chinas are practically all sired by A Wonder Price 2d by A Wonder Price, out of a dam by Long Wonder. This boar is an especially big, smooth fellow and comes from the celebrated herd of Tim Neuhoffel of Central City, Neb. He is without question one of the best big, young boars in service in Nebraska. Mr. Tidrick will have his fall sale on November 5 and a bred sow sale on February 15. He will have a choice lot of boars to offer in the fall sale, and in the winter sale he will have forty head of tried sows, besides a number of spring gilts. Here is going to be an opportunity to get something mighty good, for he has spared neither time nor money in getting the very best breeding stock obtainable. Watch these columns for further announcements.

Edgar Taylor's Durocs

Edgar Taylor of Plainview, Neb., is one of the young men breeding Durocs in Nebraska who deserves more than passing comment for the rapid advancement he is making in the development of his herd. By the exercising of good business judgment and common sense, he is succeeding in building up a business that will prove both pleasant and profitable to him in the future. He has been a careful buyer of very choice stuff and has succeeded in getting together a herd that stands second to none in point of breeding. This year he has 120 head of spring pigs that are coming along very nicely at this time. These pigs are sired mostly by A Golden Model by Golden Model 15th. There are fifteen litters by him, largely out of sows sired by Crimson Chief, he by Model Chief A. Besides these there are other litters sired by Colonel Chief, Sweet Rose's Wonder, Model Chief and others. Mr. Taylor had 165 pigs farrowed from twenty sows, which surely is a good average. One of the particularly strong attractions we saw while here was a litter of March 8 pigs sired by Colonel Chief and out of a Red Chief Wonder dam. There are three boars and one sow in this litter that are really just about as good as we have seen this year. If they keep on coming as they give promise of doing at this time, they are going to make somebody step some in the show ring, and if we are not mistaken there are three boars here that will make mighty good herd headers for somebody. Keep this herd in mind for future reference if you are going to be in the market for something in this line.

Morgan's Durocs

We found Will Morgan, the well known breeder of Durocs of Wayne, Neb., with about eighty head of spring pigs on hand that compare in quality and everything else favorably with anything we have seen this year. Mr. Morgan has one of the really good herds in north Nebraska. It is right that he should, for he has gone to a lot of expense and has spared no effort in the upbuilding of his herd. He has gone out into the very best herds in the country and has purchased the best breeding animals to be found. His pigs this year are sired largely by Fancy Chief, he by Clipper's Chief by Crimson Chief. He is out of a Golden Model bred dam. This boar combines the blood lines of the Ohio Chief, Crimson Wonder and Golden Model families. He won the second prize in his class at the Interstate fair at Sioux City last fall and was picked by many good judges for first place. Some of the very best pigs Mr. Morgan has on his farm were sired by this boar. Other litters are sired by Golden Model 31st, Colonel Chief, Crimson King by King the Colonel, Colonel Boy and others. He has a number of choice fall males on hand, these being sired by Morgan's Critic by Critic Wonder. If you are in the market for a fall male, you can make no mistake by writing Mr. Morgan regarding these boars. Mr. Morgan will hold his annual bred sow sale on February 20, 1915. Keep his herd in mind and watch these columns for further announcements.

Sale Dates

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 15—Harry Tidrick, Winside, Neb.

Duroc-Jersey Hogs

October 2—F. B. Nelson, Lindsay, Neb.
October 2—F. A. Lemmerman, Creston, Neb.
October 5—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—Harry Tidrick, Winside, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 20—Will Morgan, Wayne, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Holstein-Friesian Cattle

October 19 and 20, 1914—H. C. Glissman, Station B, Omaha. Sale at South Omaha.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.

The Market Place
FOR THE BUYER AND SELLER

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COME TO OTTERTAIL COUNTY, Minnesota. Fine climate and pure water. Rich corn and alfalfa lands for sale on easy terms. Write for information. Fred E. Hodgson, Fergus Falls, Minn.

South Dakota

WE ARE THE "SNAP" MERCHANTS on eastern South Dakota farms. We get them direct. Write us for big list of great bargains. Hansen, 326 Brandeis Theater, Omaha, Neb.

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WRITE FOR ILLUSTRATED BLUE book describing my rich, black Red River Valley farms. Corn, clover and alfalfa successfully grown. Wm. McRoberts, Casselton, N. D.

Oklahoma

140 ACRES FIRST AND SECOND creek bottom; 40 acres ready for plow, balance in timber; never-failing creek; well and house; 4 miles railroad. Price, $1,800; $1,000 cash, balance 5 years, 6 per cent. Philip Moore, Wister, Okl.

Oregon

OREGON STATE PUBLICATIONS Free—Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions; they will have painstaking answers. We have nothing to sell. Address Room 110, Portland Commercial Club, Portland, Ore.

Wisconsin

SUCH BARGAINS ARE SCARCE—Only $32.50 per acre for a good 80-acre farm three miles from Centuria, Polk county, Wisconsin; 18 acres field, more cleared. Rich clay loam soil; neat frame house, 18x28; good barn, with room for 20 head; first-class hay shed, chicken house and hog house. Buildings in nice grove on main road. A bargain. Write Baker, D-67, St. Croix Falls, Wis.

Miscellaneous Lands

PRODUCTIVE STATE AND DEEDED lands, crop payment or easy terms—along the Northern Pacific Ry., in Minnesota, North Dakota, Montana, Idaho, Washington and Oregon; no isolated pioneering; free literature. Say what state interests you. L. J. Bricker, 402 Northern Pacific Ry., St. Paul, Minn.

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PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

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70 USED CARS—WE CARRY THE largest stock of used automobiles ever offered to the public. We are exclusive used-car dealers, which enables us to offer astonishing bargains. We can save you at least 50 per cent on any car you wish to buy. All of our cars are thoroughly overhauled in our own shop that we may know the exact condition of the mechanism. Write for our Bulletin No. 5, prices and large list of satisfied customers. Industrial Garage Company, 20th and Harney, Omaha, Neb.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

GOVERNMENT FARMERS WANTED—Make $125 monthly. Free living quarters. Write Ozment, 39 F. St. Louis, Mo.

LEARN THE AUTO BUSINESS—Practical work. No books used. Stationary engineering. Special rate. Write for free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

WANTED—AN IDEA. WHO CAN think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write for "Needed Inventions" and "How to Get Your Patent and Your Money." Randolph & Co., Patent Attorneys, Dept. 202, Washington, D. C.

UNITED STATES GOVERNMENT wants men and women over 18; $65 to $150 month. Thousands appointments coming. Common education sufficient. List of positions open free. Write immediately. Franklin Institute, Dept. J-94, Rochester, N. Y.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

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POLAND-CHINA BOAR PIGS, 14 TO 16 weeks, big type, pedigreed. Davis Bros., Lincoln, Neb.

REGISTERED GUERNSEY BULL for sale, from producing dam; an exceptional individual. H. E. Wimer, Blencoe, Ia.

FOR SALE—SEVEN BILLIE GOATS, 1 month old to 1 year old. W. B. Fuerst, Battle Creek, Neb.

GRADE NUBIAN MILCH GOAT; males. Also best fly trap on earth. Circulars free. Gillespie, Madison, Neb.

100 HEAD OF HEAVY-BONED HAMPshire hogs, all ages, $12.50 to $25 each. E. Dooley, Selma, Ia.

GUERNSEYS FOR SALE—TWENTY choice Guernsey heifers from 2 to 4 years old, all giving milk; also a registered bull unrelated. L. C. Schwinck & Co., Stuart, Neb.

DOGS

FOR SALE—ENGLISH SHEPHERD Pups. James Cassell, Fremont, Neb.

FOR SALE—PURE-BRED ST. BERnard pups, also one 3-year-old registered St. Bernard female. L. R. Confal, Howells, Neb.

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ALFALFA SEED—DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

I WANT ALFALFA TIMOTHY SEED. Have select stocks of all seeds for sale. Werter DeVaughn, 1614 Harney St., Omaha, Neb.

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FARM LOANS NEGOTIATED—FIVE-year, 6 per cent; ten-year, 5 per cent. Deal direct, save money. Security Farm Loan Ass'n, Gibbons Bldg., Chicago.

Hog Cholera

Its Prevention and Treatment

THE most complete and practical series of articles ever published on hog cholera has just been completed in the Twentieth Century Farmer. We have taken this matter up in the interests of the farmer and stock raiser. We have put at the head of this investigation a practical man—a man who has had twenty-five years experience in raising hogs and has been a successful competitor for premiums in the state fairs of Nebraska and Iowa, a man who is recognized by the hog raisers of these states as a practical hog man. He has not taken the matter up from the standpoint of the veterinarian, though he has consulted veterinarians in the employ of the government, the colleges and the states, as well as many veterinarians practicing independently among farmers, and has given careful consideration to their opinions. He has not treated the subject from the standpoint of any one farmer, or the farmers of any one locality, nor based his judgment on the experience of men under identical conditions. He has personally interviewed farmers and breeders in three states—Nebraska, Iowa and Kansas.

The writer's years of experience in the hog raising business have enabled him to weigh this great mass of information collected and draw from it conclusions that should be of great value to any man interested in keeping cholera out of his herd or combating it once it gets into his herd, in a rational and practical manner. The writer is not a scientist and has not written a scientific treatise; he discusses this vital subject in the plain, every-day language of the farm and market.

These articles have been so persistently called for that we have collected them into pamphlet form, and this pamphlet is now ready for distribution. We are making a charge of 5c each to cover postage and handling. If you want one of these bulletins, fill out and send the attached coupon before they are all gone.

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TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, July 25, 1914 | Number 711

Prattle of the Youngsters

No Danger

"Don't pull that dog's tail, Billy; he'll bite you."

"Why, mamma, a dog ain't got no teeth in its tail."

Positive Evidence

"Mother," said Tommy, "I saw a man making a horse at the blacksmith's shop today."

Mother—Why, my dear boy, that's impossible.

Tommy—Well, he had him pretty nearly all done when I came. He was just nailing something on his hind foot.—Youth's Companion.

Used It

A little 9-year-old was laboriously looking up his spelling words in the dictionary when he came upon one whose meaning was perfectly apparent to him. He dashed off a sentence containing the word "capsize" and passed to the next. Imagine the teacher's amusement when he recited glibly, "My cap size is No. 6."—Delineator.

Stuffed Menagerie

It had been a hard afternoon for the teacher, who had taken her forty pupils through the local museum of natural history, but her charges reached home quite fresh and sparkling.

"Where have you been, boys?" asked the father of two of them, duly.

"To a dead circus," he was joyously informed.

Intentional

Mrs. Cronan heard her little granddaughter Margaret crying as if in great pain, and hastened to the child.

"Why, dear, what is the matter?" inquired Mrs. Cronan. "Did you meet with an accident?"

"N-no, grandma," sobbed Margaret. "It w-wasn't an accident. M-mother did it on p-purpose!"—Harper's Magazine.

Doing Their Best

Little Margie had not been to the country before, and, getting lonesome, she was told she might go to the barn and look for eggs. Presently she returned without any.

"Couldn't you find any eggs, dear?" asked the mother.

'No. The hens were scratching all around as hard as they could, but they hadn't found a single egg," was the doleful reply.

Youthful Ingenuity

One afternoon a very stout woman was rambling along a country road, when she suddenly noticed a little boy walking closely beside her. Not knowing the youngster, she was naturally somewhat surprised.

"Look here, little boy," she heatedly cried, "why are you following me along like that? Go away from me instantly."

"I ain't doin' nothin', lady," pleaded the little fellow. "Please don't send me away."

"You must go away at once," repeated the perplexed woman. "Why do you wish to follow me?"

"Because," was the startling rejoinder of the youngster, "you are the only shady spot along the whole road."

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Special Tractor Farming Issue

YOU are interested in power farming. Every man is interested in it, whether he thinks he can afford to own and operate a tractor or not. As we have announced several times during the past, the second National Power Farming Demonstration will be held at Fremont, Neb., August 17 to 22. In our next issue we will publish an article telling you why you should attend this demonstration, and just what benefit you will derive from it. There will be thirty or more firms there this year, some of them with several types of tractor, and you can learn more about power farming at this time than you could from a course in a correspondence school, a library of books on the subject and a visit to a tractor factory.

In the August 1 issue of the Twentieth Century Farmer we will not only publish some splendid articles on power farming, but on a number of other subjects, notably on the crops in which you are interested at this season of the year. This will be a big, fine issue of the Farmer, one of the largest and best of the year, packed full of articles that you will not only want to read now, but that you will want to file away for future reference.

Bright and Breezy

Pride of Ancestry

"A family tree," says a wit, "is often like the potato plant—the best part is under ground."

Occupied

"I've never heard him say an unkind word about anybody."

"No; he's too busy talking about himself."

Taxation Without Representation

Bacon—Now I see there is a dog in New York who wants to vote.

Egbert—Well, why not? There is a dog tax, isn't there?

Spoke Too Fast

"My wife's gone to the West Indies."

"Jamaica?"

"No; she wanted to go.

His Danger

Hojax—I doctor myself by the aid of a book called "Every Man His Own Doctor."

Crabshaw—Yes, and some fine day you'll die of a misprint.

An Explanation

"Your nephew is a college graduate, isn't he?"

"Yes," confessed honest Farmer Hornbeak; "but, in justice to the college, I'll own up that he had no sense beforehand."

They were Bullets

A young woman from the city had been staying on a ranch in the cattle country for a few weeks. Seeing some calves running across a pasture, she exclaimed: "Oh, what pretty cowlets!"

"Yes, miss," drawled the ranchman, pulling his mustache to conceal a smile, "they are pretty, but them's bullets."

Hard on the Bride

The power of first love has received so much poetic attention that we can afford to smile at the seriocomic twist that John P., an ancient Rhode Island worthy, once gave it. The old gentleman's habits and manners were as primitive as the time in which he lived.

John P. married twice. On his second wedding journey he visited a business acquaintance in a Massachusetts town. On his arrival he presented his bride in this graceful way:

"This," said he, "is Mis' P. 'Taint tother Mis' P. I wish 'twas!"—Youth's Companion.

Like Himself

John had just returned from college, resplendent in a tight, royal-blue suit, silk hosiery, a fancy waistcoat and a yellow necktie. He entered the room where his father was reading. The old gentleman looked up and surveyed his son; the longer he looked the more disgusted he became. "Son," he finally blurted out, "you look like a d—— fool!"

Later his old maiden aunt, who lived in the neighborhood, came in and greeted the boy affectionately. "My dear John," she said affectionately, "you look exactly like your father did twenty-five years ago when he came back from school!"

"Yes," said John, with a smile at his father, "so Dad was just telling me."

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

The Centralized Co-operative Creamery

Good Business Management, Quality in Product and Loyalty of Patrons Necessary to Success

THE Farmers' Co-operative and Educational Union in Nebraska has launched a movement that will be watched with a great deal of interest, not only by its own members, but by other farmers in Nebraska and other states as well. The Farmers' Union movement in Nebraska is of but recent origin, which makes this creamery movement all the more interesting.

At a meeting of representatives of the union it was decided to start a co-operative centralized creamery, with a capital of $100,000. This creamery will do a general creamery business, buying from anyone wishing to sell cream. It will also buy and sell poultry and eggs.

The Twentieth Century Farmer is in sympathy with this movement and wishes it success. We feel, however, that the men behind the movement have some very serious problems to solve, and upon the way these problems are solved depends, to a very large extent, the success or failure of the movement.

In former articles published in this paper we called particular attention to some of the uneconomic practices of the centralizers in handling the cream. The Farmers' Union, in handling their central plant, will have many of these same problems to solve.

One proposition that will immediately confront the Farmers' Union people will be the employment of two men, each of whom must be efficient to make a success of the business—a manager and a butter-maker.

Manager and Butter-Maker

They absolutely must have a competent man for a manager. His job will necessarily be a big one. If the man selected for manager be the right kind he will be a big asset. If he is the wrong kind he will be as big a liability.

The Farmers' Union doesn't want to make the mistake of thinking the right kind of man can be secured unless they are willing to pay the salary. Don't start out thinking you can hire a cheap man and let him grow with the business. You must have a man who knows the manufacturing and selling end of the business when he starts with you.

The quality of the product sold will to a great extent depend on your butter-maker. Get the best man you can get for your butter-maker. Have your product from the start of such quality that the consumer, when he first uses it, will demand of his dealer the same brand in the future. A good buttermaker will be as great an asset to the business as a good manager. Be careful to start right.

The editor of Hoards' Dairyman, in writing on this new movement, puts it in a very clear light. We print herewith what this paper has to say on the subject:

Some of the farmers of Nebraska feel that they are not getting as much for their cream as they should.

The prices paid are from 3 to 5 cents under the market prices for the best butter and the farmers are uneasy because they hear of the creameries of Minnesota and Wisconsin paying from 1 to 5 cents over the same market price.

As a result of this feeling the Farmers' Union of Nebraska recntly launched a movement to start a co-operative centralized creamery at Fremont. It is proposed to do a general creamery business, buy from any farmer whether a member of the union or not.

The intent and purpose of the Farmers' Union is laudable and we hope they succeed.

The creameries of Nebraska are the result of fifteen years of the most strenuous and exacting experience. They have met and solved the question of manufacture and marketing. The one big thing that they have not been able to solve is the collection of the cream to get a good quality and to save an enormous collecting expense. This problem is no nearer solved today than it was ten years ago.

The farmers will not be able to buy the experience that has enabled these creameries to solve the factory and marketing end of their business. At least if they do buy it they will have to pay dear for it. On the other hand, they may be able to bring some kind of order out of the condition that exists in the collection of the cream.

They will have to meet the quality problem. Their main hope of improvement over the present existing creameries is in the quality of the raw material they buy. If they are led into competition and are fooled into believing that they must take all cream offered at a given price to hold the trade, it will defeat thir own ends. They may be able to reduce the cost of collection, but there are, seemingly, but two ways that this can be done—that is by controlling all of the cream in a given community or by direct shipping.

Here, then, is the situation: The established creameries have fifteen years of experience in the factory and distributing end of their business. They have the most perfect organization in both of these lines that exists in the world so far as buttermaking is concerned. These same creameries have actually moved backward in the matter of collecting the cream.

The new creamery can start in an even race in the matter of collection, but will have a tremendous handicap in the manufacturing and distributing end. This is the rock on which they will break if they don't spend money freely to put this through.

The nail has been hit squarely on the head in what is said about the quality problem. The Twentieth Century Farmer firmly believes that if the Farmers' Union succeeds in its enterprise it must pay for the cream it buys on a quality basis. We fully realize the difficulty in doing this. We know that most every man selling cream will think he is putting out just as good a product as is his neighbor.

Word to Farmers

Now a word to the farmer who joins this movement and intends to sell his cream to the Farmers' Union. First, make up your mind you are going into it to make it a success. Make up your mind you have confidence in the movement and its management, and that you will get a square deal. You may find your cream is not testing what your neighbor's is. If so, don't call the management a bunch of robbers and thieves, but find out for yourself why your test is not up to that of your neighbor. There is a reason.

There is considerable food for thought for the man figuring on selling his cream to the Farmers' Union and intending to give them a square deal, as well as to get one himself, in the report of the Merrick County Cow Testing association, published in this paper on July 11. Note the difference in the price of butter-fat per pound in these different herds. The tests as shown in this report were made by a man hired for this purpose, who had no financial interest in any of the herds or the results obtained.

It will clearly be the duty of any member of the Farmers' Union selling them his cream to find the reason for his low test (if he has one) and then seek to correct it. Financial benefit will be his by correcting his mistake, whether it be the cows in his herd, the feed he is giving them or the manner in which he handles and markets his cream.

If the Farmers' Union, backed up by its members, will take hold of the quality question we feel sure its chances for winning will be much better than if it disregards it. True, some of the men who have a poor quality of cream to sell will quit you and go to the other fellow who pays the same price for "rotten cream" he does for good cream. But stick to it, and in the end the quality of your product will be so high that the price you may be able to pay for raw material will be such that many farmers will see the necessity of helping themselves by producing and selling a better product.

If the Farmers' Union will start on a quality basis and stick to it we believe they little realize the genuine benefit their position will be to the general dairying interests of the country.

NATIONAL·POWER FARMING·DEMONSTRATION
August, 17 to 22, 1914·Fremont, Nebr.

Location of Nebraska's New Swine Barn

This is a Matter of Vital Importance to All Hog Men and Should Receive Their Attention

THE next Nebraska legislature will be asked for an appropriation for a new, up-to-date swine barn for the State fair. This has been practically agreed upon by the State fair board. When the matter of appropriation for the new agricultural hall was under discussion by the board the swine men asked for a swine barn, but after talking over the matter fully with the fair board they agreed to wait and to do their part in assisting the board to get the necessary funds from the legislature for the agricultural building.

The fine new agricultural building fully answers the question of whether or not the swine men stood by their agreement and did their part in getting the legislature to see the necessity for providing funds for this building.

The Nebraska State fair is great in many ways. It is noted for its splendid exhibits in different departments, but the swine exhibit stands out in the front rank for its consistent showing year after year of the best animals in the land.

Nebraska No Longer "Easy"

The time was, a good many years ago, when the exhibitor making a circuit of fairs with a show herd of swine had Nebraska on his list as one of the fairs at which he could exhibit and make a "killing." Nebraka breeders and exhibitors have for several years past made it so interesting in the show ring for the circuit man that this state is no longer on his list.

The swine interests in Nebraska are of such magnitude that this business is one of our main resources. We predict that it will grow as time goes on, for no state has more natural resources for successful hog raising than has Nebraska. Alfalfa can be successfully grown any place in the state. No better or surer crop can be raised than this splendid forage plant. Nebraska raises the corn with which to fatten its hogs. Consequently, swine-growing is one of the most profitable pursuits of its farmers.

Good Exhibits Make Good Hogs

This paper is firmly of the belief that no one enterprise does more to place good hogs on the farms in the corn belt than does the state fair. Thousands of our farmers annually visit the swine exhibits at the state fair and mentally compare the splendid animals shown with the ones they have at home.

They go home determined to have as good hogs as those seen at the fair. The young man on the farm sees by observation at these fairs what can be done in raising good animals. He makes up his mind to be up with the procession and improves the opportunity by buying a start in first-class animals.

No truer statement was ever made than that our state fairs are great educational institutions. It is pleasing to note that the people of the state are becoming more and more awake to the educational importance of the state fair. This is shown in the more liberal appropriations for substantial buildings in which these exhibits may be made, as well as the convenience of the man who lends his assistance as an educator—the exhibitor.

The exhibitor of swine at the Nebraska State fair is certainly doing his part in this line of education. At no state fair in the United States can the young man who is starting out in life get a better knowledge of what a good animal is than at this great show. In 1913 the Nebraska State fair swine exhibit led all others in numbers as well as in quality.

We surely feel that our next legislature will recognize the standing of Nebraska as a swine state and provide the necessary funds for the erection of a modern swine barn in which this exhibit may be properly housed. The swine men of the state should take a lively interest in this matter, and do it now.

Candidates for the legislature are now before the people asking their support. This is the time for the swine man to get busy and ask the candidate for the legislature seeking his support, how he will stand, should he be elected, on a liberal appropriation for a swine barn on the State fair grounds. Do this in the primary campaign, and don't wait for the election campaign.

Hogs of This Kind Should Have the Best of Accommodations on the Fair Grounds

Nebraska Hogs Are Too Good to Be Compelled to Be Shown in the Open

Let Us Advertise

This is an advertising age, and we believe these splendid permanent buildings on state fair grounds should be, if possible, so placed that the man going past the grounds will ask the question, "What is that fine building?" The new agricultural and horticultural building on the Nebraska State fair grounds is certainly a monument to agriculture and horticulture in Nebraska. Why not place the new swine barn where every person on the trains of the great transcontinental railways passing Nebraska's State fair grounds will see this monument to the swine industry of the state?

This advertising is gotten without the outlay of any additional money. A new swine barn placed on the high ground, that it may be in plain sight, won't cost as much as if placed on the low ground, where the swine barns now are, and out of sight of anyone except those visiting the show.

Good Location Suggested

The Twentieth Century Farmer believes the vacant ground just north of the south gate between the main street leading north and the Burlington tracks, would make an ideal location for the new barn. It would be attractive to every man, woman and child going by on the trains and would be a lasting advertisement to the swine industry of Nebraska.

The swine barn on any state fair ground should be located with a view to the comfort of the hogs on exhibition. In this location the animals would receive the benefit of any breeze there might be moving. It is highly important that exhibition hogs should be kept as cool as possible. The work of doing this to the party in charge is very much increased if the location is such that the animals get practically no moving air.

Drainage is another very important matter to be taken into consideration when locating swine barns. The great dread of the swine exhibitor is hog cholera, and the better drainage the hog barns can have, the more easily can the barn be kept clean; consequently the less liability of an outbreak of the dread disease. This location would certainly afford much better drainage than the present one.

Solve the Drayage Question

The drayage question is a serious one, not only for the exhibitor, but the fair management as well. If the new swine barn is placed in the location we suggest, the swine exhibitor, except those coming on the Rock Island, could cut out the drayage expense, as the Burlington and Northwestern roads have platforms and chutes adjacent to this location. The hogs could be taken out of the crates and driven to the new barn. The item of drayage alone is a considerable one to every exhibitor each year, to say nothing of the inconvenience.

The older breeder, who has been exhibiting for years, realizes more fully the dray problem than does the man who has not gone through the mill. Numerous times have exhibitors been compelled to wait over a day after the fair because they couldn't get dray wagons in time to get their stock loaded to get away on certain trains. We are not putting the blame on the draymen. Every dray wagon works to its full capacity. Extra men are employed to supply the demand. The express companies employ the regular dray wagons to get out the hogs to go by express, and each year there are several hundred of them.

The swine exhibitors of Nebraska should get together and take the matter of the new swine barn up with the State Fair board. The board is always anxious to go over matters of importance with its exhibitors, and we feel sure it would be more than pleased to grant an audience pertaining to this matter with the swine men. The State Fair board fully realizes the importance of the swine exhibit and appreciates the efforts of the swine men in placing Nebraska in its present position in the swine world. Its members are as anxious as anyone to see Nebraska kept to the front and know that hearty co-operation between the exhibitor and the fair board is necessary.

Need of Uniform Live Stock Shipping Rules

With Various State Regulations, Showing Difficulties in Interstate Shipping

WE ARE in receipt of numerous inquiries, generally from breeders and shippers of pure-bred live stock of different kinds, inquiring about the necessary certificate to accompany the shipment of stock into some other state. We are giving below the requirements of several states to which the breeders in our territory do a large amount of shipping.

In looking over these regulations it is noticeable how different are the requirements of different states. Why is this? It is because the officials in the different states having these matters in charge have made such regulations as in their opinion are best. However, the officials in one state have not consulted the officials in another. We believe that in the requirements for shipment of the different kinds of live stock from one state to another, especially in a group of eight or ten states in the Missouri and Mississippi valleys, state lines should be considered as only imaginary. It would without question be to the interests of all shippers of live stock from one state to another to have uniform inspection and certificate rules covering interstate shipments. Why cannot the different authorities in these several states get together and consider these matters as though they were of one state and adopt uniform inspection and shipment regulations?

These regulations in some states are made by live stock sanitary boards, in others by state veterinarians. Why cannot these officials or boards appoint at least one delegate from each of their various boards in the different states to meet at some central point and take this matter under consideration? Without question, a much more uniform regulation can be adopted. If after the first meeting the representatives feel it would be necessary, possibly a central meeting of this kind, composed of all the boards having these matters in charge in the different states, should be held. We feel sure the expense entailed would be but little as compared to the benefit to our live stock men from a more uniform inspection and shipment regulation.

The present system is very confusing to our shippers. This applies especially to our hog men. The authorities in one state require vaccination of one kind, in another state another kind. A hog man, in order to comply with the requirements of some certain state, has been compelled to treat his hogs in a certain way. He may get an order from some man in another state where the requirements are such that it would be impossible to ship from his herd, treated in the way he has treated them, into the state from which he got the second order. This should not be. We know full well that the authorities in the different states have different ideas on these matters, but we are satisfied that a union meeting, such as we are suggesting, would without doubt modify the ideas of some of these men, and rules could be adopted which would not be at such great variance. Gentlemen, get together.

Hogs

Colorado—Hogs for breeding purposes must be accompanied by affidavit from owner or seller showing them to be free from hog cholera or exposure thereto and a copy of same be sent to the state veterinarian of Colorado. Cars carrying hogs destined to Colorado for purposes other than immediate slaughter must, before loading, be properly disinfected as required by the United States bureau of animal industry.

Illinois—None.

Iowa—Except for immediate slaughter, must be accompanied by a certificate of health certifying that they have been immunized with Dorset-McBride-Niles anti-hog cholera serum not more than thirty days prior to date of importation when the serum alone is used, and not less than thirty days prior to date of importation when the simultaneous method is used.

Kansas—Hogs for breeding and stocking purposes, or for exhibition at any fair within the state, must be accompanied by a certificate showing them to have been immunized by the Dorset-McBride-Niles serum method, unless otherwise provided for by the live stock sanitary commissioner at time of shipment.

Minnesota—Health certificate.

Missouri—Health certificate, except for immediate slaughter, including statement of nonexposure except where swine are certified by state or federal veterinarians as having been immunized by the Dorset-McBride-Niles serum method.

Nebraska—Certificate of health showing freedom from all contagious and infectious diseases, and that no contagious disease has existed in the locality in which the shipment originated for a period of six months previous to the time of shipment. Railroad cars used for such shipments must be thoroughly disinfected with a 5 per cent solution of carbolic acid before hogs are loaded. Such hogs shall not be unloaded while in transit into any public stock yard. If feeding and watering are necessary, it must be done in the car. No hogs intended for shipment into the state of Nebraska shall be loaded from or unloaded into any public stock yards or ordinary chutes, but must be loaded from wagons and unloaded in the same manner. Hogs shipped to public stock yards for immediate slaughter where government inspection is maintained need no inspection.

South Dakota—Health certificate.

Wyoming—For purposes other than immediate slaughter, health certificate showing them free from all contagious, infectious and communicable diseases, and certifying that no infectious swine disease exists or has existed in the locality from which said shipment originated within the period of six months; otherwise certificate must show that they have been immunized by the Dorset-McBride-Niles hog cholera serum not more than thirty days prior to date of shipment.

Cattle

Colorado—Health certificate and tuberculin test chart for bulls for breeding purposes and female cattle over six months old intended for dairy purposes.

Illinois—None except Texas fever.

Iowa—For dairy and breeding purposes, health certificate, including tuberculin test.

Kansas — Tuberculin test certificate for dairy and breeding cattle. Health certificate for cattle from territory under quarantine by federal government on account of Texas fever ticks or scabies.

Dairy or breeding cattle originating in the states of Illinois or New York must be accompanied by a tuberculin-test certificate issued by an inspector of the United States bureau of animal industry; otherwise the shipment will be quarantined upon arrival in Kansas, inspected or tested by state officials at owner's expense.

Minnesota—Cattle for breeding or dairy purposes must be tuberculin tested. Cattle for dairy or breeding originating in the state of Illinois must be held and tuberculin tested on arrival unless accompanied by a certificate of tuberculin test made and issued by a veterinarian of the United States bureau of animal industry.

Cattle of New York state must show certificate of health and tuberculin test issued and made by an inspector of the United States bureau of animal industry or the chief veterinarian of the New York department of health.

Missouri—Health certificate for dairy and breeding cattle, including tuberculin test. If any animal in a lot inspected is found tuberculous, the words "exposed to tuberculosis on day of inspection" shall be written on the certificate of health of such animals as pass. Cattle for pasturing, feeding or immediate slaughter admitted on permit from state veterinarian without tuberculin test. Regulations do not apply to cattle shipped to the public stock yards at Kansas City, St. Joseph and St. Louis, or for exhibition at any fair or live stock show.

Nebraska—For dairy or breeding purposes, over 6 months old, health certificate, including tuberculin test. For feeding, grazing or range purposes, permit from the deputy state veterinarian of Nebraska without tuberculin test. If not accompanied by a health certificate, cattle will be inspected at destination, at owner's expense. For exhibiting purposes, permit from deputy state veterinarian without tuberculin test, provided accompanied by proper health certificate. Exhibition cattle remaining in the state three months or more shall be subject to tuberculin test at owner's expense. Cattle for immediate slaughter admitted without inspection. Cattle originating in the state of Illinois and New York shall not be transported, trailed or driven into the state of Nebraska unless accompanied by certificate of health and tuberculin test issued by an inspector of the United States bureau of animal industry.

South Dakota—Health certificate, including tuberculin test of dairy and breeding cattle. Such dairy and breeding cattle as may be imported directly or indirectly into the state from Illinois or New York must be accompanied by certificate of tuberculin test made and issued by a veterinary inspector of the United States bureau of animal industry.

Wyoming—Meat cattle, health certificate. All dairy cattle, bulls and female cattle, registered or pure-bred, over 6 months old, health certificate, including tuberculin test. Cattle originating in an area under federal quarantine for any disease must be accompanied by a health certificate issued by an inspector of the United States bureau of animal industry.

Sheep

Colorado—In compliance with regulations issued by the United States Department of Agriculture.

Illinois—None.

Iowa—Health certificate.

Kansas—Health certificate from authorized inspector when from scabies-infected districts, unless intended for immediate slaughter.

Minnesota—Health certificate.

Missouri—Health certificate, except when intended for immediate slaughter. Exposed sheep must be dipped twice at intervals of ten days in lime and sulphur or nicotine dip, under the supervision of federal or state authorities.

Nebraska—Health certificate stating that they are free from all contagious and infectious diseases. When such shipments originate in a territory where lip-and-leg ulceration or scabies exists, the certificate must show freedom from these diseases.

South Dakota—Health certificate.

Wyoming—Send ten days' notice to secretary State Board of Sheep Commissioners, Cheyenne, Wyo., inclosing 3 cents for each sheep and 25 cents for each buck. All sheep to be dipped twice at destination, within fifteen days after arrival, in a dip prescribed or recognized by the State Board of Sheep Commissioners for scabies.

Horses, Mules and Asses

Colorado—Health certificate, including mallein test.

Illinois—None.

Iowa—Health certificate, including mallein test.

Kansas—Health certificate, including mallein test.

Minnesota—All branded horses, mules or asses imported into Minnesota must be accom-

(CONTINUED ON PAGE SIXTEEN.)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Entries in all live stock departments at the Iowa State Fair close August 1.

Iowa last year made 93,911,906 pounds of butter in creameries, of which 86,933,906 pounds—all but 6,978,000 pounds — was exported from the state.

The runty pigs are showing up in the herd. Get rid of them. The food they eat is thrown away, and if the herd comes in contact with hog cholera germs, the runt is the first to go wrong.

A lot of feed is going to waste in the stubble fields of the corn belt. Most of these fields are fenced for cattle and horses, but many of them are not fenced for hogs. If these fields were fenced hog tight, the hogs would soon pick up a lot of feed the cattle and horses never get.

Did you ever try to arrange a good night pasture for the work horses? If not, try it. It seems almost cruel to keep your horses tied up in a hot, stuffy barn these hot nights. Give them a little pasture that they may get the pure out-of-doors air and eat a little cooling feed.

Let us again call your attention to the ever present hog louse. If we don't keep up the fight all the time we won't win. The hog louse works all the time, and if left alone he soon gets the pig badly out of condition. The hog louse and the cholera germ are side partners. The louse gets the hog in fine condition for an attack of the germ. If you haven't already done so, get ready at once for an all-the-year-round fight against this pest.

The Farmer's Cash Register

In our opinion far too many farmers are without farm scales. We regard this implement, if it may be called such, as one of the necessities of the average grain-belt farm. Those of us who have not availed ourselves of the oportunity of checking up many things which we may check by the use of the farm scale don't realize the many times we would use the scale if it were handy. The man who has not had a good scale on his farm can't accurately tell how his hogs, cattle or sheep may be gaining or the exact amount of grain or hay he may be feeding. The up-to-date feeder fully realizes the fact that the best gains on any of our feeding animals can only be made by careful feeding. In scooping out corn to hogs or cattle you are not finding out the exact amount you are feeding. It must be weighed. The farmer who is feeding a number of cattle, hogs or sheep should know at least once a month how they are gaining, and the only way he can know this is by actual weights. If he knows the actual gain the animal is making and knows the exact number of bushels of grain and pounds of hay taken to make this gain, he knows whether or not the necessary profit is being made.

A farm scale is necessary, especially to the breeder of pure-bred animals. One of the questions always asked by the inquirers seeking to buy a pure-bred animal is, "What is its weight?" In answering this inquiry it is always the intention to give as nearly as possible the accurate weight, but when a guess is made we are liable to over-guess. The buyer may be equipped with a scale and weigh the animal. If you have overestimated the weight in answering the inquiry, you are practically sure to have a kick, and it may result, and often does, in a loss to you for future business of a good customer. The influence of dissatisfied customers can't be estimated. It is possible the influence of one dissatisfied customer receiving an animal which does not weigh up to representation may cost the seller more than enough money to have equipped himself with a good farm scale.

When you do build a scale, don't build it where it can't be utilized. If you haven't a good lot or yard in which you can keep almost any animal, build one, and in this lot place your scale. Arrange for a chute to the scale so that any animal can be easily driven and weighed.

Many of our farmers are buyers of grain and many are sellers. In either case the farm scale will soon pay for itself in knowing whether or not you are getting all that you pay for when you buy, or getting pay for all produce sold when you sell. Too many of us do not pay enough attention to knowing exactly, in pounds, the gains made on our animals in the feed yard. They are often bought in the country by lump; you may not make a good guess, and think at selling time you have made a profit when in reality you have not. The scale will tell the tale. The farmer who will equip himself with a good scale and keep it in good condition will in a very short time wonder why he ever got along without it. Give this part of your farm business a little attention and see if you don't think the necessary amount of money required to place a scale on your farm would not be money well invested.

Man Power and Machinery

One of the great questions on the American farm today is that of help. It is serious in two ways—quality and price. Many of our farmers are willing to pay the price necessary to get the man, but so often are they fooled in the quality of the man they hire that they sometimes become discouraged in trying to carry on their business.

We scarcely think the price required to secure the average farmhand is much, if any, more than that of the laborer or clerk selling his time to the ordinary commercial man. On some of our farms in some seasons of the year the question of quality and price are both practically thrown away, and it simply becomes a question of whether or not you can get anyone at almost any price.

It is pleasing to note that the manufacturer of farm implements has very largely kept abreast to this question and very generally provided tools and implements by which the work of the farm may be carried on with the least amount of help. We have the gang plows, the wide harrows, the two and three-row cultivators, modern harvesting machinery and threshers.

On a large number of farms—and we believe this number will be doubled within the next two or three months—we find the portable elevator. This piece of machinery is certainly a labor saver, and is utilized at the time of year when labor is highest priced and scarce. These elevators are made to run with both horse and engine power. They are so constructed that they may be readily moved from one building or part of the farm to another. At threshing time they will practically take the place of two men and certainly relieve the farmer of some very hard work. This same machine is used at corn husking time. Many farmers who are equipped with a portable elevator tell us they can readily hire a man to husk at half a cent per bushel less than the man who is not equipped with one of these machines has to pay. Some farmers say they have even hired this help for a cent a bushel less.

This being the case, it appeals to us that an up-to-date farmer can hardly afford to be without a good portable elevator. The cost is not prohibitive, and if he will consider the amount of money saved in time and help at threshing season and the money saved in hiring the corn scooped into the crib at husking time, he will surely find this an investment worth while. If your farm is not equipped with a portable elevator, we believe it would pay you to make some inquiry about this machine.

The next six weeks is liable to be the hottest and dryest season of the year. Look carefully after the live stock. Be sure they have plenty of shade and water. This applies particularly to the hog. He can't stand heat, and must have water often.

New Hog Shipping Rules

The new rules of the Department of Agriculture regulating interstate shipment of live stock are of particular interest to the farmer buying or selling stock hogs.

Under the old rules it was necessary to hold them in the yards twenty-one days after they were vaccinated, then to be dipped and shipped. The expense of feeding dollar-a-bushel corn limited to a great extent the trade in feeder hogs.

Under the new rules hogs may be treated with serum alone, made by a government licensed plant, disinfected and held for at least six hours in noninfectious pens before being shipped. This saves the long feed in the yards on high-priced corn and makes it possible for the stock yards to be a medium of exchange for this class of stock.

There are many of our farmers who are afraid of the simultaneous treatment, fearing that if the hogs are treated by this method there is danger of infecting their premises. This new rule makes it possible for this man to buy stock hogs in the yards, if they are there to buy.

The time of holding hogs treated with the simultaneous method is reduced from twenty-one to fourteen days under the new rule. This will be another benefit to both seller and buyer.

It must be remembered these regulations are for interstate shipment only and are subject to regulations prescribed by the state into which the shipment is to be made.

The Live Stock Sanitary board of Nebraska took this matter up at its meeting July 17. At the present time the rule in Nebraska is to hold the hogs twenty-one days after vaccination.

This change in the rules is not going to make any very radical change at once in the stock hog business for the reason that stock hogs are not being raised in sufficient quantities where feeds available for fattening are not also raised. It will, however, have a tendency to induce farmers in counties where a limited amount of corn and a large amount of alfalfa is raised to produce and send these hogs to market.

The stock hog business in our public stock yards we predict will in a few years become an extensive one, giving the man who raises them and has not the feed to fatten them the opportunity to dispose of them at a profit. It also gives the cattle feeder in the corn belt an opportunity to buy hogs to follow his cattle, which in turn will be a profitable investment to him.

Don't delay fall plowing any longer than you can possibly avoid. Every weed in the stubble that produces ripe seed will make you a lot of extra work next year. The soil may not be in condition for the best of plowing. If this is the case, have the plow sharpened a little oftener and put an extra horse in the team. You can do this work and it should be done.

If the binder is still in the field where you unhitched after finishing cutting, don't delay in getting it into the shed. Delay in this work may cost lots of money.

Western Dairy Industry

That the dairy industry has been making rapid strides west of the Missouri river is quite apparent to all observers of the dairy cow demand. This is especially true of the irrigation districts where alfalfa and feed crops can be produced with a degree of certainty. The dairy industry, wherever advocated, is immediately followed with a demand for the dairy-bred cow. If dairying pays, it is readily observed that the more complete the machine for producing butter-fat the better it pays.

The western milk-producing enterprise, which has created a wonderful demand for the best quality of dairy-bred cattle in the east is not an empty-air proposition. On the contrary, there are a lot of enterprising business men who have the money and disposition to put the business fairly on its feet and establish manufacturing facilities to consume all the milk that large communities engaged in the dairy business can supply.

These irrigation valleys are planning the dairy as one of the surest means of permanent business. Bankers and business men about the little towns are becoming interested in what they term the "sure-shot" business—the farm dairy, with a home manufacturing demand for their milk. In these localities there is springing up a demand for the pure-bred dairy cattle. Holsteins, Ayrshires, Guernseys and Jerseys are all discussed, with the preference in quality bearing down strongly on the breed best adapted to a dry, cold climate. Constitution and general hardihood will determine the strength of popularity for most of this western irrigation dairy enterprise.

Dairy cattle breeders should be getting a line on this movement, as there is already an inquiry for young stock in these communities for the establishing of home herds of pure-breds. Some localities are buying in view of experimenting as to the breed best adapted to western conditions, feed and climate.

Water and Grass

The demand now is water and grass. Every farmer who owns live stock should see to it that these necessities are supplied liberally to every head of stock in his possession. These essentials are the key to the thrift and growth of the animal, and without plenty of water and grass of a good quality the farm stock will not produce the flesh or the dairy cattle the milk that yields the profit that these animals are capable of producing.

The grazing season is the period of greatest production when rightly directed, and it is the season of greatest profit to the owner or operator. Animals will put on more flesh, acquire more growth on pasture, the cow produce more milk and at less cost than can be produced during the feeding season. Then why not make the most of the opportunity? Why not waken up to a sense of these conditions and "make hay while the sun shines?" Keep the pastures in good grazing condition. There is always a loss in pasturing too closely; it never pays to keep a few too many cattle on a pasture, resulting in the stinting of the feed the animals naturally require.

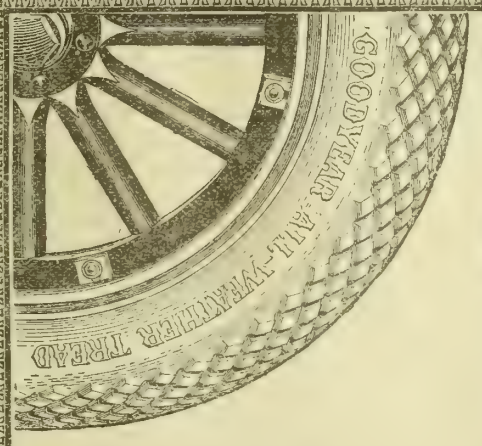
Pastures should be under-pastured rather than over-pastured. It pays to have smaller enclosures and change the stock more frequently to the fresh grass. This practice will be found very satisfactory with all kinds of stock; it is proverbial with the flock— "a change of pasture is good for sheep." It applies equally well with cattle. Pastures may be improved by sowing additional kinds of grass seed, giving more variety for encouraging the appetite of the animal.

There is too little attention paid to the summer watering of pastured stock. Mud holes and hog wallows are often found at the watering places where other kinds of stock get their water supply. A too scanty supply of water often causes thirsty animals to go half supplied. Make more allowance for a full and free supply of pasture and water, and provide clean, wholesome drinking troughs, tanks and conveniences for the stock in getting the water.

Exchanging Work

A farmer in Wisconsin kept account of the time he had worked for his neighbors and of the help he had received from them in turn. The farm management bulletin issued by the government gives the results of his investigations. During 1912 he gave 217½ hours of man labor and 112 hours of horse labor and received 103 hours of man labor and 76½ hours of horse labor. Not a very paying proposition, was it?

While the farmer who undertakes to keep an elaborate set of books may find that the time spent on his records will more than offset any gain, as is claimed by some, yet the jotting down of a few figures such as this man kept may point the way for changes that will repay him largely. An elaborate set of books requiring the cross-recording of each item is a mistake in any business, but the merchant who would proceed without a simple accounting would soon land in the bankrupt court unless he were saved by sheer luck. Perhaps you who do not keep books may be the farmer who is getting more than his share of exchange work; but then, again, you may not be.



One-Third More for Tires

16 makes of tires now sell for more than Goodyear prices. Half of them cost about one-third more. As compared with them, Goodyears save you 25 per cent in original cost alone.

Don't Pay It

Don't pay those extra prices. The evidence is that Goodyear tires are the best tires built today. They outsell any other, and they won that place by millions of mileage tests.

No man knows how to build a tire to give you lower cost per mile. No other maker combats tire troubles as we do in Goodyear tires.

Any higher price means added cost of upkeep without any compensation. In most cases, that higher price is due to limited production.

Save This 25%

We used to charge you extra prices for Goodyear No-Rim-Cut tires. That was because of exclusive, costly features.

Those tires are built the same today. They have the same exclusive features. But we now build ten tires where we then built one. We have modern equipment, new factory efficiency. Our prices came down as our costs came down. They are half what they used to be.

Accept this saving. It is one of our greatest accomplishments. The price of the leading tire of the world is all that you should pay.

Exclusive Features

These four features of No-Rim-Cut tires are found in no others at any price:

Our No-Rim-Cut feature, which wipes out rim-cutting completely.

Our "On-Air" cure, which saves all the countless blow-outs due to wrinkled fabric. This one exclusive feature adds to our tire cost $1,500 daily.

Our patent method for combating tread separation. It reduces this danger by 60 per cent.

Our All-Weather tread—our double-thick, resistless anti-skid which, because of its flatness, runs as smoothly as a plain tread.

Note that these are all exclusive Goodyear features. No other tire offers one of them. Every year they are saving our tire users many millions of dollars.

You will get them all, at the Goodyear price, if you ask your dealer for No-Rim-Cut tires. Any dealer can get them quickly if your size is not in stock.

GOODYEAR
AKRON, OHIO
No-Rim-Cut Tires
With All-Weather Treads or Smooth

THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio

Toronto, Canada — Branches and Agencies in 103 Principal Cities
London, England — Dealers Everywhere
Mexico City, Mexico — Write Us on Anything You Want in Rubber

JOHN DEERE

Wheel Plows
With Quick Detachable Shares

Unscrew One Nut—That's All

THE latest improvement on John Deere Sulky and Gang Plows is John Deere Quick Detachable Shares. Unscrew one nut and the share comes off—slip share on, tighten the one nut and you are ready for work. Shares on or off quick, that's the idea. Here's what it means to you:

1. No trouble to change shares.
2. Eighty percent of time saved.
3. No danger of damaging share.
4. Share is drawn up closer.
5. Share is stronger—not weakened by bolt holes.
6. Resharpened or sprung shares can be drawn into place—no drift punch necessary.
7. No unequal strain on share.
8. No injury to hands in taking share off.

We have beautifully illustrated booklets on the following plows with John Deere Quick Detachable Shares:

New Deere Sulky and Gang. (High Lift Frame Plows).
John Deere Stag Sulky and Gang. (Low Lift Frameless Plows).
John Deere Two Way Sulky. (Side Hill or Irrigated Land).
John Deere Engine Gangs. (For Traction Engines).

Mention the booklet that you want and ask for our big free book—

"Better Farm Implements and How to Use Them."

Describes the John Deere full line of farm implements. It should be on every farm. Tells how to adjust important tools.

Ask for package P 15, Address your letter to

JOHN DEERE
PUBLICITY DEPT. MOLINE, ILL.

HELP BOOST WHEAT PRICES

By Not Glutting the Market.

The unusually large crop is going to make wheat low.

Store your wheat and get the extra profit, by being able to sell at right time.

Congested traffic is going to cause trouble and delay in getting cars at threshing time.

BUTLER METAL Grain Bin

Corrugated. Can't Cave In. Rat-Proof. Fire-Proof.

Can be used for store house. Capacity increased by additional sections. Keeps grain perfectly. Large door removable shoveling board.

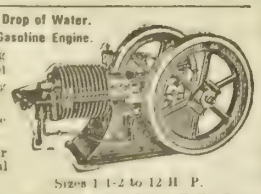
Ask for prices and descriptive Booklet Showing Letters From Satisfied Users.

BUTLER MANUFACTURING CO.
1212 W. 10th St., Kansas City, Mo.

Runs 365 Days Without One Drop of Water.
Yes! The Gade Air Cooled Gasoline Engine.
runs continuously pulling rated H P. without the aid of any artificial cooling device.

Cools cylinder on inside—the logical place.

Get descriptive Folder explaining this wonderful engine at once.



Sizes 1 1-2 to 12 H P.

GADE BROS. MFG. CO., 66 E. Iowa St., Iowa Falls, Iowa

BINDER ATTACHMENT with corn harvester cuts and throws in piles on harvester or in windrows. Man and horse cut and shock equal with a corn binder. Sold in every state. Price only $20.00 with fodder binder. J. D. Borne, Haswell, Colo., writes: "Your corn harvester is all you claim for it; cut, tied and shocked 65 acres milo, cane and corn last year." Testimonials and catalog free, showing pictures of harvester. Address PROCESS MANUFACTURING CO., Salina, Kansas.

PATENTS That Protect and Pay Send Sketch or Model for Search.
BOOKS, ADVICE and SEARCHES FREE
WATSON E. COLEMAN, Patent Lawyer, Washington, D. C.

Preparation for the Fall Fairs

THE agricultural fair is one of the important organizations in the interest of farming and live stock development. It is not only an incentive to improvement to the exhibitor, but its influence for good extends and widens to the betterment of all interests and industries in the county or district of country under its influence. It has been the exhibition of stock at the agricultural fair more than any other influence that has caused the rapid improvement in breeds of farm animals. It has been this same influence that has stimulated improvement in the breeds or varieties of grains, grasses, vegetables and fruits. It has been the outgrowth of fair competition and exhibition that has created a demand for improved breeds of animals and improved farm produce of all kinds. It has been the agricultural fair more than all other influences that started into use the improved methods and improved machinery and appliances for crop cultivation and harvesting.

The agricultural fair has an educational influence upon the general public. It encourages communities of persons to take a pride in the producing ability of their part of the state. It instills into every citizen, unconsciously, a home-loving disposition, an appreciation of the worth and value of the farm home above that exerted by soil influences alone. It is the agricultural fair that makes character and reputation for the ambitious and industrious producer and exhibitor. As an advertising medium it has no equal. Its local influences are of a progressive nature; they encourage the growth of principles and habits that make all participants better citizens and better neighbors, and a spirit of improvement is thus created throughout the entire community.

Agricultural fairs, like all other institutions or organizations of a public character, are not all well conducted; they are not all well officered; they are not all put into the hands of the most competent, honest, business management, and therefore they sometimes fail or are not satisfactory to the great body of people interested. This is not the fault of agriculture; it is not the fault of the fair. It is a defect in organization or in operation, and must be remedied without damage to the agricultural interests back of it.

This is a year of great opportunity for the county fair and state fair. The encouraging conditions of vegetation at this season of the year have never been more flattering than now throughout a very large area of the country. In all lines of vegetables, grasses and grains the prospects are excellent. Very naturally, a season of encouraging growth is followed by a disposition to excel in exhibition of products. County agricultural societies should plan for the county fair at once where not already lined up for this annual exhibition.

This is a good year for unorganized counties to get together, organize and hold a fair. A few active persons, stock breeders and farmers, will find the business men of any town in the county ready to join in such an enterprise. This fair spirit only needs a little agitation to bring it to the surface. It is the right kind of spirit; it not only indicates local pride, but it announces to the world that they are enlisted in competition, in the exhibition of what they produce and that they are seeking a better and higher plane of agricultural excellence.

This is a good year to select and save exhibition samples to show when the growing conditions may not be so good. Good show quality in sheaf grains is always in demand and makes a nice display section at your county fair in any year that there is a failure or partial failure in crops. If all crop conditions were alike, if each year produced the same in quality and growth, then each year might be left to take care of its own exhibition interests by its own products. But this is not the case. Next year may not be nearly so favorable in the development of vegetation as this year has been, and the produce of an unfavorable year would not be a true representation of the producing ability of the state or county. It is best to take advantage of present conditions, and save out of the best that is produced this year for exhibition purposes in years that are below the average, of course, labeling the exhibit with the proper credit of the year produced.

The state fair should not be lost sight of. This is a home interest, a state pride, one which every county in the state should be interested in, and should exert an effort to assist and support in exhibits and influence. Talk up your state fair interests, encourage your neighbors to attend and in every reasonable way become a booster for your own state first.

Fall and Winter Fair Dates

Date.	Name and Place.	Sec'y or Mgr.
Aug. 26-Sept. 4	Iowa State Fair, Des Moines	A. R. Corey
Sept. 7-11	Nebraska State Fair, Lincoln	W. R. Mellor
Sept. 12-19	California State Fair, Sacramento	J. L. McCarthy
Sept. 14-18	South Dakota State Fair, Huron	C. N. McIlvane
Sept. 14-19	Colorado State Fair, Pueblo	J. L. Beaman
Sept. 21-26	Montana State Fair, Helena	A. J. Breitenstein
Sept. 21-26	Interstate Live Stock Fair, Sioux City, Ia.	Joe Morton
Sept. 21-26	Interstate Fair and Live Stock Ass'n, St. Joseph, Mo.	H. L. Cook
Sept. 29-Oct. 2	Wyoming State Fair, Douglas	Anson Higby
Sept. 22-Oct. 3	Oklahoma State Fair, Oklahoma City	I. S. Mahon
Oct. 7-17	International Dry Farming Congress, Wichita, Kan.	Ralph H. Faxon
Oct. 7-17	International Congress of Farm Women, Wichita, Kan.	Mrs. Mary Pierce Van Zile
Nov. 16-24	American Royal Stock show, Kansas City	T. J. Wornall
Nov. 28-Dec. 5	International Stock Exposition Chicago	B. H. Heide
Jan. 18-23 '15	National Western Stock show, Denver	Fred J. Johnson

More of Everything

A Kansas paper has figured that more cows in Kansas will boost the lumber business, because more cows will require more barns, and more barns will require more lumber. Certainly. And then to go on. More lumber will mean more people to handle it. This will mean more houses, which will require more lumber and still more people. Then, to take care of these extra people, we will require more clothing, food and other necessities. This will mean more business, and more crops to supply the food. This includes the necessity for more milk and other dairy products, which will bring more cows into the state, and this again will require still more lumber. It makes an endless chain of prosperity, and this chain is being started in communities all over the corn belt and the west.

The American Poultry Association will hold its annual meeting at Chicago on August 9 to 15, 1914. Program will be sent upon application to the committee at room 1305 No. 542 South Dearborn street, Chicago.

"I believe in play with all my heart; but I believe in work even more. While a boy or man plays, I want to see him play hard; and when he works I do not want to see him play at all.
—Theodore Roosevelt."

GOOD CHANGE

Coffee to Postum.

The large army of persons who have found relief from many chronic ailments by changing from coffee to Postum as a daily beverage is growing each day.

It is only a simple question of trying it for oneself in order to know the joy of returning health as realized by an Illinois young lady. She writes:

"I had been a coffee drinker nearly all my life and it affected my stomach—caused insomnia, and I was seldom without a headache. I had heard about Postum and how beneficial it was, so concluded to quit coffee and try it.

"I was delighted with the change. I can now sleep well and seldom ever have headache. My stomach has gotten strong and I can eat without suffering afterwards. I think my whole system greatly benefited by Postum.

"My brother also suffered from stomach trouble while he drank coffee, but now, since using Postum, he fels so much better he would not go back to coffee for anything."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum comes in two forms:

Regular Postum—must be well boiled. 15c and 25c packages.

Instant Postum—is a soluble powder. A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage **instantly.** 30c and 50c tins.

The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.
—sold by grocers.

Entered in the Tractor Show

In previous issues we have shown photographs of some of the machines entered in the tractor demonstration to be held at Fremont, Neb., this year. In succeeding issues we will show other mahines entered. The above cut shows the Kinnard-Haines tractor being used for road work. Don't forget the date of the demonstration, August 17 to 22. The leading makes of tractors and plows will be seen at work, giving prospective purchasers an opportunity to judge of their qualities.

To Fight the Hessian Fly

THE Department of Agriculture has determined on a united and systematic fight for the extermination of the Hessian fly, an insect pest that has assumed dangerous proportions in its ability to destroy the winter wheat throughout a very large area of the best winter wheat-producing states of the country. It is quite evident from the information gained about the habits, work and propagation of this insect that the farmer and wheat grower has but one course to pursue in defense of his wheat crop against almost total destruction from this enemy, and that is plainly outlined in the following statement and request from the Department of Agriculture. The press of the country cannot unite too strongly in urging its interested readers in promptly taking up the suggestions and remedies outlined by the department as follows:

Every wheat grower in the country who suspects that his crop has been infested is requested to send his name to the Agricultural department's bureau of entomology at Washington, D. C., with a request for a question blank. The questions to be answered are merely as to whether the wheat grower's crop was infested straw will be sent by the farmer will then be asked to forward some of the infested wheat plants for examination, postage to be paid by the government. He will also be asked to give his name, address and the nearest railway station.

The department is co-operating with various state experiment stations in this compaign against the Hessian fly, and in some cases the infested straw will be sent by th farmer to local stations for examination. The wheat grower can learn just where his sample of straw is to be sent when he sends his name to the department, indicating his willingness to send the sample. The department encourages the sender not to be afraid to forward too much of the straw, even though it has to be sent by parcel post. The upper part of the straw need not be sent, but enough above the ground should be included to get the insect in what is known as the "flaxseed" stage when the larvae is incased in a hard, brown skin and somewhat resembles a flax seed. The insects will remain for a considerable time in the "flaxseed" state during a drouth and will only emerge after rains have moistened the soil. Dry weather in the late summer tends to keep the insect in that stage, which is a fact of special importance in the north, where the wheat must be sown early enough to enable the plants to stand the winter.

Probably no other insect causes more damage to the wheat crop in the United States than the Hession fly, although there are certain years when the chinch bug exceeds the fly

(CONTINUED ON PAGE TEN.)

Farm and City Combine

In two days the farmers and business men of Humboldt, Neb., saved the county $325 by working together at a bad piece of road. About fifty men, very equally divided from country and town, met on an appointed day last May at the call of the Commercial club. The amount of work accomplished and the good time enjoyed by the men doing it demonstrated the effectiveness of this community co-operation.

Greatest Outside Elevator on Earth

If we took price into consideration, if we figured only on big profits for ourselves —we couldn't make this claim. Our elevator would be no better than others. But we forgot price in building the National. We set about to make a machine without a fault or flaw anywhere. How we succeeded and of the extra dollars we spent, you can judge by reading this article.

First, to understand fully just why the NATIONAL stands head and shoulders above its competitors, see the small illustrations and note the difference between the National sections and sections in common use on other machines. For instance:

—**The National has 16 right-angle bends to each section**—others only 6.

—**The National is 16 inches wide,** 3 inches wider than other machines.

—**Four Wood Ribs, laid in lead,** run full length of section—making sections permanently rigid, stiff. Others require supports.

—**Flights run on Wooden Beams,** thus lightening draft and doing away with rattling noise. On others the flights drag on their bottoms, causing vibration, increasing draft.

—**Corrugated Steel Couplers,** not cast iron couplers are used to connect sections.

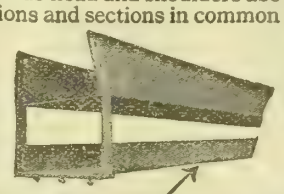
—**Corrugated Steel Keeper Irons,** bolted every two feet to the section, make the National sides permanently rigid.

These points of superiority are reason enough why you should choose the NATIONAL. But there are other reasons, other superiorities. You will find them in

Our Cog-Rack Jack **The "Little Giant" Overhead Jack**
The "Little Giant" Variable Speed Jack
Roof Extension for Flat Roof Cribs **Our "Common Sense" Feeder**
Galvanized Telescoping Swivel Spout, etc.

The cost of the National—when you consider the economy of maintenance, economy of power and everlasting efficiency—is by far the least expensive of all machines, the biggest bargain ever offered to the corn farmer.

We have the National's brother machine in wood—the "Little Giant" Portable—which contains every feature embodied in the steel machine. Thousands of these machines are in use, giving good, efficient service. Pictures, descriptions, low price on request.



The Hog Trough Type in use on all other makes

The National Section —the Best in the World

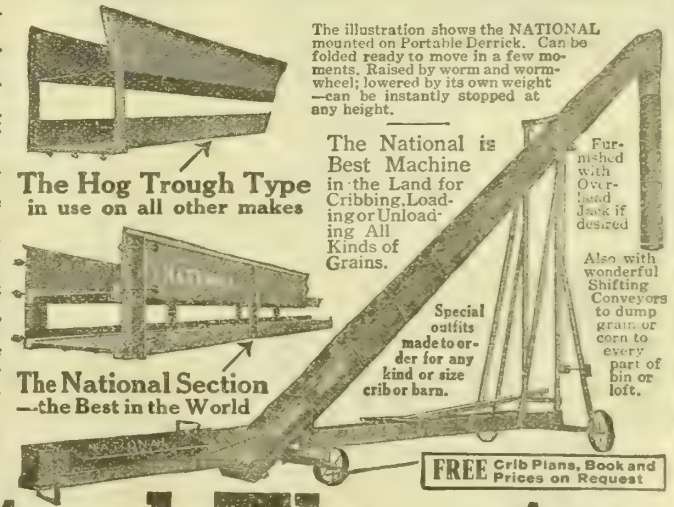
The illustration shows the NATIONAL mounted on Portable Derrick. Can be folded ready to move in a few moments. Raised by worm and wormwheel; lowered by its own weight —can be instantly stopped at any height.

The National is Best Machine in the Land for Cribbing, Loading or Unloading All Kinds of Grains.

Furnished with Overhead Jack if desired

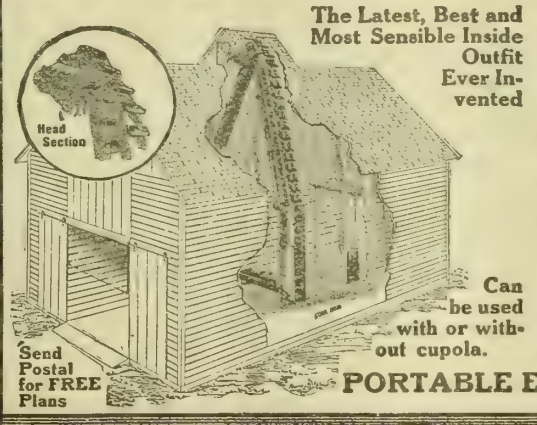
Also with wonderful Shifting Conveyors to dump grain or corn to every part of bin or loft.

Special outfits made to order for any kind or size crib or barn.



FREE Crib Plans, Book and Prices on Request

National Steel Elevator



The Latest, Best and Most Sensible Inside Outfit Ever Invented

Can be used with or without cupola.

Send Postal for FREE Plans

and Our

"Little Giant" Inside Machine

—the wonder machine of the century. Embodies everything that is new and good in elevator construction and, besides, contains numerous improvements over the shortcomings of other types of inside machines.

One sensible feature is the short delivery distance from filling to emptying buckets. This means **less wearing parts, less power, less upkeep, longer life.**

Also **smaller cupola space** is required. This not only **saves money,** but **does away** with necessity of erecting a **one-sided cupola.** Then there's our **Head Section,** so arranged to empty every bit of grain directly into center of hopper; the spout swinging around against either side of elevator fills crib directly back of elevator.

The above is typical of the ingenuities and superiorities which you will find exclusively in the "Little Giant" Inside Machine. But we want to get our book into your hands. Write for it. It shows every detail, gives full descriptions, big photographs, tells about work done, testimonials, etc. Attractive price and terms goes with catalog. Write postal and we'll include most complete book on crib plans and specifications ever issued. Address

PORTABLE ELEVATOR MFG. CO., 920 E. Grove St., Bloomington, Ills.

607

JOHN DEERE

The Spreader with the Beater on the Axle

HERE'S the low down spreader with the big drive wheels. The beater and all driving parts are on the rear axle. That means no clutches to give trouble, no chains to break or to get out of line; it means less than half the parts heretofore used on the simplest spreader.

Only hip high to the top. Easy to load. You see where to place each forkful. The result is an even load that spreads uniformly.

Light draft because the beater runs on roller bearings and the center of the load is comparatively near the team. Staunch, strong and easy to operate.

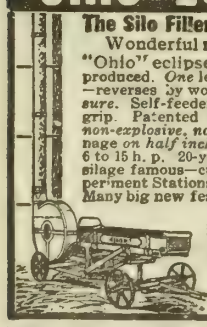
See the John Deere, the Spreader with the Beater on the Axle. Sold by John Deere dealers everywhere. Send for beautiful booklet, also for

"Farm Manures and Fertilizers" FREE

A Book by Dr. W. E. Taylor, soil expert. It tells the value of manure, how it should be stored, and how applied to the land to get the most out of it. You can get both books free when you write about John Deere Spreaders by asking for package No. Y 15

JOHN DEERE, MOLINE, ILLINOIS

"OHIO" 1914 Model



The Silo Filler With the Direct Drive

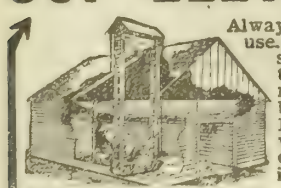
Wonderful recent improvements of "Ohio" eclipse anything ever before produced. *One* lever controls *all* movements—reverses by wood friction *at finger pressure*. Self-feeder—with famous "Bull Dog" grip. Patented Direct Drive—*Shear cut—non-explosive, non-clogging.* Enormous tonnage *on half inch cut*—50 to 250 tons a day—6 to 15 h. p. 20-year durability. "Ohio-cut" silage famous—cuts all crops. Used by Experiment Stations everywhere. Guaranteed. Many big new features this year.

Write for folder B, free, also send 10c for 264-page book, "Modern Silage Methods."

THE SILVER MFG. CO. Salem, Ohio

WRITE FOR BOOK

CUP ELEVATOR



Always ready for use. Placed inside the crib in the dry. Easy running, durable and strong. Elevates oats, wheat, or ear-corn, 50 bushels in three minutes.

SET IN YOUR CRIB BEFORE YOU PAY

The first successful **Upright Ear Corn Elevator made—SOLD DIRECT to the Farmer.** Free Catalog showing 8 styles with crib plans which save you money. Write for it today.

INTERLOCKING FENCE CO. BOX 67 MORTON, ILL.

Only $2 Down

One Year to Pay!

$24 Buys the New Butterfly Jr. No. 1. Light running, easy cleaning, close skimming, durable. **Guaranteed a lifetime.** Skims 95 qts. per hour. Made also in four larger sizes up to 1-2 shown here.

30 Days' Free Trial Earns its own cost and more by what it saves in cream. Postal brings Free catalog folder and "direct-from-factory" offer. Buy from the manufacturer and save half.

ALBAUGH-DOVER CO. 2208 Marshall Blvd. CHICAGO

Buying and Selling Hay Crop

THE importance and extent of the commercial hay-growing industry of the Missouri valley country that has developed in comparatively recent years has suggested that a better system of handling this product from the producer to the consumer should be introduced. In the interest of a more economical system of distribution, and that a closer co-operative relationship in trade may develop between the producer and consumer, there has been organized recently what is known as the United Hay Growers' Association, with headquarters at Nebraska City, Neb. It has been announced that this title was chosen as an appropriate one for the organization, as its purpose will be to co-operate with all hay growers and local associations of hay growers in selling the hay of its members and in looking after and attending to all matters pertaining to the best interests of the hay growers.

It is claimed by this association that the advantage it is able to give its members is in putting them in direct communication with buyers; that instead of shipping to commission firms at the large central hay markets and then having their hay shipped from these markets to the buyers, the association will route the shipments of hay direct from the growers to the buyers; in other words, look up buyers who are consumers in small amounts as they demand it. It is, in fact, a short way of getting the hay from the grower to the consumer at the least possible expense of freight and handling expense. All sales are announced to be on a strictly cash basis, but the association will handle none of the growers' money. The transaction is between the grower and buyer or the bank that handles the business in the payment or settlement for the shipment.

Each grower grades his own hay according to instructions furnished him by the association. These instructions are furnished all members, buyers and banks that handle the business. In case any shipment gets damaged or in any respect does not come up to specifications representing the grade, the buyer notifies the bank that makes the collection for the hay and the bank appoints a competent arbitor to inspect the shipment and settle the differences between shipper and buyer. The loser pays the expense of arbitration, and the grower will be obliged to make a cut in price should it prove to be damaged or incorrectly graded.

The association will collect 50 cents per ton when the hay is sold; but at the end of each business year, when the selling cost can be determined, each shipper will receive a statement of the annual business, together with a check for the difference between the commissions collected when the hay was sold and the pro rata cost of selling it. This would seem to be a system of co-operation that co-operates, when the grower or seller is charged the actual expense of putting his hay into the hands of the buyer or consumer, and there is no arbitrary dockage for bad condition or grading below what it is entitled to, as is sometimes claimed by hay shippers when the consignments go to the regular commission trade in the large hay markets.

Shippers of hay very frequently complain of unfair treatment from commission firms, and under present conditions the differences are hard to settle satisfactorily, and possibly this system may have troubles resulting in difference of opinion also, but it is a step in the direction of education of the grower in grading his hay and trying to have it come up to representation. There should be considerable advantage to both buyer and seller in reduction of shipping expenses, freight handling, etc., that is a feature of advantage worth while considering.

Some of the statements and requirements in the articles of organization are: Capital stock of $10,000, in shares of $100 each—ninety shares of preferred stock and ten shares of common. One-twentieth of a share may be purchased at $5, entitling a grower of hay to membership and all the privileges of same. Dividends—5 cents a ton on all hay sold by the association shall be set aside and paid in full to the stockholders June 1 and December 1 of each year. A strictly cash system is adopted in all sales. Buyers shall bear a shrinkage loss of 2 per cent in weights of all alfalfa and clover and 1 per cent on all other kinds of hay. The money obtained from the sale of capital stock shall be used to pay advertising and operating expenses of the association until the business becomes self-supporting. The secretary-treasurer is the only salaried officer.

The success of such an enterprise as this association represents depends almost wholely upon its management, the ability and responsibility of its operators and the securing of the confidence of the seller and buyer.

The hay trade of the country is one of the big features of commercial industry and deserves the best system of government and operation in its distribution, and must eventually secure this where there is room for improvement between grower and dealer or consumer. The enormity of the hay product of the United States may be appreciated when the 1913 crop, by official report, is placed at 64,116,000 tons; price per ton, $12.43; total, $797,077,000. The 1914 crop has a prospect of a much larger yield.

It must not be lost sight of, however, while small local interests and associations are striving to better the distribution of this product between producer and consumer, that we have a national association of hay dealers and handlers that is no doubt the greatest association of its kind in the world, and is operated by a class of business men whose equal would be hard to excel in any line of trade or business. This association came into existence in 1893, twenty-one years ago, but was not fully installed until 1895. It was brought about with a view of bettering the condition of the hay trade of the country and is responsible for the present high standard of the business as it is found in all the large markets throughout the hay-growing states of the union. Its membership comprises more than a thousand of the leading dealers in the country.

To Fight the Hessian Fly

(CONTINUED FROM PAGE NINE.)

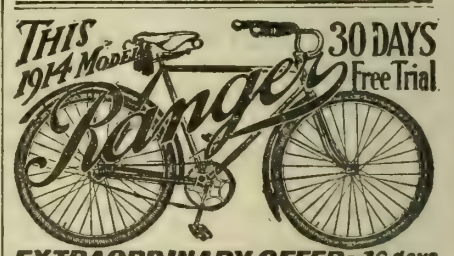
in its devastations. During the seasons when the fly is especially abundant hundreds of thousands of acres of wheat may be either totally destroyed or so badly injured as to reduce the yield from 50 to 75 per cent. The monetary losses run far up into the millions.

A number of years ago there was in Kansas general co-operation between grain dealers, millers and farmers to restrict the ravages of this dangerous insect. According to their own estimate, over a million dollars were saved by prompt action and thorough measures. This year the department hopes to secure general co-operation throughout the country in combating the pest. There are indications that its ravages may be severe. Already in Iowa and Oklahoma there have been threatening outbreaks of the insect.

Not only are federal and state organizations of the government co-operating in this campaign, but others, such as the National Millers' Federation, are working to secure better control over the Hessian fly. The individual wheat grower is asked to send his samples of infested straw before the middle of September, and sooner if possible, as after that the fly will have hatched and have entered into the wheat.

Late sowing of the seed and burning of the stubble when not seeded to grass or clover are the only measures known to date that are effective in controlling the Hessian fly—that is, for winter wheat-growing sections. In the spring wheat sections late seeding will not apply; on the contrary, the earlier it is sown in the spring the less it seems to suffer from this pest.

THIS 1914 Model



30 DAYS Free Trial

EXTRAORDINARY OFFER—30 days one month's free trial on this finest of bicycles—the *"Ranger."* We will ship it to you on approval, *freight prepaid*, without a cent deposit in advance. This offer is *absolutely genuine.*

WRITE TODAY for our big catalog showing our full line of bicycles for men and women, boys and girls at *prices never before equaled* for like quality. It is a cyclopedia of bicycles, sundries and useful bicycle information. **It's free.**

TIRES, COASTER-BRAKE rear wheels, inner tubes, lamps, cyclometers, equipment and parts for all bicycles at **half usual prices.** A limited number of second hand bicycles taken in trade will be closed out at once, at $3 to $8 each.

RIDER AGENTS wanted in each town to ride and exhibit a sample 1914 model ***Ranger*** furnished by us.

It Costs You Nothing to learn what we offer you and how we can do it. You will be astonished and convinced. **Do not buy** a bicycle, tires or sundries until you get our catalog and new special offers **Write today.**

MEAD CYCLE CO., Dept. T186, CHICAGO, ILL.

ALFALFA

SOWN SUCCESSFULLY IN AUGUST

How to grow Alfalfa, how to feed it, how to harvest and care for it. Full information for corn belt farmers who wish to grow this most profitable hay crop will be sent free on application. Also samples of our Western Upland, Dakota and Turkestan seed of extra quality at low prices. Address

IOWA SEED CO., DEPT. 51, DES MOINES, IOWA.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

Sunflower Seeds

Mrs. John C. C., Wyoming: Are sunflower seeds a wholesome feed for chickens at any other than molting time, and just what purpose do they serve them?

Answer—Yes, many poultry keepers, especially in other countries than the Uited States, raise sunflowers, fields of them, and depend upon them as a large part of the winter feed. They contain considerable protein, but it is the oil in them that is most highly prized. The Russian sunflower is considered not only most productive of oil, but also of meal. In our country the birds eat up the sunflowers from our chickens; they are crazy for the oil in them; so are the mice, and so are the chickens when once you get them to eat it. Usually, you must let them get hungry before they will try it.

What Ails Them?

Mrs. W. R., Wyoming: Will you tell me what ails my chickens? They seem so healthy; their heads are red, and they lay well. In two that I killed for the table I found little white things that looked like spiders—hundreds of them—between the lining and entrails and all over the heart and liver. In one hen they were as small as mites; in the other hen some were larger. Will you tell me what ails them?

Answer—I give this hoping some of our poultry readers of experience might possibly know, for in all my years of experience I have never known the like. Worms of many kinds I have known to eat up the crop and gizzards of chickens, also the throats of ducks, but never insects of this kind. My only guess must be that these spidery things must have invaded the hens from the outside, through the pores, and probably while laying. They might have burrowed after oil or even gone deep for blood, and entered in that way. They, of course, will finally kill all fowls invaded. Look after nest boxes and roosts.

Caponizing for Home Use

Alice, Illinois—Have sent you the address of the poultry book asked for, also where to get the caponizing set. You can learn, if you want to, but it is best to try your hand first on chickens already dead and intended for the table. Anyone who wishes to use the cockerels for their own use during winter is wise to caponize them, as it not only improves the meat, but gives you more of it. I know one farmer who does not allow his wife to put one cockerel on the market; all are caponized for home use. In the fall and early winter he has many corn huskers. His claim is that chicken meat is cheaper than beef or pork for his table at this time. Yes, the Braekel is the chicken taught to sing; it lays white eggs and many of them. I know of only one advertiser—S. H. Hoyt, Waverly, N. Y.

Inbreeding

L. B., Nebraska: Kindly inform me how long the rooster will stay with the hen before he becomes inbred?

Answer—I suppose I have read the question aright, although I might not have made it out exactly as the writer meant it. Inbreeding is not brought about in that way. If the hen and rooster are unrelated, their progeny each year would remain as it was the first year, with a tendency to become fewer and larger, as well as stronger. Breeding the sisters and brothers of their progeny together would soon, without great care, get you a strongly inbred flock.

Poultry Notes

Don't buy your breeders from chicks that have been penned in a three-foot space until they are nearly mature. These may come on fast, and if white or buff develop the very white or pale buff in color required by the standard of perfection, but nine time in ten the male birds are long and narrow in shape—"spindling" we would call it in a plant—and not fit for breeders.

***

Weakness of the legs is often caused by hens becoming too fat and not getting enough ash or roughage in their feed or enough grit. Again, roosters too heavy for the breed often cause spinal trouble in the hens, which invariably brings on lameness in the legs, and this results in many crooked backs or breasts in the young.

***

For the older hens that you want to keep over for next year, give close attention to those that molt earliest. These will begin as a rule to lay earliest.

***

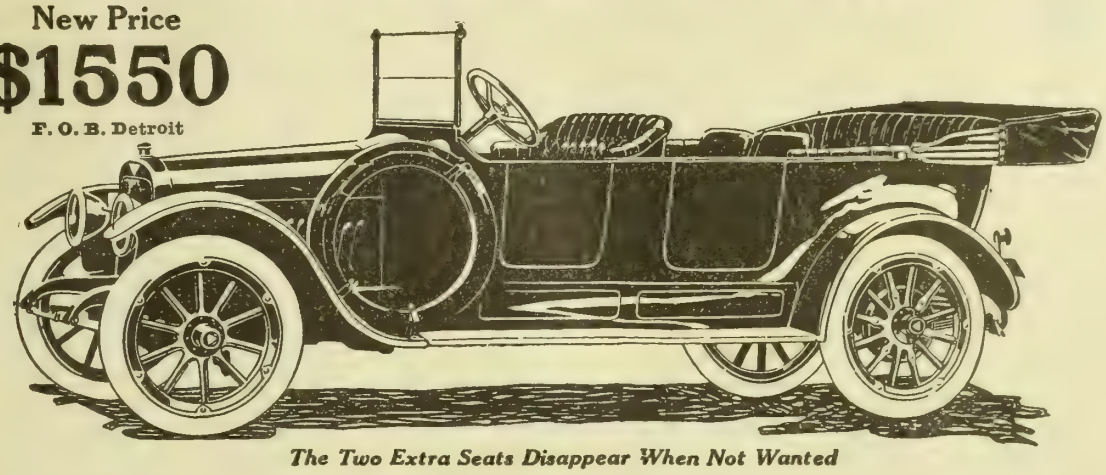
Too close inbreeding will not exactly make insane chicks, but it will make chicks that take spells of dizziness.

***

If ducks are raised without running water, then two essentials are—yards kept clean and water troughs kept the same. Put slats across the troughs and see that the bottom is kept clean of filth, and fresh water given often. If kept in a yard, ducks must have shade also, and plenty of green stuff.

HUDSON Six-40 for 1915

New Price
$1550
F. O. B. Detroit



The Two Extra Seats Disappear When Not Wanted

Next Year's Gem Car

The new HUDSON Six-40—now just out—fulfils our dreams of the ideal car.

It is our last season's success plus a year of refinements. It has 31 new features. And the price—due to trebled output—is $200 less.

Our 48 engineers—headed by Howard E. Coffin—have now devoted four years to this HUDSON Six-40. And they now present it as the finest example of the coming type of car.

Note What It Embodies

You have wanted a Six, but all Sixes were costly. Here is a Six of the finest type for $1,550.

You have wanted lightness. Here is a Six, with room for seven passengers, weighing 2,890 pounds. We have saved at least 1,000 pounds—the weight of a car-full of people. All through proper materials and better designing with no sacrifice of strength.

You wanted lower operative cost. Here a new-type motor saves you 30 per cent under former cars of similar capacity.

You wanted beauty. We offer you here one of the handsomest cars in the world—a distinguished car—a thoroughbred.

You wanted every convenience, every comfort, every new idea in equipment. We embody them all in this car.

A New Quality Price

You have felt heretofore that quality cars had to be high-priced. You have found no low-priced car to compare with them.

But here is a car built to accord with the highest HUDSON standards. It is built by Howard E. Coffin and his famous corps of engineers. Four years have been spent to bring every part to the finest point of refinement. It forms the last word in a quality car. And the price is $1,550.

Last year's HUDSON Six-40 met an overwhelming welcome. Men ordered 3,000 more than we could build. They offered premiums to get it.

We have met men's wants. Now, to meet their demands, we have trebled our factory output. And the saving effected—$200 per car—goes to HUDSON buyers.

Other cars this year will offer you many of the HUDSON attractions. These are the lines which the best future cars must follow. But you'll not find elsewhere these attractions combined with the HUDSON price. Go see our new model and prove this.

Some 1915 Features

Distinguished streamline body.
"One Man" top with quick-adjusting curtains.
Extra tires carried ahead of front door.
Invisible hinges.
Disappearing tonneau seats.
Dimming searchlights.
Simplified starting, lighting and ignition system.
Wiring in conduits.
Better carburetion.
Automatic spark advance.
Lock on ignition and lights.
Gasoline tank in dash.

The HUDSON Six-54

is a larger model of this same type car. It is big, impressive and powerful—135-inch wheelbase. The price is $2,350.

Hudson dealers everywhere have these new models on show. New catalog on request.

HUDSON MOTOR CAR CO., 8062 Jefferson Ave., DETROIT, MICHIGAN

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

A Problem in Threes

If three little houses stood in a row,
With never a fence to divide,
And if each little house had three little maids
At play in the garden wide,
And if each little maid had three little cats
(Three times three times three),
And if each little cat had three little kits,
How many kits would there be?

And if each little maid had three little friends
With whom she loved to play,
And each little friend had three little dolls
In dresses and ribbons gay,
And if friends and dolls and cats and kits
Were all invited to tea,
And if none of them all should send regrets,
How many guests would there be?
—Selected.

Dragons in the Creek

On a hot Sunday afternoon in July, Rose and Harry were sitting with their Uncle Jack on the banks of the little stream that flowed through their father's farm, rippling and splashing gently over its stony bed.

"Ouch!" cried Rose suddenly, shaking her hand.

"What was it?" asked Uncle Jack.

"A devil's darning needle," she answered.

"It wouldn't hurt you," said Uncle Jack.

"Wouldn't it?" asked Harry. "The boys say it has a sting in the end of its tail."

"Well, it hasn't," said Uncle Jack, "and it oughtn't to be called a devil's darning needle at all. It is really a dragon fly."

"Why do they call it a dragon fly?" asked Rose.

"I am not sure, but probably because it must be considered a regular dragon by the bad little insects that live in the water. The dragon fly lives about a year, but not as we see it now. These gauzy-winged creatures fluttering over the water and dipping into it only live a month or perhaps a little more. They lay 100 or more bright green or yellow eggs on the stems of plants just below the surface, fly about, eating a lot of gnats and mosquitoes, and then die."

"Oh, do they eat mosquitoes?" asked Rose. "Then I'll always like them, even if they do look sort of horrible."

"These bright-colored eggs," continued Uncle Jack, "hatch out pretty soon into little bugs that live at the bottom of the water. They live down there about eleven months, and what a lot of wigglers and other villainous little beasts they eat! Every now and then they get so fat their skin splits and they come out of the old skin larger and with a new skin large enough to fit, but always they are dreadful eaters."

"How do they get to be dragon flies?" asked Harry.

"When the hot days of summer come," Uncle Jack went on, "the time for living underneath the water is over. Then the insect crawls up a plant stem into the sunlight. As it dries off the skin of the back splits and out comes the dragon fly. At first the wings are wet and sticky, but soon they grow dry and shine in the sun; then the dragon fly spreads its wings and flies away. As most dragon flies cannot close their wings, they always remain spread."

"See," said Rose; "here is one with its wings closed."

"I am glad you found that," said Uncle Jack, "because that is a damsel fly, an exception to this rule. See how much smaller she is than the other kinds? They call her the damsel fly because she is so quiet and as dainty as a young girl in a bright summer gown."

"Uncle Jack is getting romantic," said Harry. "I guess the damsel is like Rose in one way, though, if she has a dreadful appetite."

HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Prize Story.)

Fourth of July Fun

By Hattie Miller, Aged 13, Jones, Okl.

I belong to the brass band. We have twelve in our band. The Fourth we played at Spencer, Okl. We left home early in the morning and went from Jones to Spencer on the train. When we got there we played two pieces and marched to the picnic grounds. The people had a nice place for us to sit. We heard some speaking and played some.

When dinner time came around they sent us to different houses. There were five of us went to the banker's, and the banker's wife certainly had a fine dinner for us. There was some of nearly everything you could think of that was good to eat. Before we were through eating it began to rain, and it rained nearly all evening, but we had a fine time as it was.

Our train left for Jones at 6:30, and for supper we bought a nice lunch at a grocery store. After we had finished supper we had a good time with firecrackers.

(Honorable Mention.)

The Twentieth Century Farmer

By Mechie Honda, Aged 9, Rock Springs, Wyo.

I think that the Twentieth Century Farmer is one of the best papers I have ever read. I did not know of it until I came to Rock Springs, and now I find it a great paper. How I came to know of it I went next door and asked for a book I could read. He began showing me the Twentieth Century Farmer. I refused to take it, so he found me some fourth grade readers. In a few days I was through reading them and politely asked for more, but he didn't have any more books or magazines but the Twentieth Century Farmer. I said "All right," and went home.

A few days after this man left for Salt Lake. While he was gone we kept his mail for him. One day I found the Twentieth Century Farmer in the mail box and I thought I would like to look at it, so I sat down and began reading. I had not read far when I got interested in it. Now I read the whole magazine with interest and I find that it helps me very much.

The Fourth

By Myrtle Woolery, Whiting, Ia. Honor Member.

'Tis the end; the day is over and the flaming gas is lit;
There's the ripple of silvery laughter, and the whiz of the rocket, and yet—
Behind all the fun and frolic there is something sober and sad,
For the Fourth of July has taken away the sight from many a lad.

He will never again see the flowers that blossom to make the path bright;
He will never again see the gentle face which bids him a soft "Good night."
Of course, it's the nation's birthday; we must celebrate that, it is true;
But there's something sad about it—something that I or you
Will never understand till it happens to Alice or Brother Lou.

Perhaps in the auto races he has started off proud and gay,
And was brought back dead or dying before the close of day.
Or maybe it was the rocket that simply wouldn't go;
With a smile he held the match to it, and lo!

With a cry of pain, he sprang backward, in the arms of some comrade near,
And was carried home on a bed of pain to his sister and parents dear.
Yes, there's something sad about it, and I think, "Ah, how lucky am I!"
What a sad, sad day to some it has been—our nation's Fourth of July!

Additional Stories

Harry Freiberg, Stanton, Neb.; Harry Linder, Elmwood, Neb.; Marie Kaspari, York, Neb.; Mary Elmore, Grand Island, Neb.; Minnie Kujath, Fairbury, Neb.; Velma Huff, Nebraska City, Neb.; Mary Rock, Hyannis, Neb.; Mary McKown, Seneca, Neb.; Julia Shaneyfelt, Marquette, Neb.; Lillian Price, Dunlap, Ia.; Ubima Villers, Villisca, Ia.; Madge Roberts, Rose Hill, Ia.; Myrtle Woolery, Whiting, Ia.; Margaret Schauman, Billings, Mo.; Twila Wilson, Sapulpa, Okl.; Kathryn Bohnhoff, Bruce, S. D.; Algere Johnson, Sherwood, N. D.; Walter Cheney, Turlock, Cal.; Arvid Porter, Fresno, Cal.

Sticking to It

Did you ever start to do a piece of work—write an essay or make a kite—and have it go wrong? What did you do then? Did you give it up or did you throw away the failure and start again? It is the fellow with backbone to start again and again till what he is doing is right who grows to be a man other men admire.—American Boy.

Picture Contest No. 15

Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it interesting. Say the things you would think if you really saw this little girl. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than August 8.

Start Your Business Training Now

Gem City Business College
Quincy, Ill.
Established 1870
America's Greatest Commercial College

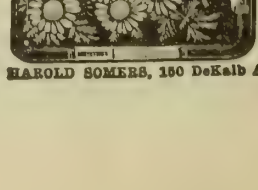
Take a business course or train for civil service, a secretaryship or for commercial teaching. Write for year book. Good positions waiting.
D. L. MUSSELMAN, Pres.
Lock Box 37 Quincy, Ill.

School of Watchmaking, Jewelry Work and Engraving

Young man what have you made up your mind that you are going to be; a doctor, preacher, lawyer, merchant, or are you of a mechanical turn of mind? If so, how would you like to become a watchmaker and also take jewelry work? It is a clean business and a trade that commands good salaries, or you can get into business for yourself.

Over five hundred watchmakers and jewelers in Kansas, Nebraska and Iowa have learned their trade at this school. Write to the Horological Department, Bradley Polytechnic Institute, Peoria, Ill., asking for latest catalogue.

DAISY FLY KILLER



placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by dealers or 6 sent prepaid for $1.

HAROLD SOMERS, 150 DeKalb Ave., Brooklyn, N. Y.

Our Women Readers

On the Other Side of Sleep

There are loving little mothers on the other side of sleep,
There are loving little mothers over there;
And the little bits o' babies whose lone-hearted mothers weep
Know their loving and their tender-hearted care.
Oh, the little loving mothers, who lay down and went to sleep,
And who left their litte babies with us here,
They are where the winds of heaven over blossomed meadows sweep
And we hear their happy laughter ringing clear.

Oh, they know so more than we do, over where the children play
And come to them with rare blossoms in their hands,
That the grief and separation is but for a little day;
Every little bit o' mothers understands.

So they walk the slopes of heaven with the sunlight on their hair,
And the babies who have left their mothers lone
Know their tenderness and loving, know their cuddling and their care,
Whilst they wait to clasp their arms about their own.

And they ring-around-a-rosy where the heaven blossoms sway,
And they weave white clover blossoms in a crown,
And they wreathe their shining tresses, and they kneel by them and say
Their "lay-mes" when earth-babies lay them down.
And they're happy over yonder on the other side of sleep,
Caring for the babes whose mothers linger here;
Where the sun-warmed winds of heaven over swaying blossoms sweep
They are romping, and their joy rings sweet and clear.

—Judd Mortimer Lewis.

Our Home Chat

If you have a baby that you want entered in the State Fair baby contest this year, you should be making your preparations. These contests have been found of so much value by mothers of babies that win and babies that do not win that the fair managements are being swamped by the large numbers of applications for entry they are receiving. As it is possible to give good service in examining only a limited number, you have to come within that limit if you want your application accepted.

In Nebraska only the first 200 babies entered will be examined. Mrs. M. E. Vance, who conducted the contest so successfully last year, will have charge of this contest again, but applications should be sent to Secretary W. R. Mellor at Lincoln. Entries close August 17. In Iowa the contest will again be in charge of Mrs. Mary T. Watts of Audubon.

The city babies have been receiving the credit all over the United States of winning the most premiums. This is probably not because the country babies are not as well proportioned and healthy as the city babies, but because the city babies are entered in larger numbers and there are more of them to choose from. We hope the rural babies will be present in large numbers this coming fair season and that they will win the proportion of awards to which they are entitled.

But remember, if your baby is entered in the health contest and does not win, neither your time nor efforts are lost. The score card will show you what defect or imperfection prevented your baby from being a prize winner. As these things are often easily remedied, your baby and you may be greatly benefited by this year's trip to the fair, besides the fun and excitement of being part of the show. THE EDITOR.

Women's Clothes

I have noted with interest the sundry and divers letters and lists by sundry and divers writers concerning the right and proper outfitting of a family in clothes.

I am not going to make any remarks about my own or my family's wardrobe, because I fail to see where it would benefit anyone else. Our pocketbooks are of as various sizes as our families and our desires, and hence what seems a good and sufficient outfit to one would not to another. It might seem too good or not good enough.

Frankly, I am not sure but that we need all sorts of clothes to make life what it ought to be. We see the foreign women with their little shawls over their heads, and I for one like to see them. I always speak to these women when I meet them, whether I know them or not, because I feel warmly to them. They are in a strange land, with strange customs, as well as costumes, and we have yet to see that our present styles or past ones are really any more suitable than are those used by our foreign friends and neighbors. Why should we want these women to don a modern hat when their own head dress means so much to them? The little shawl over the head is as typical of the married state as is the wedding ring with so many. The same rule applies to many other things. We may not criticise any more than we may be criticised.

The friendly spirit in the community is worth much more than a uniform method of dressing, and if a girl wants to wear many and brilliant colors it is her way of showing that she really is trying to do the best she can.

I have a little neighbor whose clothes are not like mine, but her house is as clean and her heart as kindly as any I know. Let us cultivate the friendly spirit, for we never can tell when a word or smile of ours may help the homesick hearts of those who are in our midst.

A great one says: "A man to have friends must show himself friendly," and it is quite as true of a woman. The same sort of heart beats under all sorts of fabrics, and I'm not at all sure that the fashionable will find the best laces in the next sphere.

ROSE SEELYE-MILLER.

Dainty Desserts

Heavenly Hash—Put in a shallow dish bananas and oranges, sliced thin; a few shreds of cocoanut, almonds and English walnuts. Fix gelatine the usual way, pour over and serve in squares.

Cherry Flummery—One pint of pitted cherries, one pint of water; sweeten to taste, cook until tender; add three heaping tablespoonsful of corn starch, stirred smooth in a little water. When thick pour in mold and put on ice. Serve with whipped cream. MRS. A. GILBERT.

Styles for Home Dressmaker

Description of Patterns

6039—Boys' Blouse—Linen, gingham or percale can be used to make this blouse. The blouse can be made with either the round or square collar and with or without the belt finish. The sleeves can be either plaited or gathered. The pattern 6039 is cut in sizes 4, 6, 8, 10 and 12 years. Age 8 years requires 2½ yards of 36-inch material and seven-eighths yard of 27-inch contrasting goods.

6732—Ladies' Three-Gored Skirt—One of the newer models is here shown, with flat effect in front and back and front closing. The tunic is only slightly circular in cut and is cut away in ornamental outline in front only. The design is excellent for taffeta and for lightweight woolen goods and cotton. The pattern 6732 is cut in sizes 22 to 32 inches waist measure. Medium size requires 3⅞ yards of 44-inch material.

6721—Men's Negligee Shirt—This shirt can be made in two ways, either with the full length, coat opening, or with the shorter opening, and also a wide-roll collar of more ornamental effect. The sleeve is set in at the armhole and there is a small yoke across the back. A cuff finishes the wrist. The pattern 6721 is cut in sizes 34 to 42 inches chest measure. Medium size requires 3¾ yards of 36-inch material.

6105—Ladies' Apron—Linen, gingham or percale can be used to make this apron. The apron covers the entire dress and closes at the back. The pattern provides for separate sleeves. The pattern 6105 is cut in sizes 34, 38 and 42 inches bust measure. Medium size requires five yards of 27-inch material.

6000—Boys' Russian Dress—This pretty little Russian dress is for the small lad who has not yet worn the regulation bloomers. The garment closes at the right of the front. The collar, cuffs and belt are of contrasting material and linen, plain gingham or percale can be used to make the dress. The pattern 6000 is cut in sizes 1, 2 and 3 years. Medium size requires three yards of 27-inch material and half a yard of contrasting material.

6036—Girls' Dress—Linen or serge can be used to make this dress with the collar and cuffs of contrasting material. The blouse of the dress is made to be slipped on over the head and the kilt skirt is joined to an underwaist. The pattern 6036 is cut in sizes 6, 8, 10 and 12 years. Age 8 years requires two yards of 54-inch material and one yard of 27-inch contrasting goods.

6752—Ladies' Empire Negligee—This negligee is made with the body and sleeve sections in one piece. The sleeves may be loose or gathered into bands. Any of the pretty crepe materials can be used for this negligee The pattern 6752 is cut in

(CONTINUED ON PAGE SIXTEEN.)

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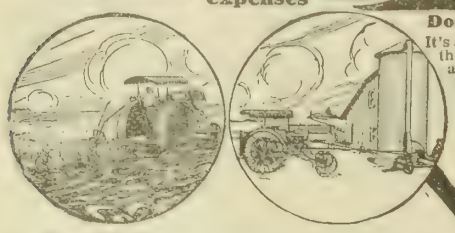

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Civilizing South American Reds

By Frank G. Carpenter

LA PAZ, Bolivia—Before leaving Washington I had a talk with Senor Don Ignacio Calderon, the minister from Bolivia to the United States, with regard to my trip to his country. Among the other things he asked me to investigate and report upon to the American people were the efforts that are now being made to start an industrial mission among the Aymara Indians about Lake Titicaca. I have been making inquiries as to this in my travels about the lake and La Paz, and have found the beginning of a work that may form the opening wedge for the civilization of millions.

You have all heard of the semi-civilized nations who inhabited this Andean plateau shortly after Columbus discovered America, at the time the Spainards came. The whole country was then peopled with semi-civilized tribes. There were the Chibchas in Colombia, the Caras and Chancas of Ecuador, the Quichuas of Peru, the Aymaras in Bolivia, and farther south the brave Araucanians, who are said never to have been conquered. The Chibchas were skilled in weaving and the making of pottery. They had paved highways, and their farming was carried to a high degree of success. They had weights and measures, and a currency in the form of gold disks. The Araucanians had a confederacy, and they met in grand councils to decide their public affairs. The Caras had a high civilization, with a military and tribal organization, and the Aymaras, who formed the chief race of Bolivia, were akin to the Quichuas, those wonderful Indians of Peru, the subjects of the Incas.

Boy Scouts of the American Institute at La Paz. These Are Young Bolivians of the Better Class

Big Decrease in Numbers

At the time the Spaniards came, it is estimated that there were from 20,000,000 to 40,000,000 of these Indians on the high plateau of the Andes. They were enslaved by our Christian white race, and the life was ground out of them. As late as 1575 the Peruvian Indians are said to have numbered 8,000,000, but 200 years later this number had dropped to 1,500,000, while that of the whole Inca empire, which had numbered 20,000,000, had been cut down to less than 4,000,000.

Today the greater part of the population of Ecuador is made up of Indians. There are about 1,000,000 Aymaras and Quichuas here in Bolivia, and there are more than twice as many, mostly Quichuas, in the Peruvian republic. All of these Indians are in a low state of civilization. Not one in a hundred of them can read or write, and the great majority are more like animals than like civilized men. They are mere hewers of wood and drawers of water. Nearly all are the slaves of the alcohol habit; all soak their brains with cocaine, by chewing the coca leaf, and altogether they are a race from whom active mentality seems to have departed. They are nominally Catholic; but allied to their Catholicism are many superstitions connected with the worship of the sun. They have also strange customs such as eating the dead bodies of their enemies, and carrying written messages to the gods when they die, as I shall describe later on.

Live in Miserable Mud Huts

These Indians live in mud huts scattered over the high plateau of the Andes. Their huts are without windows, and are lighted only by the doors, which are so low that one has to stoop to go in. They have thatched roofs made of the grass of the pampas. Their only furnishings are the skins of alpacas, llamas and sheep, upon which they sleep at night, and in some cases a ledge of mud, built up across one side of the hut as a bed. They cook in clay pots over a fire of the droppings of llamas. There are no chimneys and the smoke gets out as it can.

Some of the Indians have flocks of sheep and own alpacas and llamas. Now and then you find one who has horses or donkeys and cattle. Some are independent squatters having their huts out on the pampas, but many more are the peons or debt slaves of the whites and the half-breeds, or Cholos, who own most of the good land of the Andes. I have already described the condition of these peons in one province of Peru. The conditions are not so bad in some of the other provinces, and also in parts of Bolivia. But everywhere the most of the Indians are little better than the slaves of the landowners, and so far as I can learn but little attempt has been made to elevate them. The Roman Catholic church, which is such a great force in our country, is practically dead as far as any civilizing work is concerned on the Andean plateau, and its priests have either despaired of doing anything with these Indians or they do not care to attempt it. The field is, I believe, one that that church should take up. The Indians are more or less subservient to it, and the Catholics could accomplish more in the work of regeneration in a fixed time than the Protestants. At present the Protestant missions are to be credited with most of the attempts at elevating the Indians that are now going on.

Christian Italian Endows School

The industrial school which the minister from Bolivia has asked me to investigate is supported by money left by an Italian, one Antonio Chuiotto, who was converted to Christianity in the Peneil Hall mission in Los Angeles. He had gone to the United States as a young man, had settled in California, and had, as I understand it, there made a little fortune in milling. Later on he emigrated to Argentina, where he lived for a number of years. He there became interested in the uplifting of the Indians of South America, and when he saw he

had not much longer to live, decided to leave his money for that purpose, giving it to the Argentinians. There was some difficulty, however, as to the laws of Argentina that prevented his making a will to this end, and he therefore came to Bolivia, where the regulations are different. Here he left his estate, consisting of about $35,000, for the starting of this mission. The money was put in the hands of the Methodist Episcopal Church mission, or rather into the hands of three trustees, one of whom was the Rev. George McBride, the president of the American institute of La Paz; another, Hugo Wenburg, formerly of the American Bible society, and a third, Dr. Foster, a medical missionary.

These men have taken the Italian's bequest and have bought a farm of about 500 acres on the shores of Lake Titicaca, about forty-five miles from La Paz. The farm slopes down to the lake under the shadows of the mighty snow-clad peaks of Sorati and Illimani. The greater part of it is level, and it consists of good agricultural land, which has been in cultivation since the days of the Incas. The land was bought of a Bolivian haciendado, and it has about 250 Indians living upon it. According to custom, these Indians went with the land. They have certain tracts there which they have farmed from generation to generation and others upon which they have flocks of one kind or another. They work about two days of the week for their rent.

Nucleus of Missionary Work

These Indians form the nucleus of the missionary work, and it is among them that the industrial movement is now going on. The trustees have established a school, and both children and grown-ups are attending it and learning to read. They have introduced new plants and grasses, and they are experimenting with grains to see if better conditions of farming cannot be created on these high plateaus. They expect to improve the breeds of sheep and to bring in goats and American cattle. They hope also to teach the Indians the several trades and to uplift them in every possible way.

During my stay here I have met Mr. Hugo Wenburg, who is now managing the farm. He tells me that the Indians would have nothing to do with the missionaries at first. They had been told by their neighbors that the Americans would work them to death and that they would be cheated out of all that they had. The trustees had great trouble in getting their confidence, but finally succeeded, and a great desire for education has sprung up. The Indians are sending their children to the school, which, owing to the lack of buildings, is now held in the patio or open square inside the farmhouse. The school day is short, as the children have to work for their parents. The hours are from 7 to 9 in the morning, but the children are so anxious to learn that they come before the teachers are awake. The little Indians are bright and are about as quick to learn as the Cholos or whites.

Slow to Adopt New Farming Methods

I asked Mr. Wenburg how he was getting along introducing new methods of farming. He replied:

"We have had great difficulty in getting the Indians to try anything new, but I am sure that as soon as they can see that our ways are better we shall have no further trouble. Among other attempts we have made was the introduction of the American plow. The Indian plows are of wood and are little more than forked sticks, that cut a furrow of only two or three inches. We imported some plows, but had great trouble in persuading the Indians to yoke their oxen to them. The plows are yoked to the horns of the oxen and the oxen push the plow-tongue along with their heads. We showed them that we could plow twice as deep with our plow as they could with theirs, and when our crops rise high above theirs I am sure we shall have no further trouble."

In talking about the superstitions of the Indians, Mr. Wenberg said that they believe in witchcraft and that death is usually occasioned by some one bewitching them. When a person dies his relatives and friends are anxious that the witches should not pursue the soul of the man after death. Not long ago a man died on the farm, and his family came to the overseer and asked him to take a piece of paper with a cross on the top and to write below that: "I have died because I am bewitched by my enemies, and I here pray to the Lord that I may be free from them in the future." This sheet of paper was put into the hand of the dead man and was buried with him.

In the same connection Mr. Wenburg says that the Indians are very quiet as an ordinary thing, but they may become enraged, and that when they fight they grow savage. At such times a man may even kill and eat his victim. The Indian overseer now on the farm belonged to a family who killed and ate a man in that way. They then threw his bones into the lake. This was discovered, and, as a punishment, the neighbors took away the land that belonged to them.

Industrial Farm for Indians

During my stay at Cerro de Pasco I learned of a similar industrial movement that is going on among the Indians of Peru. The heads of this work are interdenominational, and they come chiefly from Great Britain and Canada. They have a mission station at Arequipa and a large industrial farm not far from Cuzco. The farm formerly belonged to the Jesuits, but some time after they were driven out of the country it was bought by this organization. It is of vast extent, consisting of something like 60,000 acres of good land on the plains and running from them high up the slopes of the mountains and including the valleys between. As in the case of the farm on Lake Titicaca the Indians went with this land. They had their own little holdings scattered over it, and owned their own flocks, working a part of each week for the farmer. The foreigners have established schools on the estate, and are introducing our grains and grasses and new methods of farming. I am told that the Indians are learning to plow. They use one-handed plows of American make, and now cultivate their land in deep and straight furrows, a thing they did not do in the past. The foreigners have brought in new crops and new varieties of the old crops. Among other things they are experimenting with is the Irish potato, of which they are raising as much as 320 bushels per acre.

Indians Easily Civilized

I talked with Mrs. Austin, a fine Canadian woman, the wife of one of the missionary farm managers. She tells me the mission has already proved that the Indians can be civilized, and that all they need to get along in the world is education and freedom from alcohol. This mission is doing not only work of an industrial order among the Indians, but also evangelical and even gospel work among the Peruvians. It has a thriving school at Cuzco, where the pupils are taught Spanish; and it has trained nurses who serve among all classes of people.

In sailing down the west coast I came from Lima to Mollendo, with Bishop Homer C. Stuntz, who has the general supervision of the Methodist Episcopal missions of South America with his headquarters at Buenos Aires. He tells me that there are six North American Protestant missionary boards on this continent. These are the Methodist Episcopal, Southern Baptist, Protestant Episcopal, Canadian Baptist, Methodist Episcopal Church South and the Presbyterian. The church having the largest force of missionaries is the Methodist Episcopal and next to it is the Presbyterian. Including the missionaries from Europe, there are altogether about 1,000 Protestant missionary men and women, with more than 1,000 missionary stations and substations. They have altogether 130,000 communicants and adherents, which is not very much in the population of 50,000,000 or more which South America now has. They have 193 day schools and forty-two high schools with about 20,000 pupils. Among the institutions doing mission work is the Salvation Army, which has something like 27,000 adherents.

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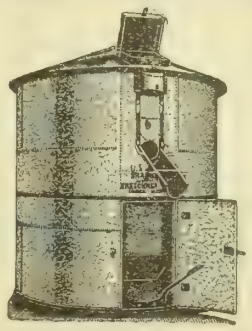

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This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Paralysis and Veterinarians

A Veterinarian, Nebraska: Replying to your inquiry regarding hogs paralyzed in their hind legs, I have used and advised giving fluid extract of nux vomica with a good deal of success, especially if used early in the attack. There are such a variety of causes for this condition that the treatment may not always do the work, but it can do no harm in any case and may prove satisfactory. If, as sometimes is the case, there is a fracture of the thigh bones caused by feed short in mineral matter, the treatment would not help. This condition is often due to injury in the back from lack of exercise, too long confinement in crates in shipping, overfat condition, etc. This injury results in pressure on the nerves, poor circulation, etc.

An affected hog should be put by itself and fed only good, clean food, with no corn or kitchen slop. I would prefer fresh, clear water, oats and possibly some slop made from shorts. Keep the bowels loose; if necessary give a dose of salts. Then give the fluid of nux vomica in from five to twenty-drop doses, according to the size of the animal, twice daily. Above all, keep the animal in a clean, dry place and out of the hot sun. Right here I might state that when I say "clean" I mean more than we generally find or than is shown us as clean hog houses and yards. To be clean the houses should be kept free from dirty litter, cobs, dust and cobwebs, and the yards free from old cobs, sticks, straw and mud holes. Once or twice a year is not enough to clean up. A weekly clean-up, with the use of lime and plenty of disinfectants, would prevent a great big lot of the diseases of hogs, including cholera and worms. True, it takes time, but, if done often, not very much, and it is cheaper than cholera, with the time taken to burn up the hogs.

To be honest with you, I do not feel that the veterinarians of this state have been very kindly dealt with by the farm papers of the state during the last year. The majority of veterinarians want to do what is right, but we have all been made to suffer for the actions of a few, who should have been discovered and made to pay for their own misdeeds. As for a "veterinary trust," if those who talked this were as well acquainted with the veterinarians as I have been for the last twenty-two years they would know such a thing was absolutely impossible.

Such advice as the farmer will get from this letter to you is giving him still more "something for nothing," as the idea seems to be at present to furnish all possible to the farmer free of charge, both in material and service. The state furnishes serum for less than cost and the farm demonstrators and others do the work free of charge. And now the Nebraska Live Stock Sanitary Board has a non-licensed veterinarian, at a larger salary that the state veterinarian gets, to go out and give all kinds of free advice and service to the farmer. Why doesn't the State Board of Health send out a state physician so we can all get free treatment?

Answer—We publish this letter in full that our readers may get the point of view of the veterinarians of the state. The writer of this letter is a veterinarian of experience and ability. He agrees with us in condemning the practice of making a profit on the serum used in vaccinating hogs, as we can testify from having seen his books. In criticising the practices of some of the veterinarians in the state we have tried to be fair to those who are honest in their dealings, but, as the writer says, they have all suffered to some extent for the failings of a few of their number. We are not among those who have accused the veterinarians of having formed a "trust," though we did rightfully accuse certain among them of trying to secure control of the administration of serum and virus. While we cannot agree with all the opinions expressed in this letter, we believe it to be worthy of careful consideration, and are glad to place it before our readers.

Dandelions on Farm Lawn

C. L. D., Iowa—I noticed your answer to C. G. C. in the issue of July 4 about dandelions, and, knowing how hard it is to convince people on this point, thought I would contribute our experience. Our farm home has a large and beautiful lawn, free from this pest, though dandelions abound on every side and many lawns in town have very little else in them. Nine years ago we built on new land, so had a chance to start right by planting all shrubbery and trees at the sides and back and along the driveway, not on the lawn. The lawn was seeded with Kentucky blue-grass seed and white clover. In the spring only the thickest leaves and trash were removed. No cutting or raking is done until late in June, when the grass seed is quite ripe; then a man with a team cuts it with a common mowing machine and rakes it with a hay rake, so he leaves plenty of seed on the ground. There is also seed enough in the hay to do good work in seeding bare places and fence rows wherever needed. The mowing is repeated in about six weeks, soon enough to prevent the clover seed from getting ripe and spreading too much. In the fall a quiet old driving horse pastures off the late growth and leaves it just right for winter. A cow on a picket rope will do as well.

The moral is this: If you prefer blue-grass to dandelions, don't cut it close, which gives all the floating seeds a chance to stick in. If you need to cut out dandelions, use a butcher knife, very sharp around the end of the blade, and push it through the root well underground. Remove the plant and press the soil and turf well down to fill up the hole and keep fresh seed from growing there. If you are starting new, don't clutter up the lawn with bushes and flower beds and trees. Keep these off at the sides.

Live Stock Shipping Rules

(CONTINUED FROM PAGE FIVE)

panied by a health certificate, including mallein test, certifying that animals have been examinted and mallein tested within thirty days prior to date of shipment and found free from glanders.

Missouri — Health certificate showing freedom from all contagious, infectious or communicable diseases.

Nebraska—Health certificate.

South Dakota—Health certificate, including mallein test.

Wyoming—Health certificate.

Styles for Home Dressmaker

(CONTINUED FROM PAGE THIRTEEN)

sizes 34 to 44 inches bust measure. Medium size requires 4¼ yards of 44-inch material, 3⅛ yards of edging and 2¾ yards of ribbon.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Review of Live Stock Market

By A. C. Davenport

CATTLE sold higher last week than ever before in the history of the trade. There was a time during the last few months of 1912 when a few choice or fancy cornfed steers reached a higher figure than was paid last week, but there never was a time when the average of all the cattle coming to market was as high as last week. This statement includes all classes, ranging from grass cows and heifers up, and can easily be verified by an examination of the killing sheets of the various packing houses. All markets have had identically the same experience, it being a country-wide condition, and not in the slightest degree local.

Under the influence of moderate receipts the market has been steadily tending upward for some time back. While the general public watches the top of the market, it has in this instance been the medium kinds of cattle that have made the most advance, and it is these medium cattle that are selling higher than ever before in the history of the trade.

The reason for the condition noted is to be found in the statistics showing the movement of live stock at the leading market points. During the first six months of 1907 almost 4,500,000 cattle arrived at the six big markets. This year only a few over 3,000,000 head of cattle put in an appearance, showing a falling off of not quite 1.500,000 head this year as compared with seven years ago. During all this time receipts have been gradually growing smaller. In 1912 the shortage became very noticeable and prices during the latter half of that year were the lightest on record up to that date. During the following year, that is, 1913, the whole country was searched from end to end with a fine-tooth comb to bring out every marketable animal possible, as was noted at the time in these columns. It will be remembered that attention was called to the large shipments of stock from the old southern states that had not been shipping cattle since the civil war. Stock of all kinds, ranging from young calves to old work oxen, were rounded up in all of the out-of-the-way sections of the country and pushed to market to make good the shortage. As a result of this the supply of cattle last year held up better than anyone expected. It was however, hinted in these columns at that time that the shipments of cattle from the out-of-the-way corners of the country could not be duplicated the coming year, and that has proved to be the case; so much so that receipts for this year thus far are showing a falling off at six market points of about 380,000 head as compared with the same period last year. Keeping in mind that last year's supply was the smallest that it had been for a long term of years it will be readily understood why there is at the present time such a squeeze in the cattle market.

Probably at High Point.

With statistics showing such an enormous falling off in cattle runs this year the only surprise is that prices have not advanced to a greater degree than they have. There is, however, a reason for this and that is to be found in the reduced demand for beef. The retail price of beef is so high that consumers are buying more sparingly than ever before, and it is a noteworthy fact that as the market on live cattle has advanced the demand for beef has decreased.

There is a feeling in the trade that the market, taking all kinds of killing cattle as a whole, is not likely to go very much higher. The season is close at hand when range cattle, which are already beginning to arrive on the market. should become more plentiful, and with that there will undoubtedly be a sharp reaction in prices on all kinds of grass cattle, and also on the medium to pretty decent kinds of cornfeds. On the other hand, it is possible that choice or fancy cornfeds will continue as high as they have been and they might go even higher, but as a matter of course cattle of that description will be very limited in numbers.

Hogs Are High.

Hogs last week reached the high point of the year to date, although the market fluctuated to some extent, there being low as well as high days. Hogs at present writing are just about as high as at the best time in July, 1910, which means that the market now is as high as it ever was in the month of July in the history of the trade. The bulls feel that they have been amply justified for the faith that was in them and they are highly gratified with the course the market has taken.

While the current high prices may bring forward sufficient hogs to hold the market in check, temporarily, at least, there are a good many bulls who believe that the high point of the year has not yet been reached. They are basing their faith on a belief in a short supply of marketable hogs in the country, and they are in consequence looking for a gradual strengthening in prices for the next thirty or sixty days. Some of the bulls are bold enough to predict that hogs on the basis of Omaha will reach during that time as high as $9.00 for an average drove, while some believe that the figure will be even higher than that.

While this is all speculative, no one being able to foretell the course of values with any degree of certainty, it serves to show the strong feeling prevailing among the trade. Later on in the year when the spring crop of pigs shall become of marketable size, even the bulls admit that prices are likely to suffer a sharp reverse. This, of course, is contingent upon hogs continuing free from cholera, as they are at present, and upon a large crop of corn. Others of a still more prophetic turn of mind predict that hogs next spring, barring loss from cholera and disaster to the corn crop, will sell lower than for several years back. This prophecy is based upon the large crop of young hogs now believed to be in the country and upon the heavy falling off in the export demand for hog products incident to the increased production of pork in Germany and other countries.

Sharp Slump in Lambs.

It was noted a week ago that there was a feeling in the sheep market that prices, especially on lambs, were dangerously high, and that a material increase in receipts would very likely bring a lower range of prices. This proved to be the case. Range men, just as had been anticipated, hastened to get in as many lambs as possible to take advantage of the high prices, and as a result of the increased receipts there was a sharp slump in the market at all points. The loss amounted to around 50 cents, more or less, at the different market points. When it is remembered that lambs before the break were selling at the highest point for July in the history of the trade, it will be readily understood that even after the decline the market is still high.

The immediate future of the sheep market must be governed to a large extent by the receipts. If range men part with their holdings freely a still further slipping downward of values would be a natural consequence. However, most sheepmen look for a good, strong market throughout the year. With plenty of feed on the range and with the wool market very satisfactory it is believed that owners will hold back their ewe lambs, and, in fact, all good breeding stock, and that receipts while large will not be excessive. At the same time a good buying demand for feeders is anticipated, provided the corn crop shall turn out to be as good as it now promises. The scarcity of feeder cattle is expected to force many farmers with a large amount of feed on hand to change from cattle to sheep, and that, of itself, ought to be sufficient to maintain a good strong sheep market throughout the year.

Breeders' Notes

Holsteins

Dr. B. B. Davis, proprietor of Friesland Farm Holsteins, whose town address is room 200 Bee building, Omaha, has some mighty choice young Holstein bulls for sale at this time. They are sons of Kalmuck Skylark Johanna and King Segis Lyons and are from first-class A. R. O. dams. Dr. Davis will also sell a few choice females. The high character of this herd is not excelled by any other Holstein herd in the west. Dr. Davis has spent a lot of money in the upbuilding of this herd, and anything you get from him is of the very best, both individually and also in point of breeding. Get in touch with him if you want anything, mentioning the Twentieth Century Farmer.

Percherons

This is by no means a bad time of the year to buy a stallion, when you come to figure the saving in the cost price at this time as compared with what they will cost in the breeding season. Fred Chandler of Chariton, Ia., has quite a number of 1, 2, 3 and 4-year-old stallions that he is offering at this time. These horses have been raised right out in the open and have been grown and developed in the right way. They are the big, heavy-boned, drafty kind, and are being offered at farmers' prices. Get in touch with Mr. Chandler for further particulars regarding what he has to offer, mentioning Twentieth Century Farmer.

Duroc Bred Sows

George W. Schwab of Clay Center, Neb., is offering at this time a choice lot of Duroc-Jersey bred sows. This offer should receive the attention of anyone wanting something in this line. These sows have been grown and developed in a manner that insures their going out and doing good for anyone who buys them. They are big, strong, rugged individuals, carrying the top blood lines of the breed, and they are being priced worth the money. If you are interested, write Mr. Schwab for further particulars, mentioning the Twentieth Century Farmer.

Sale Dates

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 15—Harry Tidrick, Winside, Neb.

Duroc-Jersey Hogs

October 2—F. B. Nelson, Lindsay, Neb.
October 2—F. A. Lemmerman, Creston, Neb.
October 5—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—Harry Tidrick, Winside, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 20—Will Morgan, Wayne, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Holstein-Friesian Cattle

October 19 and 20, 1914—H. C. Glissman, Station B, Omaha. Sale at South Omaha.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.

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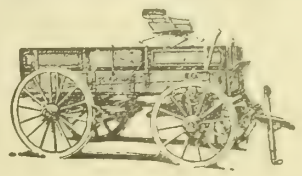

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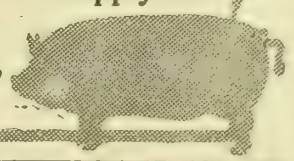

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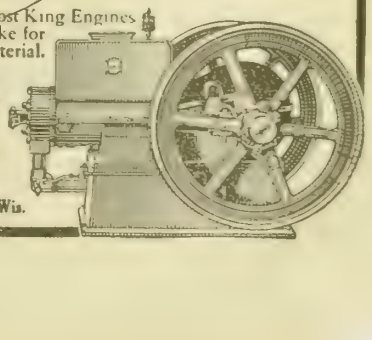

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Semi-Annual Review of the Leading Articles and Special Features Appearing in this Magazine

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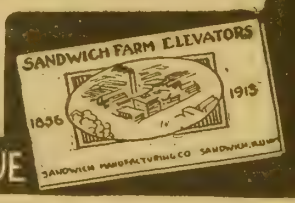

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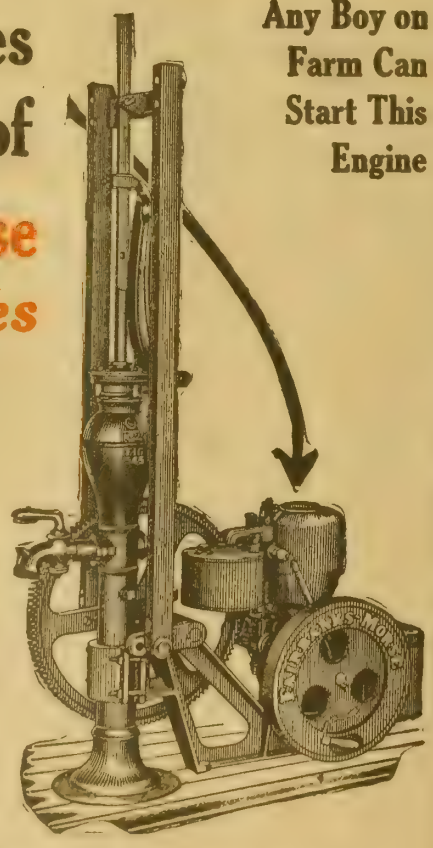

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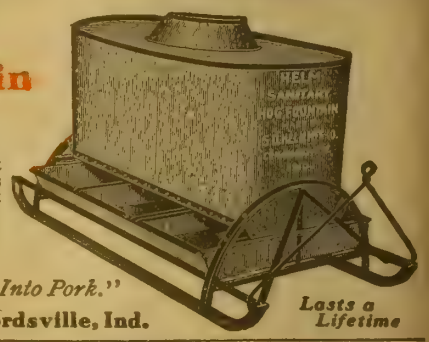

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TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, August 1, 1914 | Number 712

Prattle of the Youngsters

Hopeless Case.

"My son, don't you know it's very wicked to play ball on the Sabbath? I shall have to inform your father. Where is he, young man?"

"Over there playing second base," said the boy.

The Compliment.

He had handed the child a banana, and the latter, in his delight, forgot his customary "Thank you."

"But what do you say Harry?"

For a moment the child was puzzled, then with a smile he handed it back.

"Peel it!"

He Knew

Farmer's Wife (to visitor)—Now, Johnny, will you go and collect the eggs, and don't take the china ones. I suppose you know what they're for?

Johnny—Oh, yes; they're for a pattern to show them how to make the others.

The Usual Penalty.

Litle Dick, who was in the habit of receiving a good old-fashioned punishment when he said naughty words, was much excited the other day when he found his mother washing out the new baby's mouth with an antiseptic. "Hooray for her!" he cried looking at Little Sister with dawning admiration. "Aw, Mother, tell me what she said, won't you?"—Woman's Home Companion.

Her Old Friend.

They had just finished taking a new film in a German moving-picture studio near Berlin. Among the properties was a live stork which had been trained to reach out one of his long legs and shake hands with people. Everybody was gathered around the bird trying out his accomplishment. A little 6-year-old girl was among them. The stork shook hands with her, too. Then she ran beaming to her mother crying, "Mamma! Mamma! he knew me again at once!"

Circumstantial Evidence.

Mrs. R. was an extremely careful mother and had repeatedly cautioned her 6-year-old daughter against handling any object that might contain germs. One day the little girl came in and said:

"Mother, I am never going to play with my puppy any more, because he has germs on him."

"Oh, no," replied the mother "There are no germs on your puppy."

'Yes there are," insisted the child. "For, mother, I saw one hop."—Ladies' World.

She Fixed It.

A school teacher instead of giving the customary spelling lesson to her young pupils asked them to write out names of the things they had for breakfast that morning.

One of the little girls told her mother about the spelling lesson and about the names she wrote.

"Why," said the mother in surprise, when the little one told her that she had written bread and milk, "you didn't have bread and milk this morning."

"I know," replied the youngster, "but I didn't know how to spell [illegible]."

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Alfalfa Planting Time

THE most desirable time for sowing alfalfa is at hand. Where are you going to sow your alfalfa this year, and how much are you going to plant? Of course, that depends upon the purpose for which it will be used. More farmers each year are coming to realize the value of alfalfa as a forage crop, and when we think of the newness of this crop in this country it is wonderful what an important place it has taken among the staple products of the American farm. There are few farms in the middle west on which a larger or small acreage of alfalfa is not grown each year, and the acreage is constantly increasing.

In our next issue we will have a very interesting article telling of the manner in which one man has utilized a steep hillside for this crop and how he manages its harvesting and marketing in a profitable manner.

It is also time to plan pastures for the pigs. On this subject we will have a short article giving timely and reliable information, based on many years of experience, on the arrangement of the alfalfa or other pastures for fattening pigs.

The fifth article in the silo and silage series will appear in our next issue. This article will give the experiences of three farmers who are using silos, telling just exactly how they utilize them and what they think of them as permanent investments.

Bright and Breezy

No Cause for Complaint.

"Is that your mule?" asked the man going fishing.

"Yassar," said the colored man, who was sitting on a log by the road.

"Does he kick?"

" 'Deed mistuh, he ain't got no cause to kick. He's gittin' his own way right along. I'm de one dat's havin' de worry an' difficulty."

He Showed Them.

Some years ago a prominent man went into the business of raising hogs. A friend congratulated him on his success as his breeds were certainly fine. "Hogs!" he replied contemptuously. "Why, these people never knew what a big hog was till I came here!" And he wondered why they laughed.

Alpha and Omega

"Good earning power on the husband's part and good saving power in the wife—this goes a long way toward making the home happy."

The speaker, Senator Heyburn of Idaho, smiled and added (the occasion was a silver wedding in Wallace):

"In a word, the husband should make the money first, and then the wife should make it last."—Washington Star.

Tempting Offer.

William MacDonald, a youthful Scotchman, was seriously in love, but to arrive at the point of proposing marriage to the fair one of his choice was too much for his sensitive soul. Finally, after many hours of deliberation, he hit upon a plan.

It was a moonlight, starry night, and he led the maiden of his heart to a church yard, and, pointing to the various headstones, said:

"Allie, my folks are buried there. Wad ye like to be buried there, too?"—Harper's Magazine.

It Wasn't Romance.

They had wandered into the conservatory. The music came to them in faint rhythmic throbs. ' I have had many men at my feet" she was saying, carelessly, "but in vain. Not one of them met my requirements."

He pondered. "Have you tried corn-plasters?" he suddenly asked. "I have known them to do the work when the most skilled corn doctors have failed."

Anything to Oblige.

"Not long ago," relates ex-Senator Cannon, "a young couple came in from the suburbs to New York City, to see the Hippodrome. They arrived very early and decided to have lunch. They visited a tea-room and had the place all to themselves.

"In serving them the waitress omitted to supply a teaspoon, and the fair young bride whispered the fact to her husband.

"Summoning the waitress, the young man asked:

" 'May we have a spoon!'

" 'Why, certainly,' replied the girl, 'I am just tidying up, and you can have the whole room to yourselves in a minute or two.' "—Lippincott's Magazine.

THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

National Power Farming Demonstration

What You Can See and Learn About Tractor Farming at the Fremont Show

By L. W. Ellis

MAYBE you live far enough away from Fremont, Neb., so your railroad fare there and back would be an item to figure on. I hope you do, because you are the "man from Missouri," who will have to be shown that the National Power Farming Demonstration there August 17 to 23 is worth spending your money on.

Not only your money, but your time. The writer once heard an employer say to an assistant: "Jones, you have now reached the point where the cheapest thing we can spend on you is railroad fare." The young man's time had become valuable. Yours is valuable, too; so take your railroad fare, double it to cover your hotel bill, and double the sum again to cover your time, and you probably will have an idea as to what it will cost you to go to the big show.

Value to Tractor Owner

Now, what will you get out of it? That depends upon who you are. If you are the owner of a tractor, here is the place to take a short course in power farming and tractioneering. Maybe you have already taken a correspondence course and have some questions that have not been thoroughly answered by the "mail professor." All right, at Fremont you will find every type of motor, transmission, frame, etc., that anyone has ever written up in a correspondence course and then some, and there will be somebody on the job who knows each particular type inside and out. Ask him all the questions you want to; you'll have time if you only make use of it. The public trials only keep the tractors busy half the day, and the rest of it is yours to find out things. All salesmen and the tractioneers in charge will be right there with answers for you.

A Post-Graduate Course

Maybe you have been to one of the traveling schools held by some tractor manufacturer. You asked questions, listened to lectures, and maybe learned to operate one or more models of tractor made by that particular manufacturer. But you didn't learn them all, did you? Fremont invites you to come and take a post-graduate course. The manufacturers entered will be there for the sole purpose of letting people know what they've got. You can put in your mornings for a week and learn the main kinks of every traction engine you will ever be called upon to operate, or at least of one of closely similar type.

Maybe you have been running a tractor for someone else and have had to turn down a good job in the neighborhood because you did not understand the other man's machine. Here is a chance for you to see that other machine and pick up what information you need regarding it.

For the Dealer

If you are a farm implement dealer, you may find there some fellow from your home town who is so interested in the farm machinery on display that he wants to buy right there. He may want your advice and assistance in making the purchase. Then, too, you naturally want to know about the machines your competitors are carrying. You can see some of these machines at the State Fair, but not nearly as many, nor under such a variety of conditions.

If you are looking for an agency contract, you will find at the demonstration some thirty or forty tractor manufacturers, many of whom carry attractive lines of smaller machines.

If you are already handling a tractor, you can see it perform and probably increase your confidence in your ability to sell it after you have seen it working under all the conditions and tests that will be imposed.

What Do You Want?

Perhaps you are a farmer with less than 160 acres of land. You have just got through with a hard season's work; your horses are tired out, and you have had to go easy on them for the last few weeks. You want to get your fall plowing done. You are beginning to worry about filling your silo and about your threshing. You have some wood to cut, some hay to bale, some corn to shell, some feed to grind. Altogether you have a lot of work, and you do not know whether to buy a stationary engine, a portable or a tractor.

All right; come along to Fremont. A lot of manufacturers will have tractors there that they call small ones. Come and see whether they are small enough to pay you on the 160-acre farm. See whether one man can actually run a tractor and plows. See whether you can get over a plowed field with one of these small tractors, and pull disks, harrows and drills behind it without packing the soil. See whether you can turn around close to the corners so you won't have to keep horses to finish up what the tractor leaves. See if these small tractors can haul a good load to town, and take it fast enough so you can get there and back once or twice a day. See if these tractors can work when the ground is soft and slippery.

What Will it Cost?

Remember, if you buy a tractor you probably will sell some of your horses to pay for it. Ask about the prices. Find out what the freight is to your town. Check up the statements that have been made to the effect that these small tractors cost less to buy than the horses that will do the same work. Have the salesmen show you in actual figures just what a machine will cost; then watch it work, and judge for yourself how many horses it would take to do so much. You may find that you can sell four out of every five horses, put the money into a tractor, have more power on your farm and have a better power combination than you have at present. Again you may not. Fremont is the place to find out.

Before you come to Fremont look over the catalogues; look over the past issues of the Twentieth Century Farmer. See what claims have been made for the small tractor. Make a list of them; then come to Fremont and stay until you have some tractor manufacturer answer every single question that is on your mind. Better still, bring along the "ads" and make the manufacturer who is behind each ad show you that he was telling the gospel truth about his engine.

You Judge for Yourself

Remember that Fremont is not a competition where a set of judges is going to decide anything for you. You and the other farmers you will find there are the sole judges. The farm paper accounts afterward will not be able to tell you who the winners are. All the editors can do is to tell that the manufacturers had their machines at Fremont and give a faint idea of the work they were doing. All their photographs will tell only part of the story. The spectators are the jury, and the jury will report to itself. If you are not on the ground you won't get the answer to the tractor problems that are bothering you at the present time.

Maybe you have a threshing outfit; that means a larger tractor. Come to Fremont and see whether a gas tractor will run as steadily as your old steamer. Find out whether you can line up a gas tractor with a separator; see whether they run with straight belts or cross belts. You may find some that run either way; occasionally that is an advantage.

If you are a thresherman, you know you have more or less trouble with bridges, and the road commissioners are after you about cutting up good roads. Fremont is the place to find out just what the various tractors will do on the roads, for there are four miles of road to be graded during the demonstration. You can judge for yourself whether the tractors shown can go over the roads without hurting them and over the bridges without smashing them down.

How About Road Building?

Maybe you know of some road to be built in your neighborhood. You might get part of this work if you had the right kind of engine. It might even pay you to invest in a set of wagons for hauling material, and in a grader for handling the road. At Fremont you will see the whole process of road building, with traction engines, dump wagons, graders, etc., just as you would see it if you went to a successful contractor, only you will see many more types of machinery in operation there than you could at any single camp.

Possibly you live in a timber country and would like to know how to cut your costs of loading and hauling logs. Unfortunately, Fre-

(CONTINUED ON PAGE SEVENTEEN)

THE VALUE OF TRACTOR FARMING

NEARLY every farmer knows from his own experience that medium or deep plowing at the right time will produce a larger crop than shallow plowing. The chief difficulty has been to get the right kind of power to do it.

The best time to plow is just as soon as possible after the grain is cut. The practice in many sections is to thresh the grain from the field as soon as possible after the grain is cut. In this way early plowing is made possible.

Soil conditions at this time of year are usually such that plowing with horses is extremely difficult, and here is where the tractor comes into service, for the ground can be plowed at the desired depth at a time to receive the moisture which usually comes during late summer and early fall.

The year 1913 was extremely dry, especially through the south and west. One Kansas farmer found that a field plowed with a gas tractor produced a good crop, while the field next to it and of the same kind of soil, but plowed with mules, produced almost nothing, due to the fact that it was impossible to plow the proper depth to hold a sufficient amount of moisture.

A gas tractor was used on a portion of the Missouri state fruit farm experimental station and showed excellent results. A portion of this orchard was also worked with mules. The director of the station reported that peach orchards cultivated with the tractor produced an immense crop of fruit of good size and good quality, while the trees made a growth of about two feet, and orchards cultivated with mules produced a much smaller crop and of inferior quality, while the trees made but a few inches of growth.

Another interesting case of a large land owner is reported from North Dakota. He rented two pieces of land on shares. One of these pieces was farmed by a man using a tractor, the other by a man using horses. When the grain was sold it was found that the land plowed with the tractor returned $3.75 per acre more than that plowed with horses. Instances of this kind are indicative of what may be done, and the farmer should ask himself if he can afford to be without a tractor.

You can do more work with a tractor at the right time and in the right way. If the weather is dry and hot you do not have to wait for rain to soak the ground so that you can plow, nor worry because you are killing your horses with the hard work and heat.

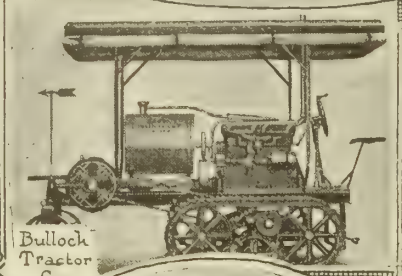
A tractor can work night and day if necessary, and work just as well the last hours as at the first. This can't be done with horses, for they must rest, and besides, they are always subject to injury and disease. A tractor will do the work at the right time and in the right way and will shortly pay for itself from the production of bigger and better crops.

Economically a tractor is much better than horses, and there is no reason why you can't make tractor farming pay as well as others have. The first cost of a tractor is about the same as the necessary horses, and the depreciation from year to year will usually be less than horses and mules.

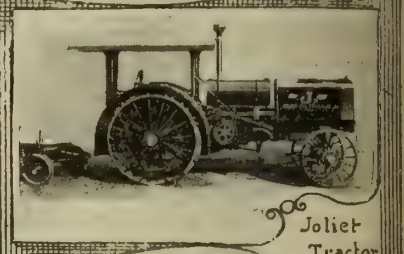
The feed bill for the horses and mules of this country is tremendous. Reliable statistics show that they eat one-fourth of all the grain raised. Also, that they only work on an average of 100 days in the year and the rest of the time they are idle, yet they eat just the same. The turn of a switch stops a tractor, and it stops consuming fuel, but you can't do this with horses and mules.

Too many men are required to farm with horses; men are hard to get, and besides, wages are constantly increasing. You can do as much work alone with a tractor as several men and teams can in the same time.

Reliable data shows the cost of stubble plowing to be 46½ cents per acre when plowed with a tractor and $1 per acre when plowed with horses. From this we see that tractor plowing can be done for less than half than can be done with horses, and not only that, but there is all of the care of horses to be taken into consideration.



Bulloch Tractor Co



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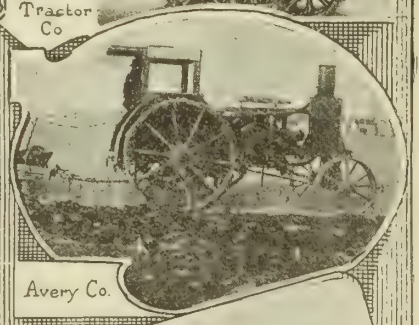

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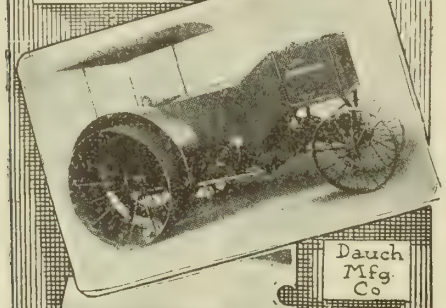

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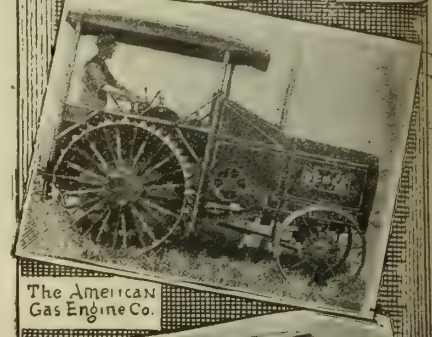

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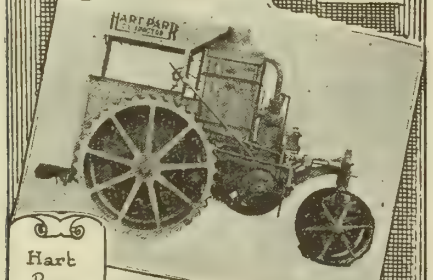
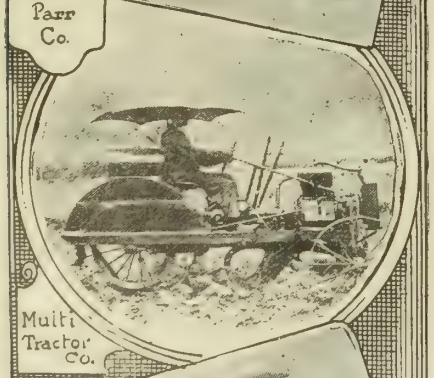


Hart Parr Co.

Case Plow Works



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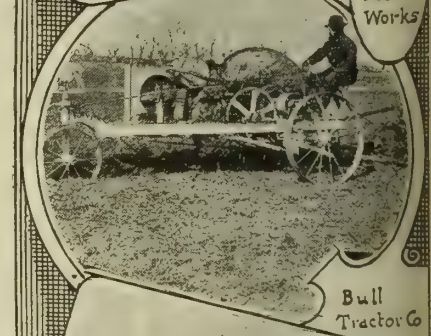
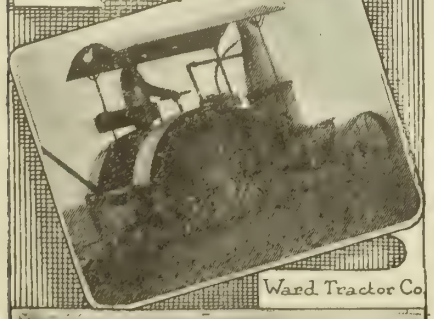


Bull Tractor Co



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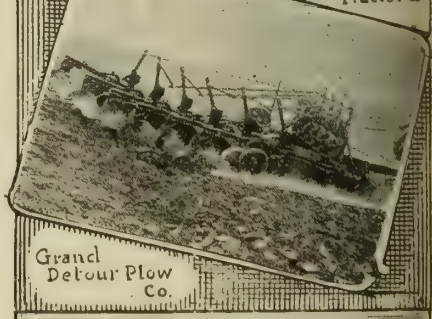
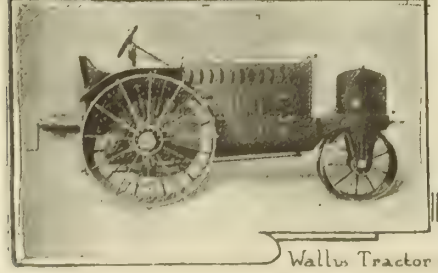


Grand Detour Plow Co.



Wallis Tractor Co

Kinnard Haines Co

Burning Real Money in Our Wheat Fields

Loss to Each Individual Seems Small but Total Amount is Staggering

IN A former issue of this paper we called attention to the waste of of both land and straw in the habit of stacking or piling our straw in the fields instead of having a straw yard around the buildings in which to thresh the grain.

Some figures taken from the agricultural reports of a few of our states will show very clearly the immense sums of money wasted each year which can be saved by the owner of the place making up his mind that this leak will be stopped on his farm.

We called attention to the waste of land by having the straw pile in the field. Did you ever think of this and figure out how much you were losing in rental value alone by leaving these straw piles in the field?

A careful computation has been made of the number of acres of ground covered by straw piles in Missouri, Iowa, Nebraska and Kansas, based on the acreage of small grain in these states as shown by the agricultural reports. This computation shows in these four states 836,352 acres of ground actually covered by straw piles. It is fair to say that at least two-thirds of these straw piles are in the fields and not stacked in a straw yard or around the buildings.

A very large per cent of the ground on which these straw piles stand will not be cultivated next year, and some of it not for the next two or three years, because the old straw is still there. It is fair to say the rental value of this land is $3 per acre. So, in rental value alone in these states is lost $1,672,704, to say nothing of the inconvenience of plowing, cutting and cultivating around this old pile or the further detriment to the adjoining land on account of the distribution of weed seeds. True, this loss to any one farmer is not great. It is, however, just one of the many leaks that it is easy to stop.

Generally speaking, farmers living in the states for which we are quoting these figures have been raising good crops when weather conditions were right. The soil has seemed to retain its fertility, and too little attention has been paid to the very important matter of giving back to the land at least something in return for what we are taking from it. The time is rapidly coming—and is here on some of these farms—when the soil must have returned to it in the form of fertilizer what has been taken away.

The practice of burning the straw still goes on in some localities and on some farms. Have you ever figured how much money is actually going up in smoke when you burn a straw pile? The time is going to come when commercial fertilizers will have to be used on many of our farms. These fertilizers cost money. Based on the prices of commercial fertilizers, straw is worth as a fertilizer $2.50 per ton. Just bear this in mind and remember when you touch a match to a straw pile you are actually burning up $2.50 for every ton of straw you consume.

The practice of burning straw is generally followed in new countries. The land is new and we don't think we need it. Many farmers in these countries claim manure will hurt the land and prevent good crops.

The writer lived in one of these new countries some twenty years ago, and it was said manure would ruin the land. Practically all the straw and manure was burned. In going over this same country now we find things have changed. The straw is being taken care of and the manure is spread. Time will bring any farming country to the necessity of manuring the land.

Figured on a basis of one-half ton of straw to the acre, there was produced in these four states 10,032,207 tons in 1912. We believe it is fair to say that half of this great amount is absolutely wasted, either by burning or careless handling. If this is true, figuring its value at $2.50 per ton, we wasted in 1912 (and will probably waste annually an equal amount) $12,540,308.

Our older communities are getting away from the "farming for grain alone" idea, because they have been forced to. They are each year beginning to pay more attention to the by-products of the farm. They are rapidly getting rid of the fellows who know the land doesn't need any fertilizer. Straw is one of the many by-products that may be turned to good account. It is one of the by-products most carelessly handled.

Improved ideas, improved methods and improved machinery have made it possible to turn this valuable by-product into a money maker to such an extent that it is, to say the least, very slack business for us to continue this waste.

To What Depth Should We Plow for Wheat

By A. C. Hartenbower

SHOULD I practice deep, medium or shallow plowing? This question arises in the mind of each wheat wheat grower when he is getting ready to prepare his wheat field. While the answer to this question must depend upon local soil conditions in particular, yet experimental results give valuable data on this point.

In 1906 the Oklahoma Agricultural Experiment Station commenced an experiment to compare deep, medium and shallow plowing in growing wheat. The experiment ran for four seasons and duplicate plots were used in each test. The soil was turned each year to seven depths, namely—three, four, five, six, seven, eight and nine inches. Two plots were not plowed, but only double-disked, in order to compare that method of preparing a wheat seed bed with the plowing. The plowing was done August 1 each season and afterward all of the plots received practically the same cultural treatment.

The four years' average yields showed that the highest yield on the average—sixteen bushels of wheat per acre—came from the plots that were plowed seven inches deep, while the lowest yield on the average—ten bushels per acre—came from the plots that were disked only. Not only, therefore, did the deepest plowing, or that eight and nine inches in depth, respectively, cost more, but the resulting yields were actually less than from seven-inch plowing.

Depends on Soil

The results of the experiment at the Oklahoma Experiment Station should be especially valuable to those wheat growers who have soils that are similar to the soil on which these tests were conducted. The experiments were conducted upon a fine silt soil, very low in organic matter. The soil and subsoil run together badly, and as a result the effects of extremely deep plowing are soon lost. Such a soil type is found on many of the upland soils in the southwest and on many bottom lands in the south central portion of the wheat-growing belt. In such soils, under normal conditions, plowing deeper than seven inches is neither advisable nor profitable.

Bulletin No. 176 of the Kansas Agricultural Experiment Station reports results for 1910 of an experiment with wheat where the depth of plowing varied from three to seven inches. Upland soil, low in producing power, was used in the experiment, and the plots were plowed July 15. The seven-inch plowing gave a yield of 38.36 bushels per acre, while the three-inch plowing gave 33.46 bushels per acre. The land plowed seven inches deep, therefore, produced about five bushels more wheat per acre than the land plowed three inches deep.

The results of the experiments at both stations showed that medium deep plowing is more profitable than shallow plowing and that seven-inch plowing is the right depth for wheat growing under the soil conditions represented.

In the medium sandy soils, underlaid with loose, sandy subsoils, in the southern portion of the wheat belt, plowing should not be deep. Such plowing would only tend to increase the porosity of the subsoil, which is already so loose and open that large quantities of water absorbed by the surface soil are lost for crop production.

In those soils that have a medium subsoil, or one that does not run together badly, plowing may be deeper than seven inches. The principal element limiting the depth of plowing under such conditions would be the cost of plowing. The cost of plowing deeper than seven inches increases almost proportionately with the depth. When the plowing goes below seven inches the heavy, impervious subsoil, which commonly underlies the soils of the southwest, brings a high cost—a cost out of proportion to the returns generally received, when done with horses; with tractors the expense would not increase perceptibly. Medium deep plowing, although advisable in wheat growing, must be cautiously used in fields formerly shallow plowed and in the case of late plowing.

Do Deep Plowing Early

The experiments conducted by the Kansas Agricultural Experiment Station referred to in plowing for wheat bring out the foregoing point. Two plots of medium upland soil were plowed to a depth of three inches and seven inches, respectively, on July 15. Two similar plots were plowed to the same depths on September 15. The yields for 1910 were:

METHOD OF PREPARATION.	Yield in Bu. Per Acre.....	Cost Per Acre for Preparation	Value of Crop at 80c Per Bu....	Value of Crop, Less Cost of Preparation....
Plowed July 15—				
Three inches deep.....	33.46	$4.45	$26.77	$22.32
Seven inches deep....	38.36	4.95	30.69	25.74
Plowed September 15—				
Three inches deep....	14.46	3.05	11.57	8.52
Seven inches deep....	15.79	3.55	12.63	9.08

The seven-inch plowing of July 15 gave an increased yield of about five bushels per acre over the three-inch plowing of the same date, while the seven-inch plowing of September 15 gave an increased yield of but about one bushel per acre over the three-inch plowing of the same date. If we consider the cost of preparation and the yield per acre, the extra four inches of plowing of the latter date gave an increased return in value of crop, less cost of preparation, of but 56 cents per acre, while the extra four inches of plowing in July gave an increased return in the value of crop, less cost of preparation, of $3.40 per acre. Both would have been

(CONTINUED ON PAGE SIXTEEN)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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To all points in Canada, per annum, in advance 2.50
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The sows bred for September farrow, remaining on pasture, should be fed enough grain to keep them gradually gaining in flesh until farrowing time.

If your oats or wheat are damp at threshing time, throw into the bin a lot of dry, porous bricks or dry cottonwood chunks; they will help wonderfully to absorb this moisture.

If the colts could be allowed to run in the stubble fields, they would pick up a lot of grain that would otherwise go to waste. If much grain is left, be a little careful about letting them get too much.

If the cows had only the protection of a wire fence last winter, it might be a good plan to arrange for a good, comfortable shed this year. Some poles blanked up and covered with straw make a good one. Don't put off making it until the fall work begins.

Get your plow in shape for fall plowing. It takes too much horse flesh to pull a dull plow or one with a poor point. If you didn't grease it last spring when you finished plowing, spend money enough to get it polished, and then you can save that amount of money next year by using a small amount of grease this fall.

The next six weeks will probably be the worst season of the year for dust. You can't do anything better calculated to fit your hogs for a severe attack of cholera than let them lie in dusty quarters. If sufficient rain doesn't fall, haul water and kill this dust. A hog has very little chance to resist an attack of cholera if his lungs are full of dust.

Granting Licenses to Serum Plants

Now that the Live Stock Sanitary Board of Nebraska has made the requirement that all serum plants selling their product in the state must first have a government license, let us take a look at the government in its granting of these licenses.

We have talked to a large number of commercial manufacturers of serum, some having licenses from the government and some having been inspected by government men and their licenses not yet granted.

In talking to these men we have found them making one universal statement—the government does not seem to know what they want in the way of equipment. We fully realize the fact that the manufacture of serum is comparatively a new problem; that the government feels the necessity of being careful; that the necessity of a good product being made by these manufacturers demands the greatest possible care on the part of the government in making requirements for equipment.

With its attitude of being careful in making these requirements we are in hearty accord. It does seem to us, however, that there should be some definite standard of requirement with which the manufacturer may comply in fitting up his plant. Some applicants for license have told us that one inspector making an inspection of the plant had required a certain equipment. This was complied with and another inspection asked. The next inspector said the equipment asked for by the first inspector wouldn't do at all, and made the applicant for license take it out. This kind of work doesn't appeal to us as being right. It doesn't look like it is giving the manufacturer applying for license a square deal.

The manufacture of serum is an honorable, commercial pursuit, just as hundreds of others are. The nature of the business requires regulation. We are sure a very large per cent of the commercial manufacturers are anxious to comply with any requirement desired by the government, but it seems in many cases they can't find out what that requirement is. In justice to them it should be made known, and then application for license not denied because the requirement is changed within the next thirty days.

One applicant told us he had had seven inspections and license not yet granted, each time making the additions or changes suggested by the inspector. Does this look right?

This paper is, and has been, strongly in favor of all plants having a government license, but we do think they should know what the necessary requirements are. It's only justice.

The 1914 Hay Crop

The hay crop promises to be very heavy in many localities, while reverse conditions are represented from some other commercial hay-producing sections. The shortage of cattle and sheep in the country helps to solve the shortage of the hay crop where such a condition exists. It is reasonable to guess that the hay supply will be abundant where properly distributed to meet the feeding demand. The early cuttings of alfalfa made a good yield. There are good prospects for the third and fourth crops. One good, soaking rain when the crop is starting and another about two weeks later will guarantee a good yield. The native hay meadows are already made. Feed conditions have been good this season, and we now await the outcome of the corn crop.

Wheat for Emergency

Over most of our territory we have harvested a good wheat crop. Some of this crop is already on the market. A large per cent is still in the farmers' hands, either in the bin or in the stack.

Prospects for a corn crop are good, but the crop is not yet made. Wouldn't it be a good plan to hold at least enough of the wheat crop to feed and fatten the hogs on hand? Experiments have shown wheat to be about as valuable as corn for feeding hogs when properly fed.

Thousands of our farmers last year had the sad experience of being compelled to sell not only their surplus, but their breeding stock of hogs, just because of a failure of the corn crop, and that after a fine prospect early in the season.

The selling of our breeding stock is expensive in more ways than one. It takes time to get back into the business, takes money to buy what we want and generally years of careful selection.

If you have a good supply of wheat on hand, hold at least enough of it to insure your not being compelled to sell your hogs at an immature age or to part with the brood sows you have by careful selection placed in the herd.

It is a splendid time now to do some effective weed killing for next year. Every weed that goes to seed this fall makes extra work for you next year. There are plenty of our cornfields in which cockleburs are growing. Get them before they ripen. The only effective way we know is to go through the corn by rows and pull all in sight.

The Cow and the Sheep

There is always more or less discussion as to which is the more profitable, the cow or the sheep. This, like all other live stock and agricultural comparisons, depends more on the handler than on the stock. A sheepman will succeed best with sheep, and a cowman best with the cow, because the conditions and requirements necessary for the successful development of each will be contributed, and the animals will do their best.

All kinds of farm animals will succeed and become profitable when properly handled. This we see on all sides; it has been proven. The question nowadays is, Will the owner or handler of live stock make a success out of the business of handling stock? The business itself is a success, but the handler often does not know anything about the business of handling stock, and therefore fails in obtaining the best results or even moderate results.

The sheep is a profitable animal on the farm and has been made a very profitable animal on the range when systematically handled. The cow is a profitable animal on the farm when used as a dairy feature, and the farmer who has an aptitude for dairy management and dairy work will make a success with the cow in this line of industry.

The relative cost of keeping the cow and the sheep cannot be figured accurately, owing to the variation in the size and feeding capacity of these animals. The experiences of those who have thought they observed tests closely are widely different in their estimates, ranging all the way from five to ten sheep, as an equivalent to a cow in matter of feed consumed and expense of keeping. All sheep and all cows are not on an equal basis in consumption of feed. It is fair, however, to presume that on an average of six sheep can be kept on the feed required for a 1,000-pound cow.

The keeping of a few sheep on the farm where there are pastures fenced to hold them is a safe proposition for any farmer. Even the dairy farmer may find it profitable to keep a few sheep, as they are good weed destroyers, and in wool and mutton will return a good profit for feed consumed. They are not injurious to cow pastures, as many believe, especially where but few are kept. The keeping of cattle and sheep on the same pastures at the same time is not recommended; yet all over the eastern sheep-raising districts the cow pastures were usually the run of a few sheep of extra quality, those being given a little extra care for show or breeding purposes. The keeping of a few sheep is the best way to solve the question of profit, also of the matter of whether you would like to engage in sheep raising as a business.

Hog cholera is beginning to show up in different localities. Be careful about going around public stock yards and then going into your own hog yard without thoroughly disinfecting your shoes.

Whom Will You Elect?

The Twentieth Century Farmer is not a political paper, but we can't help at this time saying something about politics, for the politics of our state and nation are the business of the state and nation.

It is an undisputed fact that too many of our farmers do not pay enough attention to politics. We refer in particular to their carelessness in voting, both at the primary election and the fall election.

Very often do we hear someone making a kick about some official, saying he is absolutely unfit to fill the office. Inquiry of the fellow making the kick very often reveals the fact that he did not take the time and trouble to go to either the primary or general election and help select men to fill the various offices.

It is the duty of every man to go to the polls on both these election days and cast his ballot. It is as much his duty to do this as it is to attend to any part of the particular business in which he is engaged. This applies to the farmer as well as to the business man.

Under the primary nomination system, every man has an equal chance to say who shall be the candidate of his party, and he should, without fail, do his duty in seeing to it that the best men possible are placed on the ticket for election.

Te office of state railway commissioner is one of great importance, particularly so to the farmer. This commission has to deal with so many matters directly affecting the farmer that the man who fills this office should know the farmer and his needs. He should be a man who has had to do with public matters, one who has knowledge of public-service corporations and what may be expected of them.

At the next election the people of Nebraska will elect one man for a full term of six years to fill this important office. There are a number of candidates for this office in both the old parties. The farmers have the time to look into the records of the different candidates for this office and should do so. They should find out who among the different candidates knows and will appreciate the farmers' position. The farmer wants no advantage, but he does want a square deal.

Hog Cholera Day

A successful hog cholera day was held at Norfolk, Neb., on July 11. In this county (Madison) there is a farm demonstrator and a county organization. The meeting was well advertised and surprisingly well attended.

A more busy time for the farmers couldn't have been selected. Harvest was on in full blast. The second cutting of alfalfa was going into the stack and many farmers were busy with their wild hay. Notwithstanding all this, the register showed an attendance of better than 200. It is safe to say that if this meeting had been held at a time when farmers could have more easily left their fields twice the number would have attended.

This meeting showed at least two things: The hog industry is of the greatest importance in northeast Nebraska, and its farmers are determined to do their part to get away, as far as possible, from the terrible losses occasioned by hog cholera.

A glance over the register of the attendance at this meeting showed some farmer in attendance from every postoffice within a radius of fifty miles of Norfolk.

It was an all-day meeting. Part of the program was given in the forenoon, to a good audience, and part in the afternoon. Some farmers were so busy at home that they came for the forenoon meeting and went to the harvest fields in the afternoon.

Dr. C. M. Day, field veterinarian for the Live Stock Sanitary Board, spoke on vaccination, when and how to do it, explaining how to use serum and virus, what may be accomplished by its use and how to use the instruments.

Dr. J. H. Gain, chief veterinarian of the agricultural college, told about the making of serum and virus, the kind of hogs used, and results of many experiments in its administration.

E. Z. Russell, associate editor of the Twentieth Century Farmer, spoke of hog cholera control from the farmer's side, showing many practical things the farmer can do to assist materially in the control and eradication of the disease.

Drs. Gain and Day answered many questions from those present about the disease, treatment, etc. One thing about the questions asked impressed us very much, and that was the kind of questions. Every question was a practical one, showing a sincere desire on the part of the questioner to get a better practical knowledge of the business. The "smart fellow" trying to catch the speaker wasn't there.

At the close of the meeting Dr. Day vaccinated seven pigs, showing by actual work how it should be done. He also killed and held a post-mortem over pigs that had been sick, showing the hog raisers how to know, by post-mortem examination, whether or not their hogs are affected with hog cholera.

The Twentieth Century Farmer believes great good is going to come from these meetings. We believed this when we urged the appointment of a field veterinarian. The farmers want to know, and are going to know, what to do and how to do it.

Val Kuska, farm demonstrator of Madison county, is to be congratulated on the successful outcome of this meeting. Prof. Anderson, field man in charge of farm demonstrators of the extension department of the university, was there and gave valuable assistance.

A word to the farmers. Organize in the fight against hog cholera. You can get valuable assistance through the Live Stock Sanitary Board and extension departments of the State University. It is free to you. Wouldn't it be well for you to avail yourself of this help?

How to Grow Weeds

Do not forget the weeds that have been growing during the past weeks of fine crop weather. Weeds constitute the one prominent crop of the farm that grows without cultivation. All that the weeds need in order to produce a good crop, when the moisture conditions are favorable, is to be let alone. You need not jump into a weed patch with cultivator or harrow to insure a good growth; just stand back and look over the fence and do nothing, and a bounteous crop will surely be the result. "Big crops, big weeds," is a familiar saying with the old-time pioneer farmers, and it is as true today as it was a hundred years ago. It is a good plan to cut the weeds back a little several times during their growing, as this keeps them from producing too much seed.

Insect Extermination

It should be gratifying to all persons who can realize that they belong to the great army of consumers to observe the interest and concern that the United States secretary of agriculture is manifesting in devising co-operative means of extermination of the insect pests that are so disastrously attacking and ruining the crops of the country in such wide-spread areas. The effect of insect damage each year on crop yield is considerable in the aggregate, but most sensitively experienced locally in the communities and states where the pests develop and prosecute their work of destruction unchecked.

The spasmodic efforts that have been exerted to head off these various destructive agencies have accomplished very little for permanent good. A systematic, well planned fight against all forms of crop-destroying insects, supervised by the United States Department of Agriculture, as the base of operations, and co-operated in by state, county and community organization, may be made effective in the permanent eradication of these pests. It has been plainly demonstrated by the efforts of some states, as, for instance, Kansas, in combating the spread of the Hessian fly and chinch bug, that concentrated effort properly planned and carried out is effective in reducing the spread of the insects.

It now devolves upon all crop-growing states to join with the Department of Agriculture in an effort to suppress and completely eradicate any insect pests that may develop in any locality that the work may be started on the first evidence of insect development and continued unremittingly until every vestige of it has disappeared. Extermination by organized effort is the plausible means of permanent relief.

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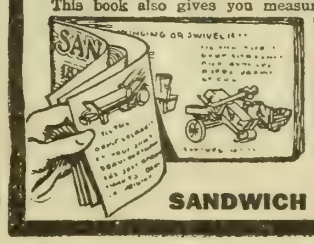

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The Economical Storage of Hay

THERE is possibly no feature of the storage question on the farm that merits more consideration than the economical housing of the hay crop. There is a growing sentiment in favor of baling as a storage feature in the matter of handling and preserving the hay on the farm. The saving of the hay from the harvest field demands stacking as a usual harvesting proposition, because conditions are such that stacking is the only sure and quick process of handling the partially cured product. This quite generally demands the stacking to be done in the hayfield and at the nearest and most central point where there is hay sufficient for a stack, unless in wet ground, where higher and dryer points are selected for the stacking and hay moved to it. The urgency is to get the hay in some form of storage that will save it from rain or storm.

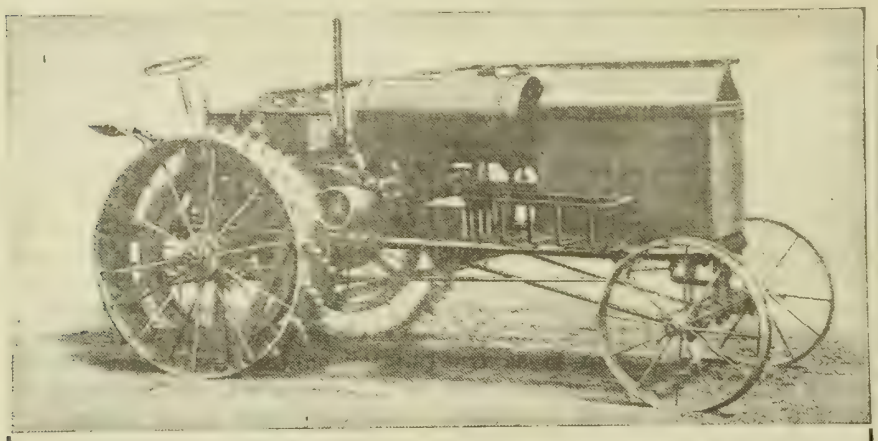
The desirability of baling hay on the farm for farm use is gaining ground among many of the best farmers and live stock handlers all over the country as an economic labor-saving and money-saving proposition. The handling of loose hay is a slow, tedious, disagreeable job, and appreciated after one has spent a season in feeding out the baled article. Besides the convenience of handling the baled hay the saving of time is a matter that counts forcibly with the teams and men employed in the matter of expense.

The storage of hay has been and will continue to be a proposition that the farmer and hay producer must figure with in the matter of economical hay production. The one great question today is, How can the hay taken from the harvest field be most economically and safely stored, free from damage or loss in quality? This question implies a saving of commercial quality, whether it is to be fed on the farm or sold into the shipping trade.

The building of barns or sheds to store loose hay in is a big job and an expensive investment that usually lies idle the greater part of the year. The stacking of hay seems to be the logical proposition to the average farmer, but it means considerable loss in damage and waste by rain, storm and the varying influences of the weather, especially if left to stand through the autumn and into the winter season. The attempt to bale out of the windrow before stacking is argued by some, but this demands expert judgment in getting cured to a condition that it will not heat in the bale when stored in large bulk in sheds and barns.

The practice of stacking, and as soon as the harvest is finished starting the baler to work baling from the stack, to be raked up under cover of the shed, is advocated by many who bale to feed, as well as those who bale for sale. Well cured hay cannot be put into better preserving form than in the bale. Hay of any kind cannot be put into more convenient form for handling than in the bale. In the matter of storage advantage in shed or barn there can be no comparison made between the baled over the loose hay.

The hay baler is a neighborhood necessity now, and with the large hay farm will soon be as common as the stacker. Its hay-saving and labor-saving advantages will warrant its purchase. There is a difference in balers and in the kind of work they do. We recommend the investigation of the different makes and the purchase of a baler wherever hay is raised in any quantity.



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Criticising Official Activities for Health

ONE of the western coast farm papers, in an editorial, sharply criticises the health commissioner of one of the large coast cities for activity in trying to provide some regulation for prohibiting the sale of milk from cows affected with tuberculosis.

This paper accuses the health commissioner of playing to the galleries, and suggests that he had first better ascertain whether tuberculosis germs in milk are transmissible to human beings. It calls upon the mayor of the city to put a muzzle on the health commissioner until this point is definitely determined.

It certainly seems strange to us that anyone could take such a position as this paper does. It questions the disease being transmissible. Many records show positively that this disease has been traced directly to milk from cows having tuberculosis. In one test made by the government in New York twelve healthy babies were fed with milk from cows having tuberculosis, and in every case the baby was affected, but by proper care and food the babies were afterward made sound and well. Would not this test prove that the disease was transmissible?

In a recent bulletin issued by the government people were cautioned against using milk from cows having tuberculosis, saying that tests had positively shown the disease to be transmissible from animals to human beings. It is our opinion that when the government sends out such warnings as this it is time for the people to take notice.

Suppose positive evidence were not at hand. Why should the risk be incurred? Would the editor of this paper use, in his family, milk from cows affected with tuberculosis? Especially would he want to give it to his little babe? We think not, and believe if this editor were buying milk from someone and found the cow from which he was getting his milk supply was affected with tuberculosis, especially if the disease were in the udder, as has been found, he would be loud in his protestations to city officials for not doing their duty.

Above all others, why should the editor of a farm paper protest against regulations for testing cows for tuberculosis? If he is abreast of the times he knows that thousands of carcasses of cattle are condemned and tanked each year because they are affected with this disease. This is a direct loss to the farmer.

If he will look up the records of the packing houses he will find that thousands of hog carcasses are likewise condemned and he will also find that a very large percent of these hogs come from dairy farms where tuberculosis has been found in the cows.

Instead of criticising officials who are wide awake in these matters, we should commend them and give them every assistance we can in their work of trying to eradicate all diseases, both in humans and animals.

To Awaken Interest in Farm Life

Not only thousands of children, but also a great many adults in New York City, have never seen a cow with her calf, a mare with her foal or a hen with her chickens. For that reason, among others, many persons are urging that farm animals be shown in the New York Zoological park. They believe that the sight, besides being educational, would do much to awaken the interest of city children in farm life.—Youth's Companion.

Irish agricultural exports in 1912 amounted in value to $141,274,500.

Power and Power Farming

MECHANICAL power is being applied to practically every phase of modern industry. Improved machinery and cheaper power make it possible for the manufacturer to reduce the number of employes and at the same time to decrease the cost of production. In the commercial world the automobile and motor truck are found taking the place of the horse to a large extent. This same development has made it possible for the farmer to economize on labor and time by using up-to-date machinery.

The large tractor was called into the west and northwest because field operations were very extensive and labor was scarce. There they met with unquestionable success and were proven to be wonderful savers of time and expense.

Demand of Average Farm

The man on a small farm is also desirous of reducing the expense of labor, saving feed, cost of horses and completing field operations in less time. In other words, he wants a small tractor, which will do for him what the gigantic motors are doing for the west.

Manufacturers are expending vast sums in attempts to satisfy this demand. Rivalry is standardizing and improving the output with wonderful rapidity. Tractors are being made of almost every description, even to guiding them with lines. The question is now up to the farmer, which, if any, is applicable to his conditions. While many farmers have decided this question for themselves and sons with emphatic disapproval of all tractors, nevertheless many progressive farmers are using them successfully; consequently they are surely deserving of serious consideration and fair trial.

Is Small Tractor Practical?

In an effort to obtain some authentic and first-hand information, letters were sent to owners and operators of tractors on medium-sized farms in central states. In all thirty-nine replies were received from men who were actually using their tractors on farms from 160 to 350 acres. The field operations include plowing, disking, drilling, harvesting, clearing land, besides road grading and belt work.

Of the thirty-nine men thirty-two stated that the tractor has proven itself a profitable investment; two say that it paid fairly well, while three report a failure. Some of these have been used only during the last season, while others have been in use for five yars. The average experience for the thirty-nine men was two years.

These results do not prove conclusively that the tractor is a profitable investment for every farm, for there are many on which no tractor is adaptable. The tractor does, however, have an important part to play. Besides the field operations mentioned it promises to be a valuable factor in the reclamation of swamp lands in the north.

Type of Tractor

In practically every instance the small tractor of twenty to thirty horsepower belt and twelve to fifteen drawbar gave best results. This also makes it more economical for running at light loads, such as grinding feed, shelling corn, sawing wood and filling the silo. It is further interesting to note that of the thirty-nine tractors twenty-seven used kerosene for fuel.

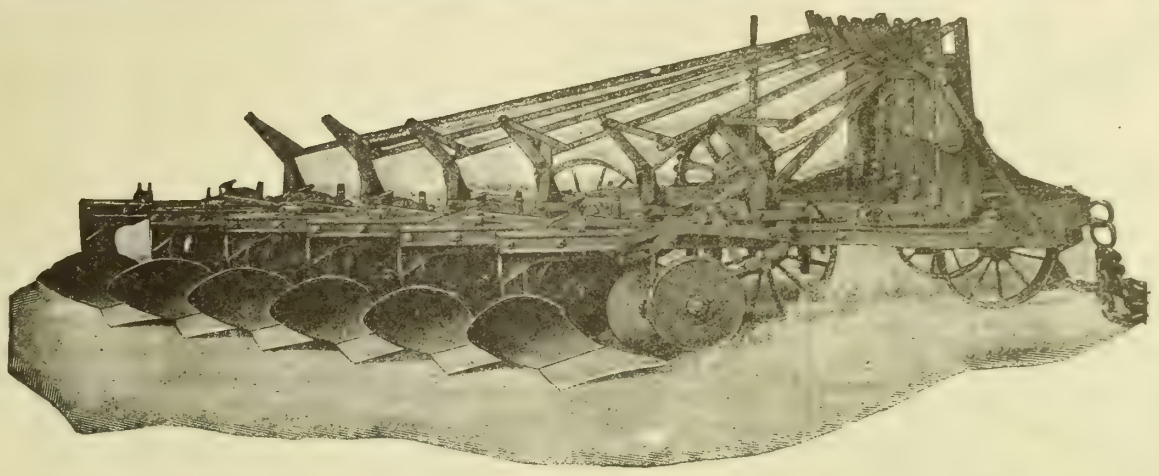
The farmer who made his tractor pay best was using it for all the heavy work, thus taking the place of men and horses. On thirty-five of the thirty-nine farms the reports show a decided decrease in the cost of labor. One man farming 360 acres stated that his labor expense was only one-half of what it was formerly; on a 500-acre farm $500 was saved annually, and on another farm the labor saved amounted to 33 per cent. In addition to this, where the tractor was used successfully, the reports show a decrease in the number of horses from one-third to one-half, the average being from sixteen horses to eleven.

Must Meet Farmers' Needs

The small tractor is here to stay. There is, however, one point which should be mentioned in conclusion—in order to obtain the best satisfaction the manufacturer and farmer must work more closely together.

For years the manufacturers have been studying conditions on the farms for which they are building their engines. They are also seeking information from the agricultural colleges in order that they may more perfectly adapt their machinery to the farmers' needs. In fact, many are so perfect in construction that responsibility for their success is slowly passing from maker to operator.

It is the duty of the farmer, on the other hand, to meet the manufacturer part way; to attend a gas engine short course or tractor school for a sufficient length of time to become familiar with the principles of the internal combustion engine. Then he can study his own engine more intelligently and receive more nearly the most efficient service it is capable of rendering.



Grand Detour Power Lift Plows

Easy Control—Perfect Work
One Man's Wages Saved

These Advantages and Many Others make the Grand Detour Plow a profitable investment for the progressive farmer. The automatic power lift device is a vast improvement over the old style method of riding hand-levers and straining back and limb. Simply pull a cord and the plows are lifted or lowered, one after the other in perfect line, leaving even ends. No time is wasted in turning. just pull the cord and keep going. It saves the board and wages of a plowman and insures your work being done on time. A Grand Detour Plow will do fine work under the roughest field conditions.

Further Favorable Features
Bottoms can be handled independently; if one hits a stone it does not affect the others. Smooth, even furrows at all times. Gauge wheels fastened to plow standard keep furrows uniform in depth. Large and wide supporting wheels prevent side draft.
Plow follows engine without slipping. Short turning space is required at end. Adjustable scrapers keep plows clean. Plows adjust themselves to the varying conditions of the soil. Strong and durable, yet light weight.

Watch Them Work

At the Fremont National Power Farming Demonstration
Held at Fremont, Neb., August 17 to 22

We invite every reader of this paper to visit us at this demonstration and see our plows in actual operation. This will give you a fine opportunity to note their advantages and the perfect work they do. Actually seeing will tell you better than words can describe. We will be glad to talk with you, answer questions and offer suggestions to fit your individual case. This will not put you under the slightest obligation in any way. If unable to come and see us, write us, and we will send you literature and further information.

Grand Detour Plow Co., Dixon, Illinois
Established 1837

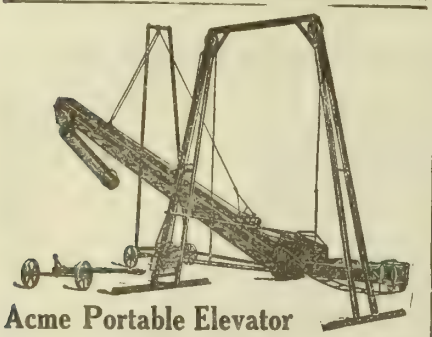
LOOK FOR THE
BULL TRACTOR
when you visit the
Fremont Demonstration
August 17-22.

If you can't see the Bull, look where the crowd is thickest. The Bull is always the center of greatest attraction.

Let us demonstrate to you at Fremont how you can profitably sell enough horses to buy a tractor and at the same time accomplish more work.

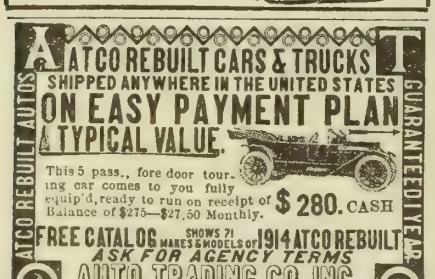
In the meantime send for catalog.

Bullock Machine & Supply Co.
2520 Farnam St., Omaha, Neb.



Acme Portable Elevator
will save you big money in price and handle your grain quick. FLEMING & SONS, MFG. CO., Huntsville, Mo.

Send for Free Catalogue and prices direct to consumers on my All Steel grain dump farm wagons and farm trucks, steel and wood at saving prices. Write today.
Marvin C. Van Derveer
No. 22 Fourth Street, Council Bluffs, Iowa.



Tubercular Cattle Ordinances

IN FORMER issues of this paper we have spoken of tuberculosis in cattle, especially those used for dairy purposes, of the necessity of more strict regulations by states and municipalities, pertaining to the testing for this disease of all cows from which milk is used.

Norfolk, Neb., is one of the cities that has tackled this problem vigorously, and they propose to see to it that no milk is sold in that city from a cow affected with this disease.

To this end an ordinance was adopted covering the case. First, a license must be obtained by every person, firm or corporation selling cream or milk, for which a fee of $10 per year is charged, except parties living in the city limits of Norfolk, which parties are charged a fee of $1 per cow.

The ordinance provides for an inspection at least once in six months by a committee of the council, such inspection looking to the general sanitary conditions of the place, the water supply of the cows, the kind of food given or any other matter that may affect the public health. If conditions are not found to be satisfactory the license is suspended until such time as the owner complies with requirements.

Cows from which milk is furnished to the city of Norfolk are not allowed to drink from stagnant ponds or pools, or from inlets or pools where manure, dead animals or decayed vegetation are dumped so it may affect the water supply. All milk sold in the city must test not less than 3 per cent butter-fat.

We quote herewith two sections of the ordinance pertaining to the testing of cows from which milk is sold in Norfolk for tuberculosis:

"Section 6. Any and all owners of cows who sell milk within the corporate limits of the city of Norfolk shall annually cause said cow or cows to be tested for tuberculosis by what is known as the tuberculin test, and the certificate of such test shall be presented to the council for inspection and filed with the city clerk.

"Section 7. No milk or cream shall be sold, offered for sale or kept in the city of Norfolk which is produced from sick or diseased cows, or from cows kept in an unclean, filthy or unwholesome condition, or from cows fed upon any substance in a state of fermentation or putrification, or any unwholesome food or impure water, excepting silage and malt. The council committee or board of health shall condemn and destroy any impure food found which is kept for the purpose of feeding cows."

The Norfolk ordinance provides for the protection of its citizens against unsanitary milk tickets. All tickets, other than metallic ones, must be destroyed after being used once. All metallic tickets must be sterilized before they can be used or resold.

The cows furnishing milk to the city of Norfolk were all tested as provided in the ordinance. The test began May 11. Three hundred and thirty-four cows were tested. Of this number thirty-one reacted to the test, showing them to be affected with tuberculosis. Twenty-eight of these cows were slaughtered. Two are condemned, but not yet shipped, and one is held for a retest. Of the twenty-eight slaughtered eleven were passed for food. Seven were condemned and the carcasses put into the rendering tank. Reports have not yet been received by the Norfolk officials on the other ten.

Of those condemned one showed strong tuberculosis bacilli in the mammary glands or udder. We talked to the man who owned this cow. He told us the family had been using the milk and selling it to six of his neighbors. He expressed himself as being very much surprised to find he owned a cow in such a condition, as the animal looked well and healthy. Let us hope that none of the people using this milk contract the disease on account of it.

The question was asked Dr. McKim, the veterinarian who did a large part of the work in testing these cows, if he had much trouble. He answerd that at first there was some objection, but when people found there were fine, healthy-looking animals badly affected with the disease they realized the importance of the movement.

We can't help but feel the great importance of people having their cows tested for tuberculosis. You certainly wouldn't use the milk from one if you knew it, and there is no way of knowing except by test. We have asked the question of many farmers and practically none of them have had their cows tested. They don't know whether or not they are running the risk of giving some or all members of the family this terrible disease by not taking this simple precaution. Not only that, but quite a financial loss may be incurred by having tubercular cows, from the hogs on the place contracting the disease from the cows and their being condemned for food. True, the packer loses it directly, but don't fool yourself, the producer loses the amount in the end. The packer knows exactly the per cent of loss and he, of course, takes it off the general buying price.

We hope and expect to see more cities adopt regulations such as Norfolk has done. The sooner the officials awaken to the importance of this movement the sooner will their citizens have the protection they should have.

Farmers' Real Co-operative Association

THIS is an age of co-operation, a joining together of business interests, a shortening of the road from the producer to consumer. The farmer has been among the last to feel the need of co-operative assistance in establishing his rights in the trade and traffic of his produce. The inherent independence of the tiller of the soil has led him to a feeling of self-reliance, an independence that is averse to co-operation. The present-day tendency to control business by corporation and large association money influence has put the independence of the farmer on the defensive and is forcing him to co-operative means—to seek the aid of organization through his own fellow workers.

A farmers' co-operative association that has succeeded in its efforts in establishing co-operative interests among its membership was organized at Lexington, Neb., in 1901, and is known as the Lexington Shippers' Association, incorporated under the laws of Nebraska. This association, from a small beginning at its organization, has grown to a membership of 325 farmers, and to a business that represents 95 per cent of all the hogs shipped from Lexington. Its purpose is for handling the live stock shipments of its members at the least possible expense. It has its

(CONTINUED ON PAGE TWELVE)

Tractor Exhibitors, Attention!

We are in a position to supply you with anything you may want in the line of tents or awnings for your exhibits at the Tractor Show at Fremont, Neb., August 17 to 22.

Our stock of tents, flies and awnings is very complete, and we can fill your orders without delay.

Make your reservations for tents at once, and we will have everything in readiness for you when your exhibit arrives.

Our prices are reasonable and will be furnished on application.

Rogers Tent & Awning Company
Fremont, Nebraska

Delays Sometimes Expensive

Business or social engagement — just a few minutes for lunch — can't wait for service. What can be had quickly?

Order

Post Toasties

with fresh berries or fruit and cream. They will be served immediately, they are nourishing and taste mighty good, too.

Sold by Grocers —everywhere!

Blacksmith Shop on the Farm

THE constantly increasing use of machinery on the farms has made it necessary for all progressive farmers to have repair shops equipped with some blacksmith tools.

Farm machinery and equipment in general are subject to wear and breakage, and constant attention to repair is necessary, since the original cost of farm implements makes the frequent exchanging of old for new prohibitive. The profit realized from a machine consists of the work it does economically over and above paying for itself. The amount of service to be obtained from any article depends largely upon the care it receives. In the case of a machine, a mower for instance, the care has reference to shelter, lubrication, nuts tight, bearings free from play, sickle sharp and breakages repaired.

The extent to which forge work should be done on the farm depends upon the ingenuity of the farmer and also upon local conditions. If there is a reliable shop nearby where repairs can be made without loss of time, it may be best to take some of the more difficult work there. However, this is seldom the case, and breakdowns are most frequent during the busy season. The amount of time lost in making a few trips to town when the farmer is most anxious to get his ground prepared, seed sown or harvest completed would be sufficient to convince a farmer that the shop is an important adjunct to his equipment. It is not advisable for a farmer without considerable experience to sharpen his own plows or shoe his own horses, as they require skill, practice and additional equipment.

A small, well selected outfit, used to the best advantage and kept in good condition is much more satisfactory than a large miscellaneous set of tools, many of which are seldom used. In nearly all localities tools may be purchased of the local dealers. In addition, manufacturers of tools offer outfits in such combinations as makes it possible to obtain most any set desired. A small outfit of good tools to begin with, and then added to as the demand increases, would be advisable. The tools needed first would be as follows: Forge, anvil and hardie, blacksmith hammer, blacksmith tongs, cold chisels, punches and drill bits.

A forge of the portable type with a fan blower may be obtained for $15 to $20. Anvils are divided into two classes, steel and cast iron. The steel anvils are the best and cost approximately 11 cents per pound. However, a castiron anvil, purchased for about one-half the sum, would be very serviceable. A 100-pound anvil would be most satisfactory.

An anvil hardie is used for cutting both cold and hot iron. It has a square shank that fits into the socket of the anvil, thus holding it securely in position. It is a very handy tool around the shop and can be purchased for about 50 cents. A stationary bench vise with jaws about four inches wide, is best for ordinary work. It weighs about thirty-eight pounds and costs approximately $6. A two-pound blacksmith hammer which will serve for general work, costs about $1.25. Three cold chisels, ½-inch, ¾-inch and 1-inch, made of tool steel, may be obtained for about 20 cents, 40 cents and 75 cents respectively. Cast steel chisels cost less. Three punches —one-fourth inch, three-sixteenths inch and one-third inch at the point —cost about 15 cents each.

Two pairs of blacksmith tongs are needed; one pair of common tongs for flat pieces of iron and one pair of bolt tongs for handling round iron, cost about 20 cents per pound. Drill bits—that fit an ordinary carpenter's brace—may be secured. These are adapted for boring either wood or metal. The cost of these drills is from 10 cents upward according to size and quality.

There are an unlimited number of articles which can be added to the shop equipment, but those needed most would be as follows: Post drill, set of one-half dozen drills, set of taps and dies—ranging from ¼ to ¾ inch—sledge (5 pounds), riveting hammer, heavy hammer, additional tongs, fullers, facers and swages, pipe wrenches and a babbitt ladle.

Some Close Figuring

In 1855 it took 274 minutes of labor to care for and raise a bushel of corn. In the year 1894 the average time required had been brought down to about forty-one minutes.

PRIZE FOOD
Palatable, Economical, Nourishing

A Nebr. woman has outlined the prize food in a few words, and that from personal experience. She writes:

"After our long experience with Grape-Nuts, I cannot say enough in its favor. We have used this food almost continually for seven years.

"We sometimes tried other advertised breakfast foods, but we invariably returned to Grape-Nuts as the most palatable, economical and nourishing of all.

"When I quit tea and coffee and began to use Postum and Grape-Nuts I was almost a nervous wreck. I was so irritable I could not sleep nights, had no interest in life.

"After using Grape-Nuts a short time I began to improve and all these ailments have disappeared, and now I am a well woman. My two children have been almost raised on Grape-Nuts, which they eat three times a day.

"They are pictures of health and have never had the least symptom of stomach trouble; even through the most severe siege of whooping cough they could retain Grape-Nuts when all else failed.

"Grape-Nuts food has saved doctor bills, and has been, therefore, a most economical food for us."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true and full of human interest.

MANUFACTURERS

who will exhibit at the

National Power Farming Demonstration

FREMONT, NEB., - - AUGUST 17-23, 1914

Manufacturer.	Address.
American Gas Engine Company,	Kansas City, Mo.
Avery Company,	Peoria, Ill.
Bull Tractor Company,	Minneapolis, Minn.
Bullock Tractor Company,	Chicago, Ill.
Case Plow Works, J. I.,	Racine, Wis.
Dauch Manufacturing Company,	Sandusky, Ohio.
Deere Plow Company,	Omaha, Neb.
Denning Motor Implement Co.,	Cedar Rapids, Ia.
Grand Detour Plow Comany,	Dixon, Ill.
Gray Tractor Company,	Minneapolis, Minn.
Hart-Parr Manufacturing Co.,	Charles City, Ia.
Hoke Tractor Company,	South Bend, Ind.
Holt Manufacturing Company,	Stockton, Cal.
Joliet Oil Tractor Company,	Joliet, Ill.
Kinnard-Haines Company,	Minneapolis, Minn.
La Crosse Plow Company,	La Crosse, Wis.
Lininger Implem't Co. (Hackney),	Omaha, Neb.
Multi-Tractor Company,	Lincoln, Neb.
Pioneer Implement Co. (Heider),	Council Bluffs, Ia.
Pioneer Tractor Company,	Winona, Minn.
P. & O. Plow Company,	Canton, Ill.
Waterloo Gas Engine Company,	Waterloo, Ia.
Wallis Tractor Company,	Cleveland, Ohio
Ward Tractor Company,	Lincoln, Neb.

JOHN DEERE

It will pay farmers for miles away to see JOHN DEERE engine gang Plows in operation at the big Power Farming demonstration at Fremont, Neb., August 17th to 22d. QUICK DETACHABLE SHARES USED ON ALL JOHN DEERE PLOWS.

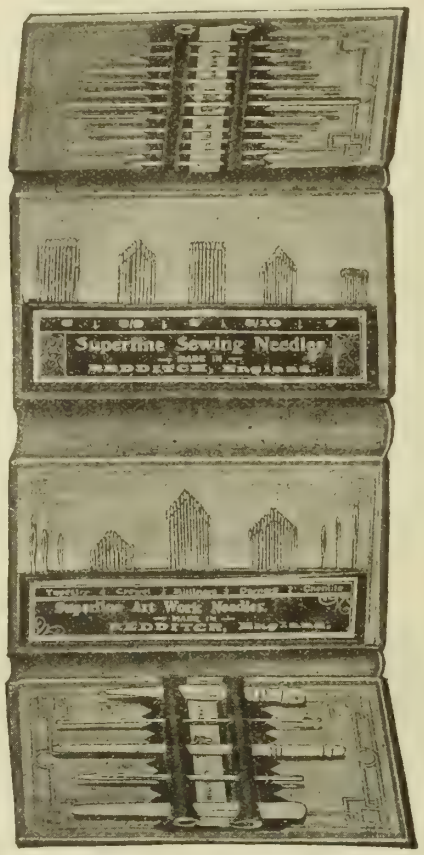
OMAHA

Why We Make This Free Offer

The Twentieth Century Farmer is interested in everything that will benefit its readers. We never offer anything that we do not believe in ourselves. This needle book is a real treasure. We are glad to offer it to you. There is a needle for every need; silk and cotton darners, art work needles, rug and tapestry needles, punch work needles, milliners' needles—in fact, there 142 needles which would cost you $1.00 if you bought them at the store.

EVERY NEEDLE GUARANTEED

This needle book has soft leatherette covers beautifully designed and embossed. It just fits the machine drawer or work basket. You must send at once if you want a book because others will want them and we have just a small stock on hand.



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Needles Enough to Last Three Years.

NEEDLES FOR EVERY NEED.

75 Gold Eyed Sewing Needles.
51 Art Work Needles, viz:
15 Medium Cotton Darners.
15 Milliners' Needles.
15 Crewel or Embroidery.
3 Rug or Tapestry.
3 Chenille Needles.
1 Bone Stiletto.
1 Bone Tape or Ribbon.
1 Bone Crochet.
1 Steel Crochet.
1 Steel Bodkin or Tape.
1 Punch Work.
2 Medium Wool Darners.
2 Fine Wool Darners.
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2 Medium Cotton Darners.
142 Useful Sewing Articles.

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To every subscriber, either new or renewal, who will send us $1.00 for a one year subscription to Twentieth Century Farmer we will send one of these needle books free and prepaid. Here is the greatest offer we have made in ten years.

Address **TWENTIETH CENTURY FARMER, Omaha.**

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Discouragements with Sheep

IT IS often asked, "If there is so much easy money in keeping and raising sheep, why are there not more people engaged in the business? Why do we hear of persons trying it and after a year or two selling out and going back to raising hogs and cattle?" This is true where there is no protection offered the sheep against the dog and wolf nuisance. The first need of the sheep owner is state legislation against the sheep killing dog and a bounty for wolf scalps. Otherwise the sheep owner is handicapped in the handling of his business. The dog has an instinctive desire to kill sheep and will cultivate this and exercise this privilege whenever an opportunity offers unless restrained in some way by fear or teaching that it is not the proper thing to do.

This condition of dog nuisance keeps the sheepman always on the look out for fear of his flock being chased and injured by dogs. It makes extra labor and attention in bringing the sheep into the yard or corall at night, which adds greatly to the expense of handling; besides, the sheep do not thrive so well as when undisturbed and out in the clean pasture. Night yarding of sheep becomes a great chore after the novelty of owning sheep wears off and where dog proof fences are not provided as a barrier against these marauders so that the sheep may be regarded as safe in the field as in the corall there is a disposition to give up the business as a nuisance demanding too much attention, which is the truth.

A strict dog law should be enacted in every state against the trespassing dog, the owner to be made responsible for all damages done his neighbor's flock. Some states have a dog tax that is used in paying damage done flocks where the identity of the guilty dog cannot be traced or proven or the owner not worth the damage. Before the farm flock will become of interest to all farmers as it is in the eastern states, the flock must be protected by an anti-dog law that means flock security.

Other drawbacks in the handling of the flock on the farm can readily be provided for by the owner who is interested in the success of the business. Where other kinds of stock are disposed to injure or destroy sheep or lambs they can be kept separate. The farm flock will popularize itself on the western farm just as it has on the eastern farm. It will take fences and improvements to do this. These will all come in a few more years, when the way has been cleared by the operation of an anti-dog law, which means so much in this industry and the money making advantage it will influence for the western farmer.

Real Co-operative Association

(CONTINUED FROM PAGE TEN)

own yards, scales, office, with every convenience for shedding, feeding, watering and care of twelve carloads of animals until loaded in the cars.

All shipments are handled by the association shipping agent, who receives 4½ cents per hundred pounds as weighed in from the farmer at the yards, and all expenses of shipping are charged up to the stock shipped. The association has never selected any special commission firm to act as its sales agent at any of the stock yards; on the contrary, the shipments in the course of a year have been pretty well scattered among the live stock commission companies of South Omaha, Neb.

This association handles from 225 to 400 cars of hogs per year, depending upon the hog supply. As this is the only association of this character in this part of the state, its territory has been widening, until Lexington is now getting a shipping patronage through the influence of the association that otherwise would go to other railroad points.

This plan of stock shipment has proven very satisfactory. The association has no debt; on the contrary, it has acumulated a considerable fund in its treasury. This is believed to be the largest shipping association in the handling of hogs in the state. The Lexington Shippers' Association is conceded to be the largest distributer of money of any organization in the interest of the farmer and producer in Dawson county.

The officers of this association consist of a president, vice president, secretary-treasurer and shipper, with an executive board of three persons. Other communities in other states might profit by what this prosperous organization of farmers has found of interest and financial worth to its members in its fourteen years of experience. Among the prominent patrons of this association will be found E. E. Young, H. E. Zimmerman, W. R. Shepherd, D. E. Cole, Miles Kinch, August Simmons, and Clay Wallace, all of Lexington, Neb.

Fall and Winter Fair Dates

Date.	Name and Place.	Sec'y or Mgr.
Aug. 26-Sept. 4	Iowa State Fair, Des Moines	A. R. Corey
Sept. 7-11	Nebraska State Fair, Lincoln	W. R. Mellor
Sept. 12-19	California State Fair, Sacramento	J. L. McCarthy
Sept. 14-18	South Dakota State Fair, Huron	C. N. McIlvane
Sept. 14-19	Colorado State Fair, Pueblo	J. L. Beaman
Sept. 21-26	Montana State Fair, Helena	A. J. Breitenstein
Sept. 21-26	Interstate Live Stock Fair, Sioux City, Ia.	Joe Morton
Aug. 25-30	Interstate Fair and Live Stock Ass'n, St. Joseph, Mo.	H. L. Cook
Sept. 29-Oct. 2	Wyoming State Fair, Douglas	Anson Higby
Sept. 22-Oct. 3	Oklahoma State Fair, Oklahoma City	I. S. Mahon
Oct. 7-17	International Dry Farming Congress, Wichita, Kan.	Ralph H. Faxon
Oct. 7-17	International Congress of Farm Women, Wichita, Kan.	Mrs. Mary Pierce Van Zile
Nov. 16-24	American Royal Stock show, Kansas City	T. J. Wornall
Nov. 28-Dec. 5	International Stock Exposition Chicago	B. H. Heide
Jan. 18-23 '15	National Western Stock show, Denver	Fred J. Johnson

Sowing Rye for Soil Builder

IF THE fertile farms of the Missouri are to continue to produce bumper crops more attention must be given to soil building in the immediate future than has been during the past.

It is true that some of our farmers are beginning to realize the value of barnyard manure, straw and green crops as fertilizers, yet these still remain in the minority. In most cases the amount of manure and straw produced on the average farm is so far below the amount of plant food removed by annual cropping that evidence of soil depletion is becoming quite noticeable.

Green manuring is a new term to the average farmer. Where it has become known it seems so extravagant that often both the word and the practice have been completely dropped.

Sowing rye in the early fall for a manure crop is a practice that is worthy of trial by every corn belt farmer. Experiments conducted in different sections of the country have proven that green rye is equal, ton for ton, to stable manure with one small exception. Manure has half a pound of phosphoric acid per ton more than rye. This, at present commercial prices, would amount to about 3 cents.

In a ton of green rye there are eleven pounds of nitrogen, four and one-half pounds of phosphoric acid and twelve and one-half pounds of potash. A ton of green clover contains only twelve pounds of nitrogen.

In order to get the best results from rye sown on stubble land it is necessary to plow the ground as early as possible after the crop is harvested. The best results are obtained where the binder is followed by the disc. The land should be plowed about the middle of August, followed immediately by a harrow and surface packer.

The rye should be sown early in September in order that the crop may have the opportunity of covering the ground well before winter. This heavy crop of rye will answer two purposes; first, it covers the ground and keeps the wind from blowing the soil; secondly, it aids in keeping the soil covered with snow during the winter and thus prevents the disastrous leaching that occurs on soils not covered. The foliage and roots also give organic matter and ventilation to the soil.

A crop sowed early in the fall will by May 1 produce five to fifteen tons of rye to the acre. This, plowed under to a depth of six to eight inches, will give you, compared with barnyard manure, a money value of $10 to $20 per acre, produced at a cost of less than $2 per acre. In addition to the manurial value of such a crop it is grown at a time when the soil is unoccupied. It acts also as a protection to hillside lands and in case of emergencies can be used as late fall or early spring pasture.

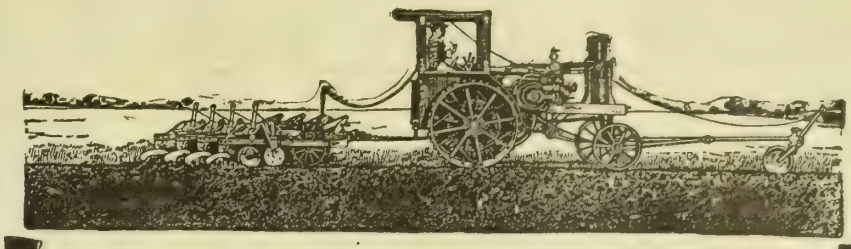
In growing rye for fertilizing purposes most farmers make the mistake of pasturing it too close in both fall and spring. In no case should it be pastured late in the spring. It should be allowed to grow as long as possible. You can't have too large a growth to plow under. Heavy vegetation plowed under is a conserver of moisture and if turned under properly will be a great aid to the growing crop even though the season is dry. Some will tell you that it will sour your soil. This is absolutely untrue. Your soil is sour only when it is cold, wet, non-ventilated and unproductive.

Farmers have a great weapon in the rye crop to aid them in battling off soil depletion. It is the cheapest fertilizer within the farmers' reach, and the greatest soil builder. Missouri Valley farmers should sow thousands of acres of rye on their wornout hillside fields this fall. If you haven't stubble land on which this can be sown, it does equally well if sown in the corn stalks early in September with small ,one horse disc drill.

Sowing Rye to Improve Depleted Soil

Hog Cholera Day August 12

The next hog cholera instruction day at the university farm has been set for August 12 instead of August 5, as was previously announced. It is the plan to hold these meetings on the second Wednesday in each month as long as the demand warrants. The instruction and demonstrations regarding hog cholera diagnosis, vaccination and measures for prevention are free. Instruction begins at 9 o'clock and lasts through the day.



Here's the Way to Raise Another Big Crop Next Year

Just as soon as you can after you are through harvesting, you should disc your ground and then plow EARLY and DEEP.

Discing will prevent rapid evaporation of moisture and deep plowing will kill the weeds and insects and open up the soil to receive the rains and air. The warm summer days supply just the right conditions for the manufacture of plant food for next year's crop, but your ground must be plowed EARLY and DEEP for this to be done.

With an Avery Tractor you can plow even if your ground is hard and dry. Heat and flies don't stop it, and you can do all your work in a short time just when it should be done.

Find out what an Avery "Light Weight" Tractor and "Self-Lift" Plow will do for you in saving expenses, saving hard work, and raising bigger crops.

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"Light-Weight" Tractors and "Self-Lift" Plows

Avery "Light-Weight" Tractors and "Self-Lift" Plows make it possible for you to change to Traction Farming successfully on **any size farm--large, medium or small.**

Avery Tractors are built in five sizes, from a little 8-16 h. p, pulling 2 or 3 plows to a big 40-80 h. p. pulling 8 to 10 plows.

One man or one boy can run the entire outfit alone. **No plowmen is needed.** Saves his wages and board. Also **saves all the hard, back-breaking work** of raising and lowering the plows by hand at the end of each furrow. Power taken from the plow wheels lifts the plows out of the ground.

The **light-weight,** simple Avery Tractors have completely outclassed the heavy-weight, complicated makes. Averys are the **simplest** tractors made today--and the **lightest weight** considering their draw bar efficiency.

Don't put off changing from horse or mule farming because of any doubts about Tractor Farming.

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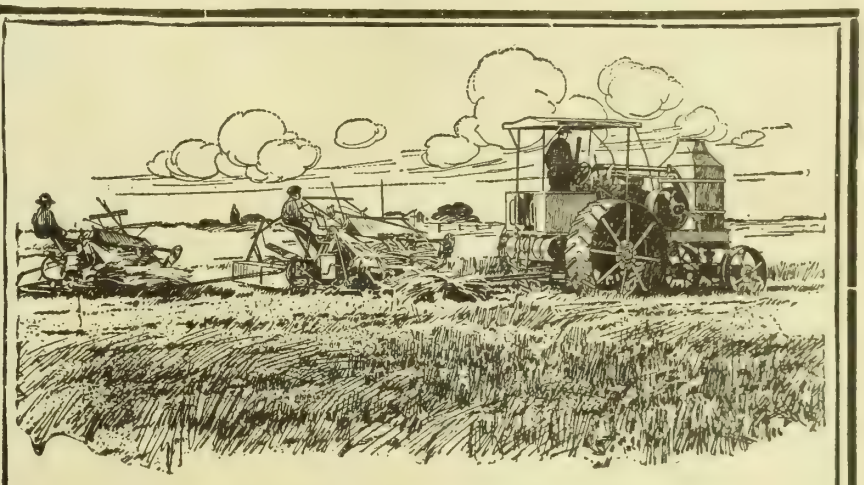

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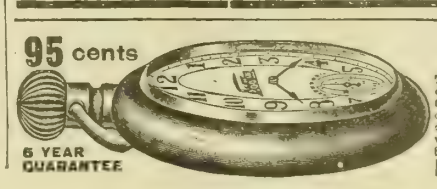

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Directory of Internal Combustion Traction Engines

MANUFACTURER.	ADDRESS.	FUEL USED.	Rated Horsepower	Speed of Tractor, Miles per Hour	Speed of Engine, Revolutions per Minute	Pulley Diam., Ins.	Pulley Face, Ins.	Wheels Front. Diam., Ins.	Wheels Front. Face, Ins.	Wheel Drive. Diam., Ins.	Wheel Drive. Face, Ins.	Capacity Kerosene Tank, Gals.	Capacity Gasoline Tank, Gals.	Capacity Water Tank, Gals.	Total Length, Inches	Total Width, Inches	Total Height, Inches	Approx. Road Wt., All Tanks Filled, Pounds	Approximate Shipping Wt., Pounds
Avery company	Peoria, Ill.	Gasoline and Kerosene.	8-16	1¾-3	600	19½	7	24	6	50	12	6¾	6¾	11.6	130	56	53	.....	4,000
			12-25	1¾-2-2½	570	19½	7	30	8	56	20	6¾	14	15.0	164	80	105	.....	7,500
			20-35	2-2½-2⅔	500	22	8½	38	10	69	20	6	21	40.0	176	90½	108	.....	11,500
			25-50	2-2½-2⅔	500	22	8½	38	10	69	20	6	21	63.3	176	90½	108	.....	12,500
			40-80	1¾-2-2¼	500	26	10	42	16	87½	24	6¾	33	76.0	215	111½	121	.....	20,000
Baker Manufacturing Co.	Springfield, Ill.	.....	40	2	900	14	8	..	12	....	18	.....	30	30.0	.....	72	52	8,000	7,000
Bull Tractor Co.	Minneapolis, Minn.	Gasoline.	5-12	4	750	10	6½	30	6	60	12	12	.....	6.0	144	78	64	3,300	2,970
Bullock Tractor Co.	Chicago, Ill.	.....	75-55	1.6-2.4-3.8	600	30	10	40	12	....	....	60	15	60.0	195	86	104	20,150	19,000
			60-45	1.6-2.4-3.8	600	30	10	40	10	....	....	60	15	140	195	86	104	18,900	17,500
			40-30	¾-2½-4	600	20	8	40	8	....	....	52	10	85.0	171	81	102	15,300	14,500
			30-20	2½-4	600	.....	....	34	4	....	....	25	.....	25.0	138	66	102	8,150	7,500
The Denning Implement Motor Co.	Cedar Rapids, Ia.	Kerosene-Gasoline.	16-24	2½-3½	800	8-12	8	30	4½	48	12	20	10	60.0	128	77	62	4,400	4,000
			24-30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diamond Iron Works	Minneapolis, Minn.	.....	70	1½ 2.2 1½	600	.....	....	42	12	96	27	100	100	100	.....	.....	.....	20,000	18,000
			36	1.8-3	600	20	10	40	8	66	15	50	50	45.0	.....	.....	.....	8,500	8,000
Electric Wheel Co.	Quincy, Ill	Gasoline.	40	b'rk 1.75-2.4-3	700	12-20	8	36	8	60	24	.....	30	7.0	108	96	120	10,000	10.000
G. W. Elliott & Co.	DeSmet, S. D.	Gasoline.	25	2½	600-800	10	5	30	5	36	48	.....	10	30.0	132	70	66	2,900	2,600
			40	2½	600-800	12	7	34	6	42	60	.....	15	40.0	156	79	78	4,600	4,200
Hart-Parr Co.	Charles City, Ia.	Kerosene.	35	1.75-2.5	500	22	7	40	8	74	12½	30	.....	30.0	182½	73	128	11,900	11,500
			40	2.2-4	400	30	9	48	18	73	20	50	6	50.0	204	96	128	16,800	16,100
			60	2.3	300	40	12	52	12	66	24	50	12	50.0	198	106	128	20.500	19.750
Heider Manufacturing Co.	Carroll, Ia.	Kerosene-Gasoline.	8-12	1-4	750	14	7	4	30	60	8	15	5	30.0	144	72	96	5,450	5,100
Hoke Tractor Co.	South Bend, Ind.	Gasoline.	40	2-5	6-1500	10	7	60	10	24	6	.....	20	....	168	70	84	4,000	4,000
Holt Manufacturing Co.	Stockton, Cal.	.....	70	1.36-3.06	500	16	10	39	16	....	....	.....	60	56.0	228	99	125	.....	22,300
			60	1.36-3.06	500	16	10	39	16	....	....	.....	60	56.0	221	99	123	.....	21,800
			30	.....	650	16	10	28	10	....	....	.....	25	9.0	212	87	65	.....	9,475
Holmes Tractor Co.	Pt. Clinton, Ohio	Gasoline.	12	1¾-4	750	12	6	36	5	48	10	.....	25	40.0	138	72	54	4,400	3,900
Huber-Anderson Manufacturing Co.	Minneapolis, Minn.	Kerosene-Gasoline.	27-47	2½-4	600	24	8	38	6	69	14	45	5	45.0	150	93	84	8,760	8,000
Imperial Machinery Co.	Minneapolis, Minn.	Gasoline-Motor Spts.	40-70	1½-3	400	30	12	60	15	96	24-30	.....	70	40.0	215	110	135	20,800	21,000
Kinnard-Haines Implement Co.	Minneapolis, Minn.	Kerosene-Gasoline.	20	2¼	700	26	8	72	16	....	....	.....	.....	.....	.....	.....	.....	.....	9,500
			30	2¼	550	32	9	84	18	....	....	.....	.....	.....	.....	.....	.....	.....	13,000
			40	2¼	450	34	10	96	24	....	....	.....	.....	.....	.....	.....	.....	.....	18,500
Kuhnert & Ryde Co.	Chicago, Ill.	.....	15	2¼-4	700	20	8	36	9	50	12	25	5	18.0	144	78	72	6.000	5.600
The Lawter Tractor Co.	St. Mary's Ohio	.....	40	3	700	20	8	48	12	25	6	25	25	....	150	82	94	6,500	6,500
Leader Engine Co.	Detroit, Mich.	.....	18	2-3½	750	14	7	38	6	54	18	.....	18	40.0	114	64	70	5,750	5,500
Mayer Bros. Manufacturing Co.	Mankato, Minn.	Kerosene, Gasoline or Distillate.	35	1½-2¼-3	750	14	8½	38	9	66	20	35	5	14.0	102	75	73	8,700	.....
			22	1½-2¼-5	900	12	6½	32	5½	54	12	25	5	12.0	87	52	60	4,200	.....
Minneapolis Steel and Machinery Co.	Minneapolis, Minn.	Kerosene-Gasoline.	15-30	1¾-2½	700	15	6½	36	10	63	14	24	3	56.0	149	78	113	9,849	9,200
			25-45	2	600	21½	8½	42	10	84	20	57	12	86.0	199	102	125	16,895	15,700
			40-65	2	500	23¼	10½	42	12	84	24	86	12	115	238	98	122	24,816	23,300
			60-110	2	500	23¼	10½	42	12	84	30	86	12	120	262	110	122	28.666	27,100
Nichols & Shepard Co.	Battle Creek, Mich.	Kerosene-Gasoline.	22	2⅛	350	24	10½	43	10	79	28	32	4	4.0	193½	114½	112	18,700	18,700
			35	2⅜	300	30	13	48	12	73	32	32	4	4.0	232	132½	121	29,700	29,700
Pioneer Tractor Co.	Winona, Minn.	Kerosene-Gasoline.	30-60	2-3-6	600	17½	12	62	12	97	24	70	15	....	264	120	130	26,000	25,000
M. Rumely Co.	Chicago, Ill.	Kerosene-Gasoline.	15-30	2-2¾	375	30	9½	38	12	70	24	35	3	....	192	94	123½	.....	16,500
			25-45	1-9	375	36	11	..	....	....	....	.....	3	....	....	....	....	.....	25,000
			30-60	1-9	375	36	11	44	16	80	30	70	3	....	228	116	132	.....	26,500
			15-30	2-1	500	18	9	39	8	61½	30	.....	.....	.....	.....	.....	.....	.....	11,673
			40-80	2½	600-600	42	12	42	12	88	20	.....	.....	.....	.....	.....	.....	.....	26,000
			40-80	.....	270	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14,450
Samson Iron Works	Stockton, Cal.	.....	25-30	2-4	525-575	20	8	32	12	48	16	30	.....	29.0	149	60	50	8,200	7.800
Strite Tractor Co.	Minneapolis, Minn.	Kerosene.	15-25	1.4-2	175-250	38	10	42	10	72	20	55	5	70.0	180	107	112	.....	15.800
			50-60	2½	375	30	12	48	14	78	30	80	10	200	216	119	126	.....	28,000
St. Paul Machinery Co.	St. Paul, Minn.	.....	20-40	2⅓-4	600	20	10	42	10	66	16	40	20	5.0	177	94	82	10,270	10,000
United Traction Co.	Canton, S. D.	Gasoline.	30-60	2¾	550	33	8	40	14	60	24	.....	65	250	237	84	104	13,800	13,000
Waterloo Gas Engine Co.	Waterloo, Ia.	Kerosene.	20	3	100-750	14	6	28	4¾	52	10	9	2	11.0	143	83	63	4,840	4,770

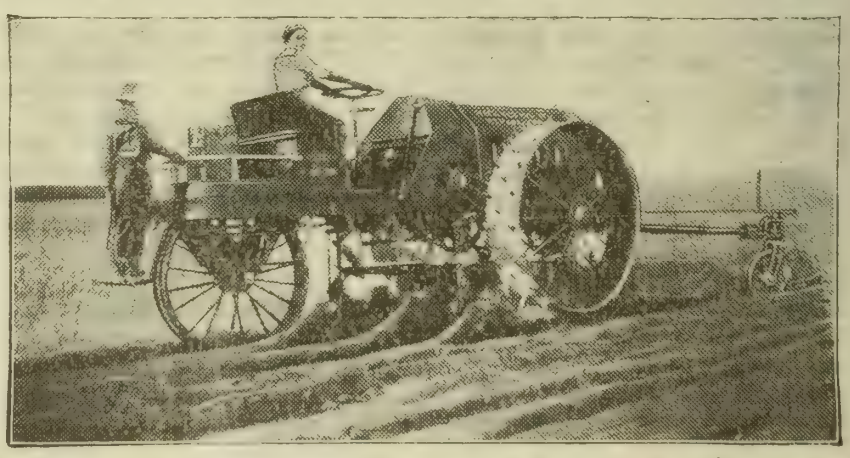
Machinery on the Farm

Every farm justifies a careful and judicious investment in farm machinery. Like all other lints of business, there must be observed a careful and considerate outlay in the running expenses of the farm. There are many farm implements, tools and machinery that every farm needs and must have in order that the work be carried on economically and profitably. More than the real need is a waste and counts against the conserving of economical farm industry.

While it is poor economy to do without needed machinery, serious inroads and leaks have been introduced into farm management by some farmers in years gone by where a too liberal purchase of farm machinery was indulged in because it could be bought on time. There is such a thing as acquiring unnecessary debt and paying high rates of interest that cripple the business of well meaning and industrious men. Some persons have kept themselves poor and their credit poor by their mania for buying machinery and their careless practices in handling and preserving it after it gets into their possession. Such persons are not very numerous among the farmers of the present day. Yet there are places all over the farming communities where the barn yards, feed lots and orchards are the common storage for the farm machinery, when not in use. Machine sheds are not regarded of any value on these farms. The preservation of the machine has not been taken into account.

It may not be out of place to suggest in this relation that the farmer who treats his machines and farm implements in this way gets but little credit for his intelligence and sense of management. A sane man who would stop for a moment and estimate the cost of a machine shed or two or three sheds, even, conveniently located so as to be easy of access from the horse stable where the teams are kept, and the difference in wear between outdoor and indoor housing of machinery will not argue the case, but provide shelter at once. There is nothing so damaging to the reputation of the farmer as careless, slothful methods and practices in the handling of his business, and in this, there is no better key to the situation than to see the fence and barn yard lined up with machinery of all sorts new and old.

This is now the beginning of the season of farm machinery abuse. Corn planters, cultivators, plows, harrows, where are they? Under the machine shed, out in the field where the team was unhitched when the last work with them was completed, or are they stored in the barn yard along the fence to decay and rust and rot under influences of rain, sunshine ,heat, cold ,etc.



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HACKNEY MANUFACTURING COMPANY, 574 Prior Avenue, St. Paul, Minn.

This machine will be at the Fremont, Neb., Plowing Demonstration, August 15 to 22. Don't fail to see it work.

Hog Cholera

Its Prevention and Treatment

THE most complete and practical series of articles ever published on hog cholera has just been completed in the Twentieth Century Farmer. We have taken this matter up in the interests of the farmer and stock raiser. We have put at the head of this investigation a practical man—a man who has had twenty-five years experience in raising hogs and has been a successful competitor for premiums in the state fairs of Nebraska and Iowa, a man who is recognized by the hog raisers of these states as a practical hog man. He has not taken the matter up from the standpoint of the veterinarian, though he has consulted veterinarians in the employ of the government, the colleges and the states, as well as many veterinarians practicing independently among farmers, and has given careful consideration to their opinions. He has not treated the subject from the standpoint of any one farmer, or the farmers of any one locality, nor based his judgment on the experience of men under identical conditions. He has personally interviewed farmers and breeders in three states—Nebraska, Iowa and Kansas.

The writer's years of experience in the hog raising business have enabled him to weigh this great mass of information collected and draw from it conclusions that should be of great value to any man interested in keeping cholera out of his herd or combating it once it gets into his herd, in a rational and practical manner. The writer is not a scientist and has not written a scientific treatise; he discusses this vital subject in the plain, every-day language of the farm and market.

These articles have been so persistently called for that we have collected them into pamphlet form, and this pamphlet is now ready for distribution. We are making a charge of 5c each to cover postage and handling. If you want one of these bulletins, fill out and send the attached coupon before they are all gone.

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A settler wanting money to improve his farm can get same from the state school fund on long time and easy terms. We have cultivated lands here for four years, 1,000 acres in crops now, and looking fine. Modern conditions everywhere.

You can see our lands for least money. Settle very near the finest market with a macadamized road most of the way.

We own these lands and will make a very low price. We are eager to complete this settlement.

You know five cows here will support the family and yield a profit besides. Who couldn't care for five cows? We give the buyer a specially low rate ticket so the cost of viewing our lands is but a few dollars. Our automobile meets you at the depot and shows it in a few hours, so the total cost is very little compared with others, besides it's an easy trip, and gives you an outing you will enjoy.

Write me today while it's on your mind—asking any questions that occur to you.

N. P. WEST, President

WEST LAND DEVELOPMENT COMPANY

Inc. for $100,000

814 Majestic Bldg. Denver, Colo.

BIG CROPS IN SHALLOW WATER DISTRICT.

This photo was taken in the Shallow Water District northeastern Colorado near the South Platte river. We are selling such productive land $15 to $35 per acre; easy terms. 60 acres free breaking if bought before August 10th. Have 75 farms to select from. Don't miss these bargains. We are closing out this summer the last of the Murray Johnson ranches, scattered amongst improved farms selling $35 to $55 per acre. Close markets; good, level roads; healthy climate; good water. Wheat yielding 35 to 45 bu.; alfalfa, 3 to 4 tons; corn 35 to 45 bu. per acre. Splendid orchard country. Write at once for circulars and excursion rates. Agents wanted. Platte River Valley Land Co., 6th Floor State Bank Bldg., Omaha, Neb.

Red River Valley Lands

are the equal of any anywhere in the world. The black top soil runs from 18 inches to several feet in depth. Its rotted vegetation mixed with mineral. No fertilizer ever needed if its fertility is fairly well conserved.

We own 100 improved farms. We have too many, more than we can handle well. They are great bargains at our prices. They are worth much more, but we bought years ago, so we can give you the advantage.

But to really appreciate what we say, you should get our fine illustrated booklet, which gives you a "birds-eye" view of the country. Could you see it, you would be carried away with it.

Write me today, asking any question that comes to your mind. We have every convenience you have where you are—maybe more indeed—at about one-third of what your land will bring with an equal or better producing power. You will admit it when you see it.

T. W. McLEAN, General Manager Red River Valley Land Company, Fargo, North Dakota.

To What Depth Should We Plow for Wheat

(CONTINUED FROM PAGE FIVE)

more profitable if done by tractor, provided good judgment is exercised in the selection.

Increase Depth Gradually

Except in the western portion of the wheat belt, any field that has not been plowed more than three or four inches deep in past seasons should not be plowed even to the medium depth noted—seven inches. The wheat plant has a surface root system and its feeding roots are confined to the upper soil and subsoil layers. Any practice that tends to place on the surface a large amount of subsoil which is not broken down cannot but be detrimental to maximum production. Under such conditions the crop would suffer from lack of plant food; perhaps not so much because the amount of plant food would be low, but because of its inability to take it from the soil. Again, it would be difficult to conserve moisture.

In any case, then, the depth of plowing should be increased gradually—in most soils not more than one inch per season in summer plowed land. In the subhumid and humid sections, if plowing has been five inches deep previous to 1914, the depth of plowing this season should not be more than six inches in all average soils. There are a few soils in these sections in which the depth of plowing may be increased more rapidly because there is no well marked differentiation in the surface, sub-surface and subsoil layers. But these soils are few, and unless the farmer is absolutely sure that he has such a soil experience would seem to demonstrate the advisability of increasing gradually the depth of plowing.

In the soils of the arid and semi-arid sections of the wheat belt there is generally no well marked line of differentiation or demarcation in the plant food supply, in particular between the surface, subsurface and subsoil. Here under most conditions there is no particular reason why the depth of plowing may not be increased more than one inch per year. Many soils in these sections have such open, sandy subsurface and subsoil that more than medium deep plowing is unnecessary in wheat growing.

Advantages of Medium Plowing

The advantages of medium deep plowing must be quite generally known and only brief mention need be made of them here. Perhaps the greatest advantage is the greater water-retaining power of the deeply plowed field. In general, the yield of wheat in the central west and southwest is largely limited by the amount of moisture present. It is requisite that our wheat growers realize this factor if the most profitable yields are to be obtained. A second important advantage from medium deep plowing is the increased feeding area given to the root system of the plants. Yields are many times cut short because the feeding roots are unable to penetrate the subsurface soil and the subsoil.

It is evident from the experimental results given and from farmers' experiences that successful wheat growing demands medium deep plowing. Until the wheat growers realize the importance of such plowing their yields must in many seasons be limited.

All measurements in this article are landside measurements.

C. D. Hilles, formerly private secretary to President Taft, now president of the New York Juvenile Asylum, stated recently that bad teeth make bad boys. He declared that by "patching up the teeth of delinquent boys he is able to send them back home fully 90 per cent good instead of 90 per cent bad."

"If you want knowledge you must toil for it, and if pleasure you must toil for it. Toil is the law. Pleasure comes through toil, and not by self-indulgence and indolence. When one gets to love his work his life is a happy one."—Ruskin.

Concrete's Safeguard

Protect your concrete investment with Lehigh cement. It's the best insurance against depreciation and expensive upkeep.

Take no chance. Be on the safe side. Specify

LEHIGH PORTLAND CEMENT

Its strength is exceptionally high and it increases in strength each year. Structures built with it grow stronger with time.

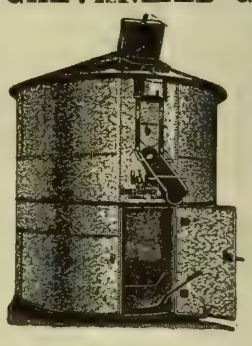
Send for our book, "The Modern Farmer." It tells all about Lehigh and how to build concrete foundations and other farm buildings.

Lehigh Portland Cement Co.
327 Consumers Bldg., Chicago, Ill.
723 Young Bldg., Allentown, Pa.

Use concrete for foundation construction It lasts forever—will stand the heaviest load and strain, and is fireproof and ratproof. Best for house, barn and corncribs.

121A

GALVANIZED GRAIN BINS



These are the original and perfect Grain Bins and Corn Cribs.

Warranted to protect your grain against rats, storms and fires, never to burst, give perfect ventilation, made from best material obtainable.

Does not break, rot or burn, lasts a life time, COSTS LESS than a wood grainery or corn crib.

We make all sizes, from 150 to 2,500 bushel capacity at lowest prices.

Write now for free circulars of Grain Bins, Perforated Corn Cribs, Hollow-walled Metal and Wood Silos, Cypress and Metal Tanks, Culverts, etc.

Kretchmer Mfg. Co., Council Bluffs, Ia.

FIR LUMBER

Quality Guaranteed. Direct from our Mills to you. Large saving. Pay when car is unloaded and checked. Ask for Lumber and Millwork Catalog.

KEYSTONE LUMBER CO.
DEPT. R. TACOMA, WASH.

ALFALFA $6.50 PER BU.

Best Hardy Non-Irrigated Seed 99.8% Pure

99% germination, $9.00. Government tested. Absolutely guaranteed Northern grown, extremely hardy. No seed better. Have Turkestan Alfalfa, Sweet Clover, New Timothy, grass seed all kinds. Ask for our latest 60-page book on growing Alfalfa. 76-page catalog and samples. **All Sent Free.** We can save you money. Write today.
A. A. BERRY SEED CO., Box 407 CLARINDA, IOWA

ALFALFA

Now is the time to get ready to sow alfalfa. July and August good months. Get our book, Alfalfa, The Wonder Crop, Free. Full information on how to successfully grow alfalfa. How to prepare the ground, protect and harvest. Earn 24% net on $1,000 an acre. Also tells about "NITRAGIN," the famous inoculator. Write today.
Galloway Bros.-Bowman Co., 265 Galloway Station, Waterloo, Iowa

Bargain Prices on STEEL Shingles

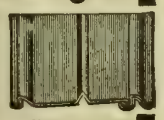
1,000,000 Sq. Ft. Priced For Quick Selling! Freight Paid!

This is the greatest roofing offer you ever heard of. A special summer price made on the famous Edwards Reo Steel Shingles that never rot, rust, burn or wear out. Now you can have a genuine steel roof *at less cost than best-grade wood shingles* Come in big sheets. Lay 100 or more at a time with only hammer and nails. No painting, no tinsmith needed. Lay over old roof or sheathing if you wish.

Edwards STEEL Shingles

At Lowest Factory Prices

Our exclusive Tightcote process means *extra heavy* galvanizing *after* the sheet is cut and stamped. No raw edges, no chance for rust or corrosion *anywhere*. Patent Interlock gives a tight, close-fitting overlap, protects nail-holes, prevents bucking in wind $10,000 Guarantee Bond against lightning We are world's largest makers of Steel Shingles, V-Crimp, Corrugated, Standing Seam, etc., painted or galvanized, and quote you amazingly low prices freight paid. Write today, give size of roof if possible.

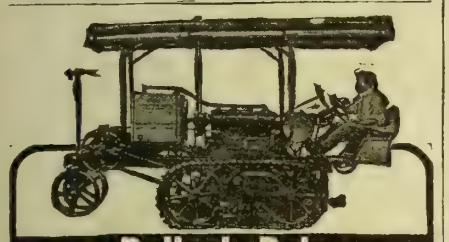


"CRIPLOCK" ROOFING

"PERFECTION" ROOFING

FREE BOOK and SAMPLE to test galvanized roofing We send sample and directions free Make your own comparisons Ask for Book No 888.

THE EDWARDS MFG. COMPANY
848-898 Lock St. CINCINNATI, OHIO



Bullock Baby Creeping Grip Tractor

Another notable achievement of the Bullock Tractor Co. Pronounced by expert agriculturists the ideal type and size tractor for small farms. Its low price, adaptability to do every kind of traction work and its low cost of operation makes it quick and big profit-maker on farms even as small as 160 acres.

One important feature of this tractor is that it steers with the creepers at the same time with the front wheels, permitting short turns and operating close into fence corners; the machine can turn within its own length.

Interesting literature describing the Bullock Baby 90-20 H P. also 3 larger sizes with prices sent on request. Address

BULLOCK TRACTOR CO.
1806 Diversey Parkway, Chicago

Works Easy On Any Job

Especially Adapted for Small Farms and Orchard Plowing.

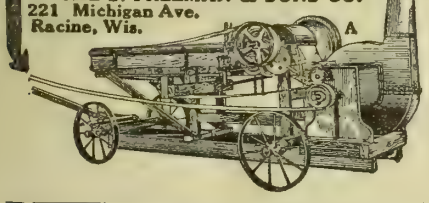
Get Prices

The FREEMAN Ensilage Cutter

Best for Over 30 Years

Strongest, safest, most durable and capable cutter ever perfected. Runs smoother, faster, cuts cleaner, uses less power. Adjustable knives, large feed rolls, **safety fly wheel, safety stop lever**. Blower-elevator fills silo quickly, cuts expense, prevents waste. We also build (patented) **Enclosed Steel Carriers** which keep feed from blowing away. Get full particulars of the Freeman Line before buying—it means satisfaction and money-saving to you. **Write for catalog today.**

THE S. FREEMAN & SONS CO.
221 Michigan Ave.
Racine, Wis.

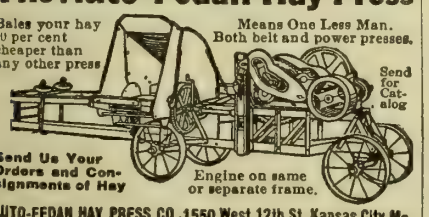


The Auto-Fedan Hay Press

Bales your hay 20 per cent cheaper than any other press

Means One Less Man. Both belt and power presses.

Send for Catalog



Send Us Your Orders and Consignments of Hay

Engine on same or separate frame.

AUTO-FEDAN HAY PRESS CO., 1550 West 12th St., Kansas City, Mo.

Power Demonstration

(CONTINUED FROM PAGE THREE)

mont is not in the midst of the woods, but you are probably engineer enough to size up the merits of an engine for logging purposes after seeing it work at a variety of other things and talking with the representatives.

Maybe you will insist on a spring mounting. Come to Fremont and you will find it. You may want an engine with a belt pulley for sawing logs. You need not come to Fremont to be sure of getting that, but you will probably find there some devices for loading logs that will appeal to you especially.

You will want an engine which can twist and turn on a crooked wood road and still be easy to steer. Come to Fremont and make the tractor men put their big iron horses through their paces. Offer an order to the manufacturer who puts up the best exhibition of easy handling and you will get up a pretty good contest right there on the grounds, with yourself as the judge.

You can imagine also that the big loads of road material which some of the tractors will probably haul are big loads of logs. You will find the manufacturers accommodating about showing their engines on rough roads. If no bad roads can be found within reasonable distance, there will be the plowed fields as a substitute; they will be as soft and bumpy as a new trail through the forest.

Everyone is Interested

If you are in none of the classes we have mentioned, you may still be interested in the tractor from an engineering standpoint. Since the great Winnipeg motor contest has been discontinued, the Fremont show must take its place as the meeting ground for all men connected with the industry, whether as manufacturers, designers, shopmen, inspectors, salesmen, advertising men, dealers or customers. The Winnipeg motor contest undoubtedly advanced the state of the tractor industry enormously, not only by creating confidence in the manufacturers who were willing to submit to the tests, but by providing a pleasant and easy method for the exchange of ideas and experiences among manufacturers who were seriously trying to adapt mechanical power to farming and contracting work.

The Fremont demonstration, carefully carried out, as it undoubtedly will be, and more accessible to the great mass of corn-belt farmers, should prove equally successful in promoting the solution of this problem.

Those who are on the ground earliest and stay the longest will receive the greatest benefit. Those who ask the most questions, take the most notes and use their eyes and ears the hardest will come the nearest to a hundred-fold return on the cost of their trip.

If you are a farmer, trying to decide as to whether a tractor is a practicable thing on your farm; a thresherman, in the market for a new engine; a contractor or county commissioner, with good roads at heart; a lumberman, or freighting contractor; an engineer, teacher, manufacturer or student, a salesman, a dealer or a mere newspaper man—if you are in any way interested in the subject of tractors, and live within two days' journey, the writer for one cannot figure how you can afford to miss the National Power Farming Demonstration at Fremont.

Not only do the middlemen make many profits on products that go from the farmer to the city, but in coming back to him also. A southern paper has followed the travels of a napkin, originating as cotton in a southern state, sold to a broker, taken to a New England mill, from which it is sold to another broker, passed on to the wholesaler or jobber, sold to the retailer and perhaps sold by him back to the man who raised the original cotton. Thus does our mercerized cotton travel. Unavoidable? Perhaps.

WINCHESTER

TRADE MARK

Light Weight Hammerless Repeating Shotguns

12, 16 AND 20 GAUGES, MODEL 1912

This is the lightest, strongest and handsomest repeating shotgun made. Although light, it has surpassing strength, because all the metal parts are made of Nickel steel, which is twice as strong as ordinary steel. It is simple to load and unload, easy to take down, and works with an ease and smoothness not found in repeaters of other makes. Look one of these guns over at your dealer's. They are

"THE MOST PERFECT REPEATERS."

"FLOUR CITY" TRACTORS

A Complete Line to Choose From

Don't lose sight of the fact that the "FLOUR CITY" is manufactured in small as well as large types—15, 20, 30 and 40 H. P. respectively the draw bar power of the four sizes we manufacture. They are all the same design throughout and are free from those freakish ideas or notions which follow in the wake of a successful line. They are all equipped with four cylinder vertical motors and bevel gear transmission. They are the oldest four cylinder tractor in the field and their development has been of that careful, conservative and conscientious order, which stands for the BEST.

Our new Booklet of Testimonials will be sent on request. It is the best evidence you can get

SEE the "FLOUR CITY" Tractor at the FREMONT, NEB., Demonstration, August 17-22.

KINNARD-HAINES CO.,
844 44th Ave. No.,
Minneapolis, Minn.

Granite Harvester Oil

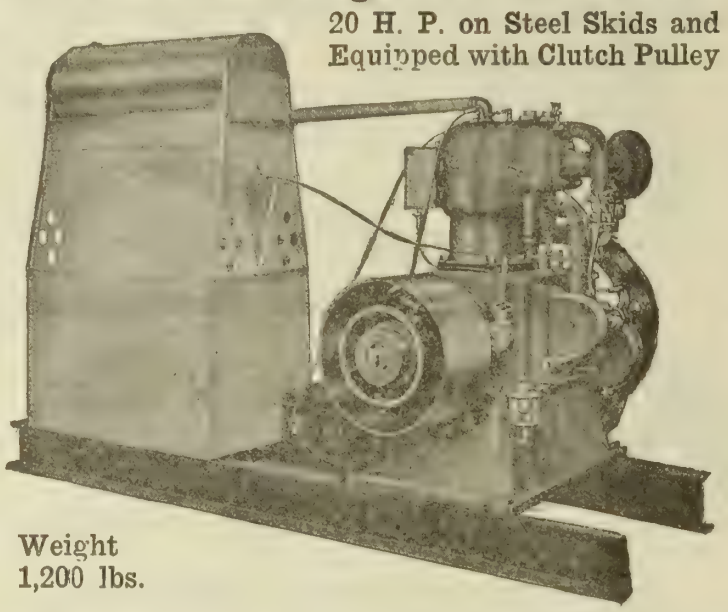
is a heavy oil for farm machines; it stays where it is put, and takes up all rattle and play. Reduces friction—never rusts or gums.

For sale by all dealers or

STANDARD OIL COMPANY
(NEBRASKA)
OMAHA

See Cushman Engines at Fremont

20 H. P. on Steel Skids and Equipped with Clutch Pulley



Weight
1,200 lbs.

We shall have 4 H. P. and 20 H. P. Cushman engines on demonstration at Fremont, Neb., during the Tractor Plow Demonstration, August 17 to 22.

These are the famous light weight, high powered, all-purpose engines that have attracted so much attention because of the satisfaction they give on all farm work.

If you plan to visit Fremont during the demonstration, better make a note to use the Cushman Engine in operation. If you do not expect to be there, drop us a line for complete catalog explaining the advantages of light weight steady Cushman Engines for all farm work, as compared with the heavy engines.

Cushman Motor Works, 2037 N Street LINCOLN, NEB.

Public Auction!

400,000 Acres State Land in Eastern Colorado—Directly Served by Rock Island Lines

The State Land Board of Colorado will offer this land at Colorado Springs, beginning September 3, 1914, and at Limon, beginning September 10, 1914. One-tenth of the purchase price cash at time of sale, the balance in 18 equal annual payments with interest at 6 per cent.

The law provides that the land can be sold only to persons who will become actual settlers and at not less than the appraised value. Most of the land has been appraised at $5.00 per acre.

This sale is a great opportunity to buy good land cheap—most of the cost to be paid out of the returns from the land.

Professor H. M. Cottrell, an expert of national reputation, formerly with the Kansas and Colorado Agricultural Colleges, now in charge of the Rock Island Lines' Department of Agriculture has made a careful study of the land. He advises this land is particularly adapted to dairying and live stock with sure feed and forage crops.

The territory has the advantage of five great markets. Colorado Springs and the Cripple Creek mining district that produces $10,000,000 in gold yearly, Denver, Pueblo, Kansas City and Omaha.

Much of this land is in sight of Pike's Peak. It is one of the most healthful districts in the world, 320 days of sunshine each year, delightful living conditions summer and winter.

Inspect the land before the sale and select the exact place you want for a home.

Low fares for the round trip via Rock Island Lines.

The Rock Island Lines' Department of Agriculture is at the service of all farmers now living along the Rock Island Lines and those who are thinking of moving there. Take advantage of this means to obtain greater efficiency and profits as well as a better location.

Write today for full information about these lands.

Rock Island

L. M. ALLEN, Passenger Traffic Manager
Rock Island Lines
731 La Salle Station, Chicago

The statements herein made have been fully investigated and can be absolutely relied upon.

See the Tractor Directory on Page 14 of This Issue

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

THERE are half a dozen ways to preserve eggs, from paraffine to lime water and water glass. The last two ways are surest, the water-glass method occupying first place in keeping eggs for several months just as fresh as new.

Usually when eggs are most plentiful and lowest in price the most eggs are preserved, and yet this is not always the best time, as in the spring there are bound to be many infertile eggs, all of which can be done away with in the fall by selling off the cockerels or penning them. This year eggs are holding steadily at a low price on the farms, lower than in March and April, and now is an excellent time to be putting some away in stone jars by any one of the leading methods, but preferably in water glass, as in this preparation it is not at all necessary to bother about whether the eggs are fertile or infertile, just so they are fresh and clean.

Experiment stations have made extended tests of the different ways of keeping eggs. Jars have been filled with brine, and jars with the lime preparation, and jars with the water glass. The eggs come out of the brine strongly salty of taste from the first, and out of the lime water with a pink tinge to the white and often an odd taste, and if kept long the majority rotten; but out of the water glass, if put down aright, they come out just about as they went in, with the taste of having been laid yesterday, while the white stands up as firm and beats up as well as a fresh egg. And so, if you would sell eggs at winter prices, or nearly so, now is the time to put down the late summer eggs, as well as those yet to come.

Putting down eggs in water glass, which is silicate of soda, a solution of soda and sand, should not cost you over 1 cent for a dozen eggs. It is made in two ways—a powder form and a liquid form. The latter resembles molasses, though not quite so thick, and has a slightly yellowish tinge. Put up in quart or gallon jars is the handiest form for the beginner. One dollar a gallon is price enough to pay for it and leave the dealer a good margin of profit. Always ask for the commercial water glass, as there is another kind that is chemically pure and is used for many scientific purposes. This kind you do not want, as it is likely to be alkaline enough to spoil the eggs. Get the commercial water glass, and to every pint of it or part add nine pints or parts of boiled and cooled water. If you are putting fresh eggs each day into the jar, you may not need to use ten pints to cover those put in that day, and so divide it by parts instead of pints.

Eggs must go in fresh; they should not be touched with water before putting them down. The jar must be set in a cool, dry place, where no sunshine rests upon it. It must be kept covered. As you put the solution over the eggs be sure that you have beaten and thoroughly churned it. An egg beater distributes the particles of the water glass solution in the water added to it. Never use the same water for a second packing of eggs.

Growing, Laying and Market Ration

L. E. B., Nebraska: Will you please publish a not too expensive ration for growing chicks, for egg production and meat?

Answer—A good ration for growing chicks, after 2 months of age, is: Equal amounts of corn and wheat, one-half this amount of oats, from one-fifth to one-tenth beef scrap, according to what animal matter they may pick up on range; to this should be added just what charcoal they care to pick up. Measure something in this way: Twenty pounds of corn, twenty pounds of wheat, ten pounds of oats, from two to four pounds of good beef scrap. Including green stuff, there is no better growing ration than this, and if wheat is more plentiful than corn, it will do just as well, if not better, for growing young stock to increase the wheat thirty pounds in proportion and drop back the corn to ten pounds, but never drop it lower than this, and if you must do so add buckwheat or sunflower seed or something equally high in fat production in its place. Chicks grow fine on just wheat and corn alone.

For a laying ration the proportion for corn, wheat and oats is much the same as for growing chicks. To this can be added kafir and buckwheat, say in this proportion: Cracked corn, sixty pounds; wheat, sixty pounds; whole oats, forty pounds; kafir and buckwheat and beef scrap, ten pounds each. This is for scratching. As with the chickens, you will get good results from merely the first two. Laying hens must, every morning or every other morning or evening, be given a full mash feed. If you give this, then omit the beef scrap from the scratching feed and add it to the mash. This is one good formula for a cheap mash: Boiled vegetables, five parts; shorts or bran, two parts; cornmeal, two parts; prepared meat of some kind, one part.

Fattening for market means a larger proportion of corn to any mixture you make up for the birds. Cracked corn wet up with water or any kind of milk, preferably sour, will put on meat faster than any evenly balanced ration that I know. But remember that grit and charcoal in plenty must be kept handy to fattening birds. Digestion must be aided.

Bone Meal and Wild Mustard

There is nothing better, outside of good food and water, for growing chicks than a little bone meal added to the feed once a day. It strengthens the bones and hurries up the feathers.

***

When the wild mustard patch gets ripe save the seeds to mix in the mash for the next winter laying hens; it is a safe stimulant.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Best of All

'Twas a brown little, plain little, thin little book;
In passing you hardly would give it one look.
But the children all loved it, "Because," they all cried,
"'Tis full of nice stories—'tis lovely inside!"

'Twas a brown little, plain little, thin little girl;
Her nose was a failure, her hair wouldn't curl,
But the children all loved her, "Because," they all cried,
"She's so kind and so bright and so lovely inside!"

—Minnie Leona Upton, in Youth's Companion.

The Editor's Corner

It is too bad we have not room to print all the interesting letters that the last two weeks have brought us. There was one about a boy that wouldn't learn to swim. It is almost impossible to believe this could be true, for most boys certainly like to swim. Trips! We had a lot of trips. There were trips to Niagara Falls, to Idaho and to California that were especially interesting. Then there was a story of a flood, when a creek overflowed and they couldn't go to Sunday school. There was one about a snake cactus that scared a tramp. There were several about catching rabbits and taming them and one about trying to catch a squirrel. Of course, there were a number, as always, about the pets. One little girl tried to write a fairy story. Fairy stories are only good when they are different from those we have already read and full of interesting things. It is harder to make up interesting things than it is to write the unusual things that actually happen. One writer says she has tried four times and has not had anything printed yet. This is too bad, but of course, we can not print her stories if the others are better, as it would not be fair to the others. And, by the way, there are some who have written much more than four times without having anything printed.

We are sorry to tell you that one of the verses printed in connection with a past picture contest has been found to have been copied from an advertisement. By changing two words, the writer sent it in as original. We are sorry any of our readers should do such an unfair thing, but glad it did not receive a prize, thus depriving someone of a prize fairly won. One of our readers sent us a letter containing a copy of the verse from which this was taken. We are sorry he did not sign his whole name, as it would not have been printed, and it is not considered very nice to write an anonymous letter about anything.

HOME EDITOR.

(Prize Story)

Visit to My Uncle's Farm

By Tena Loftin, Aged 14, Eminence, Missouri.

I live in town and I think it is a treat to go to the country on a visit. One Friday evening, when I came home from school, my aunt and uncle from the country were at our house. They had come to town and had come to spend the night with us. We had not been to visit them for over a year, and that night my uncle asked why we couldn't go home with them. At first mamma would not go, but after some little coaxing she gave her consent.

It was a distance of twenty miles to my uncle's farm, and as there was no train we had to go in the wagon. We started about 9 o'clock and at 12 we ate lunch, and just after dinner it began to rain, but we did not get much wet.

We came to the farm just as the sun was sinking behind the beautiful Ozark hills. The geese and ducks were coming up from the river, and the cows had come from the pasture and were standing at the gate waiting to be milked. In the barn yard were the goats, horses and chickens. This is the scene I witnessed.

In the kitchen a fire was burning brightly in the range, and supper was prepared for us in the dining room. After eating our supper and washing the dishes, my two cousins and I went upstairs to look at pictures, but after a while I was so tired I went to bed.

The next day we went to see a neighbor girl, and we had a nice time. We went boat riding and played some games. The following evening my aunt and cousins, mamma and I went to a large spring and stayed all the evening.

The next day my cousin and I went to the river to get some water and were told to hurry back, but we thought we would have a boat ride before we went back to the house. We climbed into a boat and I told her I was going to see if I could row the boat across the river. She gave her consent and I tried it. We were almost across when my oar got caught in an old root and in trying to save it I fell out. The water was not deep, only a little above my knees, but it was awfully muddy. My dress was a sight.

Then we got our water and went back to the house, and after receiving a severe scolding from mamma, I went upstairs and changed my clothes and came down, ready for another boat ride; but I was awfully ashamed that I did not obey mamma and hurry back, as she had told me.

(Honorable Mention)

Our Birthday Dinner

By Colean Armontrout, Aged 13, Pryor, Okl.

Last year, on the seventeenth of June, our neighbor had a birthday. She was sixty-three years old. It was a nice warm day, and clear. The birds were singing in the trees. She didn't know we were going to surprise her. We were the second ones there, after the people began to come, and she went into the kitchen and commenced to prepare dinner. But the people kept coming, and finally they told her. How funny she looked!

Eighty-four were there. We went about two blocks from the house and set out our dinner on the ground under the big trees. We had everything nice to eat and there was a well down there, and we made lemonade. It was a jolly evening. A man was there with an auto, and a lot of us went auto riding. We went by the well where they were drilling for oil.

This June when her birthday passed, we all thought of that time. She is getting old. I believe in being good to old people, for we all have to be old. She received for presents a set of silver knives and forks and a pair of glasses.

Flossie and Kitty

By Bessie Cheser, Aged 11 Fulton, South Dakota.

I have a nice little dog and pony. My dog's name is Flossie and my pony's name is Kitty. We have lots of fun. I play horse with my dog and I hide from her and she finds me. Flossie had eleven little puppies once, and I sold a lot and gave a lot away. I sold them for $5, $10 and $15 apiece. They were Scotch collies. If Flossie sees a little chicken fall in the swill pail she will go and pick it out and lick it off clean.

Now, I will tell you about my pony. I drive her everywhere and she runs away lots of times. One time when I was going to town she got scared at a big white hog and ran half a mile; then I took the whip and gave her a good whipping and she never ran away after that. I have lots of fun with her and my dog.

I am keeping house for papa. My mamma is dead. I go to church on Sundays and during the week I go visiting in the afternoons. My dog goes with me and rides in the buggy. I have a new buggy.

One night papa and I filled our straw tick, and we had to go half a mile, so we drove Kitty. She got scared and started to run, and papa and I had to walk and lead her. After we had filled up the straw tick we set the straw pile afire, and Flossie was so scared she ran home. Then we went home, too.

Additional Stories

Bernice Bell, Ord, Neb.; Charles Einspahr, Imperial, Neb.; Minnie Forbes, Palmer, Neb.; Vera Bock, Denison, Ia.; Lillian Schuster, Rudd, Ia.; Elfrida Hintz, Randolph, Ia.; Fred Hall, Oak Hill, Kan.; Lila Kinsinger, Meade, Kan.; Rose Potts, Lebanon, S. D.; Joe Delio, Emma, Colo.; Frances M. Sheldon, Ten Sheep, Wyo.

Bad Fairies

Of all the bad fairies who meddle with life,
The worst are a mischievous elf and his wife;
So whatever you're doing, beware of these two—
They are "Haven't Much Time" and "I Guess It Will Do."

—St. Nicholas.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

Picture Contest No. 15

Write a verse of four lines about this picture. Each of the two children writing the best one will receive a book as a prize. Make it interesting. Say the things you would think if you really saw this little girl. Write plainly, giving your name, age and address. Remember that neatness, spelling, punctuation and the age of the writer are all considered, as well as the quality of the verse, in awarding prizes. Verses must be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha, and must reach this office not later than August 8.

Be An Auto Expert

and get $100 to $150 a month or more. There are not enough experienced men to fill good jobs because the automobile industry is growing faster than men can be trained. Equip yourself as expert mechanic or for entering the automobile business for yourself. Ours is the largest, best equipped auto school in the West. You get complete instruction in auto machine shops, many makes of autos. Individual chauffeur work in large touring cars. Write for booklet.

NATIONAL AUTO TRAINING ASS'N.
2852 North 20th Street OMAHA, NEB.

School of Watchmaking, Jewelry Work and Engraving

Young man what have you made up your mind that you are going to be a doctor, preacher, lawyer, merchant, or are you of a mechanical turn of mind? If so, how would you like to become a watchmaker and also take jewelry work? It is a clean business and a trade that commands good salaries, or you can get into business for yourself.

Over five hundred watchmakers and jewelers in Kansas, Nebraska and Iowa have learned their trade at this school. Write to the Horological Department, Bradley Polytechnic Institute, Peoria, Ill., asking for latest catalogue.

Of Interest to Our Women Readers

Belief

If I were asked what I believe, I could
not help but say,
The gentle and the simple creeds of boy-
hood's yesterday;
The tender faith in Bible things, the
truth, the way, the right;
The golden rule to live one's life ac-
cording to the light;
And everywhere the thought of God, that
we are everywhere
The children of one Father's love and of
His heavenly care.

If I were asked what I believe, I know
my thoughts would go
Back to the little child at prayer in the
soft evenglow;
And I can think of nothing else so beau-
tiful, so sweet,
As prayer beside a mother's knee, who
tried to lead our feet
In paths of righteousness and truth,
where none could go astray
From that dear life of simple trust in
childhood's yesterday.

If I were asked what I believe, I'd have
to say, as then,
A simple faith in God's command, a man-
lier trust 'mong men,
A clear and more abiding course toward
that which men might call
The straight-out-from-the-shoulder faith
of Peter and of Paul;
The teachings, most of all, that came to
us in Sunday school,
Way back in little childhood's land, the
land of Golden Rule.

—Baltimore Sun.

Our Home Chat

It is with pleasure that we give most of our page in this issue to our old friend, Mrs. Cornman, to tell of her experience in nursing a typhoid fever case. Typhoid period is with us. One case often means dozens in the same neighborhood, and all too frequently one or more deaths. While we heartily hope that none of you may need the information and advice contained in this letter yet it is well for us all to understand the precautions to be observed in guarding against this disease and to be prepared in case we should be needed to help care for some victim. We are not giving you a doctor's treatise on this subject, but just the experience of a woman and a mother—one of yourselves—who has successfully performed a duty that may devolve upon any one of you at any time.

HOME EDITOR.

Nursing a Typhoid Case

There are few diseases more to be dreaded than typhoid fever, and there are few where recovery depends so much on good nursing. The best physicians acknowledge that they can do little without the co-operation of an intelligent nurse, who will give the patient her undivided attention, not only until the crisis is past, but afterward, until complete recovery is assured.

Before giving my own experience in taking care of my only daughter last year who I feel sure contracted the fever from impure drinking water, I want to urge that all water, from surface wells at least, be boiled before using either for cooking or drinking and be sure that flies are excluded from the house, as they often carry the germs of this disease and contaminate food upon which they may alight. Sometimes too, the contagion is carried by root crops especially those that are eaten uncooked.

One of the first things to do is to take precaution that others may not be infected from the case under your care. There are various disinfecting "compounds," but I used copperas, dissolving five pounds in a stone jar by pouring boiling water on the crystals. All did not dissolve at once so more water was added from time to time. When the slop jar and bed pan were emptied this solution was used freely to clean them and then it was poured over the excrement, being used as a covering to keep the filthy flies away. The reason for this care is that the bowels are the seat of the disease and the evacuations carry the germs. Not only did I use copperas as above mentioned but I washed my hands in it after each time that I waited on my patient, and I mopped up the entire floor of her room every morning with cold water strong with copperas We used about twenty pounds of this in all, and as the price is only 5 cents a pound, it was a cheap price for safety.

My patient's temperature was 107 at the time of the doctor's first visit on Monday. I was called on the long distance telephone the next day, but, owing to the schedule of trains, could not get to her home until Wednesday. I realized what was before me as I had nursed two patients through this disease many years before.

My first step was to cut off her hair and put cloths wrung from ice water on her head and sponge her all over in cool water with some borax dissolved in it. It was afternoon and her fever was rising, but this treatment kept it down to 103. No medicine was given. No ice sacks were used. I simply sponged her over again and again with cold water until the throbbing of the artery in her throat became normal and her restlessness ceased.

I removed the curtains, took up the rugs and replaced the dresser scarfs with oil cloth, leaving nothing superfluous in the room. Beside the bed was a high backed rocking chair one common wooden seated chair and a cot. This last afforded me a place to rest occasionally in the daytime but at night I did not lie down for fear of going to sleep. My vigil lasted for fifteen days, when from sheer exhaustion I gave up my place to her husband for a single night, when I again resumed my watching until the fever left her on the twenty-fourth day.

Her husband would gladly have relieved me, but I did not believe in changing nurses. No matter how delerious she was she noticed my absence if out of her sight and as both her husband and father had to work, I was the logical caretaker. I think many a patient has had recovery retarded or has "lost out" entirely by being given over to the care of temporary nurses, well meaning relatives or perhaps neighbors, who, having no real knowledge of the case could not place the proper estimate on symptoms that would be full of meaning to the observant nurse who had constant care of the patient, and who would thus know whether a call for the doctor was necessary or not. Let those who want to help in times of sickness do so by relieving the nurse of responsibility outside of the sick-room. There is plenty to do—washing ironing, cooking, cleaning, etc. Should there be children, they should be taken away and looked after outside of the home, so that their noise might not disturb for perfect quiet is essential.

Diet of the right sort is important in typhoid. During the first three weeks, orange juice, slightly sweetened varied with a little lemonade, blackberry juice and tea with cream and sugar added were all that was permitted, and nothing was given oftener than every three hours. In between we gave her all the distilled water she wanted to drink. This distilled water was a boon as it saved the boiling and cooling. We bought it from a city a little over 100 miles away and it cost us only $1.60 for a case of twelve two-quart bottles.

To run up and down stairs after cold water as needed was quite a chore until my husband suggested using the fireless cooker—an all metal one compartment affair—as a refrigerator. A piece of ice would keep a pint jar of water so cold that other water had to be added to make it the right temperature to drink with safety. Every time water was taken the jar was again filled from the bottle of distilled water. Were I to have the care of a sick person in hot weather again and had no fireless cooker, I would make one out of a tin pail with a tight lid set in a box much larger and packed all around with sawdust and covered with a heavy rug or comfort. Besides cooling the water the cooker kept cream and other things fresh.

When I gave milk and broths, I heated them over a common kerosene lamp by placing two long hairpins across the chimney.

As I strained all the fruit juices through a double wire strainer for twenty-four days, it was no hardship to continue this process with soups, the doctor saying none but liquid food could be allowed for ten days after the fever left.

I had overdone and suffered a complete collapse the second day after she began to mend, and we had to employ a trained nurse. This change caused the fever to return, but it subsided when I again resumed my post. The second ten day period was just over when the excitement caused by the first caller again brought on a rise of temperature, which again extended the fast. By this time the patient was so hungry for something besides soups that it was with difficulty I could pacify her and yet deny her. This is where many home nurses err. They do not realize the danger of indulging the patient. They do not realize that the stomach has not been sick and hence craves and can dispose of solid food, but the intestines are sore, sometimes with ulcers so deep that hemorrhages result and can not take care of anything that would irritate.

For this reason beans, cabbage and onions are forbidden. Other vegetables are allowed like potatoes, celery, tomatoes and asparagus. These should be cooked soft and mashed in the water they are boiled in with a little cream, butter and milk added Then strain and season with salt. A little soda should be added to the tomatoes. Sometimes beef broth was used instead of milk, to give variety. Liquor from cove oysters was also used.

When the time finally came that solid food was allowed, the edge was taken off her hunger with a piece of toast three by four inches, with hot milk poured over it, or a medium sized baked potato well buttered, made a meal. A little more was taken from time to time till at three months from the time she was first confined to her bead, she could eat as much as before her illness.

I have the satisfaction of knowing that my care saved her. The attending physician declared that no two trained nurses could have accomplished what I did. He said he took the case with little or no hope, but I did not for one minute allow myself to think she would not get well. Those I saw I sent away thinking she was doing well so I had their cheer to help me. I had the windows open at all times, took two borax baths a day, changing from a night gown to a wrapper every morning and vice versa and wore only soft, heelless slippers.

My patient was sponged twice a day in borax water, besides sponging in ice water to reduce her fever, and her back was bathed with alcohol whenever the surface appeared red, so as to prevent bed sores. Her mouth was cleansed daily with peroxide of hydrogen and when her bed linen and gowns were washed there was a teaspoonful of carbolic acid added to the boiling water. As pads for the mattresses I kept two folded comforts, the folds meeting in the middle. This protected the mattress, and if either became soiled, it could be replaced by a clean one when making the bed, for half the bed was always made and my patient moved to it, before making the other half. CENA S. CORNMAN.
Missouri.

What is Farm Drudgery?

We have spent the last two years on a large farm, and I have yet to learn what household drudgery is on a farm. I wonder if farm life is not a good deal as we make it, or at least as we take it. We were just starting out, and conveniences were, indeed, few, but we made the most of those we found and invented others that proved practical. Experience taught us many a lesson, and we soon decided that an outlay of work which cost health and privation was an unprofitable proposition, regardless of financial returns.

We had no regular hired help, but during the spring plowing, haying, harvesting and corn cutting, when there was an exchange of farm work, there were often a dozen to cook for, and though some of the days were strenuous, I got along very well with no help whatever in the house. So many, many steps may be saved if the work is planned ahead and one learns not to worry.

Probably the majority of farm homes have no water system, the well being several yards from the house. We managed by the use of a ten-gallon milk can. While the horses were being harnessed in the morning the windmill was pumping the can full of water, and on their way to the field they hauled the can to the back door, where it stood in the shade, and was used for cooking, dishwashing, etc. Drinking water

was all that had to be carried. At noon, if the can was empty, it was filled and brought up again.

Fuel was always ready when it was needed, but we found kerosene a cheap fuel and used an oil stove hot weather. In the kitchen newspapers and waxed paper, which can be bought for a small sum, were utilized in a score of ways to save dishwashing. It saves work to wash the dishes and separator as soon as possible after being used, or they may be left soaking in a pan of water.

Much of the day's work was done in the cool of the morning, and preparations for supper, as far as practicable, were made while doing the noon work. No dishwashing was done in the heat of the day in the stiffling kitchen. The dishes were carried into the dining room, which was much cooler, and with a little more time and care there were no traces left. During these sultry noontides I wished for a screened porch. Those of you who have screened porches are fortunate, indeed.

In fruit canning time the work of preparing the fruit was done in the cave, which was stone-walled and delightfully cool, and fitted with an inner screen door. Little jelly was made during the sultry weather, but the juice was strained and canned and the jell making postponed until fall.

My floors were not carpeted, and the rugs were taken out and dusted often enough to make the task but a light one. Dustless dusters lessened the work in chambers and living room. I took care of the chickens and did most of the small garden tending and also did the chores when the field work was pressing. Ironings were often done after supper and before dark.

Last year we established an emergency shelf, and such a time and worry saver it proved to be! Though it required an outlay of about $12, it is not expensive to keep when established, and home-canned meats, vegetables, etc., add to its value. We kept accurate account of household expenses, and whenever the cream and egg check amounted to more than the grocery bill some labor-saving device, practical but inexpensive, was added to the household. Occasional holidays were enjoyed, which freshened us for days to come. The daily mail carrier brought us several good magazines and we found time to feed our minds as well as our bodies.

This year we are living in town and farming a little way out, but next year we expect to live in the country again, and already I am planning and "counting chickens," and can hardly wait until the time comes when mine is once more the privilege to welcome "farm drudgery" with wide-open arms.

Iowa. MRS. A. C. C.

For Red Ants

Replying to the inquiry as to how to get rid of red ants, a subscriber in Iowa suggests pepper in the runways, or tansy leaves. She does not state, however, whether or not she has tried this method with success.

Styles for Home Dressmaker

Description of Patterns

6805—Ladies' Waist—Any of the figured crepe materials can be used to make this waist, with the collar of contrasting material. The waist closes at the front and is made with the body and sleeves in one. The pattern 6805 is cut in sizes 34 to 44 inches bust measure. Medium size requires 1⅜ yards of 54-inch material, ¼ yard of 27-inch contrasting goods and ⅜ yard of 36-inch lining for the peplum.

6765—Ladies' Shirtwaist—This is one of the plainer models, with a short tuck at each shoulder in front and with plain back. The closing is at the left side of the front, and the neck is cut out in a small V, trimmed with a small turnover collar. The pattern 6765 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2¼ yards of 36-inch material.

6806—Ladies' Skirt—This skirt can be used to complete a coat suit or it can be worn with separate shirtwaists. The skirt closes at the front and can be made in either two or three gores. The pattern 6806 is cut in sizes 22 to 32 inches waist measure. Medium size requires 2⅝ yards of 36-inch material for either the two or three gored skirt, 1 yard of 6-inch ribbon for a girdle.

6788—Ladies' Dress—Linen, gingham, percale or chambray can be used to make this dress, with the collar, cuffs and belt of contrasting material. The dress closes at the right or at the left side of the front, as preferred. The long or short sleeves can be used. The skirt has four gores. The pattern 6788 is cut in sizes 34 to 46-inch bust measure. Medium size requires 4 yards of 44-inch material and ⅝ yard of 27-inch contrasting goods.

6783—Boys' Suit—This suit shows the Russian type in an attractive form. The blouse is plain, with front closing and a handsome collar at the neck. Sleeves may be long or short. With the suit trousers are provided and these may be left straight and open at the knee, or drawn and gathered. Pattern 6783 is cut in sizes 2, 4 and 6 years. Medium size requires 2¼ yards of 36-inch material and ¾ yard of 36-inch lining.

6779—Girls' Dress—This pretty frock is closed at the back and has part of each sleeve in one with each portion of the body. The diagonal line in front is merely a simulated closing. The little skirt is gathered and has a straight lower edge and thus is especially suitable for flouncing or other bordered goods. The pattern 6779 is cut in sizes 6 to 14 years. Medium size requires as on figure 1⅞ yards of 36-inch material, 2 yards of edging and 2¼ yards of ribbon.

6725—Ladies' Apron and Cap—Modified kimono lines are used in this apron, which is quite loose and hangs in sacque fashion from shoulder to hem. There is a seam along the shoulder and down the outside of the sleeve, each section of which is cut in one with the body of the garment. The pattern 6725 is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 6⅞ yards of 27-inch material and ½ yard of 27-inch contrasting goods.

All Patterns on This Page 10 Cents

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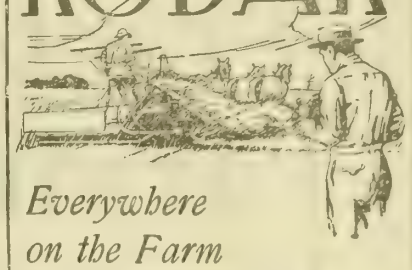

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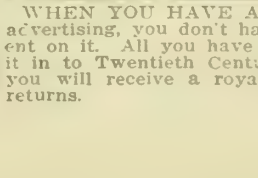

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Among the Aymaras of Bolivia

By Frank G. Carpenter

LA PAZ, Bolivia.—The Bolivian government is at last waking up to the condition of its Indian. Three-fourths of the inhabitants of this high plateau are little more than savages. They have churches, but their religion is a combination of superstition interwoven with the customs of medieval Christianity. The government has schools, but the Indians do not attend them, and not one in a hundred can read or write. Thousands of them are in a state of debt slavery, and tens of thousands are so sodden with alcohol and cocaine that for the most of the time they are little better than beasts. The government has established a compulsory system of education, and it has thrown the schools open to all Bolivian children. Nevertheless, but few of the Indians go to school, and not one in a hundred has any ambition to rise above his present condition.

Women of the High Plateau of Bolivia

One of the new movements for the elevation of the Indians has to do with the reorganization of the Bolivian army. Military service has been made compulsory for all between the ages of 19 and 21. The selection of the troop is made without regard to race, and in this way thousands of Indians are brought to the military barracks and schools from every part of the republic. Here they are drilled by German officers and instructors. They are taught to obey and to learn to read and write and do primary sums in arithmetic. They are kept from drinking, and they acquire such civilized tastes and wants that when their military service is over they are not contented to go back to the semi-savage life of their villages. Those who do go carry the seeds of civilization with them, and a crop of new ideas and new customs is beginning to sprout.

Indians Make Good as Soldiers

I have seen a great many of these Indian soldiers during my stay. They are fine looking fellows and are said to have good fighting qualities. They have great powers of endurance and are noted for their frugality and patience. The only trouble is that the army is not large enough to take in more men and there has to be some weeding out of those who volunteer to go into the service. At first the Indians were afraid of the army, but they are now keen to serve.

All the above statements relate to the Aymaras. They are the chief nation of red men upon the plateau of Bolivia. They are numbered by hundreds of thousands, and altogether are twice as many as the Indians of the United States. They belong to a race that is said to antedate the Incas, and to have been so powerful that the Incas were never able to subjugate them as they did the other Indian nations that populated the western part of the South American continent. After the Spaniards got possession of the country, the Aymaras were enslaved, and they are in what might be called a condition of debt slavery today. It is a state of peonage not unlike that which prevailed in the days of feudalism. Much of Bolivia is still a feudal country, and the men and women are practically bought and sold with the farms on which they live. The fact that the law permits them to leave upon the payment or transfer of their debts does not alter the matter, for it is known that their attachment to their homes is such that they will not do so. Many of the Indians on the industrial farm near Lake Titicaca, whom our missionaries are now trying to civilize, have belonged to that farm for generations, and they have always done a certain number of days' work every week for the right to stay there and cultivate the lands allotted to them.

White Man's Word Goes in Court

The same conditions of tenure prevail upon most of the large Bolivian farms. The Indians give two or three days of each week to the owner of the land, and they are allowed the remaining days for themselves. They receive no pay for their work except the ground rent of the little patches which they are allowed to farm. If their master needs only a part of the time he has the right to hire them out to others, and if they do not obey them he can inflict certain punishment upon them. It is against the law to strike an Indian, but, as one Englishwoman tells me, such striking is perfectly safe if it is done when there are no white witnesses present, as the courts will never accept the statement of an Indian as against that of a white. This woman has been living in different parts of Bolivia. She says that a system of child-slavery is common in the highlands and out-of-the-way districts of both Peru and Bolivia, and I understand that it prevails in some parts of Ecuador as well. Said she:

"There is no doubt but that Indian children are bought and sold to be used as servants. Indeed, I myself have bought girls and boys ranging in age from 2 to 12 years. At times I have taken them in out of pity to give them a home, and at other times because I wished to use them as servants. Such buying is more often the form of a lease than in the way of regular bargain and sale. It is like the binding out of children to work for their board and clothes, as was once common in some parts of our United States.

Famine Makes Slaves of Children

"When times are hard or famine comes the Indian fathers or mothers will often bring in their boys and girls and ask you to raise them as servants. They will expect from ten to twenty Bolivianos for

them, or $5 to $10 in gold. There are regular contracts made for this purpose, and a part of the contract reads that they shall have the right to take the child back upon the payment to you of 10 cents per day for every day you have had it. This payment is a sheer impossibility, and the purchase of the child means that you have the right to it until it grows up. The law provides that you must train the child and teach it to read and write. It also provides that it must be well treated, but this depends upon the caprice of the purchaser. Many of the servants are gotten that way."

Practically all the domestic labor of La Paz and other cities of Bolivia is done by the Aymara Indians. In some cases they are paid wages and in others they get nothing but their board for their work. In the latter instances the servants are pongos, who are sent in from the country to do a certain amount of work for their masters, who live in the city. The leases by which the Indians hold their little homes and lands provide that they may be sent from time to time into the town to work as house servants. Such periods are limited to a week or so for each person, and in some of the houses of La Paz the servants are changed every two weeks, a new one coming to relieve the old one. A land owner with a large number of Indians on his estate may agree to furnish you a house servant for a year, sending man after man, in relays as it were, to fill up the time. When the pongo comes to work in his master's house he usually brings with him enough bags of llama manure to serve as fuel for the cooking during his stay.

Pongo Does Work of Drudgery

While there he carries all the water, brings the vegetables and meats home from the market, and it is his business to empty the slops and clean the pots and pans. There are many of these pongos on the streets of La Paz. They go along half double carrying great copper or clay water jars on their backs. They act as the watchmen of the houses, sleeping at night on the stones inside the door that leads to the street, and they must get up and open to the people who go out or come in. They do all sorts of drudgery, and some kinds that servants of other classes will refuse to do. Indeed, one may have twenty other servants, but he must still have his pongo.

Notwithstanding these hard conditions, the Indians are attached to their masters. They will work for them for little or nothing rather than for a foreigner who may pay them good wages. They make their masters' grievances their own, and are ready to engage in any battle if instigated by them. This often causes feuds between the Indians of neighboring farms, and gun fights and stone fights are common. The stone fights are usually by means of the sling, which is the natural weapon of the Aymara. He uses it to keep his sheep from straying from the flock. He hunts with it, and from behind his hut watches for his enemy and sends a rock crashing through his brain.

Stone Fight Among Indians

Not long ago there was a big stone fight between the Indians of two plantations, one belonging to a foreigner and the other to a native Bolivian. The foreigner had bought the estate and the Bolivian wanted to force him to sell it cheap. It adjoined his property and was especially desirable on other accounts. He asked the foreigner his price and was told that it was $15,000. He wanted it much cheaper and in order to make him sick of his bargain he incited his Indians to stone those of the foreigner. They did so, but the foreigner made such a brave fight that the Bolivian came to him and offered to take the place at his original price. The foreigner replied: "I will sell you the farm, but the price has risen. I offered it to you a month ago for $15,000, but after what you have done you cannot have it for less than $20,000." "I will take it," was the reply. "I have had enough trouble about this already and rather than have more I will pay what you ask."

The huts of the Aymara Indians are scattered over the plateau, and also high up on the slopes of the Andes. They are usually in villages, but sometimes far apart on the plains. But few houses are more than fifteen or twenty feet square, and some only eight or ten. Sometimes a family may have a half dozen houses inclosed by a mud wall, but the most of the buildings are for the stock, and as a rule the family uses but one. It is not easy to enter such homes.

Do Not Like Strangers

The Indians do not like strangers, and in making my investigations I have had them show fight and warn me to leave. Such huts as I have seen into are little better than pig pens. They have walls so low that you can reach the thatched roof without effort, and the single door is so small that you have to stoop to go in. The floor is the ground, and the furniture is only a few skins and a little mud stove or oven, built up in one corner. The fuel is the manure of the llamas and sheep, and the cooking is done in earthenware pots, which are used not only for boiling and stewing, but for cups, saucers and plates. There is no outlet for the smoke but the door, and it blackens the roof and the walls.

The Aymaras sleep on llama skins laid on the floor. They have no night clothes, and wear the same garments at night as during the day. They usually sleep sitting, backing themselves up against the wall and drawing as closely together as possible in order that all may get under the blanket and so that the heat of their bodies may aid in keeping them warm.

Where there are several huts the cooking is done outside the homes, and sometimes an oven is built against the wall, having a cover perhaps to protect it from the wind and the snow.

Food is Simple

The food of these Indians is simple. A favorite dish is a stew known as challona, made of dried mutton. The sheep is killed and skinned. The body is then split open and laid out flat and left out of doors to be frozen. The next night it is sprinkled with water and frozen again. It is then hung up to dry. It does so without spoiling, and some becomes so tough and hard that it will keep for months. When used it is cut into bits and boiled a long time. Vegetables are cooked with it, and often some chuno. The latter is frozen potatoes, which are prepared in such a way that they will keep quite as long as the dried mutton. This is done by soaking the raw potatoes in water and then allowing them to freeze. They are soaked and frozen again. The skins become so loose that they can be rubbed or trodden off with the bare feet. After this they are dried. They now look like white stones, but are very light and like pith. They will keep for an indefinite time.

Drunkenness is common among the Aymaras. I have already described the terrible condition brought about by drink among the Quichuas, or Indians of Peru and Ecuador. The same condition prevails in Bolivia. Almost all of the Indians, both men and women, drink to excess, and they come together in great crowds on feast days and have drunken sprees, which are accompanied by dances and other excesses, where the marriage laws do not prevail. At such times there is seldom any brawling or fighting. The drink seems to stupify rather than excite; the people use so much that the alcohol gradually burns up their brains. I am told that the Indian boys are bright until they reach the age of fifteen, at which time they begin to buy liquor. They then deteriorate, and are on the down grade intellectually for the rest of their lives. It is also said that these Indians are more intelligent than those of Peru, and the standard of intellectuality rises as one goes on southward.

A Few Rich Indians

I learn from our missionaries who have Indians in their schools that it is not uncommon to find boys and girls who are equal in quickness and reasoning power to the whites, and it is known that some of the best men of La Paz have a strain of Aymara blood. There are a few Indians who are rich. Some of them have mines, and others estates of their own. There is a rich Indian family in Lima that has three girls who will graduate this year at the mission school. These girls have Indian features, but they are by no means bad looking. Their father pays $5,000 gold a year for the rent of his house at the Peruvian capital, and he owns several automobiles. His money comes from copper mines.

There is no doubt about the natural ability of the Indian along mechanical lines. He is the carpenter, iron worker and mason in this city of about 80,000 people. La Paz has fine houses and public buildings and also a large cathedral that has been for years in course of construction. All of the work upon these has been done by the Aymara Indians, and they have made practically all the furniture in use. They are expert cabinet workers, making tables and chairs and interior woodwork of mahogany, rosewood and black walnut. They make artistic creations in stucco, the fine houses of La Paz being decorated with a plaster made of mica mixed with lime and sand and then burnt in such a way that it gives a finish like the best paster of paris.

The Indians understand colors, and they have a steady job at painting the houses of the Bolivian cities, where, according to the law, every house has to have a fresh coat of paint every year. I am living just opposite the cathedral, where there are 100 or more Indians now working.

Beginning of a Change Apparent

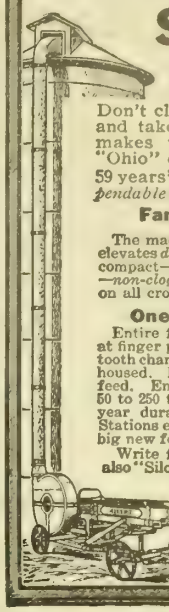
They begin at 7 o'clock in the morning and continue until 6 o'clock at night, with an hour off at noon. I am told that their wages are about $1 a day. They seem very industrious, and the employers say they stay on the job quite as well as the half-breeds or whites. Many of the best laborers and the best mechanics of Bolivia are Indians who have served in the army and thereby acquired such a taste for civilization that they have come to the cities. Such men have elevated their wives, and the beginnings of a change are already apparent.

What Bolivia needs to do is to pass liquor laws to curtail the use of raw alcohol, to establish more schools and industrial farms, and to inaugurate movements that will create new wants among the Indians. This done, they will work to satisfy those wants, and there will be a gradual uplift in their condition.

The hope is in the young of the race, and, as I have said, they are bright in intellect and ready to learn. As far as I can see there is no better field for mission work anywhere than right here on the high plateau of the Andes.

Copyright, 1914, by Frank G. Carpenter.

"Ohio" 1914 Model
The Improved Logical
Silo Filler



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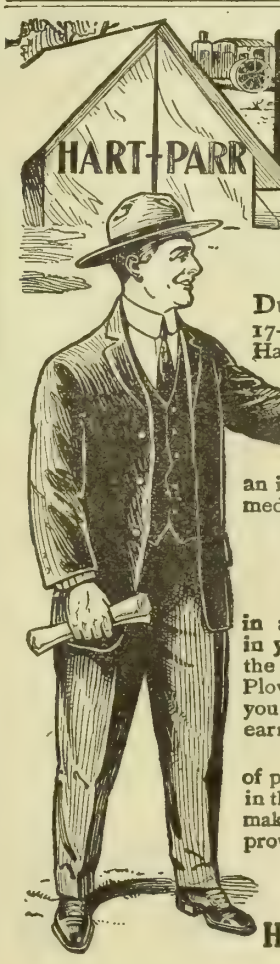

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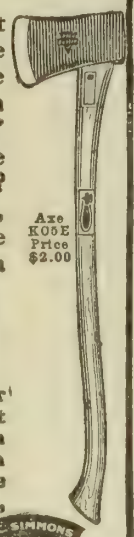
Seeing is believing. An ounce of performance is worth a ton of promise—the real test of tractor merit is what the outfit does in the field. It's safer to know than to guess—when it comes to making a tractor investment. Meet us at Fremont and let us prove our claims.

Meantime, we'll gladly send you descriptive catalogs and literature on power farming costs. 133

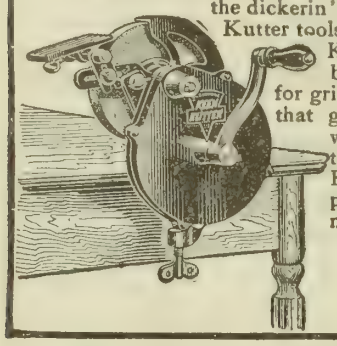
HART-PARR CO., 254 Lawler St., Charles City, Ia.

Tom Profit's Wisdom

Jim Kerr bought an axe in town—just a common lookin' sort of an axe with some gilt smeared on the head of it that made it shine—powerful. The first day he put in with it in the woodlot took all the gumption out of it,—an' the edge offen it, too. He took it back to the store an' sez he "What's that axe made of"? "Steel," sez Bert Staley. "S-t-e-a-l," sez Jim, an' they laughed together for an hour over it like two bulldogs in a mix-up. Then Jim bought a



KEEN KUTTER



across the street and he got the reg'lar Keen Kutter quality an' a guarantee fer it. He told me all about the dickerin' an' I guess he'll stick pretty close to Keen Kutter tools for a bit. I told him my experience with Keen Kutter axes an' hatchets an' he bought a Keen Kutter tool grinder, too, for grindin' generally. We can depend on that guarantee the Simmons people give, with lief to the dealer to hand back the money we've shed for any Keen Kutter tool, any kind, that doesn't pan out right. That's square business. You'll allow I'm *right.*

Tom Profit.

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Lee's Hog Remedy is non-secret. The ingredients are Sulphur, Iron Sulphate (Copperas), Charcoal, Sodium Bicarbonate, Tobacco, Antimony, Salt, Sodium Hypo-Sulphite, Naphthalin, Gentian, Sodium Sulphate (Glauber Salt), Copper Sulphate and Aloes. These and none other. No meal or filler. You cannot beat it, either quality or price.

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Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Hog Raiser's Opinion

C. W., Nebraska—I have been planning to write to you for some time, and the climax came today when I read your opinion on the double simultaneous treatment. That is the thing I have been fighting for eighteen months. I brought it up at our institute and got sat on. It never has appealed to me, for, from my observation, you have a guess coming as to the immunity, even if it seemingly works all right, and, on the other hand, you have a lingering, slow case of cholera all summer. I know of two different herds that were given serum three different times to get it stopped. The way I have it sized up, we will have no end of cholera with virus shipped around over the country to Tom, Dick and Harry that think they are going to head off cholera, and this class of fellows often get encouragement from the local veterinarians, for it is a great boon for them. At the present time I have two neighbors that have given lots of serum and virus to their herds of well hogs, and now there is a good chance for the whole neighborhood to have cholera. But I will use only the serum-alone treatment, and I have as much faith in that as anybody. I have used it twice, with good success. I was talking with S—— lately. He never has had cholera on his place and he is all worked up now to give the double treatment. I gave him my reasons as strong as I could. He is planting his first cholera, and it may take him a long time to get rid of it. I have received several inquiries on it this season from my customers, and have taken a stand against the double treatment as being the cause of the widespread of cholera last year.

I notice by one of the Iowa papers that it is a burning question all over Iowa and they want to hear from the farmers. No doubt they will get a few letters from veterinarians and county demonstrators recommending the double treatment. This will keep the disease spreading, and, of course, the farmers are able to pay for it. I think a protest ought to be made against the production or shipping of virus in any way. I have talked with several that think that hog cholera, like smallpox, can be reduced to a mild form by double treatment, but I can't get the point. The serum is a preventive only, wherein it differs from inoculation for smallpox. I would like to have your view on this point. I appreciated the hog cholera articles and hope you see your way clear to give us some good ideas each week.

Answer — We appreciate very much what you say and are glad to get your ideas on this proposition. In the main, our ideas coincide. We certainly do not feel like advising anyone to bring hog cholera on their premises and would not vaccinate a well herd. If our hogs got diseased we would not hesitate a minute to go in and vaccinate with serum alone all hogs showing a temperature of 104 or more and use the simultaneous treatment on the other hogs, for the reason that if the disease were on the place we would want to feel sure that all hogs were immune after the deal was cleaned up, and would not feel sure that those not visibly affected had contracted the disease suficiently to secure permanent immunity. There is one thing sure, and that is that state and government authorities are more generally advocating sanitary and quarantine regulations than they were a year or even six months ago. Many formerly strong simultaneous men are now advocating the use of this method only in affected herds, just as we have recommended.

In regard to a protest being made against the shipping of virus, that is one of the serious questions in connection with the hog cholera work. We have talked with some of the strongest advocates of the simultaneous method in the country, and asked them all this question: "Would you prescribe a regulation whereby no virus could be sold to any party having hogs located where there was no cholera within three or four miles of him?" In every instance these men answered that they would provide such a regulation, showing that they would not advise placing hog cholera in a neighborhood where there were no sick hogs.

As to whether cholera can be reduced to a mild form by the double treatment, would say it could if surrounded by the right conditions; that is, the herd should be in proper health when vaccinated, absolutely clean and potent serum should be used and clean and virulent virus, the operator thoroughly acquainted with his business, sanitary conditions around the herd at the time of vaccination, satisfactory and proper care taken of the hogs for at least three weeks after vaccination. The idea is this: By injecting a small amount of virus the hog is given cholera. Serum sets up a fight against these germs sufficient to prevent fatal results, making the animal immune. At the same time we do not feel, however, that if we had a herd in a strong, healthy condition, we would vaccinate. We would watch them closely and as soon as a pig showed signs of sickness would quarantine him and get a good veterinarian to post him. If he showed lesions, would not lose a minute's time in vaccinating the rest of the herd. We are not going to let up on the cholera proposition, but keep pounding away from time to time.

(The foregoing letter is from a prominent breeder of pure-bred hogs. We are very glad, indeed, to receive such letters from such men, expressing their opinions and giving us their experiences).

Alfalfa for Pasture

P. J. H., Nebraska: I intend to sow forty acres of alfalfa and timothy mixed for pasture about August 10. Do you know if it will prove all right for pasture? What proportion should be sown? If alfalfa is sown alone, should anything be sown to protect it? What would be best for this purpose? I sowed ten acres last August and it blew out bad this spring.

Answer—If you sow alfalfa alone do not sow a nurse crop. Would advise sowing with a disk drill to prevent blowing. If August gives promise of being very dry, would advise you to wait until spring to

Fremont Tractor Short Course

A feature of the Fremont Power Farming Demonstration this year will be a tractor short course. This course of instruction will be held in a large tent provided especially for this purpose. This school will be supplied with working models of different types of motors used on farm tractors, as well as the accessories.

Tractor manufacturers are generally very enthusiastic over the fact that the management of the tractor show are interested in instructing the farmers in the management of farm motors.

The school will be held during the forenoons from 10 to 11:30 o'clock. During the afternoons the time will be spent on the fields studying the different types of machines on the market today.

This school of instruction should prove very valuable to both farmers and manufacturers. Indications are that there will be hundreds of farmers in attendance. If you have not already made plans to attend the week of power farming education at Fremont, Neb., during the week of August 17-22, start making your plans at once.

A. H. Gilbert, Head of Farm Mechanics Department of Purdue University, Who Will Assist with the Tractor Short Course

sow your alfalfa; otherwise August is a better time. You do not state what kind of stock you expect to pasture. If hogs, do not sow timothy with the alfalfa; if for cattle, would not advise the use of alfalfa at all. Timothy sown with the alfalfa is supposed by some to prevent bloat. We have never tried it, but know of a prominent pure-bred cattle breeder who tried this. He lost forty head from bloat in one day on his pasture of alfalfa and timothy mixed. For cattle would advise red clover instead of alfalfa for pasture. We use about one peck of timothy to ten pounds of clover.

Alfalfa for Hogs

H. F. B., Nebraska: Will you please tell me which is the best way to put up the last crop of alfalfa for hogs in the winter, and how to feed it to the best advantage?

Answer—The last cutting should be done before the stems get woody and put into the stack or barn as quickly as possible after it is sufficiently dried, retaining as many of the leaves as possible. It may be fed as whole hay in racks made for that purpose. Make a slat rack close to the ground, under which is placed a flat trough, probably ten or twelve inches wide, into which the leaves from the hay will fall. We have tried the method of steaming alfalfa leaves or cut alfalfa. In the winter time fill a barrel about half full of hot water. Put in such amount of alfalfa leaves or cut alfalfa as will readily be soaked up. Cover the barrel with a sack or other cloth and if the weather is not unusually cold this feed will be about the right temperature to feed the next morning. It is advisable to add shorts, salt and possibly a little oilmeal to the alfalfa that it may be more readily consumed by the hogs. The idea of this soaking is to induce the hogs to eat more of this food. Experience has proven to us that hogs will eat considerably more hay when prepared in this manner than when fed dry in the rack.

Hogs in Unthrifty Condition

A. H., Nebraska: Are veterinarians reliable, and what step should be taken to secure one on my place for the inspection of my hogs and also possibly treating some of them? Are they paid by the state or by the individual where the work is done? In this neighborhood many of the hogs have some disease and my hogs don't thrive. I have the best of feed, but the young do not mature right. A hog 12 months old won't weigh 150 pounds. This is wasting feed. I very seldom have a hog die, but when they die their intestines appear to be covered with bloodish buttons. Their skin is rough and scabby, and itches, judging by the way they rub. I understand from other writers there are twenty-five types of hog cholera. If this is true, we all have hog cholera in the herds of this community.

Answer—We do not know what veterinarians you refer to. If to those in the state employ, we can say we consider them thoroughly reliable and well up in the business and competent to give the best advice. Most of the local practitioners are reliable, but some are not abreast of the times and may not be able to give the service you should have. The veterinarians in the employ of the state are paid by the state and are not paid by the individuals to whom they render service.

As to serum and virus, if these are good they are effective against cholera. They will not, however, do any good to hogs affected with worms or diseases other than cholera. It would be well to have a good, competent veterinarian examine your hogs. Dr. C. M. Day, field veterinarian for the Nebraska Live Stock Sanitary Board, expects to hold a hog cholera meeting at Ewing some time in the near future. We are writing to Dr. Day, asking him to advise you when this meeting will be held. It would probably pay you to go to this meeting and talk with Dr. Day. You certainly are not getting the weight you should from your hogs. The symptoms you describe indicate an unthrifty condition that may be due partly to lice. This would make the hogs rub. They are not easy to get rid of, but would advise your dipping or spraying the hogs with some good disinfectant or crude oil. This would have a tendency to do away with the scab or itch you describe.

"The glory is not in never falling, but in rising every time you fall."—Borvee.

JOHN DEERE

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Unscrew One Nut—That's All

THE latest improvement on John Deere Sulky and Gang Plows is John Deere Quick Detachable Shares. Unscrew one nut and the share comes off—slip share on, tighten the one nut and you are ready for work. Shares on or off quick, that's the idea. Here's what it means to you:

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2. Eighty per cent of time saved.
3. No danger of damaging share.
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5. Share is stronger—not weakened by bolt holes.
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Growing Hogs Everywhere Creamery and Its Patrons

ANNOUNCEMENTS are published almost daily in live stock journals and agricultural papers that hogs are being successfully grown in various localities south, north or west, usually in states or districts not noted for corn production, as though it demanded some pretty positive evidence to convince the general public that hogs could be grown with profit outside that district designated as the corn-belt country. The hog does not necessarily have to be fed on corn in order to live and develop into a good quality of pork.

The prevailing idea with hog raisers, feeders and breeders for more than a century of experience and practice in hog development and pork production has been that corn, Indian corn—maize, as you prefer to call it—is the natural feed for swine; that preference is given it above all other feeds; that this particular animal does better on it; that corn and hogs are a combination that go together naturally, instinctively so far as the hog is concerned.

Hogs may be raised in almost any place where grass and small grain crops are produced, where vegetable and root crops are grown. The hog can more nearly accommodate itself to whatever condition of feed is available on the farm than any other animal. It can make its way when turned out on the pasture without attention or assistance; it can live in the orchard on fruits a portion of the year; it can gather a very good livelihood if turned into the forest without other assistance during a portion of the summer and throughout the autumn season. When it fails to satisfy its desires and tastes by what is placed before it on top of the ground, it resorts to its ability to explore below the surface by rooting for insects and feed below the surface.

The hog may be raised and grown successfully any place where people and civilization exist. The hog can live anywhere that man can, but it cannot attain the same degree of thrift and profit as a pork producer in all places alike. The hog is more nearly satisfied, has a larger share of its instinctive desires provided when it is nearest the corncrib. This means that the hog and corn are measurably inseparable where the highest degree of pork development and profit are the features for consideration.

It is not a question of where hogs can be raised and where they cannot be raised successfully. Hogs can be raised in every state in the union, and by a little experimentation it will no doubt be found profitable to produce pork to supply the local demand. Alfalfa and corn has been announced as the most economical feed for growing and fattening hogs. Most of the states claim to be producing both alfalfa and corn to some extent, and that their hogs are being grown on this feed. What better advertisements can any state have to put before the public than the growing of small grains, root crops and alfalfa, whereby, with the aid of a little corn, they are producing the best of pork and at a profit?

Creamery and Its Patrons

The farmer has a perfect legal right to sell the products of his farm in the market that will pay him the highest price, but there are certain moral obligations which men owe to other men and the community in which they live. There are certain responsibilities resting upon every citizen, which he cannot ignore, and one of them is the development and protection of every interest that affects the community as a whole. If an industry is established which has for its purpose the financial and industrial development of the community, then it is important that every citizen lend his efforts to the support of that industry.

A co-operative creamery is an institution of this kind; its benefits are far-reaching and the extent of them depend entirely upon the volume of business which the creamery will transact. Every farmer who milks cows should hold a share of stock in the local creamery and thereby support the plant. If half of the farmers do not join the organization, and ship their cream to some other plant, they are increasing the difficulty of building up their neighbors' interests as well as their own.

A creamery can manufacture 100,000 pounds of butter-fat into butter almost as cheaply as it can 50,000 pounds. The equipment is the same and the total cost is only slightly increased. The profits come from the second 50,000 pounds. In the creamery, as well as in any other business, profits show only after a definite amount of business is done with which to pay operating expenses. Hence there is a moral obligation resting on every farmer to give the local creamery an opportunity to show its ability to furnish him a market for his cream. It is a sign of good, loyal citizenship when a farmer will do this.

When a farmer becomes a patron of a local co-operative creamery it is his duty to know how the business is managed. Co-operation is a result of confidence, and confidence is established as a result of having accurate information. He should insist on having a statement at least once a month showing all the details of the business that he may know at all times whether or not he is getting a square deal.

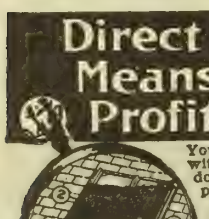
He should furnish a good quality of raw material and deliver it as often as is necessary in order to keep up a definite standard of quality. He must know that good butter cannot be made from poor cream any more than good flour can be made from poor wheat. In raising grain or live stock he has learned that he must meet the requirements of the market; when he learns that the same principle applies in the creamery business, he will be a better creamery patron.

He owes to himself and the butter-maker the duty of learning why and when tests vary. How often we hear farmers say, "I got a better test somewhere else."

The cream contains a definite amount of butter-fat, which is determined by the Babcock test. Cream contains the same amount of butter-fat whether it is sweet or sour, but may test differently, due to the manner in which the sample was taken. Men may read the test differently, and so differences may arise, all of which emphasize the necessity of the farmer knowing something about the test and the reasons why his test will vary from time to time.

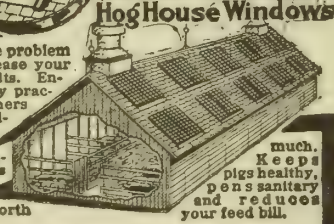
A creamery is the best agency through which the dairy industry can be established. A dairy community is in a class separate and distinct from all others, and it always advertises itself by better farms, better buildings, better roads, better fences, good loans, better live stock, more community spirit.—Dairy Record.

Direct Sunlight Means More Hog Profits for You.



You can't raise winter pigs without sunshine. Side windows can't give it. Young pigs must not be exposed to cold. You need sunshine direct on floor of the pens.

CHIEF Sunshine Hog House Windows



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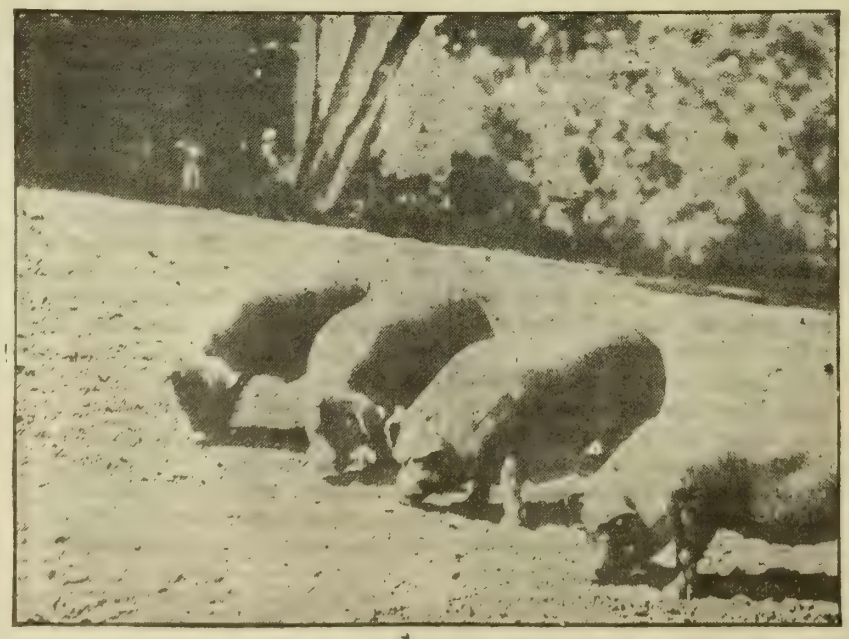

Here is a litter of spring pigs in the herd of Edgar Johnson of Plainview, Neb. They are the right kind.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Polled Durham Bulls

Lamb Bros., Tecumseh, Neb., have a couple of Polled Durham bulls they are offering for sale at this time, that are certainly priced worth the money. These bulls are both coming 2 years old and are big, strong, heavy-boned fellows with very few faults. They are smooth, well covered and well balanced and are in condition to go right out and do good, heavy service. One of these bulls is a red and the other is a very rich roan. You can shut your eyes and take either of these bulls and not make any mistake. If you are looking for something of this kind, here is a chance to get them worth the money. Write them for further information, mentioning the Twentieth Century Farmer.

Hekrdle Heard From

In a letter of recent date, Anton Hekrdle of Stanton, Neb., well known breeder of Durocs at that place, reports everything coming along nicely with his crop of spring pigs. He says they are making a very fine growth and that there are a number of prospects among them. In fact, they are really the best that he has ever had. Anyone who knows Anton Hekrdle's herd knows what this means, because he has surely had some mighty good ones in the past. These pigs are mostly sired by Beauty's Wonder, a grandson of Wallace's Wonder. Mr. Hekrdle will be at the fair this fall, so do not fail to look him up, and if yon need anything in the line of male pigs, write him your wants, mentioning the Twentieth Century Farmer.

George Brown's Polands

George Brown, the well known breeder of Poland-Chinas at Elk Creek, Neb., has sixty-six head of young Poland Chinas coming along in good shape. There were ninety-one pigs farrowed from eight sows on this farm this spring and sixty-six raised. Guess that shows some prolificacy, doesn't it? These pigs are good, heavy boned fellows, with all the length that could be asked for. Mr. Brown has not been crowding them so far, but is aiming to grow them out in such a way that they will go out and do good for those who buy them. These pigs are practically all sired by his own herd boar, Big Bone 2d. They are out of dams sired by O. K. Tecumseh, Blue Valley Quality, A Wonder, Long Chief, Higgins' Model and others. Mr. Brown will have some choice boars to sell a little later on. Keep his herd in mind and write him for further information, mentioning the Twentieth Century Farmer.

Lamb Bros.' Durocs

Lamb Bros., breeders of Durocs at Tecumseh, Neb., have a choice lot of spring pigs on hand at this writing and among them are a number of choice prospects that will be worth keeping in mind later on. These pigs are of reasonably early farrow and are making a nice, even growth. They are the good, big, stretchy kind, with plenty of bone. The breeding is of the very best, representing such boars as Crimson Wonder Again, Foss' Model, Allen's Model, Nebraska Model and others. In their herd boar, Model, this firm has one of the best young boars we have seen for a good long while. He is a son of that great breeding boar, Watt's Model. He has an abundance of scale, well sprung ribs, strong back, deep, even side lines, and stands on the very best of feet. If this pig were brought along, he would make somebody sweat in the show ring this year. As it is, they probably will not be shown this year. They will have a bred sow sale January 26 and will have a choice lot of sows bred to this boar. If you are going to be in the market for a bred sow you can make no mistake in keeping this herd in mind, for we are sure that a sow bred to this great young boar will be a valuable asset in any man's herd.

Putman & Son's Durocs

We called on our old friends, W. M. Putman & Son, at Tecumseh, Neb., last week. It is always a pleasure to call on this firm, as you are sure of receiving the glad hand and also finding a good bunch of pigs in the barn. They have about 100 head of pigs of spring farrow, all immune and doing as well as could be asked. This firm suffered considerable loss by disease in their herd last year, but are coming along now in the stride that has marked the progress of this herd for the last dozen years. These pigs are sired mostly by Successor and Wonder Colonel. Wonder Colonel is by Put's Top Colonel by Morton's Top Colonel. Successor is by Advancer No. 1 by Advancer. These two boars are both splendid specimens of the breed and have been doing good service in this herd. Other litters are by Red Model, Bain's Critic and others. They are out of sows by Chief Select, Golden Model, Ohio Colonel, Valley King, Crimson Wonder Again, Royal Critic, Lincoln Wonder, Medoc, Advancer 5th, Model Advancer and others. This firm has a senior yearling boar by Put's Top Colonel and out of a Lincoln Wonder dam that is an extraordinarily good prospect. Speaking of boars, they have one aged boar here that is going to make some mighty serious trouble for anybody who goes up against him in the show ring this fall. This boar is a son of Crimson Wonder Again and out of a daughter of Echo Top King. He is one of the biggest, smoothest, best boned and best footed Crimson Wonder boars we have seen in many a long day. Take it from us, he is going to get inside the money, or the other fellow is going to have some mighty good boar. Just keep your eye on him for future reference

Review of Live Stock Market

By A. C. Davenport

IT WAS noted a week ago in these columns that cattle during the six days previous had sold at the highest point in the history of the trade, taking the average of all the cattle received. At the same time it was pointed out that the excessively high prices were a direct result of the light receipts, the supply of corn-fed cattle having been greatly reduced, while few range cattle were as yet arriving at market points. It was also hinted that prices on the common to medium grades of cattle would be very likely to decline sharply as soon as receipts should become more liberal, although no material decline was looked for on the choicer kinds.

This all came true during last week. Under the stimulus of phenomenally high prices range men made a great effort to get in such cattle as were available, with the result that the more liberal offerings of beeves brought about a decline of around 25 cents on the medium grades of cattle at the different market points. On the other hand, strictly choice cornfed cattle being scarce continued fully steady. Butcher stock, that is, cows, heifers and the various odds and ends that come under that head, declined as much as 25 to 40 cents at some points, so far as the general run of grass stock was concerned.

As regards the future, the prospect is very much the same as was outlined a week ago. Everyone expects to see good to choice cornfed beeves continue at least as high as they are at present writing and there is a possibility of their going even higher before the summer is over. On the other hand, while the best range beef is expected to hold up very well, everyone seems to feel that the medium grades are unreasonably high and it would surprise no one should the market on that kind of stock decline 75 cents to $1 a hundred when the shipping season gets well under way.

During last week western feeders sold at extremely high prices and there is a feeling that the market on feeder cattle will continue very high throughout the season, barring, as a matter of course, disaster to the corn crop. Already large crops of hay and fodder have been secured and in this section of the country a large percentage of the first crop of alfalfa was so damaged by rain that it cannot be marketed and must be fed up. If on top of the abundance of feed now on hand there should be a liberal corn crop the demand for feeder cattle can hardly fail to be larger than for several years back, while present prospects would indicate that offerings of such cattle on the big markets will be comparatively small.

Strong Hog Market

Hog values played see-saw all last week; the market scored a big advance the previous week and it seemed to be on the point of running away with the buyers. Packers took alarm and began a series of bear raids that checked the advance for the time being at least, and sent prices tumbling down hill. It required a vast amount of pounding to force it downward and still more to keep it down. The market, in fact, seemed to be occupying a naturally strong position and did not readily yield to the usual bear tactics of the buyers.

As noted before in these columns bull sentiment is strong among the hog men and although realizing that prices are already extremely high, the bull contingent is ready to believe that the top has not been reached. Still some of the more timid bulls had their faith shaken by the recent break in values. Liberal receipts would prove of great assistance to the bears in holding the market down, but whether there are enough mature hogs in the country to furnish sufficient runs to meet the requirements of the bears for any great length of time remains to be seen.

Lambs Some Lower

Sheep and lambs have been working lower quite rapidly during the last two weeks or more, especially lambs. It will be remembered that during the first week of the month prices were the highest ever before known in July, and it was pointed out at the time that they could not reasonably be expected to continue that way very long after the range season had opened. It happened that just as range stock was beginning to put in an appearance eastern markets received a large influx of native western and southern stock and with all markets liberally supplied the downward movement became rapid and continued until the middle of the present week. During that time lambs, which constitute the great big bulk of the receipts at this season of the year, declined around $1.25 per 100 pounds. This means that good range lambs were selling at the close of last week at about $8.10, on the basis of Omaha.

While it is recognized that prices are still high, a good many sheepmen do not believe that receipts will be large enough to break the market very much below present figures in the near future. As a matter of course the market might go lower later on, but everyone is expecting such an urgent demand for feeder lambs as soon as the corn crop is assured that there is a feeling on the part of many sheepmen that active buying from this source will maintain a very strong market for killers as well as for feeders throughout the season. Sheepmen, in fact, are not doing any worrying at the present time, but are looking with a great deal of satisfaction upon the trend of events.

Government Figures at Hand

The government figures showing the number of animals slaughtered at all packing houses under federal inspection during the fiscal year ending June 30 are just at hand and are being studied with a great deal of interest. They show that during the year there was a total of 6,725,000 cattle slaughtered, which is, in round numbers, 775,000 head less than the yearly average for the seven preceding years. There has been a steady decrease during the last two years in the average weight of the cattle marketed, so that had the government figures been stated in pounds instead of head the decrease would have been very much greater. Calves show a decrease in round numbers of 280,000 head as compared with the seven years' average. Hogs show an increase, the total number slaughtered during the fiscal year amounting to 33,290,000 head in round numbers, which is an increase over the seven years' average of 850,000 head. Sheep also show a gain, the total slaughtered during the last fiscal year amounting to 14,959,000, an increase of 3,051,000, as compared with the yearly average. Taking the six big markets alone the figures make a somewhat different showing, the decrease in cattle at the six points amounting to 1,239,000 head, with an increase in hogs of 78,000 head and an increase in sheep of 2,882,000 head.

The growth of the live stock industry in California between the years 1910 and 1913 was greater than in any other of the seventeen states west of Missouri. In 1913 there were in California 1,964,000 head of cattle, 503,000 horses and 2,603,000 sheep.

MARKET PLACE

POULTRY—Leghorns

FOR SALE—50 YEARLING SINGLE-Comb White Leghorns, healthy and good looking, including my winners. Good layers. Ivar Johnson, Fremont, Neb.

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MEN WITH PATENTABLE IDEAS, write Randolph & Co., Patent Solicitors, Dept. 203, Washington, D. C.

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FREE TRIP TO PANAMA-PACIFIC exposition. Write us for particulars. W. T. Smith Co., 1111 City Nat. Bank, Omaha

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FOR THE BUYER AND SELLER

LANDS—Arkansas

LITTLE RIVER VALLEY LANDS—Rich and cheap, on railroad. Sessions Co., Winthrop, Ark.

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GET RICH RAISING STOCK IN ALAbama quick; notice what you can buy there from a nonresident owner because he cannot see to it: 1,280 acres 2½ miles from one railroad station, 3½ from another and 5 miles from another. Location fine; 800 acres in cultivation and balance in timber; rich, deep black soil underlaid with clay; produces a bale of cotton, more than 60 bushels corn, 75 bushels oats, two tons Japanese clover, with fine pasture all year round. 15 tenant houses, all fenced. Offered at only $17.50 per acre; worth double. Write E. E. Secor (late of Iowa), Selma, Alabama.

Colorado

COME TO NORTHEASTERN COLOrado, the best farming section in the west. You can get irrigated or table land that will double in value within the next few years. Natural home of alfalfa. One highly improved irrigated farm of 480 acres at a bargain. Write us. Sharp & Sharp, Crook, Colo.

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YOUNG HOLLANDER WISHES TO buy good farm or land. Box Y 130, Twentieth Century Farmer, Omaha.

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

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Minnesota

200 FARMS in THE FAMOUS PARK region and Red River Valley district, Otter Tail and Wilkin counties. Level or rolling prairie land. Timber land Any size farm you want from $30 to $80 per acre. Easy terms. Otter Tail county has never had a crop failure; 500,000 acres of corn last year, making from 30 to 70 bushels per acre. Natural clover and alfalfa country. Write for free booklet and lists. Park Region Land and Loan Co., Fergus Falls, Minn.

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NEW, RICH SOIL, NO HOT NIGHTS, on our Judith Basin (Montana) farms, where they raise big crops yearly without irrigation. You and wife join one of our low rate homeseekers' exc. parties and go out and select a choice farm bargain. Get our free maps and facts. See the owners. Wm. H. Brown Co., 5 N. LaSalle St., Chicago, Ill.

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NORTH DAKOTA LANDS DIRECT to Purchaser—The crop outlook in North Dakota was never finer than now and land prices are bound to go up soon. To obtain settlers along our 1,200 miles of track here we have obtaintd listings of several hundred thousand acres of choice lands ready to farm and will sell these at cost. Prices will never be so low again. Roads, schools, churches, railroads, all established. Very low excursion rates Mondays and Tuesdays. Come and see lands yourself, or write for full particulars. J. S. Murphy, Immigration Agt., Soo Line Railway, Minneapolis, Minn.

WRITE FOR ILLUSTRATED BLUE book describing my rich, black Red River Valley farms. Corn, clover and alfalfa successfully grown. Wm. McRoberts, Casselton, N. D.

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2 QUARTERS GOOD LAND IN HAMilton county, Nebraska, either separately or together; 5 miles from 2 good railroad towns, mostly in wheat and corn; alfalfa, timothy, native hay, oats, orchard; 6-room house, barn, granary, well and windmill. For full particulars, price and terms address Lock Box 43, Grand Island, Nebraska.

80 ACRES WELL IMPROVED, IN crop; fenced, cross fenced; 3½ miles from St. Paul, Neb.; $65 per acre; $500 now and $500 March 1, gets possession, and long time and 6 per cent. A fine home near town. Write John L. Maurer, 1201 Farnam St., Omaha, Neb.

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Caterpillar at Fremont in 1913

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1912—Willows, California.
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Glendale, Arizona, 3 competitors, first prize.
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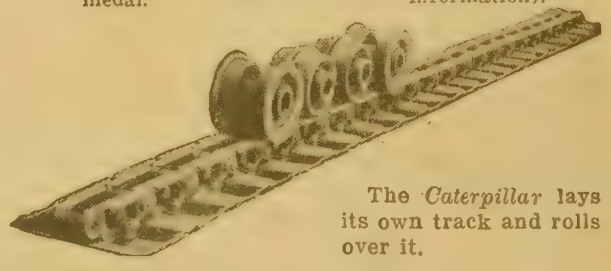

The *Caterpillar* lays its own track and rolls over it.

The *Caterpillar* transmission has no differential gearing—each track is separately controlled by a friction clutch, so you can pull with all the power on one track at a time and turn short, or pull on both together when you are going ahead. There's no chance for one track to slip like the wheel of an old style tractor. The cut-steel gears run in oil inside a dust-proof case. The powerful *Caterpillar* motor has made a great record for itself. Its cooling system keeps it in fine condition in the hottest harvest field. And parts are easy to reach—for instance, the pistons may be removed from the side of the crank-case while you stand on the ground. This tractor is not the lowest priced one on the market, but you'll find it the cheapest in the long run.

This demonstration at Fremont will be the only public appearance of the *Caterpillar* in this section this year. See the *Caterpillar* in operation—both the 60-horsepower and the Baby—and get our Catalog AF 50. Don't buy until you know the *Caterpillar*.

NO matter what the conditions may be, the *Caterpillar* will be ready to exhibit at Fremont, August 17-22. To win the tractor-buying public we must offer a machine that will do more than other tractors. That's exactly what the *Caterpillar* does. It works in any weather—on any soil. ¶ If the ground at Fremont is dry and baked hard, the *Caterpillar* will pull a gang of plows right through it—will plow it straight and plow deep, too. It's the combination of motor and tracks that do it. The large tractive surface grips the ground so that the strength of the motor is not lost getting to the draw-bar. This big surface, too, overcomes side draft so that the driver has no trouble steering. ¶ If the ground is wet and slippery, the *Caterpillar* will crawl right along—it does not slip and mire. It's the twin tracks that do it. They get such a grip that there is no waste of power in slippage. ¶ If there is any swamp land to be plowed the *Caterpillar* will wade right through that, too. Again it's the *Caterpillar* tracks—they distribute the weight so that the tractor does not sink into the soft spots. ¶ If there's any sand or loose soil, the *Caterpillar* can demonstrate on it just like any other ground—all due to

CATERPILLAR

Reg. U.S. Pat. Off.

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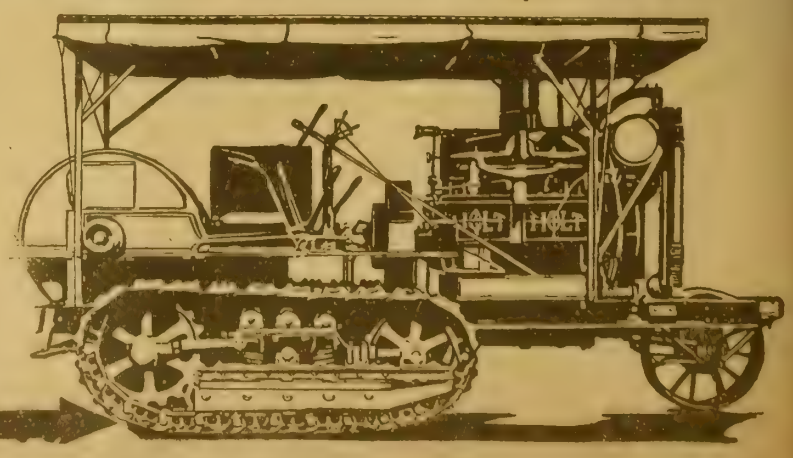

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TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, August 8, 1914 | Number 713

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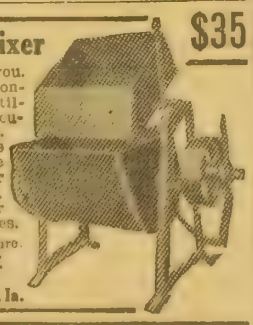

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Special Fall Fairs Number

FAIR time again! Lots of us attended the state fairs last fall, but more will go this year. Last year the grounds were dusty and the weather hot, but we enjoyed the outing and had a good time just the same. This year promises to be a vast improvement over last in most states of the west and middle west. The exhibits will be better and the conditions more pleasant.

Fairs are improving every year. County and state fairs were a few years ago mere excuses for the shell-game man and the fakir. What they left the sideshows would absorb, and if anything remained after they got through with us the pickpockets generally got it. Now it is different. Fair managements have almost entirely excluded from the grounds the gambling devices and the faked shows, finding that these are not what the people want. Improved methods of policing protect us to a great extent from the thieves that always gather wherever there is a crowd. The big fair is becoming more and more of an educational institution, with good, clean amusements on every hand.

Our next issue will be the annual fair number and will contain, among other things, an interesting article on the aims and methods of the present-day fair.

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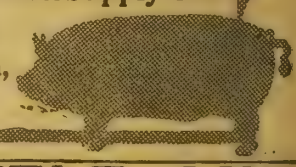

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The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Planning Pastures for Fattening the Pigs

Corn with Alfalfa or Rye Makes Good Ration and the Hogs Will Balance It Themselves

AT THIS writing the outlook for a corn crop is good over most of our territory. Hog cholera has not as yet made very great progress in killing off the pig crop. The combination of hogs and corn is one of the best in the corn belt for that which we all want and must have—money.

The season for finishing and fattening the crop of pigs will soon be here. We should consider how best we may get the corn to the pig, how best we may arrange to feed the crop with the least expense and get the most possible growth for the pig.

Undoubtedly many of our readers will be seeding some alfalfa this fall. Where will you sow it? Have you carefully figured all things looking to the harvesting and utilizing of this crop?

Hogging-Down Method Good

A good many years of experience have convinced us that the so-called hogging-down of corn is a splendid way to get the corn to the pig. It is not only an economical method, but if right conditions prevail the hog will make the best possible gains. For several years we had an alfalfa field so situated on the farm that three fields adjoined it. All these fields were fenced with woven wire fencing, so hogs could be turned into any one of them at any time.

The alfalfa field had hogs in it all the time. If one or more of the other fields had small grain, as soon as it was removed we opened the fence between that field and the alfalfa pasture and let the hogs get what they could and wanted in both fields.

In the fall when corn was ready to feed to the hogs the fence was raised or the gate opened between the cornfield and the alfalfa. Water was supplied and the hogs helped themselves and made the best of gains without any attention on our part. Supply your hog with the necessary rations and trust him to balance them. If given the opportunity he will do a better job of it than you can do.

Corn Ration Must Be Balanced

We are sure too many of our farmers do not give the matter of good, green pasture for fall use enough attention. Too many are depending on corn too largely for fattening the hog. You must have corn, and you must also have something to balance the ration if you make a successful job of feeding. Many of us buy shorts, oilmeal, etc., to balance the ration. These feeds are all right, but are they the cheapest feeds we can get to balance the corn?

Take these matters into consideration when you figure where you are going to sow your alfalfa. Wouldn't it be wise to try to arrange your farm so the alfalfa field could be adjacent to other fields in which you will be raising corn? A little thought along this line may suggest to you the particular piece of land on your farm on which you may sow the alfalfa and can cheapen and better your feeding operations in the fall.

The Country Faith

Here in the country's heart
Where the grass is green,
Life is the same sweet life
As it e'er hath been.

Trust in God still lives.
And the bell at morn
Floats with a thought of God
O'er the rising corn.

God comes down in the rain
And the crop grows tall—
This is the country faith.
And the best of all!

—Norman Gale

Rye Makes Good Pasture

To the man who hasn't any alfalfa, or can't arrange his farm in this way, let us suggest his sowing a pasture crop for fall use. Rye makes a fine fall pasture if conditions are right. Then, again, next spring it will be there early and the young pigs with their mothers will have an early green ration that will make them grow to surprise you.

This rye pasture can be let go for a crop, or may be plowed up and put into corn or some other crop. If you sow for pasture alone and intend to plow it up in the spring, sow it thick; we have sown as much as four or five bushels per acre. Sown this way, it makes a fine pasture if your soil is good and sufficient rains fall.

We urge our readers to look after this fall pasture. Perhaps you have not plowed up the barnyard or hog lot this year. If not, the first time we have a good rain to soak up the ground get into the lot and give it a good plowing. Pulverize it and sow it to rye. You will be doing two good jobs—cleaning up your premises, thereby helping to keep down hog cholera, and providing a money-making crop.

Fences Fine Investments

Some of our readers probably have the cornfield with the alfalfa joining it, but neither of them fenced. One of the best investments you could make would be to get busy and put a good woven wire fence around these fields. If your cornfield is too big to turn the hogs into, run a fence around five, ten or fifteen acres and turn in the hogs. With care in handling, the woven wire can be taken down so it can be rolled up and used at any other time or place.

One very important matter in connection with hogging down corn is the manure placed on the field and the manner of its distribution. When the hog is in the field no manure at all is wasted, and it is distributed much better than you can possibly do it.

We feel that increased wealth will come to the farmer who will fence his place so he can utilize all the waste by letting the animals clean it up. He will materially reduce the danger of disease in his herd by letting them have plenty of good pasture, and he will generally increase the productive power of the herd in many other ways.

Methods of Handling Manure

IT IS but a few years since the manure on the farm was allowed to accumulate for a year, then hauled out to the field, generally in the spring. From half to two-thirds of this valuable by-product was absolutely wasted by being allowed to stay in the pile and "stack-burn."

In those good old days the manure was hauled to the field on dump boards and thrown in piles, scattered later with a fork. Sometimes these piles were left in the field for a couple of months before spreading, and we wondered why the corn in the field was so dark and rank in spots.

If a new man was hired to work in the spring he was sure his first job would be hauling manure. In later years, and the practice is followed to a great extent now, the manure was hauled out twice a year, fall and spring. Often was the manure hauled in the fall and dumped in piles to be spread with a fork the next spring at plowing time.

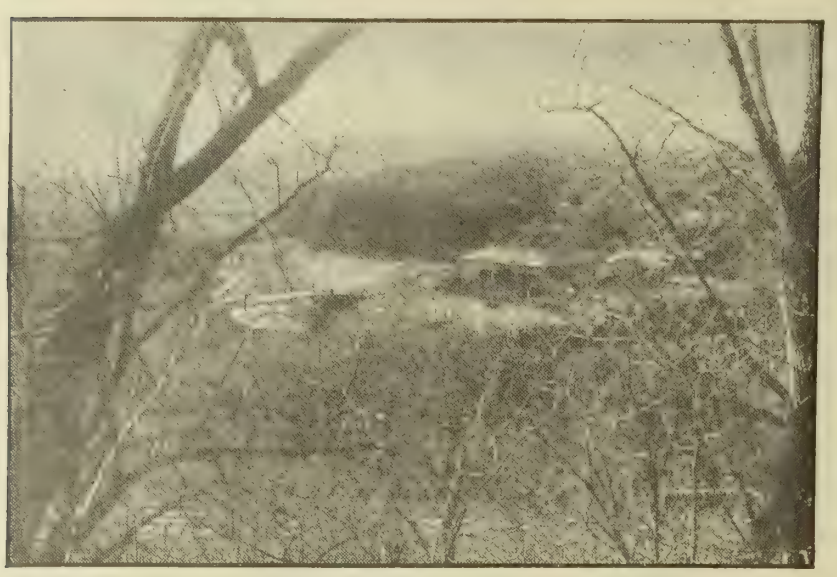
Many of our up-to-date farmers have adopted the practice of hauling the manure to the field as it is made, probably once, twice or three times a week. It is not necessary to have the manure thrown on a stubble field; it is valuable on almost any kind of crop, provided the job of spreading is properly done.

In our experience we recall distinctly spreading manure on two growing crops. One was a cornfield. After the first cultivation we went over a large part of this field (fifteen acres) with a thin top dressing of manure. The difference in the growth of the corn in this field where the manure was spread and where it was not was noticeable at husking time, and also before. One experience of this kind will convince one of the added yield he may bring to his crop. Our farm was quite hilly, and the

(CONTINUED ON PAGE THIRTEEN)

Alfalfa For Holding Humus on Hillsides

It Beats Corn and Cultivation on Steep Slopes and May Be Economically Handled



Tierney Homestead from the Alfalfa Field

Barn at Foot of Alfalfa-Clothed Hillside

WHERE the character of the soil is favorable, alfalfa beats corn as a crop for steep hillsides. It has the double advantage of being better for both farm and farmer than any crop requiring frequent use of the plow. To plow and plant but once in a decade is certainly an economy of labor. It is an even greater saving of the soil. And when by this method you can make each acre produce annually from $22 to $60 little room is left for argument against it.

This is exactly what is being done by one man who lives in the edge of the steep hills bordering the valley of the Missouri river. John Tierney, whose farm is half way between Napier and Forest City, Mo., has a fifteen-acre field of alfalfa which was sowed in the spring of 1907, and has produced six annual crops ranging in value from $22 to $60 to the acre. The entire field is a steep slope—so steep, in fact, that frequent cultivation would eventually result in utter ruin of the field by washing.

Could Not Raise Corn

The hill on whose southwest slope this field is situated is one of those great mounds of loess soil peculiar to the immediate valleys of the Missouri and Mississippi rivers. It was originally covered by timber, and after this was cleared off Mr. Tierney cropped it in corn just two seasons. At the end of that time, he tells us, in spite of the large amount of humus in the soil, as well as the presence of innumerable roots, the field was so gashed and gullied by washing that several open ditches had to be filled up and plowed in before the field could be properly seeded to alfalfa.

That was seven years ago, and today the field is without a gully—smooth as a lawn and a solid mass of green except for a strip several rods wide around the southern border of the field. This was eaten into the ground by the grasshoppers last summer. Both drouth and hoppers it could not withstand, and consequently Mr. Tierney has plowed up this strip and reseeded it; and with this doctoring he thinks the field is good for another seven years.

Mr. Tierney's alfalfa methods are worth considering. His plan is to work with nature, not against it. In the first place, he says, "Don't wait till all your black dirt is washed off the hill before you sow it to alfalfa." Washing rains, which are sure to come, no longer menace the fertility, and even the very body of the soil in Mr. Tierney's alfalfa field. And, mind you, the field is steep—propped up on edge like an exhibit at the fair. One would think it would be a difficult task to harvest the hay on ground like this, but not by Mr. Tierney's methods. Here again he takes advantage of natural laws.

A hay barn 34x60 feet, fifteen feet to the eaves, is located in the lowest corner of the field. Two bull rakes are used to bring in the hay, and Mr. Tierney says they haul a half ton at a trip easily, for it is a down-hill pull to the barn from any part of the field. A big grapple fork is used at the barn. Haying at the Tierney farm is thus neither hard nor long; it is haying reduced to its simplest form.

Much is Baled

On one side of the barn is a shed fourteen feet wide to house the baler and the baled hay. Unless the barn gets too full, baling is not commenced until all cuttings are in the barn and well cured. Much of the hay has been sold at the barn to local feeders, for the barn is only a few rods from the main highway, which is the "bluff road" following the dividing line between the bottom lands and hills, and leading two ways to good markets and shipping points.

At other times Mr. Tierney has shipped his hay to St. Louis, and he states that he has had very satisfactory results from this method. Thus he is not at the mercy of any one market and may feel reasonably certain of a good demand for his product whatever local conditions may be. It must be admitted that Mr. Tierney has a number of natural advantages. His field, sloping all one way, and that toward the main road, makes the strategic location of his hay barn possible; and yet he should have credit for seeing this possibility and taking advantage of it. The loess soil is the finest in the world for alfalfa, and yet, like all good things, it suffers from abuse. Mr. Tierney could not have chosen a surer means than this covering of alfalfa for conserving the natural supply of humus left by numberless layers of leaf-mould upon this wonderful subsoil. Whatever the natural advantages in his favor, Mr. Tierney is to be commended for his clear perception of them and the promptness with which he brought his cropping system in line with them.

Yields Vary Different Years

The yields from this field have varied, of course, with the seasons. Last year was the poorest of all. The yield was but two tons to the acre, and the entire crop sold to one feeder brought $11 a ton at the barn. In 1912 the crop amounted to about $40 to the acre, being sold at $12 a ton. At other times the price has been as high as $15 a ton and the yield as great as four tons to the acre. The yield this year will be cut down heavily as a result of the destruction wrought by the grasshoppers last summer, Mr. Tierney estimating that the strip thus killed amounts to one-fourth of the entire field. Thus it must be borne in mind that alfalfa is subject to many of the ills that reduce the yields of other crops. With a clear eye for the future, however, Mr. Tierney has every reason to be well satisfied with the method he has here adopted, and there are doubtless many other hillsides that would respond equally well to this treatment.

Mr. Tierney advises sowing alfalfa in the fall, although his field was seeded in the spring. He used fifteen pounds of seed to the acre and has a fine stand without any reseeding in the seven years that have elapsed.

Mr. Tierney is a man well past the middle years of life, having reached the age when most men cease to follow the plow, and yet this field of alfalfa has his personal attention at all times and it is a task that need not be an arduous one. He has not retired to an inactive life in town—still lives at the old farm home, renting out part of his land, farming part himself.

Thus it is suggested that alfalfa may solve other problems besides those of the steep hillside. It may be the crop to save the farmer's peace of mind as well as the fertility of his soil. It may be the crop to keep him busy without overtaxing his strength—the farmer who has earned a breathing spell in life and wishes to take it right on the old homestead.

C. R. ESTHAVEN.

NATIONAL·POWER FARMING·DEMONSTRATION
August, 17 to 22, 1914·Fremont, Nebr.

Management and Practical Value of Silos

V---Experiences of Three Nebraska Farmers Who Feed Silage

EXPERIENCE in the use of any particular feed or method of feeding we think pretty good evidence as to the value of that feed or method. True, the average farmer doesn't have actual weights of animals and foods fed as do our agricultural colleges and experiment stations. But, generally speaking, he is a close observer and knows whether or not the balance is on the right side of the ledger.

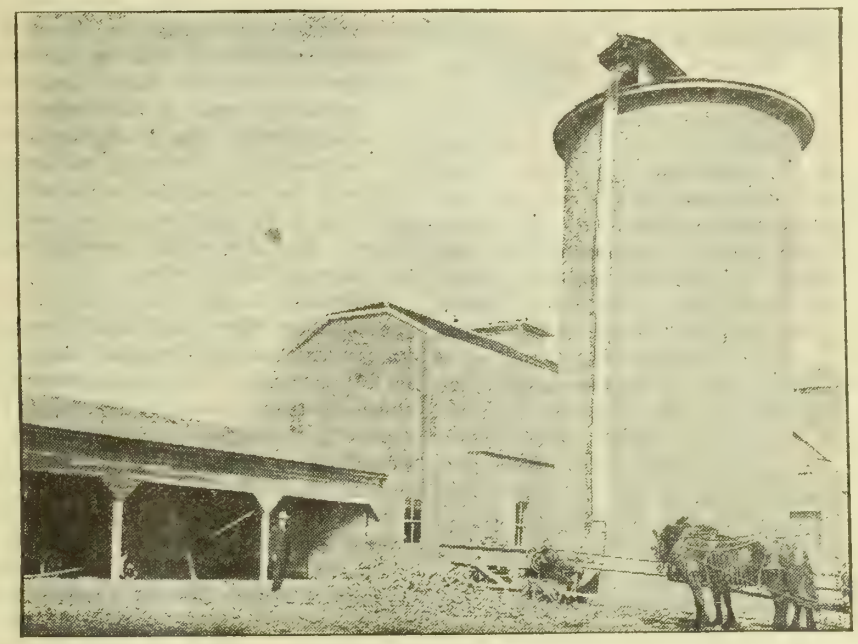
That our readers may have the benefit of some actual feeding experiences in the feeding of silage, the Twentieth Century Farmer has personally interviewed several farmers in different sections, gotten from them their conclusions in the feeding of silage, its value as a food compared with other feeds, etc.

We shall in this and some articles to follow give our readers the experiences of these men. They are all practical men, giving close attention to their business, and we believe some of our readers at least can get some good points from the experiences of these men.

He Wants Another Silo

C. W. Buck, living just north of DeWitt, Neb., has two silos of a capacity of 100 tons each. Mr. Buck found after using silage a year he wanted more of it. So the following year he built another silo. He informed us that the two he now has just about supply his needs during the winter. If, however, there is sufficient rainfall this summer to make a crop the visitor to the Buck farm will see a third silo this fall.

Answering our question, "Why are you going to build another silo when you say the two you now have just about supply your wants for the winter?" Mr. Buck replied that he regarded silage more valuable as a summer feed than as a winter feed. Yet he wouldn't think of trying to raise and keep cattle without having silage to feed in the winter time.



There is No Way to Store Cattle Feed So Cheaply as by Use of Silo

It is Mr. Buck's intention to erect one more silo, to fill it and have it in case of an emergency. If the pasture gets a little dry any time in the summer the cows won't slack up in their milk flow, the calves and young stock won't stop the gradual gain, because he can go into the silo and give them food they will relish, and food that will make them keep on growing. Mr. Buck will regard this extra silo as a sort of insurance, knowing he can follow some definite plan in his farm operations, even though the rains should not fall as he would like.

Prefers Corn and Kafir Mixed

Most silos are filled with corn. But the silos on the Buck farm are filled with corn and kafir, equal parts. The reason of this is that equally as good feed is obtained from a smaller acreage than if corn alone was used. The plants are left growing until the corn is as nearly mature as can be to make the best feed. Mr. Buck wants the plant possibly a little past the dent stage, or dry enough to require the addition of a three-quarter-inch stream of water run into the blower at the time of filling the silo.

The corn and kafir are planted in adjoining plots so they can both be cut at the same time. When the filling of the silo begins a load of corn is put through the cutter, then a load of kafir, and continued alternately until the silo is filled. The cutter knives are kept sharp and the stalks cut fine.

Cutter Owned by Five

Five farmers in Mr. Buck's neighborhood own the cutter. The power is hired in the form of a steam rig, for which they pay $10 per day for the engine and engineer, and furnish the fuel. Low wagons with sixteen-foot racks are used, each man loading his own load in the field. About six teams are required to do the hauling, taking about a day and a half to fill a silo of 100 tons.

The silos on this farm are fourteen feet in diameter. A distributer is used on the end of the elevator pipe and two men are in the silo.

The horses on this farm get no hay from November 1 to about the middle of March; a small feed of oats, depending on the quality of the silage, is given in addition to the silage. Mr. Buck thinks silage especially good as a feed for colts. The cattle on this farm did not have any hay last winter. Their only roughage was silage, and they went onto grass in a very satisfactory condition.

Silage Costs 75 Cents Per Ton

George Berger, living north of DeWitt, Neb., is a silo user. His silo holds 140 tons and is filled in one day. A total of sixteen men besides the engineer are required to do the work of filling. If corn makes thirty-five bushels per acre, Mr. Berger figures about eighteen acres would be required to fill his silo.

Corn alone is used here for filling, cutting it the beginning of the dent period. Mr. Berger does not plant corn particularly for silage, getting it out of the field regularly planted. Selection is made, however, of the growing corn that promises the least yield per acre, figuring that by using it in the silo the value of the poorer corn can be increased.

Cattle Gain Without Grain

Feed was rather scarce in this locality last season, due to insufficient rainfall. For six weeks during the winter the stock cattle were fed no grain or hay, just silage alone. Yet they made some increase in flesh. It must be remembered that there was practically no corn in this silage. The dairy cows were fed silage and alfalfa only, and satisfactory results were obtained.

Mr. Berger has had no experience in feeding silage to horses, but feeds it to his hogs and chickens and likes it. He believes that to a large extent it does to a pig or chickens what grass does to them in the sumer time.

Mr. Berger has had some experience in using silage as a summer feed. In the summer of 1913 the pastures got dry and short. The milk cows were taken off these pastures and fed silage, showing an increased flow of milk. This increase was lost when the silage ran out and the cows again returned to the pasture.

"It will pay any man having cattle to have an extra silo filled with silage for summer use," says Mr. Berger. "I wouldn't think of trying to keep cattle without a silo."

In answer to a question as to what per cent more cattle could be safely kept on the average farm if the owner has sufficient silage to be sure he could feed it when necessary in the summer, Mr. Berger said he would feel safe in keeping twice as many cattle as he could if he had no silo.

Converts Waste to Profit

Mr. Griggs, living just on the outskirts of DeWitt, is another Saline county farmer and dairyman who is a firm believer in the silo as a method by which the farmer may convert a certain per cent of the waste on the farm into something of profit. Mr. Griggs put up his silo in 1912, and consequently has had two years' experience in feeding silage. He has a 120-ton silo. His corn crop in 1912 made about forty bushels per acre, and nine acres were used in filling the silo, requiring one and one-half days' time.

In planting corn for use in the silo, Mr. Griggs plants it some thicker than he does for the regular field crop, the idea being to have the stalk not quite so large and making it more digestable. The crop is cut in the dent stage, dry enough so a little water is required when filling to give the corn enough moisture.

The experience of this farmer is that corn when put through the silo is more valuable for feed than if fed dry from the crib, for the reason that it is better digested.

When our representative made his visit to Mr. Griggs' place he found him milking several cows and feeding them silage, alfalfa hay and millet. Drouth conditions were such in this community in 1913 that there were practically no ears of corn on the stalks. Very satisfactory results were being obtained from this feed.

Better Than Alfalfa Hay

Speaking of silage as a summer feed, Mr. Griggs said it was a much more satisfactory feed than alfalfa hay. He is firm in the belief that silage is much to be desired as a summer feed, especially when pastures become a little dry. This farmer also made the statement that in his opinion there was no way by which a farmer could store feed for his cattle so cheaply or so well as by the use of the silo.

Hundreds of our farmers in Nebraska and other states were compelled, on account of a scarcity of feed in 1913, to sell off many of their breeding cows. Mr. Griggs told us that the silo was the only reason why he did not have to sell a large per cent of his cows, as in no other way could we have had the necessary feed to carry them through.

Wisdom of Others

Success comes in cans—failures in can'ts.

Politeness is like an air cushion—there may be nothing in it, but it eases the jolts wonderfully.—Printing Art.

An empty head, like an empty wagon, rattles much more than a full one, and in each case the tongue pilots the rattle.—The Roller.

If you have built castles in the air, your work need not be lost; that is where they should be. Now put foundations under them.—Thoreau.

If we judged our friends not as they act toward us, but as they act towards others, we should be under fewer delusions in friendship. —Collins.

The fact is, that in order to do anything in this world worth doing, we must not stand shivering on the bank, thinking of the cold and the danger, but jump in and scramble through as well as we can.—Sidney Smith.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
Minneapolis, Minn., 3159 Park Ave., H. E. Dimond, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Don't fool away time and feed trying to put flesh on an animal that has proven itself a poor feeder. Get rid of it.

Don't let anyone tell you that just any quality of grain is good enough for the hogs. If you expect good results you will have to feed them the best quality of grain.

If the straw pile is out in the field, it is a good plan to run a fence around it so the cattle and horses can't climb all over it. You will want the straw before spring.

The pasture may get a little short during the next six weeks. Look out for the colts; they should be kept growing. It is a bad plan to start the colt into the winter in a run-down condition.

Are the pigs coughing? If so, it is probably caused by worms or dust. If dust, get busy and kill it; if worms, don't lose any time in giving them a good cleaning out. Use santonin or some good, reliable commercial worm killer. If you have your hogs clean of worms you have a much better chance of withstanding an attack of hog cholera.

Hog cholera was discovered in one of our famous herds. No sick hogs were within five miles of the herd. A horse had died on the premises and the carcass was hauled out into the hog yard for feed. The farmer remembered seeing buzzards around. Without doubt, it was the buzzards that brought the disease to this herd. Burn or bury the carcasses of all animals that die. If a hog dies of disease don't bury the carcass, but be sure to burn it.

Another Good Man Leaves

A general feeling of disappointment prevails among the stockmen and interested citizens generally throughout the state of Nebraska in the losing of R. K. Bliss to the Iowa Agricultural College. Prof. Bliss came from Iowa two years ago to take charge of the animal husbandry department of the Nebraska Agricultural College, to fill the vacancy made by the resignation of Prof. H. R. Smith, who had made for himself a reputation as a feeder and fitter of show cattle that brought the Nebraska Agricultural College prominently before the live stock interests of the entire country. Prof. Smith, through his genial personality and his indefatigable energy and ambition to achieve success in all his undertakings, left a place hard to fill.

Notwithstanding the army of stockmen who mourned the loss of Prof. Smith, there came in his stead a mild-mannered, pleasant, unassuming young man, a near neighbor from the Iowa Agricultural College, who quietly took up the work of animal husbandry, and, in conjunction with Dean Burnett in the planning and formulating of experimental work, was soon in the harness, absorbed and imbued with the spirit of live stock development in Nebraska. His interest and enthusiasm could not have been more earnest had he been the owner of the entire live stock division and running it upon a basis of money-making entirely in his own personal interest.

In the short period of two years no man has ever made more substantial progress in the estimation and appreciation of the people of Nebraska than has Prof. Bliss. His personality carries with it everything that indicates honesty, integrity and a disposition to contribute of his best efforts for the people and institution he is serving. Prof. Bliss has made friends wherever he has met men, and his disposition and inclination to gain information from the farmer and feeder has been one of the greatest sources of endearing him to his constituency. While a teacher and instructor, he has at all times been a willing listener to the experience and observation of others.

Prof. Bliss contributes one more to the long list of valuable young men that Nebraska has been furnishing other states more efficiently to build up and carry forward their agricultural educational interests. Just why the state of Nebraska should be so generously engaged in this sort of agency, to the detriment of its own power and standing as an agricultural state, from the standpoint of its actual educational resources, is difficult to understand. There is only one ultimate result to this course of action, and that is lowering the standard and efficiency of the Nebraska Agricultural College. It cannot keep up with other similar institutions and contribute of its most desirable teaching force whenever increased salaries are made the basis of decision.

Nebraska can afford to have the best and maintain the best, especially when it comes to a bid for our teaching force by other states. If there are not now means at hand to put Nebraska upon an equal salary basis with other states, this should be one of the first provisions enacted by our next legislature. Stand up for Nebraska—not by giving our choice educators to other states, but by paying such salaries as will hold them for our own service.

How Licenses Are Obtained

We are and have been very much interested in the granting of licenses for the manufacture and shipment of serum and virus by the government.

News items in the daily press have called our attention to one practice we do not think is right, and that is that applicants for licenses have gone to Washington, called on their senators and congressmen, these offcials in turn going with them to the department. In some cases we have noticed licenses were granted soon after these visits.

We do not know whether or not any political influence has been or is being brought to bear on the department by any of these senators or representatives. We do want to say emphatically that if any senator or congressman is trying to bring influence to bear on the department, inducing it to issue any of these licenses, they are going wrong, and the practice should stop.

Licenses should be granted to these plants only when they come up to government requirements and for no other reason. If the granting of these licenses is unduly delayed it is perfectly right for a senator or congressman to assist his constituent in getting the department to act.

The fact that some of these lisenses have been granted soon after visits to Washington by applicants, as stated above, leaves ground for the assumption that politics are being mixed with the granting of these licenses.

If inspection of a plant has shown the applicant entitled to a license, it should be promptly granted, and the department should not require an applicant to get the assistance of his representative in congress in order to get his license issued.

The facts as stated above show one of two things—the department is dilatory in granting licenses after inspection, or the senator or representative is using political influence he absolutely should not use.

Foreign Butter

Considerable New Zealand and Australian butter have been coming into Oregon during the last few months. This butter arrives in the largest quantities in winter, as that is summer in these countries, and so does not come into competition with native butter at a time when it is plentiful. In a recently issued bulletin the Oregon dairy and food commissioner expresses the opinion that instead of working injury to the dairy industry of that state this butter will improve conditions. Economical conditions of manufacture and excellent quality will be encouraged, which will result in a greater consumption of butter, thus improving the market.

Have you recently taken a broom and some hot water and scalded out the sour trough in which slop is fed to the pigs? It is an important duty.

The Milking Machine

The day of machine milking is here. For years the effort to perfect a machine that would milk cows satisfactorily failed, until many experiment stations and large dairy enterprises despaired of getting the relief that the machine milker suggested. The dairy business has, even with all the inconvenience of hand milking, proven itself one of the most reliable paying features of agricultural enterprise that the farmer can associate with his farm operations.

The great drawback with the majority of farmers in making the milking of a few cows a part of their mixed husbandry was, and is, the labor attached to the drawing of the milk by hand. The milking of the one or two family cows for the home supply of milk, cream and butter was, of course, a light task and not given much consideration by the farm help. But when it came to adding to this the commercial feature of the milk business, where ten or more cows were to be milked by hand morning and evening, and this work crowded in above and beyond the regular hours for the day's work, which was and is the usual custom on most farms, then the demand for the machine milker became apparent.

The machine milker is one of the best paying machines that the farmer can install where there are as many as ten cows to milk. The one feature of ease in milking does not tell all the story in the strong endorsement of this machine. The cleanliness and sanitation of milk is rapidly becoming a feature of requirement with the cow owner. The machine milker absolutely heads off all possibility of dust or dirt getting into the vessel that receives the milk.

The special claims for the machine milker are cleaner milk, the doing away with the drudgery of hand milking, the elimination of the hired hand for this purpose, the protection of the teats and udder in a more uniform, easy-milking process, the ability to handle double the number of cows with half the labor expense, the making possible of a small dairy industry on every farm, and the making of the small farm dairy profitable without increased help. The strongest feature introduced by the machine milker is the increased farm dairy industry that it is bound to create.

Dr. L. C. Kigin, state veterinarian, informs us that he is meeting with splendid co-operation from the railway and stock yards people in placing quarantine cards on public stock yards and in enforcing the order of the Nebraska Live Stock Sanitary Board prohibiting the removal of any hogs from any of these yards except for immediate slaughter. This will go a long way toward helping to keep down hog cholera.

A Florida paper gives this wholesome advice: "While you're standing looking over the fence to see how your neighbor's morals are stunted in growth, you had better be getting a hoe and chopping some of the weeds out of your own."

Russia's 1913 corn crop was 73,072,000 bushels.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

If

If I were a wee, black kitten,
And you were a big, red ball,
How we'd romp our way
Through the long, bright day,
With never a care at all!
How we'd gambol and play
In a careless way
Through attic, and chamber, and hall!

If you were a playful puppy,
And I were a shabby shoe,
How we'd scamper and skip,
Helter-skelter, flop, flip,
In a game of our own, quite new;
With a bob and a dip,
And a hop and a skip,
In a rollicking game for two!
—Ethel Hallett Porter in Dumb Animals.

Why Rose Was Afraid

"Please, mother, don't ask me to fix the sweet corn," said Rose. I'd just as soon do anything else, but when I find one of those big striped corn worms it just makes me sick."

"Let me do it for her, Sis," said the every helpful Uncle Jack, who had stopped at the house for a drink of buttermilk. "It won't take long."

"Rose does hate worms so," said her mother. "You are getting to be such an entomologist, Jack; can't you tell us some way to raise corn without corn ear worms?"

"That is one reason we do fall plowing and rotate our crops in the field," said Uncle Jack.

"How does that help?" asked Rose.

"Fall plowing freezes them. Rotation starves them," he replied. "In September or October the worms crawl down into the ground and change to pupae. You know what they are."

"Yes," said Rose, "the stage between the worm and the butterfly, when they are just like dead things."

"Good girl!" said her uncle approvingly. "I like to tell things to girls who remember them. "These pupae remain in the ground all winter and in the spring they come out dull yellow butterflies, marked with black. They are about half as wide across as my first finger is long. They fly about in the sunshine, laying eggs on any nice, juicy plant they can find—tomatoes, melons or anything of that sort. You will find that the tomato worm and the corn ear worm are the same. They get to the corn last, as that comes later in the summer."

"Why is there usually only one in an ear?" asked Rose.

"Because these worms have very bad dispositions and they are cannibals. When two meet one generally eats the other up."

"Why does it starve them to rotate the crops?" asked the children's mother. "Won't they lay their eggs on wheat or alfalfa?"

"No," said Uncle Jack. "Corn, tomatoes, cotton, melons, peas, beans—all these the corn ear worm likes, but you can keep the cornfields clear of them by alternating with small grains or alfalfa."

"And the larvae freeze if you plow them out of the ground in the fall, don't they," asked Rose.

"They freeze, and also it makes it easy for the quail and meadow larks and other birds to get at them and eat them before they hatch out," said Uncle Jack. "They eat thousands of them on the fall-plowed fields. There's your corn, Sis, all done, and there wasn't a worm in it."

"Well, there might have been," said Rose. "You never can tell when you will run across one."

HOME EDITOR.

NEW IDEA
Helped Wisconsin Couple

It doesn't pay to stick too closely to old notions of things. New ideas often lead to better health, success and happiness.

A Wis. couple examined an idea new to them and stepped up several rounds on the health ladder. The husband writes:

"Several years ago we suffered from coffee drinking, were sleepless, nervous, sallow, weak and irritable. My wife and I both loved coffee and thought it was a bracer." (Delusion).

"Finally, after years of suffering, we read of Postum and the harmfulness of coffee, and believing that to grow we should give some attention to new ideas, we decided to test Postum.

"When we made it right we liked it and were free of ills caused by coffee. Our friends noticed the change —fresher skin, sturdier nerves, better temper, etc.

"These changes were not sudden, but increased as we continued to drink and enjoy Postum, and we lost the desire for coffee.

"Many of our friends did not like Postum at first, because they did not make it right. But when they made Postum acording to directions on pkg. they liked it better than coffee and were benefited by the change."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum now comes in two forms:

Regular Postum—must be well boiled. 15c and 25c packages.

Instant Postum—is a soluble powder. Made in the cup with hot water—no boiling. 30c and 50c tins.

The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.

—sold by Grocers.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Prize Story.)

My Lost Trip

By Walter Cheney, Aged 14, Turlock, Cal.

Charlie had always been a good boy in doing as his parents wished him. He was a lucky boy in many ways. When he was sick he did not have to go to a doctor, as his mother was one. His father was a retired farmer. In the summer his parents always went for a vacation.

The day before he was to start on his trip this year he disobeyed his parents. When he asked to go to the ball game between the local high school and Ferndale for the state championship they told him no, as he had to pack up.

The excitement for the championship was too great for him, so he resolved to go anyway and hurry back after the game and pack up.

James, the local pitcher, was in fine form and pitched his team to victory. The final score was: Riverdale, 2; Ferndale, 1.

Upon returning from the game Charlie found his parents not at home. "Where are ma and pa?" he asked.

"They have gone already, as Mr. and Mrs. Brown were going to the same place tonight and they decided to go with them. They left you at home to stay with me for not minding," answered Mary, the cook and housekeeper.

Charlie never disobeyed again, as he counted many, many things that he had missed in the three weeks' vacation his parents spent in the mountains.

The winning of the prize this time makes Walter Cheney a member of the honor department, as he won the prize on December 13, 1913. The honor department is for those who win the prize more than once. They cannot then win another prize, but we are glad to have them continue to send in stories. If they are better than the prize stories and we think you would like to read them, we then print the honor stories and send the writer a book for each story printed. The honor department now consists of Orrie Campbell, Bertha E. Hayes, John Weibe, Myrtle Woolery, Helen Barnhouse and Walter Cheney.

(Honorable Mention.)

My Donkey's Trick

By Elena Ferrari, Aged 10, Smith's Flat, Cal.

Two years ago my mamma and papa went to town and I was left home with my oldest sister and two sisters younger than myself.

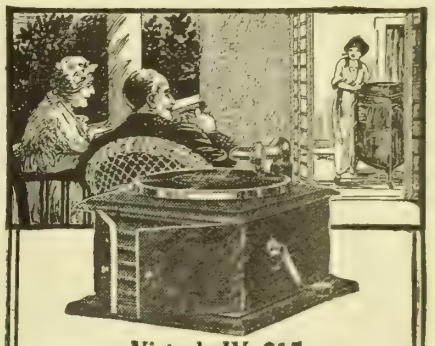
It was about 5 o'clock when papa and mamma arrived, and we all rushed out to see them coming, and were surprised when we saw a little donkey tied back of the spring wagon. I was so happy I did not know what to do. Papa called me and gave the donkey to me and told me it was my birthday present. I took the donkey and thanked papa very much. I led the donkey to the barn and called him Dan and had a lot of fun with him.

One day we all went for a ride. We got on the donkey and must have been too much of a load for him, for he went slowly, and when he got in the middle of a little creek he bucked us all off into the water and we fell splashing. The water was not very deep, but we got very wet, and the donkey ran home. We laughed and laughed whenever we thought about the donkey and his trick.

Additional Stories

Everett Van Horn, North Loup, Neb.; Josephine Little, Fremont, Neb.; Rosie Kuhr, Mead, Neb.; Annie Eggers, Yutan, Neb.; Hazel Mundell, Cozad, Neb.; Alice E. Schuler, Decatur, Neb.; Jessie Mae States, Selma, Ia.; Elaiza Sieneros, East Las Vegas, N. M.; Elsie Ferrari, Smith's Flat, Cal.; Homer C. Christian, Fayetteville, Ark.

Four Friends



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Young man what have you made up your mind that you are going to be; a doctor, preacher, lawyer, merchant, or are you of a mechanical turn of mind? If so, how would you like to become a watchmaker and also take jewelry work? It is a clean business and a trade that commands good salaries, or you can get into business for yourself. Over five hundred watchmakers and jewelers in Kansas, Nebraska and Iowa have learned their trade at this school. Write to the Horological Department, Bradley Polytechnic Institute, Peoria, Ill., asking for latest catalogue.

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Of Interest to Our Women Readers

The Two Rainbows

The sky of the world is sunny and blue.
Yet often and often 'tis hidden by clouds,
The gloom of the storm is dreary and dark,
And the mist of the fog is formed into shrouds;
But the clouds and the storm—they never can last,
Soon the sun will be shining, the darkness be past.
And a bright arch gleams on the rainy slope.

The sky of our life is happy and clear,
Yet often and often 'tis hidden by grief,
And the pain and the sorrow resemble the storms
And shadow our gladness and test our belief.
But the clouds of sadness—they pass, and it clears,
While Faith shines out and we see through our tears—
Life's beautiful rainbow of Hope!

—Guy M. Staley.

Domestic Science for Harvesters

One of the most interesting things we have read in the late issues of the magazines is an article telling the experiences of a farmer's wife, a college graduate in domestic science, when she tried to cook for hay hands. She gave them delicious salads, fried chicken and caramel cake, and they all left because of the "grub." Then, to cap the climax, her husband figured a loss on the hay crop at the end of the season, due to extravagance in the kitchen.

There were probably many who read this article and said, "Of course, just such things happen. Domestic science is not practical, anyhow." However, the difficulty is not so much with domestic science as with the way it is taught and applied. It is generally given from a city standpoint. The quantity and quality of the fare this woman served would be appreciated by society women or men working in offices, but it was entirely insufficient for men working all day in the open air. Domestic science is taught generally in accordance with the requirements of city dwellers. Where this is so the student should be able to adapt it herself to the requirements of country life.

If this woman did not learn to cook boiled dinners, potatoes in all manner of guises, puddings and other heavy foods, then her education was certainly incomplete. Her course should have included these things, and probably did, if she had given them more attention. The main thing she lacked was common sense. Education is a good thing, but education applied to a man or woman who lacks common sense is like tint applied to a wall that has not been sized—it will peel off in spots, leaving a worse condition than existed before the application.

HOME EDITOR.

Cool Drinks for Hot Days

Lemon Syrup for Quick Lemonade —Take the juice of twelve lemons and grated rind of one; let stand over night. Make a thick syrup of four pounds of sugar and when cool add the lemon juice, bottle, cork tightly and keep in a cool place. Use one or two tablespoonsful to each glass of ice water.

Cherry Punch—Make a syrup of two cupsful of sugar and one cup of water. Add while hot two cups cherry juice, one-half cup orange juice, one-fourth cup pineapple juice and the juice of half a lemon. Cool, ice, dilute and serve.

MRS. S. GILBERT.

Compensations

A woman was going about doing her regular morning work. As she washed the dishes, made the beds and swept the rooms she thought of the vacations on which several of her friends were planning.

"O dear," she said to herself, "everybody is going somewhere except me." Suddenly, like a whisper in her ear, came to her the words, "Everything has its compensations." Musing on the thought, she resolved to search and see if there were truth in the passage so timely received.

The pleasure of not having to get ready first appealed to her. There would be no hasty shopping, no tiresome visits to the dressmaker, no hours of forced haste in preparation. What was needed could be done leisurely at home and be made a pleasure.

"If I stay at home," she thought, "I'll not need many things, and I'll have some time to devote to my flowers," and at once she began to plan for them. "And my little chickens—dear little balls of down—I'll have some. And I'll read some of the books I have been wanting to get sometime for so long. And there are fresh air and sunshine and blue sky right here. No one has a monopoly on those things"

Vacations passed, the flowers grew and flourished, new every morning, of unfailing interest, and not only giving joy to the possessor, but to many a friend and shut-in, and even to passers-by. And the dear little chickens—what a wonderful transformation from seemingly inanimate things to this bursting forth into new and glorious life.

The summer hours fled. The grass was a brilliant green, the trees only rivaled it in color and freshness; the sun beat down hot, only to make the shade more dark and inviting. What is so inviting as home? What pleasure more delightful than, arrayed in easy robes, to rest in a darkened room beside an open north window through which the breezes gently play, all conducing to the most luxurious repose? What more heavenlike than to sit out in the beautiful evenings with the lover of your youth, who, though two decades have passed, is a lover still? To linger long under the stars and to live your courtship over again?

The long neglected letters were written and old friends were made glad by visits, which had become rare. And the woman was content, believing in the wisdom of the saying that everything has compensations. ELLEN C. FOUNTAIN.

Nebraska.

Styles for Home Dressmaker

6437—Ladies' Waist. Suitable for either a shirtwaist or a costume waist; this bodice has one of the new very deep yokes, made without any seam whatever. It comes down on the arm and the sleeve is gathered where it is inserted as well as at the wrist. The pattern 6437 is cut in sizes 34 to 42 inches bust measure. Medium size requires 2⅜ yards of 36-inch material.

6418—Ladies' Skirt. An excellent tailored design suitable for use with a separate coat, or as part of a costume, is shown in this model. It is a two-gore skirt, with raised waistline, plain in front and slightly gathered across the center of the back. The pattern 6418 is cut in sizes 22 to 30 inches waist measure. Medium size requires 2⅝ yards of 36-inch material.

6071—Ladies' Shirtwaist. Linen, madras or china silk can be used to make this shirtwaist. It can be made with or without the box plait at the front and with either the high or low neck. The pattern 6071 is cut in sizes 34 to 42 inches bust measure. Medium size requires 2¼ yards of 36-inch material.

6468—Ladies' Kitchen Apron. This is a plain and practical apron, the front panel fitted in to the figure and forming a bib and tabs over the shoulder. The sides end at the waist and are gathered, while the large pockets are stitched into the side front seams. The pattern 6468 is cut in sizes 34, 38 and 42 inches bust measure. Medium size requires 4½ yards of 36-inch material.

6355—Children's Dress. Any of the wash materials can be used to make this dress, with the collar and cuffs of contrasting material. The dress closes in front and the pattern provides for a pair of separate bloomers, which are attached to an underwaist. The pattern 6355 is cut in sizes 2, 4 and 6 years. Age 4 year requires 3 yards of 36-inch material for the dress and bloomers, ⅜-yard of 27-inch contrasting goods and ¾-yard of 36-inch material for the underwaist.

6399—Boys' Russian Suit. While the Russian suit remains the proper dress for little boys, it is now cut on straighter lines. Our model also has a very low, diagonal closing, with the popular vest in front. There is also a wide collar at the neck. The pattern 6399 is cut in sizes 2, 4 and 6 years. Medium size requires 2¾ yards of 44-inch material.

6373—Ladies' Dress. Serge, cheviot or linen can be used to make this dress, with the trimming of contrasting material. The dress closes at the front and can be made with either the long or short sleeves. The skirt is cut in four gores. The pattern 6373 is cut in sizes 34 to 42 inches bust measure. Medium size requires 5½ yards of 36-inch material, ⅝-yard of 18-inch goods for the vest and 1¾ yards of 21-inch satin.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

All Patterns on This Page 10 Cents

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

MOLTING the feathers is a severe strain on the fowl, and a process requiring about 100 days, though some hens are found to be taking a longer time than this, and others a shorter time, according to the age or condition of the fowl.

A very poor hen molts slowly, and is nearly sure, if half starved, to drop all or nearly all of her feathers at about the same time. This leaves her bare entirely too long, and any weakness or lack of food that has caused this, added to the bare condition on cool nights or rainy days, will leave you a fowl weakened beyond power to lay that winter, or maybe even to survive the fall and winter.

In molting properly there will be a certain ragged look of the feathers and a faded appearance, but the fowl should not be bare in any place; the new feathers should be coming in as the old drop out. If the fowl be well fed and strong, this is the way it will be. It is the nature of all fowls and birds to molt—ducks, geese and all. Along in the spring the feathers should begin to thin out on the adult fowls, leaving a thinner, cooler coat for the summer. This is what nature orders. As the hot days of July or August come on the real molt has come and the feathers gradually come in, displacing the old, until by the beginning of winter the feathering should be extra heavy and close to resist the winter cold. This, again, is nature's provision, and any tampering with it usually gives bad results, for the Van Dresser, extolled once, has gone into oblivion except by the few willing to risk it on fowls meant for the earliest winter poultry shows.

Keep the birds well fed on a good feather-growing diet, which is good corn, wheat and oats, plenty of green stuff, grit and charcoal, and this will help nature with the molt. Sunflower seed, richest of nearly all of the grains, and good cracklings from the butcher shop are excellent adjuncts to the grain, and will take the place at times of some of it. Give the fowls all they want of such a diet and many of them will carry laying through all of the molting time. The reason for so many of the farm flocks shutting off fall and early winter laying is because that, already run down with heavy spring and summer laying, the loss of flesh from brooding and caring for chicks, they come into the molt and go through it on only half ration, or, if enough, not of a kind that promotes the growth of heavy feathering. You will be doing an act of mercy also if all of the males are penned away from the flock of hens during the molt. On the farm there is plenty of room for a small house and run for these the winter through. This also conserves the strength of the breeding males you would keep over.

Fall Selection

A noted breeder does not advocate the selection of a large flock of layers by the trap nest method. It is all right if you are raising a limited number, but to give it the time you should and make a success of it you must limit your number and then charge good prices for the eggs and roosters hatched from the eggs of great layers for breeding purposes. But when one would raise large numbers of laying hens, say from nearly 1,000 or more, or even but 500, selection by the trap-nest method is too slow. This man has changed from the trap-nest method to selecting in a way any farmer could—by sight, experience and judgment. It is easy to know the vigorous hen, and you soon become nearly expert in knowing the hen that lays, though hundreds pass before your eyes every day. Selection of laying hens of any age must be made at least twice a year. Pullets make up a large per cent of this selection each year, 2-year-olds the next largest per cent and 3-year-olds a good per cent, because these will be largely used next spring, mated with male birds bought from vigorous laying strains, to produce the next season's hatches. This is on a farm carrying egg production on a large scale. Such a farm carries yards for the different ages, and each age bears its own leg bands.

The common farm poultry yard, keeping over no more than from 100 to 200 hens, should carry hens selected mainly as this man selects. Every hen's age should be known by the bands she wears. The age need not be on the band, because you can make a selection of bands that will by sight show you which hen is a last year hen and which a hen of other years. No farmer is keeing his flock in an intelligent manner that cannot tell this year's pullets from last year's hens when it comes to late culling time. Too many of them do not, and so sell off pullets and keep too many old hens. Bands are very cheap.

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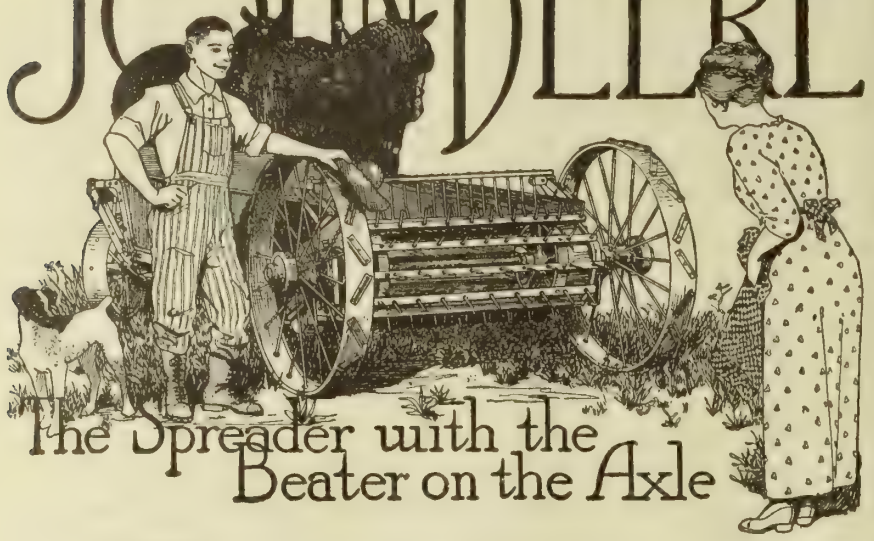

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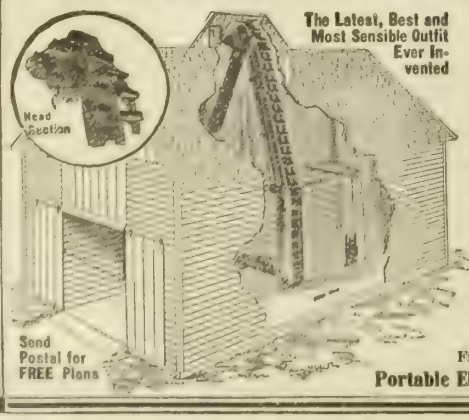

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Andean Excavations that Indicate White Race Eighty Centuries Ago

LA PAZ, Bolivia—Am able to give you the story of some wonderful discoveries just made in the heart of the Bolivian Andes. You may have read of the ruined city of Machu Pichu, found by Dr. Hiram Bingham in the heart of the jungle within four or five days of Cuzco, the capital of the Incas. That is situated in Peru. On the high plateau of Bolivia are the remains of another ancient city not far from La Paz that has been known for generations. Its origin has never been settled, but now out of the ground from under it are coming pottery, relics of gold and copper and the skeletons of human beings that lead scientists here to suppose that it was in existence 2,000 years or more before the first stones of the Pyramids were laid.

This ancient city is known as Tiahuanacu. It is twelve miles from Lake Ti-

She Was a Young Lady 1,500 Years Old

ticaca; and some of its ruins are within a stone's throw of the railway that goes from Gusqui, the Bolivian port on the lake, to La Paz. I stopped there on my way across the plateau.

The ruins are scattered over an area equal to about a dozen 160-acre farms. They consist of the remains of massive walls, of terraced mounds, and of the great edifice sometimes called the Temple. The latter building covers four acres and it was made of blocks of black stone thirty inches in thickness. The stones are much like those of the ancient buildings I saw in Cuzco. They were fitted together without mortar and that so closely that I found it impossible to insert a knife blade between them. The stones are cut with absolute regularity, and we have no modern buildings which are more closely fitted together.

Mighty Pillars Here and There

As it is now, most of the structures of Tiahuanacu have been carried away, and it is only the mighty pillars that are scattered here and there and the cut stones remaining from the old buildings that indicate the wonders of the past. The temple itself was in the shape of a rectangle, 445 feet long by 388 feet wide. Its outlines are marked by massive blocks of red sandstone, some of which are still erect. They evidently formed the part of a rough wall and they supported a platform of earth that rose eight feet above the country surrounding. On the eastern side of this platform was a lower terrace, along the edge of which were great stone pilasters ranging in height from nine to fourteen feet and in width from two to four feet. There were ten of these All except one stand there today.

Near this platform is what Squier called the palace. I refer to Ephriam George Squier, who went to Peru more than fifty years ago as a special commissioner from the United States and described these ruins in his book, entitled, "Incidents of Travel in the Land of the Incas." When I was in Bolivia fifteen years ago I went over Squier's discoveries with Prof. Adolfe Bandolier, who was then working for the New York museum, and he told me that Squier's deductions were in the main correct. Squier made some excavations under the temple. He heard from the Indians that there were large vaults beneath it, and that an underground passage led from there to Cuzco. He dug under the foundations, but found no vault or passage. The discoveries recently made are the work of Dr. Otto Buchtein, the director of the National museum of La Paz. He has made some wonderful finds in the earth not far from the temple and in the country about. The museum here is full of them and the work is still going on. I shall describe his discoveries further on in this letter, giving a talk with Dr. Buchtein.

What is Still Left

But first let me tell you what is still left of Tiahuanacu. The ruins are accessible to all, and some may be seen from the windows of the cars passing through on the way to La Paz. There are remarkable ruins right at the railway station and in the town that surrounds it The town consists of mud huts, some of which have doorways made of stone brought from the ruins and set into the walls. I saw Aymara Indians sitting in these stone doorways, and others stooping as they went in and out. The huts are often plastered with mud, and upon the thatched roofs are wooden crosses, showing the religious nature of the people. The town has a Catholic church that has stones of the ancient city in its walls, and in front of the church is a cross on a pedestal made of such stones. There are carved idols on each side of the gateway that leads into the church. They all came from Tiahuanacu, whose people lived 8,000 years ago and worshiped we know not what.

The main ruins of Tiahuanacu lie on a broad and level plain, situated about a half mile south of the railroad. They are scattered over the plain, some of them half buried and others lying well up out of the tufts of grass and other low plants that cover it. The region is the picture of desolation. The Andes are in plain view, but outside them there is nothing but the mud huts in the distance and the alpacas, llamas and sheep, watched by Aymara shepherds, spinning or knitting as they mind their flocks.

Doorway of Solid Stone

One of the striking features of the ruins is a great doorway cut out of one solid block of stone. This is fitted into the walls of an old cemetery. The block is broken at one corner, but it originally was a great stone slag eighteen inches thick, and twice as tall as a man. The doorway that was cut through its center is four and a half feet high and almost three feet in width. The stone above the door is beautifully carved with figures that seem to be Egyptian, and over the doorway is a central figure in high relief. Some of the figures evidently represent kings, for each holds a scepter and some have crowns on their heads. They have human bodies, feet and hands.

Others of the stones are enormous. I saw one thirty-six feet long and seven feet thick, and another which is twenty-six feet long, sixteen feet wide and six feet in thickness. Some of the blocks are of sandstone and others are trachyte, dark in color and exceedingly hard. The latter are beautifully carved and polished.

Among the most remarkable features of the ruins are the stone idols, dug out since Squier's time and made to stand upright. Some of these idols are of gigantic size. Their bodies are as big around as a flour barrel, and they are more than eight feet in height. The faces have thick lips, and the heads are so cut that they would be a delight to the cubists of today. They are all angles, even to the eyes, noses and lips.

Some of the smaller idols have been brought to La Paz. There is one in the center of the National museum here. It is about three feet in height, and is ar-

tistically carved. I took a picture of myself standing beside it, and also of Dr. Buchtein, the director of the museum, who has been making the excavations.

Through the Museum

It was in company with Dr. Buchtein that I went through the museum and examined the objects he has just dug from the ground. The collection is large, covering many tables and filling several rooms. It consists of pottery of all sizes, from vases of three or four gallons down to the little cups the size of half an eggshell. Some of the objects are almost Etruscan in their decoration. Other pieces have hieroglyphics that make one think of Chinese or Japanese characters. Much of the terra cotta is as fine as porcelain, and, when tapped upon, it gives forth the same sound. The bowls are of the color of terra cotta, and there are beautifully shaped cups, each of which would hold one or two quarts. The collection altogether numbers thousands of pieces, and it has all been excavated in the last two or three months.

Dr. Buchtein believes that the pottery of his latest excavations dates back to 8,000 years ago, or to more than 6,000 years before Christ. If he is correct, he has found the oldest records of civilization now in existence. He tells me he does not think that Tiahuanacu was the work of the red race, and that he believes that it dates far back of that time to a white race who inhabited this part of the Andes. In this belief he is not alone. A scientific traveler who recently passed through here has brought forth the idea that the Bolivian plateau was once settled by the ancient Phoenicians. This man claims that the gold of Ophir came from the Andes. He says the Bible states that it took three years for the ships to make the journey to the mines; and this is borne out by I Kings, tenth chapter, twenty-second verse. In the navigation of those ancient times it would certainly have taken as much as three years for a ship to have passed out of the Mediterranean, through the Strait of Gibraltar and across the Atlantic ocean to the west coast of this continent and back. The verse referred to says 'they brought back gold and also almug trees, and ivory, apes, and peacocks." There is no ivory in South America and the peacock comes from India. As to apes there are plenty of monkeys in the lowlands of this continent, but as to the almug tree, I know it not.

Relics of Many Ages

The excavations of Dr. Buchtein include many finds of implements of stone and also some of gold, copper and bronze. The first belong to the stone age, and the latter are said to date before the times of the Incas. As to the pottery, I saw much that seemed to indicate an Egyptian origin. Many of the cups and bowls have the shape of a cat. They made me think of Bubastis, the famous seat of the worship of the cat in the days of the Pharaohs. The ancient city was situated in the land of Goshen, not far from where Zagazig now stands, and right on the route the Egyptians took when they came down into Egypt for corn. Bubastis had many cat goddesses and its chief goddess was a cat-headed woman. It had a cat cemetery, situated on the west side of the town. This was crammed with cat mummies, many of which had been incased in cat-shaped cases of wood and bronze. I photographed some of the cat-bowls from Tiahuanacu, and their heads are lifelike.

Dr. Buchtein found skeletons of llamas among these cat-pots. He thinks the ancient citizens of Tiahuanacu may have worshiped llamas in connection with the jaguar, which has a head like a cat. Some of the heads are as big as my two fists, the vases being covered with spots like those of a leopard or jaguar. Other vases show the heads of the condor, the great vulture eagle of the high Andes.

Among the implements are spoons of terra cotta and of bone. There are knives of bone, some of which are sharp; and also narow points of obsidian. There are also bone rings, and bone needles of various kinds. There are stone pipes drilled out of a rock as hard as quartz. How the people were able to drill the holes without steel or other metal is unknown.

Will Be Shown at 'Frisco

In talking with Manuel Vicente Bolivian, who is now collecting the exhibit this country will have at the San Francisco exposition, I have learned that many of these ancient objects will be taken to the United States and shown there. Dr. Bolivian says that he is in correspondence with the University of Yale as to its sending a scientific expedition here to investigate the ancient civilization of Tiahuanacu and certain other archaeological wonders of the Bolovian plateau. Dr. Buchtein says that many other parts of Bolivia have evidences of prehistoric races, and that the museum will gladly welcome foreigners who wish to investigate them. He thinks, however, that what is found should in whole or in part be given to the National museum of La Paz.

The museum has many objects outside those I have described. It has huge stone figures from Tiahuanacu. One head that stands on the floor of the court is more than a yard high, and its eyes are as big around as a dinner plate. The figure is Assyrian in its carving. The doctor thinks it represents the head of a warrior.

Among the most interesting features of the museum is a large collection of mummies, recently discovered not far from the line of the Arica-La-Paz railroad, which last year was first opened to traffic. They come from near Calacoto, a station about fifteen miles from the road. They are supposed to be the mummies of the Chulpas, who lived before the time of the Incas. Each mummy is inclosed in a basket or bag of fiber, with a window in its side, out of which sticks the head of the mummy. The material of the bag appears to be a pineapple fiber, and it is firm and strong, notwithstanding its great age. The threads are evenly twisted, and each bag is woven to the exact size and shape of the mummy within.

The mummies were buried in a sitting posture, with their legs so doubled that the heels kicked the thighs and the knees met the chin. The arms were clasped back of the neck. I saw scores of these mummies, and upon my asking the doctor to be allowed to make some photographs, he aided me in carrying several out into the court. The one that I most tenderly handled was that of a young woman. She was at least 1,500 years old, but, although she had lost her flesh, her bones were sound and her teeth were as white as snow and in a far better state than my own. I carried her out of the darkness and sat her down gently on the steps beside me, in the full light of the sun. I then laid my hand caressingly upon her head, and as the doctor photographed us I repeated the soliloquy of the hero in Tennyson's "Vision of Sin" as he dances the tango with his skeleton partner:

You are bones, and what of that?
Every face, however full,
Padded round with flesh and fat,
Is but modeled on a skull.

Death is king, and Vivat Rex!
Tread a measure on the stones,
Madam—if I know your sex,
From the fashion of your bones.

No, I cannot praise the fire
In your eye—nor yet your lip;
All the more do I admire
Joints of cunning workmanship.

The inhabitants about the region of Tiahuanacu are Aymaras, the race that includes most of the red men of Bolivia. It is different from the Inca and is supposed to be much older. It is by no means certain, however, that the Aymaras were the original inhabitants of the country, and I am told that the shape of their skulls proves that they were not so.

The Aymaras have their own stories as to their origin. One of these is that the first people upon earth became so wicked that the gods turned them into stone, and the idols of Tiahuanacu were the result.

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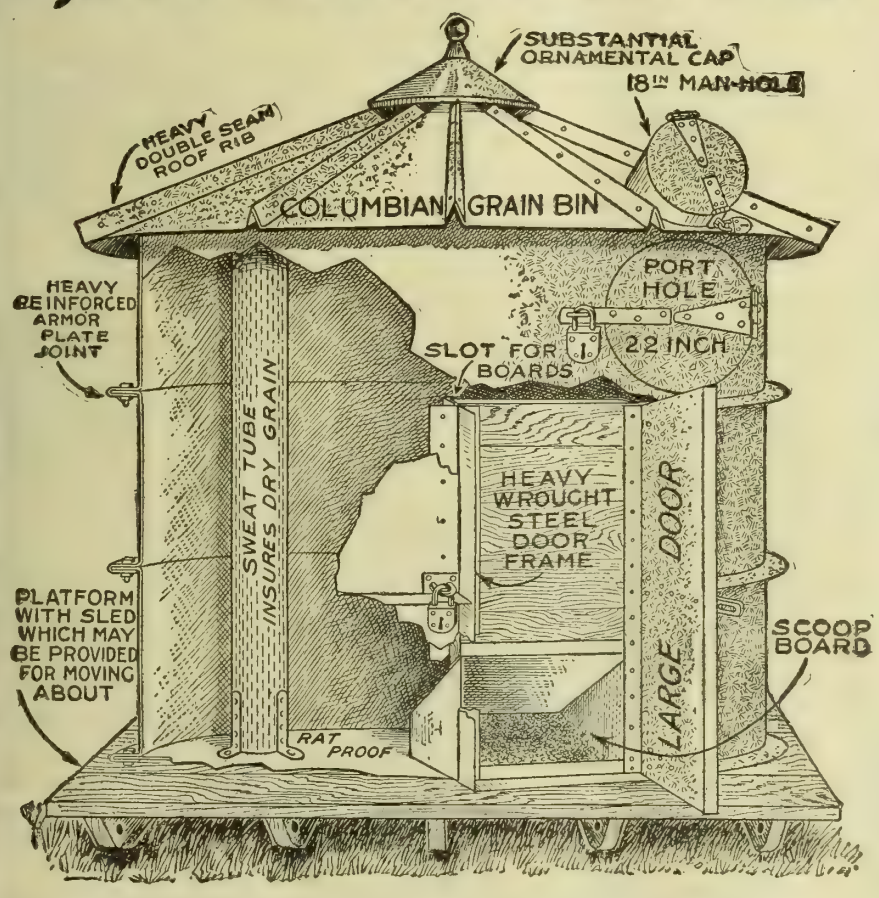

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Note *We are also builders of the Columbian Metal Silo, and can build one every 30 minutes. This insures your getting a silo when you want it. If you are interested in a silo write today for our big "Columbian Metal Silo Book."*

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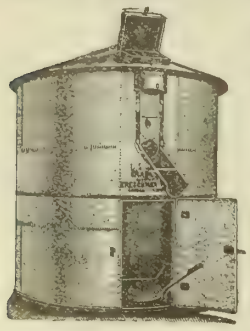

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Sow in Bad Condition

M. A., Nebraska: As you are giving good advice to so many readers of your valuable paper, I come to you. I had eighty-five pigs last year and got cholera among them, and had them vaccinated after six or seven had died. I lost all except eighteen, so I kept my old sows. I had them also vaccinated by a local veterinarian. None of them seemed sick then, but three of them died.

Now, last winter one of the old sows got sick. She didn't lie around much, but didn't eat much for several weeks and was constipated. I gave her some glauber salts and after that she got a little better. She had ten pigs the middle of April and raised them all. In about eleven weeks she went dry without weaning, and since that time she has about given up eating. She doesn't lie around much, but walks slowly, with her tail straight out and wagging slowly, but pretty hard, from side to side. She is getting very poor and is badly constipated. She eats a little oats and drinks clear water. I shut her up alone and tried to feed her some worm powder and glauber salts, but when there is something in the water she won't drink it. What do you advise me to do and what ails her?

Some of my pigs (born from healthy sows) 3 and 4 months old are lame, some in one leg and some in two. They walk on their toe tips, eat well and don't seem sick except that one has a hard swelling around the knees. I feed about twice as much corn as oats, slop of ground oats, wheat, barley, corn and oilmeal mixed. I am also feeding a mixture of wood ashes, glauber salts, copperas, sulphur, saltpeter, lime and salt.

Answer—We have had sows act much like t one you describe, and really cannot tell just what is the matter nor how to treat her. Our only remedy was to turn them on grass, give them good water and get them to take physic, which you say you have been unable to do. Generally, the sows have after a while come to their appetites and come out all right. The ration you have been giving seems a good one. Pasture, either alfalfa or clover, is one of the best feeds possible to keep hogs in good condition.

Regarding the pigs being lame, would call your attention to the letter from "A Veterinarian" in the Readers' Exchange of July 25. This will tell you fully what you want to do for your pigs.

It appeals to us that, in your vaccination experience last year, you must have had some poor serum, unless the hogs were quite sick when vaccinated. The question of getting good serum is a serious one and without doubt there was a lot of the poor product put out last year. We are hopeful, however, of a much better product being put out in Nebraska this year on account of the regulations provided for its manufacture and sale by the Live Stock Sanitary board.

Don't Use Double Treatment

Mrs. A. B., Nebraska: I have fifty little pigs to wean and would like some information regarding vaccinating for hog cholera. Can I vaccinate them myself, and if so, where can I get the serum, cholera blood and instruments?

Answer—We do not believe it advisable to double-treat a well herd, for the reason that when you do you bring cholera on the premises. We would watch the herd closely and if any of the pigs show signs of sickness would not hesitate a moment in treating. Pigs to have permanent immunity should not be treated until from two to four weeks after weaning time. We would advise you not to try to vaccinate your pigs unless you have had instruction in the use of serum and virus and the syringes. Especially should you have instruction if you use the double treatment. Virus, or cholera blood, is dangerous to handle, and should not be handled by anyone not familiar with what he is handling and knowing just how to do it. There is, however, no regulation in the state which prevents one from vaccinating his own herd. You can get the materials from Dr. J. H. Gain at the University farm, Lincoln, or from any comercial serum company. Every second Wednesday Dr. Gain holds a meeting at Lincoln for the purpose of giving instruction about vaccination, showing how serum and virus are made and how it should be used. It might be of benefit to you if you could attend one of these meetings.

Milk Looks Bloody

J. F. S., Nebraska: We are milking two cows. One has been fresh about three months and the other one has been giving milk twelve months and will be fresh again about October 1. Cows are fed four quarts of bran twice a day and all the alfalfa hay they will eat, and are in good condition and all right in every way. For the last two or three days have noticed that after the milk has stood twelve to twenty-four hours what is left in the bottom of the can after pouring the top off is a pinkish color, or some might say it had a bloody appearance. I sell milk and it is kept in two-quart cans. Cans have been kept clean and scalded. I think it must be a germ that causes the milk to get this color. Kindly let me hear from you as to what causes the trouble and what to do to stop it.

Answer—The ration you are feeding your cows is not well balanced. If the bran were reduced to one quart instead of two and a quart of cornmeal added each feeding, you would get better results.

Would not be certain of the cause of the trouble. If it is bloody milk, would suggest that you cut down some on the alfalfa hay for a while, especially if it is at all green. If possible, a change to prairie hay for a time would probably help. Have known this to remedy this trouble at once. A pound dose of Epsom salts is also good. Extremely hot weather is bad for the cows, and have known them on the same feed to decrease from one-quarter to one-half in milk flow in ten days.

If the trouble is caused by a germ that enters the milk, it may be from the udder. Be sure the udder is clean before milking and keep the utensils well scalded.

Sweet Clover for Feed

F. A. K., Montana: We are told that sweet clover is a good feed for sheep and cattle. We would like to ask your opinion as to that. If it is a good feed, would like to know when it should be cut, and how cured. Kindly give what information you can on the subject. Would it be best to grind it? Would it be a good idea to salt it when it is put up?

Answer—Sweet clover is a good feed for both sheep and cattle. We have known of no case where sweet clover caused bloat in these animals, either as pasture or hay. It should be cut when about knee high. If it gets higher than that it becomes too woody for good feed. We do not think it would pay to grind it. If cut at the proper time it makes good feed in the form of hay. It should be cured the same as alfalfa. Would advise salting it when stacking if it is damp enough to suggest the possibility of heating.

Irrigation Congress

More than $700,000,000 has been spent, and over 20,000,000 acres of land have been reclaimed. Those responsible for this vast work for the benefit of humanity will meet in convention in Calgary this year from October 5 to 9, at the International Irrigation Congress.

Insect Damages Wheat

Reports from Reading, Pa., say that thousands of bushels of wheat in Berks county have been rendered unfit for flour purposes by a small insect of the flea family.

A Man's Drink—
A Woman's Drink—
Everybody's Drink

Vigorously good—and keenly delicious. Thirst-quenching and refreshing.

The national beverage —and *yours*.

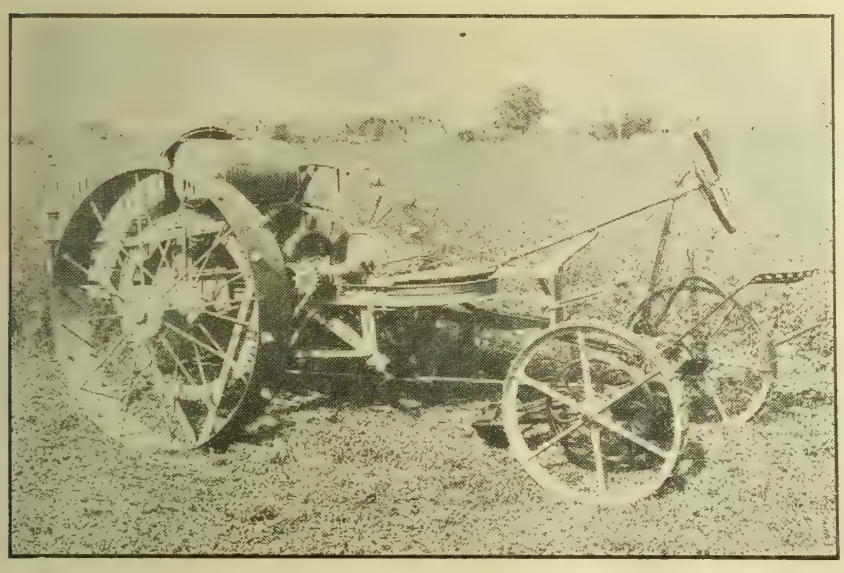
Demand the genuine by full name—Nicknames encourage substitution.

THE COCA-COLA COMPANY
Atlanta, Ga.

Whenever you see an Arrow think of Coca-Cola.

I-F

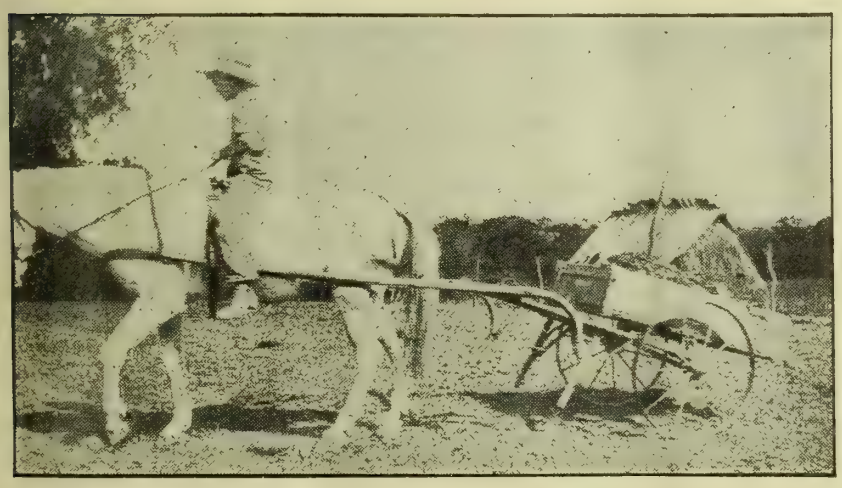
Entered in the Tractor Show



In previous issues we have shown photographs of some of the machines entered in the tractor demonstration to be held at Fremont, Neb., this year. In this issue we are showing the Ward tractor and the little machine made by the Hoke Tractor company, both of which will be seen at Fremont. Don't forget the date of the demonstration—August 17 to 22. The leading makes of tractors and plows will be seen at work, giving prospective purchasers an opportunity to judge of their qualities.

Methods of Handling Manure

(CONTINUED FROM PAGE THREE)



Hauling Manure to the Field in the Old Way Did Not Help "Keep the Boy on the Farm"

steepest part was selected for an alfalfa field. It was freely predicted that alfalfa wouldn't grow on such a clay point. The first year the weeds were kept clipped. After the first cutting next year, which we must say was rather light, we gave these clay points a thin coating of good manure. The same thing was done after the second cutting. Next year the difference in the yield was noticeable, but we kept the manure spreader busy and manured those old clay hills after both the first and second cuttings. Many times in years following have we had the question asked, "How did you ever get such alfalfa as this to grow on such a hill?" It was hard to convince some of our inquirers that it was the result of a little work at the right time with a manure spreader.

There is practically no season of the year that the average farmer doesn't have some field or pasture on which he can spread the manure made. Don't let it accumulate. If you do you are surely losing lots of good dollars in so doing. Heavy rains wash out the most valuable part of it, and some of it is taken down to the Gulf of Mexico, where it is not needed.

It is a splendid plan to build a shed adjoining the barn under which you can drive the manure spreader. Have it handy, and each day throw the manure from the barn into the spreader, hauling it to the field and spreading it as soon as the spreader is filled. It is just as easy to do this as it is to throw it into a pile and saves time in handling as well as manure, as in this way you will be sure to get the benefit of all your manure.

The time is coming soon when the manure shed and yard will be as indispensable as the cattle or hog barn, and the manure spreader as common on the grain-belt farm as the farm wagon is now.

NISCO—

"The TROUBLE-PROOF SPREADER"

is the choice of the business farmer who values spreader perfection. It positively will do more and better work in less time than any other machine. It took us 15 years to perfect this mechanical masterpiece which we know to be

100% EFFICIENT

Thoroughly pulverizes the manure, spreads it wider and more evenly than any other spreader. Easy to load, since sides are only 41 inches above ground. Bed is from 3 to 5 inches deeper than any other so-called "low down" spreader. Built for thorough work and lasting service.

FREE Circular in Colors and Descriptive Catalog

Gives reasons why "Nisco" and "New Idea" are the "Best Spreaders on Wheels." Shows why our machines are practically trouble-proof. Settle the spreader question for all times by writing us Today.

New Idea Spreader Co., Box 25 Coldwater, O.

Fills Your Crib Clear to the Top, No Waste Space.

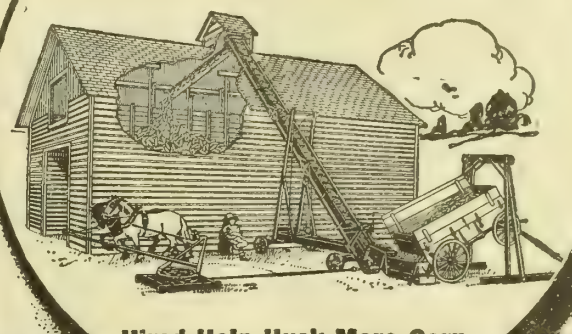
Behold! The Noiseless Elevator

The Sandwich

Made of Cypress "The Wood Eternal" Outlasts Steel, Pine Or Poplar

No Rattle and Din—No Shaking to Pieces

Adds 3 to 4 cents a bushel to the profit of the field



Hired Help Husk More Corn Where a Sandwich Elevator is Used.

Does the Work of 7 Men. A boy can run it. Saves Work and Worry.

Cannot Sag

Elevator is Made in Two Sections. Strong Malleable Hinge Couplings Extend 20 in. on Elevator Sides, Re-enforced with 4½ inch Bolts.

Experimenting All Done Before a Single Sandwich Elevator was Sold

First we tested steel—but we found that under the strain of elevating, steel twisted, became bent and dented, the constant pounding loosened the nuts, bolts and rivets.

Then we tried yellow pine and poplar but they would not stand the strain, and in time—being exposed to snow and rain—they rotted and fell to pieces.

Sandwich (Eternal Cypress) Farm Elevator

Then Came Cypress (The Wood Eternal)

Finally we tested Cypress, "the wood eternal." Here at last was the ideal material. Time and the elements had no effect—snow and rain would not rot it. So we built our elevators of "Cypress." And each year—though the cost of Cypress to us has increased—we have used it. This is why the Sandwich outlives and outlasts any other elevator.

Special Features of the Sandwich

The Sandwich has the **overhead wagon dump,** using chains for connecting wagon wheels. No platform for the horses to stumble over and break their legs or strain themselves in pulling up a heavily loaded wagon. Has **corn cleaning grate** and screen which screens out shelled corn, husk and silk. No danger of corn rotting after being cribbed.

Send Today for Free Catalog This book pictures it—tells the inside facts of Elevator construction, also gives you measurements of cribs and granaries. You'll want them if you ever build. Also make **Bucket Elevators.** Catalogues **Free.** Postage paid.

SANDWICH MFG. COMPANY, 209 Walnut St., Sandwich, Ill.

"OHIO" 1914 Model

The Silo Filler With the Direct Drive

Wonderful recent improvements of "Ohio" eclipse anything ever before produced. *One* lever controls *all* movements—reverses by wood friction *at finger pressure.* Self-feeder—with famous "Bull Dog" grip. Patented Direct Drive—*Shear cut—non-explosive, non-clogging.* Enormous tonnage *on half inch cut*—50 to 250 tons a day—6 to 15 h. p. 20-year durability. "Ohio-cut" silage famous—cuts all crops. Used by Experiment Stations everywhere. Guaranteed. Many big new features this year.

Write for folder B, free, also send 10c for 264-page book, "Modern Silage Methods."

THE SILVER MFG. CO. Salem, Ohio

WRITE FOR BOOK

CUP ELEVATOR

Always ready for use. Placed inside the crib in the dry. Easy running, durable and strong. Elevates oats, wheat, or ear-corn, 50 bushels in three minutes.

SET IN YOUR CRIB BEFORE YOU PAY

The first successful **Upright Ear Corn Elevator made—SOLD DIRECT to the Farmer.** Free Catalog showing 8 styles with crib plans which save you money. Write for it today.

INTERLOCKING FENCE CO. BOX 67 MORTON, ILL.

THIS IS THE WAY ALFALFA GROWS ON THE

WEST FARMS

The soil and subsoil are so very good that they will raise wheat, oats, barley, rye, corn, forage crops, potatoes, vegetables and small fruits in abundance and of the very highest quality. Anyone of these crops well cared for will in a single season pay for the land and in some instances pay more than double. The increase in value of your farm in the settlement will again double the first year. In other words you are pretty certain to have a profit on your land of an increase of $15.00 per acre the first year and $25 to $50 on what you raise. You will not likely do so well as this where you are although your lands are worth from $100 to $200 per acre. Compare the healthfulness of your country with **West Farms.** Disease for man or animals is very rare. Microbes can't live here. That's the reason why there are so many "one lungers" among people and such a thing as hog cholefa is unknown.

The markets in and around Denver are the very best for the railroads radiate therefrom in every direction, bringing in much that's consumed from other localities so that the local farmer get in price all the foreign one does and the freight added. Here you live long, enjoy life and make money with ease and with utmost certainty. I share with you cost of inspection.

Match this if you can elsewhere. I want to send you my booklet. It's free. Write quick to

N. P. WEST, President.

WEST LAND DEVELOPMENT CO.,

814 MAJESTIC BUILDING, DENVER, COLORADO.

RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

W. P. SCHWAB, Clay Center, Nebraska.

DUROC-JERSEY HOGS

DUROCS AND RED POLLS

25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed.

GEO. W. SCHWAB, Clay Center, Neb.

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HOLSTEIN CATTLE

Purebred Registered

HOLSTEIN CATTLE

In the production of milk and butter the larger the cow the larger the profit, other things being equal. The principle has been established through the investigations of government experts and is generally recognized.

When a cow's milking days are over, size is still an important factor. The big Holstein-Friesian, weighing anywhere from 1,000 to 1,800 pounds, with her clean, white fat well distributed through her muscular system, proves a most profitable dairy beef animal.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Secy., Box 179, Brattleboro, Vt.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

AYRSHIRES

LOVELAND FARM AYRSHIRES

The largest herd of Ayrshire cattle in the west. Several choice young bulls for sale, sired by Garlands Success. Can also spare a few females.

LOVELAND FARM, R. F. D. No. 1, Station B, Omaha, Nebraska

PERCHERON HORSES

To get a really valuable sire it is a big saving for you to buy at this time of year a growthy young stud from my big bunch registered percherons 1, 2, 3 and 4 years old. They have uncommonly large bone and in pasture condition are developing to immense weights like their imported sires and dams. Farm raised and farm proved just east of Omaha.

FRED CHANDLER, Route 7, CHARITON, IOWA.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Review of Live Stock Market

By A. C. Davenport

THE live stock markets of the country, figuratively speaking, are groping their way, surrounded by doubt and uncertainty, and no one in the trade knows what next to expect. What changes the next day or even the next hour may bring forth none are prepared to say. Long before these lines can appear in print conditions may have undergone a complete change, and present doubts may have given place to an absolute certainty.

The markets had been moving along in the even tenor of their way until the war scare, like a flash of lightning from a clear sky, suddenly upset all previous calculations, leaving the trade in the midst of doubt and uncertainty.

It was not until Friday of last week that the live stock markets felt the influence of the European complications. Even then the cattle and sheep markets did not respond to any very appreciable extent, for the reason that the end of the week being so near at hand the receipts at all points were very small. Saturday being practically a holiday so far as the cattle and sheep markets were concerned, also passed without noteworthy changes taking place. Counting in Sunday, cattle and sheep men were thus given three days' notice of the impending trouble, which was ample time in which to make up their minds whether to ship and take chances of finding a demoralized market.

Break in Hog Market

Hog shippers were not so fortunate, as the coming of the war scare on Friday found the markets of the country well stocked, and prices broke sharply, being followed by a still further downward movement of values on Saturday. During the two days prices broke around 25 to 30 cents at all points, thus wiping out a considerable part of the month's advance and leaving the market about where it was at the end of the first week in July.

A good many stockmen were greatly surprised that the market should break so sharply, having been led to believe all their lives that war means higher prices. The action of the markets has naturally led to a most thorough discussion of the probable effects of a general European war upon the live stock markets, but the deeper the subject has been gone into the more uncertain stockmen are.

It is pretty generally agreed that the first influence on the live stock market will be a direct reflection of the money market. The raising of the rates on money, making loans difficult to secure, could hardly fail to curtail buying of live stock for the time being, and a diminished demand always means a lower market. How much lower the live stock market might go would depend upon how stringent the money market might become. The sudden tightening of the money market, or a sudden fear that it would tighten, might lead to sudden and violent fluctuations in live stock prices.

Will Prices Eventually Rise?

Most stockmen believe that a general war would, after things had settled down to a more definite basis, mean higher prices for all kinds of live stock. They reason that armies in the field must be fed, but even in this most natural conclusion they are met with an uncertainty. How is the meat to be transported across the ocean with the navies of warring nations patrolling the seas? Who will take the risk of making shipments under such conditions? So far as beef and mutton are concerned, it is possible that, the supply being small, the home demand might be large enough to maintain prices or even advance them, but then comes the question of Argentina. Might not more South American beef be dumped into the United States markets on account of this being the easiest and safest market to reach while Europe is in a turmoil? Argentine shipments continue large, a total of 19,000 quarters having been loaded at Buenos Ayres for New York the last week, against 18,000 the previous week, making 512,000 quarters since January 1. Over 1,000 carcasses of mutton were loaded from Argentine ports for this country last week. This number compares with 2,000 a week ago and brings the total for the year to date up to 95,000. Again, it is possible, with ocean routes open, that all the South American beef and mutton will be required in Europe, and that the United States will be called upon for additional supplies, especially of hog products, and that prices will go higher than ever before known.

The American consumer must not be forgotten. Can he or will he eat meat to as great an extent as at present if prices are pushed higher? Already there are complaints of a poor consuming demand in the big eastern centers of population. Last, but by no means least, is the threatened strike of trainmen on the big railroad systems a war right here at home.

After considering the situation from many different points of view we find that, like the stranger lost in the woods, we have been traveling in a circle and are back again where we started at the beginning of the first paragraph—the live stock markets of the country are groping in the dark. Until you are out of the woods and know where you are at it might not be had business to let the stock feed quietly at home.

More than $1,000,000 worth of raisins were exported from the United States in the last year, the quantity—18,500,000 pounds—being in excess of any total exported in any previous year.

Fall and Winter Fair Dates

Date.	Name and Place.	Sec'y or Mgr.
Aug. 20-25	Interstate Fair and Live Stock Ass'n, St. Joseph, Mo.	H. L. Cook
Aug. 26-Sept. 4	Iowa State Fair, Des Moines	A. R. Corey
Sept. 7-11	Nebraska State Fair, Lincoln	W. R. Mellor
Sept. 7-11	Colorado Interstate Fair, Denver	I. W. Eaton
Sept. 7-12	Minnesota State Fair, Hamline	J. C. Simpson
Sept. 12-19	California State Fair, Sacramento	J. L. McCarthy
Sept. 12-19	Kansas State Fair, Hutchinson	A. L. Sponsler
Sept. 14-18	Kansas Fair Ass'n, Topeka	G. E. Clark
Sept. 14-18	South Dakota State Fair, Huron	C. N. McIlvane
Sept. 14-19	Colorado State Fair, Pueblo	J. L. Beaman
Sept. 21-26	Montana State Fair, Helena	A. J. Breitenstein
Sept. 21-26	Interstate Live Stock Fair, Sioux City, Ia.	Joe Morton
Sept. 26-Oct. 3	Missouri State Fair, Sedalia	J. T. Stinson
Sept. 29-Oct. 2	Wyoming State Fair, Douglas	A. Higby, Basin
Sept. 22-Oct. 3	Oklahoma State Fair, Oklahoma City	I. S. Mahon
Oct. 5-10	Utah State Fair, Salt Lake City	H. S. Ensign
Oct. 17-Nov 1	Texas State Fair, Dallas	W .H. Stratton
Oct. 7-17	International Dry Farming Congress, Wichita, Kan.	Ralph H. Faxon
Oct. 7-17	International Congress of Farm Women, Wichita, Kan.	Mrs. Mary Pierce Van Zile
Nov. 16-24	American Royal Stock show, Kansas City	T. J. Wornall
Nov. 28-Dec. 5	International Stock Exposition Chicago	B. H. Heide
Jan. 18-23 '15	National Western Stock show, Denver	Fred J. Johnson

From the Nebraska Experiment Station

When to Cut Corn Silage—Under normal conditions the best time to cut corn for silage is when the kernels are well dented and become glazed and about one-fourth of the husks and the lower leaves are drying up. More mature corn has a greater nutritive value and will make better silage than too green corn, providing it contains enough moisture to insure good fermentation. Corn cut too green makes dark colored, sour silage which is apt to cause animals to scour. In case of extreme drouth it may be found necessary to cut the corn much earlier than usual. The best time for cutting under favorable conditions is when the corn ceases to grow.

Plowing to Save Moisture—All of the considerable number of tests that have been made during the last several years show an advantage of plowing over disking to store water. If the weather continues dry during a test of this kind, or if disking kills the weeds as thoroughly as the plowing, little difference will be found. If the disking, however, does not kill all the weeds the difference will be greater, depending upon the amount of water used by the weeds. Where heavy rains come during the test, the advantage of plowing over disking will be greater. The plowing puts the soil in better shape than does the disk to catch the heavy rains.

Breeders' Notes

Wallace's Duroc-Jerseys

In a recent letter Clarence Wallace, the well known breeder of Duroc-Jersey hogs at Wisner, Neb., reports everything coming along in first-class shape with Riverview herd. Mr. Wallace has a splendid lineup of spring pigs this year, as well as a choice lot of older stuff, and will be in a position to supply his old and new customers this year with as good as the breed affords. At this time he has for sale a choice lot of spring males sired by Colonel Chief, Proud Colonel, Golden Model 32d, Long Wonder and others. He has some fall males that are really outstanding individuals and good enough to go into any herd in the country. We say this with the full kowledge of the importance of this statement, and we feel justified in doing so because we have seen these boars personally and know just what they are. Seven of these are sired by Golden Model 4th and two by Sensation Wonder 2d. Two of these are out of Wonder Lucy, fourth-prize sow at the Nebraska State Fair in 1913. These pigs are outstanding good ones. There are also four out of Fancy Advance 2d, the champion sow of Nebraska last year. We certainly feel that our readers can make no mistake in writing Mr. Wallace if they are in the market for anything in the line of a herd boar. We will guarantee that he will treat you right and give you value received. Write him for further information, mentioning Twentieth Century Farmer.

Cedar's Durocs

P. P. Cedar of Genoa, Neb., has as good a lot of spring pigs this year as he has had in a long time. They are making a nice growth and are coming along in dandy, good form. The larger part of these pigs are sired by Cedar Critic 2d, ad he is some good hog, too. He is as smooth as an apple, with a good bone, right up on his feet, and, best of all, he is making good as a breeder. Mr. Cedar is going to have a choice lot of spring males to offer from now on. If you want something in that line you will find it to your interest to write him early in order that you may get the pick of what he has for sale. Watch these columns for further information regarding this herd, and when writing him kindly mention the Twentieth Century Farmer.

Valley King Dead

Valley King, the great Duroc-Jersey boar owned by F. B. Nelson of Lindsay, Neb., is no more. Mr. Nelson had the misfortune to lose this great hog last week on account of the excessive heat. This is a misfortune to the breed, as Valley King was certainly one of the great breeding boars in service in the west today. As will be remembered, he was the grand champion boar at Iowa and Nebraska in 1910. He was the undisputed outstanding winner at both shows, and was one of the greatest individuals ever shown at either fair. Mr. Nelson was fortunate in having a choice lot of stuff on hand sired by him. Some of this will be included in his October 2 sale, announcement of which will appear in this paper.

Sale Dates

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 15—Harry Tidrick, Winside, Neb.

Duroc-Jersey Hogs

October 2—F. B. Nelson, Lindsay, Neb.
October 2—F. A. Lemmerman, Creston, Neb.
October 5—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—Harry Tidrick, Winside, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Holstein-Friesian Cattle

October 19 and 20, 1914—H. C. Glissman, Station B, Omaha. Sale at South Omaha.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt, Neb.

MARKET PLACE

POULTRY—Leghorns

FOR SALE—50 YEARLING SINGLE-Comb White Leghorns, healthy and good looking, including my winners. Good layers. Ivar Johnson, Fremont, Neb.

Game Cockerels

BLACK-BREASTED RED GAME Cockerels — April - May hatched, range raised, very vigorous, $1.50 each. White Game cockerels same. Enterprise Farm, Beatrice, Neb.

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Henry Hutt

Tuxedo

The Perfect Pipe Tobacco

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Geo E Phillips

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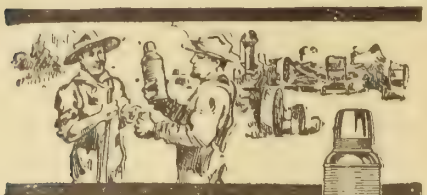
H. Hayden Collins

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, August 15, 1914 | Number 714

Fall Fairs



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Homeseekers' Number

AT THIS season of the year, if ever, there comes to us the call of the road, the spirit of adventure, the desire to seek the unknown that has led men for centuries from the safety and comfort of home to the conquest of new, wild lands. No longer do we load up the prairie schooner and set forth with all our farm and household goods piled up behind the slow-moving oxen. No longer do we fear the perils of the desert, nor attacks of wild beasts and hostile Indians. Civilization has made safe the path of the seeker for a new home. In a few days of comfortable travel we now can cover the trail that once took as many months of hardship.

But still, under these changed conditions, the tide of settlers is moving, and still it moves westward. From the lands that cultivation and density of population have made high priced to the low-priced lands of the more sparsely settled states there is an enormous exodus annually. To what do these movers go and for what do they go? What do these different states hold in store for their newly adopted sons?

These are vital questions and should be considered carefully before we start out in search of new homes in strange states. Every year hundreds of our readers move farther west. For those who are planning a western move this year we have tried to secure information that will help them in their choice of a location. Some prefer one kind of country, some another. In many of our western states there is plenty of cheap land. In our next issue we will tell you something of the kind of land in each of these states, its conditions and possibilities. If you are considering a move study carefully the country into which you are thinking of moving.

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The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Practical and Profitable Beef Production

Pure-Bred Hereford Herd of E. E. and N. T. Youngs is Good Example of Right Methods

IT IS the practical, every-day, well-bred, but farm-raised cattle that most satisfactorily fill the demand of the cattle industry. There is a crisis now on hand in the beef cattle business of this country. There is a great shortage of cattle to satisfy the urgent demands of meat consumption. This means that there must be an extraordinary effort put forth in breeding to readjust this unbalanced condition between the consuming and the producing interests.

There should be beef cattle to satisfy the meat demand, and at prices that will justify production and at the same time be within reach of the consumer. The common laboring people represent the great body of meat eaters and must not be oppressed in the matter of price because of a scarcity of cattle in the country.

Better Quality Demanded

One of the greatest legitimate influences in the solution of this problem, and the one that most quickly can be brought into force, is the breeding of a better quality of beef cattle; not the breeding of better cattle than the best that exists at this time, but a more general effort by everyone engaged in producing cattle to raise the standard of the cattle they are producing. This may be done by the use of better bulls.

This reform must commence at once, and jointly with the two classes of men engaged in breeding cattle—the breeder of pure-bred cattle and the breeder of grade cattle. The former must raise the standard of his herd by the use of better bulls and the castration of all effeminate youngsters that happen to come in his crop of calves. Don't keep a bull calf for sale as a breeder that has not distinctly the making of a good bull; all heifery, steery, effeminate appearing bull calves should be steered at once and not left and sold to some breeder of grade cattle, and be the means of holding him back beyond his opportunities, such as he would experience if you sold him a good bull of masculine character.

Scrub Pure-Bred a Menace

There are some breeders of pure-bred cattle who are following this suggestion—many, we may truthfully say. Some, however, think a pure-bred bull, though an inferior animal, is better than a grade. Here is the mistake and one of the damaging influences against the pure-bred bulls. A poor calf getter, though pedigreed, is the worst sort of advertising any breeder can give himself. He can scarcely outlive it even by honest dealing and reform in this kind of work. Go over your bull calves and use the knife freely. There is going to be a big demand for good bulls, and now is the time to get a reputation for being a good breeder and selling nothing that you are ashamed to meet any time in the sale ring.

A good example of a cattle-breeding enterprize, where the proprietors have been breeding for results, and whose young stock show that they are on the high road to improvement, a general bettering and advancement over the beef and milk qualities of the original foundation herd that they so carefully selected in the outstart, is the firm of E. E. and N. T. Youngs of Lexington, Neb. The firm consists of Mr. and Mrs. E. E. Youngs.

They are not listed among the older breeders of pure-bred cattle, but come in a later generation, having embarked in the pure-bred Hereford cattle breeding industry in 1901, when "the better beef cattle" agitation was abroad in the land, when cattle growers, cattle breeders and cattle handlers were drawing the lines pretty closely between the good, medium good and common beef cattle of the country.

From Feeders to Breeders

These were the times of closer discrimination in quality, especially in feeder cattle, than formerly existed. The Youngs were feeders, buyers and handlers, and understood from contact in the business what it meant to have a grade or two grades higher each year in the feed yard when the feeding season closed and the year's work was scored up at the hands of the packer buyer, the place of last resort. It was this experience that prompted the Youngs to study more closely the type of animal best suited for the feed yard and the packer. It was the steer in the feed yard that created the ambition in the minds of the Youngs to improve on the quality of the beef animal as a basis for beef-making.

The pure-bred Hereford was selected as their choice from which the ideal beef animal was to be created. Their specifications, however, were a little beyond a modest requirement for the average Hereford, and they soon found themselves in an apparently almost hopeless search for big, smooth, active, well proportioned beefy animals. When these were found they were not for sale; somebody else had the same realization that more beef of excellent quality in the same animal was more desirable than to have it in two animals. The big ton bull with the prospect of developing to a much heavier weight was the standard set by the Youngs, and nothing with a prospect much lower than this could be considered.

Bought Only the Best

The first bull purchased was Varsity Donald, bred by the University of Nebraska, by Beau Donald 7th, he by Beau Donald. He was an excellent and very satisfactory breeder. The second bull introduced into the herd was Preston, bought of Jim Gibson of Odessa, Mo. The third was Tempter 3d by Beaumont, bred by William Hutcheson of Bolchow, Mo.; he cost $820 as a calf. Cows have been added to the herd from Tom Mortimer's herd of Stanton, Neb.: W. N. Rogers of McCook, Neb.; Gudgel & Simpson, Independence, Mo.; Allen Bros. of Cambridge, Neb., and Scott & Marsh, Missouri. Size, quality and vigor were always requisites with this firm, and this was observed and carried out with all their purchases of cows as well as with bulls.

There are now in the Youngs herd about as fine a lot of big, smooth, well-fleshed, matronly cows, with every evidence of being able to raise big, fat calves, that any cattle admirer or critic will find in a long journey among pure-breds. The size, shape and weight of the cows at a glance shows the beef quality. The big udders and the big, fat calves that follow these cows tell the tale of plenty of milk for raising the calves.

Herd is Not Pampered

The Youngs have a fine home for these matronly Herefords to enjoy. There are 480 acres, classed among the best land in Dawson county, nicely improved, with barns and stabling for several hundred head of stock, with an abundance of shade, groves, watering accommodations, etc., in every enclosure. This farm carries the appearance of peace and plenty, and every animal seems contented, yet there is no evidence of pampering. The herd depends entirely upon pasture from spring till the close of the autumn season—a practical, every-day herd that can go out into the hands of any reasonable caretaker and make good as profitable beef producers. The Youngs herd comprises about 150 head, fifty of which are in the breeding cow list.

Mr. Youngs, while absorbed in his pure-breds, finds time to devote a portion of his efforts to the interests and well-being of his county, town and community. He is known, honored and respected by everybody in his district of country.

This firm is a little different from the usual live stock breeding firms from the fact that husband and wife are equal partners, having formed a co-partnership under the rules governing such partnership affairs. Equal capital was invested and equal division is made of proceeds above the operating expenses when figured up at the end of each year, with invoice of stock taken.

After thirteen years of successful breeding and management of the herd, in which buying and selling has entered into the affairs of the company quite extensively, Mr. Youngs expresses a great deal of satisfaction in the work, and does not hesitate to mention his partner as a strong factor on its advisory board.

Stray Plants

Treat good resolutions like corn—if one fails replant it.

You may make life a harmless dance—if you permit your own heart to furnish the music.

The stripes of beating may be "a good thing for the boy," but you wouldn't think of treating a young tree that way to make it grow.

Keep the light of caution burning, and avoid a head-on collision with "bad luck."

If you must turn robber, hold up Nature, with a mattock and a brier scythe.—J. H. Mackley in Ohio Farmer.

Fairs Are for the Farmer and His Family

Valuable Assistance in Work and an Enjoyable Vacation May Be Found at the State Fair

Boys' Camps Are Gaining in Popularity

Everybody Likes to See a Good Race

GOING to the state fair this year?" This will be a common question during the next month or six weeks. How will you answer the question? Many of our farmers will answer it affirmatively, with the proviso "if it doesn't rain," or "if it does rain," or "if the boys will stay at home and do the chores," or if many other little things don't come in the way.

Why have our state fairs grown to the enormous size they have? Principally because of the practical benefit the state and its citizens get from these institutions.

Is the fair of today the fair of yesterday? In many respects, yes; in many, no. The fair of yesterday was a show of the best in the line of farm animals and products of agriculture and horticulture, with the horse race, music, amusements, etc. In the latter class we have the fake and immoral shows, gambling devices and the bar from which intoxicating liquors were freely dispensed. The fair of today is the great live stock show, the show of the best in agriculture and horticulture, the best and latest in agricultural implements and machinery, the school exhibits, the horse race, clean amusements, good music, and, probably best and most important of all, the baby show.

Fairs Improve Live Stock

We are firmly of the opinion that a large per cent of the splendid farm animals on thousands of farms in this country are the indirect result of the state, district or county fair. These great animal shows bring out the best there is in live stock on our farms. They speak volumes for the intelligence, skill and determination of the men who produced them. These splendid animals show what some man has been able to accomplish. What one man has accomplished along this line another can do if he will. It requires determination to succeed and application of detail. The best in many an animal can be brought out only by attention to many little details.

Thousands of our farmers each year plan to go to their state fair to see the stock on exhibition and very often to buy an animal to place in the herd with a view to improving what they have. Many of our young men starting out for themselves have gone to the fair and noted that the animals they have had at home didn't by any means come up to standard. From that day they determined to have nothing but the best, bought good animals for a start and made a success. In all these cases the fairs must have the credit for improving the quality of live stock on these farms.

Take Your Family and Spend the Week

Lessons from Success of Others

It has become the practice of many of our farmers to go to the state fair to note the improvement in the grain, apples, peaches, grapes and other fruits; to see what new and practical piece of machinery has been devised during the last year, and to know by actual observation whether or not he has been keeping up with the procession. The farmer who does not keep in touch with improvements in farm machinery is making a serious mistake. These are days of high-priced labor. The up-to-date farmer must take advantage of improved machinery to farm economically. The big state fair is the place to find the latest in this line.

The time was when we carelessly selected the seed corn and other grains from our last year's crop and sometimes wondered why we didn't get better results. A few visits to the agricultural department of the state fair showed us we didn't have what we should have both in quality and quantity of grain. The object lesson taught us the necessity of better selection of seed. Better seed on the farms has added millions of dollars in wealth to the country.

The splendid quality of fruit coming under our inspection on the tables in the horticultural building has given many of us our first lesson in the value of properly planting, pruning and growing our fruit. How many of us have asked the man in charge how he could grow such apples and have them free from worms, finding out for the first time the necessity of spraying the fruit trees.

Horse Racing at Its Best

The horse race at the fair is as old as the fair itself and we believe an important part of the fair. The modern fair has eliminated the objectionable features of the horse race. Gambling has been cut out by prohibiting pool selling, and race officials appreciate the fact that fake races can no longer be tolerated if the popularity of the horse race is to be maintained.

At the race course on the fair grounds are comfortable seats where the fair visitor may take his family and enjoy an afternoon of rest and pleasure. Generally good music is given during the races, as well as some clean vaudeville acts.

No One Has Any Objection to Clean, Wholesome Amusements

Good Stock Always an Attraction

The school exhibit at our fairs is certainly one in which every citizen should be interested. It is an inspiration to anyone to note at these exhibits what the children can do and are doing. The patient teacher in the school room and the superintendent of this exhibitt at these fairs are entitled to much credit for this part of the big show.

One of the features of the school exhibit in some of our fairs is the showing of the up-to-date model school room. It shows how the seats should best be arranged, how the windows should be placed to give the best light and the general plan by which the student may be able to work under the most favorable conditions.

Amusements Are Clean

The amusement feature of many of our state fairs has undergone a very material change in the last few years. Gambling and the open selling of intoxicating liquors have been done away with. Bootlegging is carried on in some places, but we must say that state fair officials generally are doing everything in their power to stop any liquors from coming onto the grounds. Patrons should more generally recognize this fact and give state fair officials all the assistance possible along this line.

Certain classes of amusements, we think, are essential to the conducting of the modern fair. In all pursuits some pleasure and amusement must be interspersed with the serious. On the fair grounds we like to see the Ferris wheel, the merry-go-round, the trained animal show and other clean, wholesome amusements.

The day of the girl in gaudy attire, the suggestive show, the "catch 'em and skin 'em" show, is past on any fair ground, and when this fact is recognized by fair officials their fair will be held in higher esteem by the general public than ever before, and that fair in consequence will get an increased attendance from the better class of people, the people on whom the fair can and must depend for substantial support.

For What Do We Go?

In arranging and conducting a fair the officials must keep in mind this one central thought: "What are the exhibits and attractions that induce people to come to the fair and pay their 50-cent pieces for admission?" The Twentieth Century Farmer believes the great masses of people pay to see the live stock, the general farm exhibits, the races, and to hear the splendid music. They don't pay their 50-cent pieces at the gate to see the fake show or the girl show. True, many of them visit these after they get into the fair grounds, but a very, very small per cent of them would stay away on account of these shows being eliminated.

Few State Fairs Now Have Such Shows as This on the Grounds

The farmer and his family go to the fair for education and a vacation and don't go to be "educated" and many times positively insulted by these fake shows.

Music Really Good

One of the features of the modern fair is the music. Our big state fair officials have certainly recognized the importance of good music, and the visitor who has never attended one of these shows little knows what is in store for him in this line. There is no one place where one can go and hear in the way of good music anything to compare with what he will hear at these big fairs, especially for the money. This feature should be encouraged and if possible enlarged.

Learn About Your Baby

The baby exhibit at the fair is new. True, in the past we have had baby shows, where the prettiest little human doll, dressed and curled and bedecked with jewelry, won a prize, awarded by a bachelor judge, and the whole thing was a huge joke. The present-day baby show is placed on a scientific and practical basis. Mrs. Mary T. Watts of Iowa was its originator, and seldom has there been an idea so quickly taken up and made generally popular throughout the length and breadth of the country. State after state is including the baby health contest, or better baby show, in its list of departments, and it has the largest and most interested crowds of any exhibit at the fair.

Not the prettiest baby, but the most perfect baby, wins the prize. Score cards are arranged for each baby entered, showing development, both physically and mentally. Doctors gladly give their services in making thorough examinations of the babies, and many a mother has learned things about her baby at the fair that will influence his whole future. Not the parents of the prize winners get the most benefit from these contests. The parents of the babies that do not win prizes learn what the trouble is and are often given most valuable advice as to how to correct it.

Farmers Attending the Iowa State Fair

What the Boys' Camp Is

An innovation introduced at some of the state fairs during the last few years is the boys' camp. School boys compete for the honor of membership in each county of the state, two or more being chosen from each county. Half the boys must be from the rural and half from the city schools. These boys camp together under the care of competent directors and listen to lectures and attend classes part of each day. During the remainder of the time they serve as grandstand ushers and general assistants on the grounds, their duties being light enough not to be burdensome and heavy enough to keep them out of mischief.

Why Not Spend Week?

If there is any one class of people to which the big state fair belongs, it is the farmer. He has much to do in making the show and should by all means take advantage of the many opportunities for pleasure and profit afforded by visiting it annually.

Too many of our farmers go to the fair for

Kind of "Education" the People Do Not Want

but one day and necessarily take only a hurried look at the exhibits. The housewife often stays at home. She stayed at home last year and the year before and expects to stay at home next year and the next. This is all wrong. The farmer should manage (and most of them can if they will) to take a vacation at fair time, not only for himself, but the whole family. Go to the fair, take all the family, take a tent and spend the week seeing the fair. Let the boys and girls of the family see it all; let the good housewife enjoy this pleasure. Many times during the following year something will come up on the farm that will call the attention of some member of the family to something along the same line seen at the fair last fall. If the wife, the boys and the girls go, you can rest assured they will see many things you do not see and will keep them in their minds much longer than you will. Practically all our fairs provide splendid facilities for camping. It is the farmer's loss if he doesn't make use of them.

A Challenge

Winning a prize at the state fair is a sure sign that a real live citizen is getting home from third base.

When the honors of the show ring are given to an animal its owner is in the king row of good breeding.

When the blue ribbon of merit is laid upon the finished products of skill, toil and soil somebody has gotten upstairs in his business.

The state fair shows the result of mixing brain with sweat.

Finding four-leaf clovers and horseshoes may be omens of good luck, but winning state fair premiums is a surer road to profit.

A state fair prize winner votes before noon on election day.

The state fair booster will give a dollar to any good cause.

A good state fair man will return the dollar he borrows from his wife.

State fair visitors are seldom pale or emaciated. They are red-blooded and at quick-step.

The water's fine. Dare you take the plunge?—A. P. Sandles, president Ohio Agricultural Commission.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Those steers you intend to feed this fall and winter should be kept gradually gaining. It will cost a good deal more during the feeding period to put back a loss of flesh than it will to retain the flesh now. Cut a little fodder and throw it over the fence if necessary.

Many of our farmers will soon have their fall pigs farrowed. Everything should be in readiness; clean out and thoroughly disinfect the farrowing houses and have plenty of bedding hay. We may have a cold, rainy spell, making bedding as necessary as it is during the spring farrowing period.

Are you a helper in your county fair? This is an enterprise that should be given the hearty support of every man in the community. If you have not been an exhibitor, fit up some good stock; select some good samples of grain and vegetables and make an exhibit. You will not only help yourself, but your neighbors as well.

Every new machine that comes into general use sets the inventor to work at some adjunct or addition to make it more practical and economical. With the increased pulling power of the tractor over the horse came the possibility of using more than one binder, disk or other machine at the same time, thus doing more work at each trip. This created the demand for a coupling device by which these several machines might be made to follow one after another without being directly behind each other. This demand was met by the inventors at once. We wonder where the inventive genius of man as related to farm machinery will end.

Help Get New Swine Barn

In our issue of July 25 we spoke of the necessity of a new swine barn on the Nebraska State Fair grounds, the prospects of its being built, some things to be done to get the necessary appropriation, and suggested a location on the grounds for this new building.

Since the publication of this article we have received numerous letters from swine breeders and exhibitors on this subject. Without a single exception these men all speak for a new barn, and say they are ready and willing to do their part.

Every legislature is asked for appropriations it can't grant. Most appropriations made by the legislature are right and should be made, but some of them are the results of political tieups and never should get by.

This paper believes a liberal appropriation for a new swine barn on the Nebraska State Fair grounds is essential and should be made. Our swine industry is one of our greatest. It can be made greater in Nebraska by providing better facilities for showing at the state fair.

If this building is built next year it must be secured largely through the efforts of the swine men. They must say in no uncertain terms to the members of the legislature that they want this building, and show them why they want it. By all means the best time to say this is before election. Tell the candidate you want this building; get his promise to support such an appropriation before he is elected. It is generally very much easier to get a promise from a candidate than it is to get the same promise from a member of the legislature.

The swine men can count on the active support of the State Fair board. It wants you to have this new building and will do all in its power to get it, but don't overlook the fact that it is much more your fight than it is the fight of the fair board, for the simple reason that the swine men are more numerous and can on account of their numbers accomplish so much more.

The regular meeting of the state swine breeders will be held on Wednesday evening of State Fair week. Every swine breeder in the state should make it a point to be at this meeting. If you are only visiting the fair, go so you can be there Wednesday night. At this meeting plans for a campaign for the new barn will be adopted. Be there to help make them, and after they are made, do your part to help in carrying them out.

Influence on High Prices

The high prices received for cattle, hogs and sheep in fat stock markets have been and are an encouraging feature for agricultural improvement all along the line. The high prices for grain feeds and the high prices of feedstuffs in general were due to a scarcity of these feeds in the country. This scarcity was largely the result of the extensive drouth damage of last year that spread over so large a district of our best grain-producing country.

This scarcity of feeds caused high prices for feed products of the farm. This in turn caused high prices for the animal products produced from these feeds, and these influences have combined to attract and center the attention of capital and investors to land values. High-priced farm produce is the best of argument for the maintenance of high prices for lands. This is the reasonable impression that there is money in owning and operating farm properties. A series of successful crop seasons, with the present high prices for cattle, sheep and hogs, and the professional and business world would be more deeply interested than now in becoming land owners and farm operators.

The tendency and ambition of man and money is to seek investment in an enterprise that promises the largest returns. The evidence along all lines of agricultural employment is inviting at the present time, and land investments are increasing and will continue to increase so long as high prices for farm produce prevail.

Prepare for Breeding Season

The importance of being thoroughly prepared with sires for the breeding season in all lines of stock cannot be overestimated at this time, nor can this matter be treated lightly and with a feeling of indifference. The calf produce of next year means much, either for or against the improvement of the herd. A good herd is not built up in a single season, though it may be given an advantage in one season by the use of a valuable sire that will lend influence in its advancement that can be traced for generations to follow.

It is now in the height of the breeding season for the common farmer with his herd of cows. In fact, on the majority of farms the cattle stock are bred in all months of the year. Most cattle owners who handle breeding stock want the calves to come in the spring after the grass starts. The late spring or early summer is a very acceptable time. One of the greatest opportunities for this class of farmer is in the aged bull class, comprised of animals of merit as producers that cannot longer be of service in the herds where they have proven their worth.

The disposition among herd owners to select the young bull, yearling or calf that has not had an opportunity to demonstrate his worth as a sire seems to prevail. The old bull, though a known producer of excellent calves, is too frequently passed by as not desirable. It will be found that when the breeding value of the bulls of the country is closely noted a very small per cent of those in use can be classed as high-quality breeders and deserving a life-long lease as sires in the good pure-bred herds of the country. It is in this class of bull, however, that a number of excellent animals of good, serviceable age may be had, and at prices that will justify the purchaser.

Herd bulls having served their period of usefulness in a good herd have left the evidences of their breeding quality. Here is the best proof of the worth of the animal as a sire. Take a close inventory of quality in the cow herd; compare it with that of your own herd, and if the produce is satisfactory you then have a pretty correct key to the breeding qualities of the bull you buy.

Quarantine Precautions

Buying pigs, especially males, and taking them onto the farm will soon begin to quite a considerable extent. Each year at our state, district and county fairs thousands of pigs are taken onto the farms of this country for breeding purposes. Many of us don't realize the danger incurred in taking onto our farms a pig shipped on the railroad train; especially is this danger great in pigs coming from the fairs where many hundreds of hogs are on exhibition.

Under no circumstances should a hog be received onto the premises without being placed in quarantine for at least three weeks. Have a good, tight pen built some distance from any of the other hogs on the farm. When the new pig is received take him to that pen. If there is any bedding in the crate, burn it if possible. Thoroughly disinfect the crate or any litter that may remain with some good, reliable disinfectant and don't make the solution too weak.

It is a good plan to have a shallow box placed near this pen which should be filled with air-slaked lime, and every time the attendant goes to feed this pig and from there goes into the hog yard he should step into the box and disinfect his shoes by having the lime rubbed all over them. This may look a little foolish to some of us, but it is cheap; and if carefully carried out will, without doubt, save a good many outbreaks of cholera in the country the coming fall and winter.

Don't overlook this important matter, and if you are figuring on buying a pig at the fair this fall be sure and have the pen arranged before leaving home that everything may be in readiness for quarantining the new arrival.

Begin to figure on the sows you intend to use for next year's pig crop. Let us advise again; don't use too many gilts. These sows should have been running on pasture during the summer and probably have been. They should be in such condition at breeding time that the herdsman may keep them growing and gaining greatly from that date until farrowing. In the selection of these gilts it is well to choose them from large litters. Prolificacy is a quality very much desired.

Preparing Show Animals

It is now about three weeks until the fairs and live stock shows begin. The man who is showing any kind of stock at these shows should by this time have his animals fairly well fitted. The time remaining should be put in in giving them the finishing touches.

We are going to say a few things along this line pertaining particularly to the show hog. Undoubtedly many of our readers have appreciated the value of milk in feeding their animals for show. The man who has been through the show ring for a number of years fully realizes the importance of having his animals on full feed while they are at the fair; particularly is this important until the ribbons are tied.

Those of us who have been through the mill know how hard it is to keep the yearling and aged boars on feed after they get to the fair grounds. It has been our experience, and also the experience of a number of prominent show men with whom we have had the privilege of exchanging ideas, that the boar fed with milk is much harder to keep on feed on the fair grounds than is one not having had any milk during the feeding period. If we were going to show a yearling or aged boar this fall and had fattened him on milk, we would begin now and greatly reduce the amount of milk fed until it would be entirely eliminated, substituting good wheat shorts, with possibly a little oilmeal. If you do this and take your boar to the fair under rations in which there is no milk, and he goes off feed, you have a good chance of getting him to take sweet milk on the fair grounds.

Have the coat and skin in a nice condition. Do this by giving your hog a good scrubbing with soap and water at least once and probably twice a week from now until show time. It will help to put the "blue" on him.

Some show men make a practice of clipping the hair off the ears and tail of their yearling and aged animals just prior to show time. Sometimes this is a benefit and sometimes a detriment. If you have a hog with rather a long nose and a small ear don't try to make the nose longer by clipping the hair off the ear. Better leave it there. On the other hand, if you have a hog with a reasonably short nose and a large ear try to reduce the looks of the size of the ear by clipping the hair. These are small items, but they count.

Don't take your hog to the fair with the toes badly grown out. The process of training the feet should have been begun long before this. If, however, it has not been done, don't neglect it any longer. I don't care how good a foot your hog may have, it can be improved a little, at least by the man who knows how. If you don't know how don't tackle the job, for you may make a botch of it. Ask the advice of somebody familiar with the work.

Be sure and take the tusks out of all boars from senior yearling up. Some of our state fairs absolutely require it. We believe that safety to the caretaker and others should require it. The safest plan is always to be afraid of being tusked by a boar. We have known of exhibitors being crippled for life by the "gentle boar who would never bite anyone." Always remember that when you get on the fair ground your gentle, kind hog is not under the same conditions he was when at home on the farm and will not by any means have the same disposition.

Old-Fashioned Smoke House

In these times of high prices the policy of economic living is talked about at random more than discussed from any practical point of view.

There is a very large number of the consuming element who are producers of the raw product—meat animals—yet they join in with that consuming element that is in no sense associated with production when it comes to their own meat supply for family use and upon exactly the same principle or basis of supply. These people who live on farms, who raise, feed and prepare the meat animals for the packer, buy their family supplies of meats of all kinds from meat market or grocery, thus contributing to all the added expense of these meats from the farm to the packer and back to the retail grocery, as their means of food supply.

It is a well known fact, and will be attested by all persons who have enjoyed the privilege of eating the old country smoke-house cured meats, that they are not excelled by any other method of handling. In quality and cost there can be no question as to the superiority and the economy of the home-cured meats, especially pork products and drief beef for home use.

It is possible for every family that has the means of raising their own meat to make a great saving in this way. The cost of producing and preparing two or three hogs for the family meat supply will be found comparatively small when compared with the meat bills that are now paid to the butcher each year. It is a matter of dollars and cents from the standpoint of business economy. It is a matter of comfort and satisfaction from the standpoint of quality and the realization of clean, pure, wholesome meat. Farmers especially should advance by taking a step backward to the old-fashioned sanitary smoke-house, the kind that our fathers and mothers patronized in the days when the best of healthy food was a strong factor in the basis of a vigorous manhood.

Sleeping Porches

It is rather surprising to see so many new homes being built both in the city and country without a sleeping porch. A sleeping porch is inexpensive, comparatively speaking, and if anything about a house is essential we certainly believe this modern porch is. It is of more importance to the farmer than to anyone else. He comes from the field tired and warm, then is generally compelled to sleep in a hot, stuffy room. It's a wonder the average farmer has the health and strength he has.

Hundreds of new homes will be built by our farmer readers this fall. Don't under any circumstances fail to build a sleeping porch. Have it on the east or west side of the house if possible. The prevailing winds in this country are south and north, so an east or west porch will get the breeze.

The man who has not had the comfort of sleeping out of doors these hot nights can't realize what he is missing. Try it once, and we predict a sleeping porch will be on your new house if you are building one, and if you are not going to build you will arrange for one on your old house.

They've Come to Sturdy Cars

Many cars, in the past two years, have lost immensely in their sales and popularity.

In that same time the demand for Reo the Fifth has doubled. It has grown faster than we could build. And now—in midsummer—we have urgent orders on hand for more than 3,000 cars.

We are adding three great factory buildings to the mammoth Reo plant.

The reason is that men are now buying their cars to keep. And they want a well-built car.

They have had their troubles. They have paid high cost of upkeep. They have seen new cars grow old in a season. Now they want a car built by R. E. Olds in the best way that he knows.

Reo the Fifth is a great piece of engineering. Never was a car built like it.

It is built by a man who for 27 years has been building cars better and better. It is built regardless of cost, to run year after year as well as it runs when new.

And it does. Tens of thousands of men now know it. And the overwhelming demand for Reo the Fifth is due to what owners tell others about it.

Lower Cost

Reo the Fifth is built in a costly way. If we followed other standards we could build it for $200 less. But enormous production has brought the cost down. The price, fully equipped, is $220 less than it used to be.

Now this sturdy car—this car that stays new—is sold for a price which once seemed impossible. And the way it is built will save the average user hundreds of dollars in upkeep.

This car not only leads its class, but it is one of the great cars of the world.

We have dealers in 1155 towns. Ask us for name of the nearest. Also for Reo Magazine which tells how this car is built.

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Canadian Price, $1575

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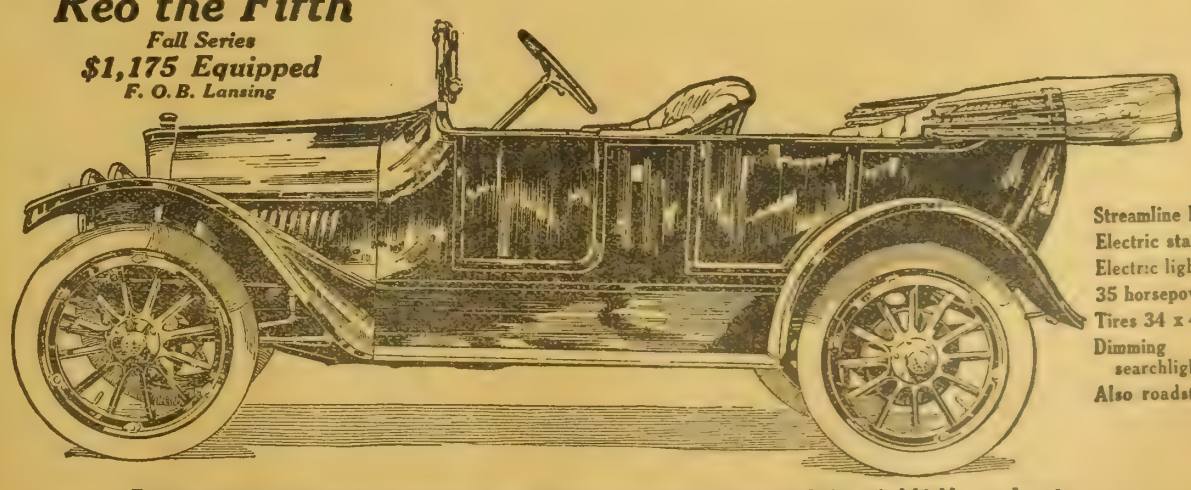

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Equipment includes mohair top, side curtains and slip cover, clear vision ventilating windshield, speedometer, electric horn, extra rim, improved tire bracket, complete tool and tire outfit, foot and robe rail, etc.

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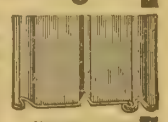
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"PERFECTION" ROOFING

FREE BOOK and SAMPLE Find out how to test galvanized roofing. We send sample and directions free. Make your own comparisons. Ask for Book No. 88.

THE EDWARDS MFG. COMPANY
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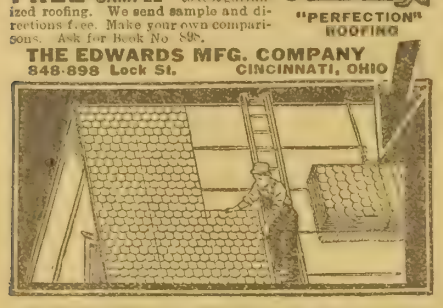

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99% germination, $9.00. Government tested. Absolutely guaranteed Northern grown, extremely hardy. No seed better. Have Turkestan Alfalfa, Sweet Clover, New Timothy, grass seed all kinds. Ask for our latest 60-page book on growing Alfalfa. 76-page catalog and samples. All Sent Free. We can save you money. Write today.
A. A. BERRY SEED CO., Box 407 CLARINDA, IOWA

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

Stupidity Street

"I saw with open eyes singing birds, sweet,
Sold in the shops for the people to eat—
Sold in the Shops
Of Stupidity street.

"I saw in a vision the worm in the wheat,
And in the shops nothing for the people to eat—
Nothing for sale
In Stupidity street."

Broody Hens

At this time of year the great laying flocks that are not non-sitters worry one nearly to distraction in piling up on the nests and wanting to cluck, cluck, for weeks if you let them. Somehow this brooding proclivity seems to increase in the flock whose hens have gone on for generations without change. Why this is I cannot say, nor why, if you allow the hens to cling to the nests a long time, this will shut off molting, and by this means keep the hens longer in the molt, which you do not want to have happen at all. The first, it is true, could be accounted for on the grounds of heredity in cases. When you find the molting hens inclined to brood, get them off the nests immediately; pen them where they have little chance to sit on anything soft, then stuff them with good feed and plenty of fresh water. Brooding causes a hen to lose flesh, and this she does not want to have happen in molting time. She needs it all, and if the molter is to go to market this fall you want her fat for the sake of profit, and the consumer wants her fat because in any other shape her meat is dry and without flavor. Never duck or abuse the clucker.

The Poults

The poults have come to an age now when they like to separate into bunches—sort of form exclusive social circles, as it were—then wander off together and take up any new roosting place that offers. Keep an eye out every evening for all the separate bunches, and if any one or more of these are missing go out and look it up, then drive them home and make them roost where you want them to. You may have to do this two or three times before you get them to understand that it is you who are choosing the spot for them to sleep, but this is better than losing them in part or entirely by allowing them to sleep on the neighboring farms.

Feel each crop at night and take notice of its size. If it is not full it isn't getting enough feed, and you want to see that it does not go to bed hungry. This is the time of year when the poults often show up in drooping condition. It may be due to blackhead, but don't be too sure until you have doctored it for indigestion first, as indigestion is a common fall trouble with the young as well as the older poults. Green corn is mainly responsible for this condition. Once a week anyway give the poults a tablespoonful of castor oil in which is dropped from ten to twenty drops of turpentine, or make them, twice a week, drink water in which you have placed Epsom salts. From half to three-fourths teaspoonful is a full dose for a large poult, but many keepers prefer letting them get it in broken doses.

Turkeys are creatures of habit. Start them to beating a certain path out in the fields and woods and coming back along the same route and you can depend on finding them any time in the day somewhere along their beaten route. If you are in the habit of feeding them in the evening near their roosting quarters, you will find them leisurely picking somewhere near the end of the home trail when you come with your dish of feed. Also, as important as the evening grain, if not more so, keep plenty of water near this feeding place.

Fattening the Chicks

On the farm chicks ready for market in age or size are coming on fast, but such chicks are often apt to go into market full of sinews instead of juicy flesh. There is no young thing on the farm that will respond so fast now to extra stuffing for market as a young pullet or rooster. Why not select a lot for sale, put them in an inclosure, and feed regularly all they can eat from two or three weeks, then note the number of pounds you will have for sale over the number you would have had if these young fowls had only been fed on range? However, you can do wonders by feeding strongly with the chicks yet on range, although they should be put in an inclosure at least a week before selling time, to finish off. In the corn belt there is nothing better for fattening purpose than cracked corn mixed with milk. Milk is rich in a substance that overbalances the too rich element in just all corn for a feed. If one could spare a little animal food during the fattening process it would not only hurry up the taking on of flesh, but aid in keeping the chicks from getting sick of their diet. Penned fowls can scarcely do without some animal food each day, and the reason for so many penned young fowls getting droopy or dying if kept in pens is because their diet is too largely vegetable.

Poultry Notes

It is the too fat hen, more often than not, that shows blood spots in her eggs. Difficulty in laying ruptures a small blood vessel and some of the blood appears in the next egg.

* * *

When you whitewash the poultry house inside add a liberal quantity of crude carbolic acid to the whitewash. To make an effective poultry lice killer—one just as good and cheaper than you can buy on the market as a vermin killer—simply add a liberal quantity of crude carbolic acid to a gallon or so of crude petroleum. Coal oil will do, but the crude petroleum is stronger and stays longer on the roosts and floor sprayed or washed with it. Between whitewashings or the other use plenty of scalding water, and there will be none or few lice to be seen or felt in the poultry house.

The Powerful Smalley Cuts Silo-Filling Cost!

Hurry-up calls for the Powerful Smalley to replace broken-down, flimsy silage machines happen every day. The Smalley works on the *grip-hook, force-feed* principle; it does work that no cheap machine can stand up under. The grip hooks and extra paddle roller *force* the corn, alfalfa, oats or peas into the knives as fast as you can throw it on the table. And it cuts that silage *fine and uniform.* No uneven, coarse pieces. Your silage packs tight—you get more tonnage.

The Powerful Smalley Force-Feed Silage Cutter

One-pulley and chain-drive on blower outfits replace power-wasting idlers. Large journals. Hard-oil cups mean easy running, no burned-out bearings. Blower operates separate from cutter—no chance of sudden stoppage of cutter causing breakdown. **Send a postal for the latest Smalley Catalog,** and get all the facts today about the fastest, cleanest Cutter and Filler in the world.

The Smalley Mfg. Co., Box 347 Manitowoc, Wis.

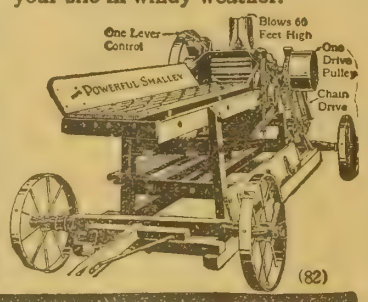
Mfrs. of Ensilage, Alfalfa and Hand Feed Cutters, Combination Ensilage and Snapping Machines, Drag and Circular Saw Machines, Champion Plows, Cob Grinders and Feed Mills.

"We have just finished filling four silos with the Smalley No. 18. It's not only a force-feeder, but a self-feeder. We do away with one man by using the Smalley."
JAMES W. WILSON, Director, State School Agr., Brookings, S. D.

Alfalfa-Grinding Screen

Another great Smalley feature. Grinds 100 to 400 pounds of alfalfa meal per hour. More fattening than wheat bran, at half the cost. Screen detachable. Protected by screen patent No. 721-246.

Don't fail to get prices on our new Enclosed Carrier, if you operate a 5 or 6 horsepower engine. **Fills your silo in windy weather.**



(82)

CHARLES W. SEARS
OF
OMAHA

REPUBLICAN
FOR
ATTORNEY GENERAL

If you want a Lawyer and Business Adviser who will make the Attorney General's Office a potent factor in the administration of Nebraska affairs and in an orderly, business-like and lawful manner protect the people and property and conserve the resources and revenues of the State—**VOTE FOR SEARS.**

We Do the Cooking

You avoid fussing over a hot stove—

Save time and energy—

Have a dish that will please the home folks!

A package of

Post Toasties

and some cream or good milk—sometimes with berries or fruit—

A breakfast, lunch or supper

Fit for a King!

Toasties are sweet, crisp bits of Indian corn perfectly cooked and toasted—

Ready to eat from the package—

Sold by Grocers.

Picture Contest No. 16

Write a verse of four lines about this picture. Each of the two children writing the best verses will receive a book as a prize. The verse must be original. In awarding the prizes consideration will be given to writing, neatness, construction of verse and the originality of the matter. Try to say something the others will not think of. Often the verses, while good, are all very much alike. Give your name, age and address. Verses should be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha. All verses must reach this office not later than September 12. Awards in contest No. 15 will be announced in the next issue.

The Editor's Corner

Stories these last two weeks were largely about birds. Then there were stories of pets, of picnics and of naughty children that repented. There was the history of a love letter that went through the civil war and a story of an adventurous duckling and another about a boy that fell out of an apple tree. Keep your stories coming. The average is constantly improving and there are fewer and fewer of the stories that are copied and sent in as original. Don't forget that your letters and stories are always welcome.

HOME EDITOR.

(Prize Story)

Wading in the Creek

By Ora Clark, Aged 13, Union, Neb.

One hot, dusty day I went to visit my friend Bessie, who lives near a creek. Someone suggested that we go wading and all agreed. Three old hats and dresses were put on and away we went.

When we reached the bank the water looked so cool we all plunged in and made a great splash. As the creek wasn't deep, we could walk in the water.

Finally we came to a small spring and had a drink. As we were leaving two boys we knew came down the path to fill a jug. When they came in sight of us they said, "Hello, girls! Hunting clams?"

"Hunting clams!" I repeated. "We didn't know there were any here."

"Yes, there are a lot of them in here," said Ben, as he waded to the middle of the creek.

"How can you find them?" I asked.

"Just watch me," said he, and he pointed to some bubbles and then grabbed down at them. When he withdrew his hand a large shell was in it. We finally got the hang of catching them, and the boys went down to the "swimming hole."

As Bessie was examining a clam it squirted some water in her eye, scaring her so she fell over.

By this time a dark cloud covered the sky, and we hurried home, with thirty-six clams.

CONGENIAL WORK
And Strength to Perform It

A person in good health is likely to have a genial disposition, ambition and enjoy work.

On the other hand, if the digestive organs have been upset by wrong food work becomes drudgery.

"Until recently," writes a Washington girl, "I was a railroad stenographer, which means full work every day.

"Like many other girls alone in a large city, I lived at a boarding house. For breakfast it was mush, greasy meat, soggy cakes, black coffee, etc.

"After a few months of this diet I used to feel sleepy and heavy in the mornings. My work seemed a terrible effort, and I thought the work was to blame—too arduous.

"At home I had heard my father speak of a young fellow who went long distances in the cold on Grape-Nuts and cream and nothing more for breakfast.

"I concluded if it would tide him over a morning's heavy work it might help me, so on my way home one night I bought a package and next morning I had Grape-Nuts and milk for breakfast.

"I stuck to Grape-Nuts and in less than two weeks I noticed improvement. I remember I used to walk the twelve blocks to business and knew how good it was simply to live.

"As to my work—well, did you ever feel the delight of having congenial work and the strength to perform it? That's how I felt. I truly believe there's life and vigor in every grain of Grape-Nuts."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Men Wanted!

$5.00 to $10.00 a Day

Earned by Automobile and Gas Traction Engine Experts

I can teach you in eight weeks how to do it.

1900 Graduates Testify

how they came to this school, knowing nothing whatever about automobiles or traction engines, and after a short time were able to go into business for themselves or to obtain positions paying from $5.00 to $10.00 a day, so it's up to you. If you are a man and have a backbone instead of a wishbone and are not afraid to work, write for one of my catalogs, which tells all about the

SWEENEY SYSTEM of Teaching the Automobile Business by PRACTICAL EXPERIENCE

How we teach you by practical experience all about automobiles, magnetos, carburetors, tire vulcanizing, electric self starters, driving, and, in fact, all branches of the automobile business, that qualifies you to become a

Chauffeur, Auto Mechanic, Demonstrator, Salesman or Traction Engine Expert

There are thousands of positions open for men who know the automobile business. I will prove it to you: Is there in your home town a thoroughly competent automobile mechanic, that understands magnetos, carburetors, electric starters, etc.? I know, and you also, that they are few and far between. That shows there is a demand for them. This is the business that you cannot pick up, but by our method of teaching by practical experience we make it easy for you to learn.

As a special inducement, write for our catalog and a certificate entitling you to a

Free Course in Gas Traction Engineering

We own and operate two Gas Traction Engines to teach you all about Gas Traction Engineering. We are the first automobile school in the world to teach this branch of the business and have been teaching it for the last two years. We will exhibit at the National Power Farming Demonstration at Fremont, Neb., and will be glad to give you full particulars about this free offer. To those who will not be at Fremont, write us for particulars.

The Largest and Best Equipped Automobile School in the World

Our school is the largest automobile school in the world. I have over $50,000.00 in equipment, including ten trucks, two traction engines and the leading automobile instructors of the world. All gathered here together in our institution to teach the automobile business.

Fill out the attached Coupon and mail at once for our large 64-page catalog and free Traction Engine offer.

Sweeney Automobile School

The Largest and Best Equipped Automobile School in the World.

1109 E. 15th St., Kansas City, Mo.

Sweeney Auto School, 1109 E. 15th St., Kansas City, Mo.
Please send catalog and Free Traction offer to

Name.....

Address.....

Of Interest to Our Women Readers

Haunted

Walking one night and peering through the gloom,
I saw the lean, pale face of the old moon
Casting a spectral light about the room,
And heard the low, sad song that night winds croon,
Then sleep half loosened me from her embrace,
And, by the sickly, pallied torch of night,
There, crouching in the shadows, I could trace
Vague shapes that hovered 'twixt the gloom and light.
Startled, I cried, "What means this mystery?
Why do you come to haunt me?—what are you?"
They crowded close and, whispering, answered me:
"We are the good deeds you forgot to do."

—Lippincott's.

Perfect Kitchen Equipment

Have you ever stopped to indulge in a day dream about how pleasant housework might be made if one had all the modern inventions now on the market for lightening labor? One could keep house for a large family and have almost enough time left to hold down another job at the same time.

Of course, the biggest and best thing possible would be an electric plant, which could be used for lighting the house, furnishing power and light at the barns and sheds, pumping (thus making running water and sewerage possible), churning, separating the milk, operating the washing machine, electric iron, vacuum cleaner and sewing machine.

But even if an electric plant were unobtainable the dread of wash day might be driven away to a large extent by the use of the hand-power washer and the gasoline iron. The cleaning, even without the vacuum cleaner, is made easier by the use of the dustless mops and dust cloths, especially where there are bare floors and a piano or other polished furniture. Gas plants are comparatively cheap and furnish bright, clean lights.

Then the cooking could be lightened by the use of the vapor stoves, which are now made so that they have no disagreeable odor, and the fireless cooker. The cooker, by the way, is one of the best time and labor-saving inventions that has been made for women, and it now has the added advantage of being quite cheap. Prices on fireless cookers have been cut down at least half in the last few years and are now so low that the cost is easily saved in a short time in economy of fuel alone. As to convenience, it is impossible to estimate their value; they make a hot evening meal possible, while allowing you to let the fire go out and stay out all the afternoon. The newer cookers roast meat and bake, as well as boil, so that a full meal may be prepared on one of them. It is much easier to get breakfast, too, if one can get up to find the cereal ready to eat and steaming hot by the time the rest of the meal is prepared.

There are innumerable devices that cost from 5 cents to a dollar that are handy in the kitchen, especially on baking and canning days, such as egg beaters, strawberry hullers, apple corers, measuring cups and spoons and cherry pitters. And, speaking of canning, the steam-pressure canners are steadily gaining in favor and making possible a great saving of fruit and vegetables that formerly went to waste.

The inventor has done a lot for the housekeeper. Of course, all these things cost more or less money, and few of us can have them all. We hesitate many times about discarding perfectly good kitchen appliances to install newer and more expensive ones, even though we see where they will effect a saving. For most of us, however, a wise choice among these households aids, and the owning of some of them are possibilities. The woman who cannot have a few o them is unfortunate, indeed.

HOME EDITOR.

Styles for Home Dressmaker

Description of Patterns

Ladies' Dressing Sacque—This is a one-piece garment, sleeves and body cut in one, but if the material be narrow a seam may be placed in the center of the back. The wide collar should be of lace or embroidery, which may also form the border of the cap. The pattern 6421 is cut in sizes 34 to 42 inches bust measure. Medium size requires four yards of 27-inch material.

6397—Ladies' Shirt-Waist—All the new shirt-waist models give the soft effect, as does this one. It has a shoulder yoke, which is a continuation of the back, and gathered fronts, closing with a box plait or without it, and with an open neck, trimmed with an ornamental collar. The pattern 6397 is cut in sizes 34 to 42 inches bust measure. Medium size requires 3¾ yards of 27-inch material.

6297 — Ladies' Three-Gored Skirt — A smart tailor-made skirt, which can be worn with odd waists or as part of a costume. It has three gores, a panel back and side front, closing with a drapery suggestion at the knee. Linen or serge can be used to make the skirt. The pattern 6297 is cut in sizes 22 to 30 inches waist measure. Medium size requires 3⅛ yards of 44-inch material.

6288—Ladies' Dress—Gingham, linen or chambray can be used to make this dress, with the collar and cuffs of contrasting material. The dress closes at the front and can be made with either the long or short sleeves. The skirt is cut in four gores. The pattern 6288 is cut in sizes 34 to 42 inches bust measure. Medium size requires 4¼ yards of 44-inch material and three-fourths yard of 27-inch contrasting goods.

6145—Boys' Suit—Every small boy needs a play suit, and here is an excellent pattern for making such a garment. The suit closes at the back and can be made with either the long or short sleeves. The high, round or square neck can be used. The pattern 6145 is cut in sizes 2, 4 and 6 years. Medium size requires 1¾ yards of 36-inch material.

6247—Girls' Middy Blouse—The middy blouse of this season is somewhat changed from the old style. It has the usual drop shoulder and open neck, with fancy collar. The sleeve is plain top and bottom and the lower edge of the blouse is gathered into a wide, flat belt. The pattern 6247 is cut in sizes 6 to 12 years. Medium size requires 2⅝ yards of 36-inch material.

6300—Ladies' Work Apron and Cap—This garment is called an apron because it can be worn over the dress, but it can also take the place of the dress, as it is made just like one. It has an empire waistline, with plain blouse and a plain, gathered skirt, short sleeves and patch pockets. The pattern 6300 is cut in sizes 34 to 42 inches bust measure. Medium size requires 5¼ yards of 27-inch material.

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

All Patterns on This Page 10 Cents

Life is What We Make It

I have been very much interested in the letters written by the farmers' wives concerning the life of drudgery, of its isolation from society, its dreary monotony and its days of wearisome toil. Is it not true that those who suffer so much from monotony on the farm would be unhappy and discontented anywhere? Many seem to think that farm life is nothing but a continual day and night toil. Well, I think any life is, if you make it so, whether in city or country. For my own part, I love the farm and am glad I live far from the turmoil and temptations of the city. The farmer's wife should be the happiest woman in the world. She is not as often interrupted as the town woman, thus enabling her to do her work with greater ease. She can raise her children away from the vices and temptations of city life, and so many snares are set for the young in the city—the dramshops, gambling table and other evils.

We all realize the progress that is being made on the farms and the visible improvements in country life. The farmer now has his telephone, labor-saving and modern machinery, rural free delivery, with its loads of papers and magazines, and on the whole a far greater degree of peace and plenty than the inhabitants of the city either comprehend or realize. Half the time when the papers are full of accounts of hard times there is no knowledge of it in the homes of the farmers. We farmers feel these changes in living expenses less than any other class of people. The beef trust holds no terrors for us, for we have our own cured meats, and a fat hen for a change, with hundreds of young fries coming on, with plenty of good milk, butter and eggs, with garden and fruits, making it possible for the farmers' wife to have a finer table than any hotel in the city. No fear of want on the farm, no wondering where the next pound of butter is coming from or the next peck of potatoes.

After all, the farm is about the best place to live there is. The farmer works hard, but it is all in

ife-giving, fresh air. Independence s his. No one can doubt the asser-ion that we enjoy more freedom in he country than they do in the city. f the city man takes a day off he oses that much pay, while the armer enjoys himself fishing or at he fair, knowing that his crops are rowing, his pigs fattening, the cows toring up rich milk and the hens till laying. In the country the sur-oundings are the best in the world. Everything has a tendency to make s better people. The beauties of ature are around us, right at our loor; while in the city our children ssociate with all classes of people.

Nothing brings a more beautiful icture to my mind than a pretty ountry home, set about with trees, ncircled by meadow and fields, rich vith the promise of harvest, the fra-rance of the flowers mingled with he perfume of the orchard and reso-ant with the cluck of poultry and he hum of the bee. If happiness oes not exist here, where on this arth will you find it?

There are good opportunities to-ay for farmers' wives, and a great any are availing themselves of hese opportunities. I like to see a oman take an interest in what is oing on in this world; we should ead and keep posted on all ques-ions. The farmer's wife can do this f she tries. I see no reason why the armer's wife should not be the hap-iest woman in the world.

Missouri. MRS. M. E. C.

Feed Influence on Breed

THE influence of feed on breed is becoming a strong factor with the handling of pure-bred stock in their prepara-ion for the show ring and sale ring. he rapid growth and development f the animal from birth to maturity s advocated by the best breeders and aisers of stock, and this theory is eing practiced quite generally by he most successful operators in this ine of industry.

The old-time idea of a slow rowth and a lessening of the ten-encies to rapid flesh forming as ad-antageous to the health and breed-ng qualities of the animal seems to ave given way to the reverse idea. t is now plainly asserted that hrough the influences of liberal, ystematic feeding of a suitable ra-ion to encourage the flesh-forming endencies the animal will develop s breed characteristics much more ositively and forcibly than if a lower or partially stunted method f growth development be pursued.

The demand at the show ring is or fat, well-fleshed and well-grown nimals. In earlier times in the istory of pure-bred live stock de-elopment the show animal was es-eemed ruined as a breeding animal, wing to its highly finished form, in rder to give it a standing in the low ring. Many of the most suc-essful breeders of the present day ursue the show ring fitting meth-ds of feeding and development with eir entire herds and flocks of pure-red breeding animals. The animals all ages on some breeding farms re what the average good feeder ould call fat, well fleshed at all mes, ready to go into the show ng on short notice or to the tcher. They are kept in a con-antly increasing developing condi-tion of flesh and growth until ma-turity and then are not allowed to deteriorate perceptibly, except as fe-males they may naturally and un-avoidably be reduced some by nurs-ing their young.

It is the practice with some to feed about all the good, wholesome feed of the muscle and bone-forming kinds that the young things will con-sume from birth until they are 1 year old. At this period of develop-ment they are thrown more fully upon their own resources as grazers. The supply and quality of pasture, however, must be such as to afford the best advantages for growth and this maintained throughout the graz-ing season.

That there is a very rapidly in-creasing sentiment among breeders of fine stock to better care and more liberal feeding, there is not the least doubt. The show ring is encourag-ing this more than all other influ-ences. The breeder who fits animals for the show ring and afterward breeds them with good results, and possibly increased advantages, and who is enabled to sell his surplus produce at good prices because of their good form and finish, will con-tinue in his effort to satisfy this de-mand. The ambition of the pro-ducer, whether he be breeder of ani-mals or of other farm products, is to attain the highest standard of excel-lence in quality and to secure the top price for the article produced.

The tendency at the present time is to assist good breeding by better care and more liberal feeding. These influences, as they are now being ex-erted to improve and build up the live stock of the country, will have a telling effect among the produce of the best breeding herds, and will within the next decade mark an era of advancement equal to any known in the animal history of the world.

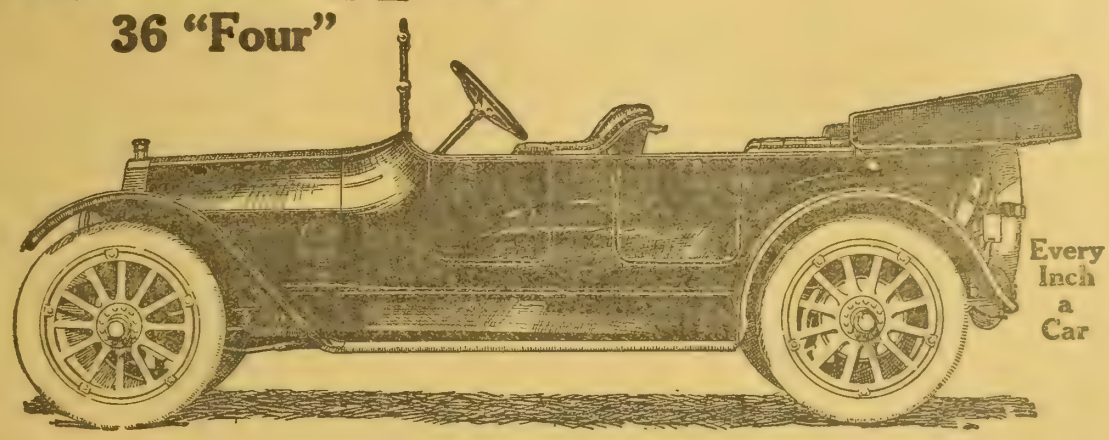
United States last year imported 822,422 pounds of mushrooms, val-ued at $1,170,399.

ALFALFA SEED

Nebraska grown, yellow, plump, dry land, re-cleaned, free from weeds; test 99.98% pure, growth 98%, at $5.75 bushel. Nitrogen for in-oculating soil $2.00 per acre can, postpaid. Ask for free book, "How to Grow Alfalfa." Seed shipped subject to examination and if not fine, we pay freight both ways. Reference: Otoe County National Bank, here; Johnson Bros. Seed Co., Nebraska City, Neb.

KISSELKAR

36 "Four"



Every Inch a Car

The first high grade, full sized *manufactured* car at a popular price—$1450

IF you are one of those who have predicted that automobiles of the better class ought to be cheaper—that some day a high grade manufactured car of fine appearance, great comfort and strong construction would be sold around $1500; *you were right.*

Here it is, a fully equipped, regular size *manufactured* automobile of established high grade at $1450—*a hitherto unheard of price for a car of this class.*

Quality and Refinement in Big Measure

Analyze If you are motor-wise, and will analyze and compare, you will appreciate the KisselKar 36.

Construction If you know steels, workmanship and the importance of perfect balance, you will appreciate the **construction** of the KisselKar 36.

Value If you have been looking for a popular priced **MANUFACTURED** car, built as carefully and expertly as cars of higher cost, you will appreciate the value of the KisselKar 36.

Comfort If you have sought vainly in other cars for your conception of easy riding, quiet operation and freedom from vibration, you will appreciate the **riding comfort** of the KisselKar 36.

Flexibility If you have wished for a car that will take the hardest hills on high, and slow down to a pedestrian's pace without changing gears, you will appreciate the flexibility of the KisselKar 36.

Economy If you realize that a car to be economical must live long, depreciate slowly, be reasonably easy on tires and fuel, and be therefore of medium weight, you will appreciate the **economy** of the KisselKar 36.

Convenience If you have deplored the necessity of either garaging your car during cold weather or buying a separate closed body, with the incidental expense of making a change twice a year, you will appreciate the **convenience** of the detachable top that is furnished at small additional cost, with the KisselKar 36.

Beauty If you are critical, and exacting in regard to appearance and refinements, you will appreciate the **beauty** of the KisselKar 36.

Completeness If you demand the newest mechanical improvements, such, for instance, as springs guaranteed against center breakage, vacuum fuel feed, dimming head lights, automatic spark advance, and other up-to-the-minute innovations, you will appreciate the **completeness** of the KisselKar 36.

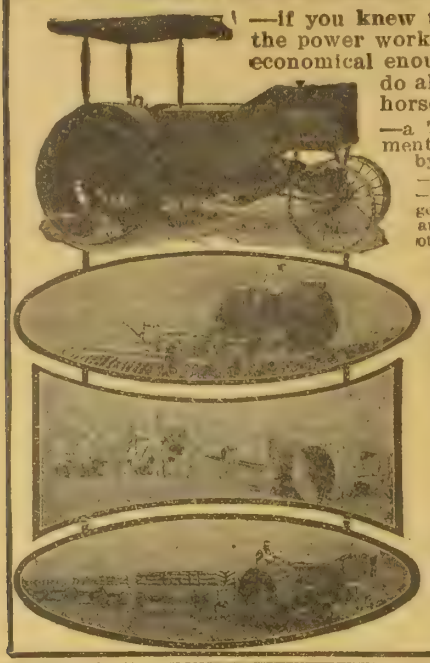
Price The KISSELKAR 36-"FOUR" at $1450 fulfills, in every respect, the full measure of value expected by far-seeing men who have prophesied that a capable and complete manufactured car of recognized upper-class, would one day be offered at a much lower price.

The "36" is sold in either the usual four-door style or the new KisselKar two-door body. With the latter you can obtain a detachable top for winter use—an invention that insures comfortable driving in winter as well as summer without the expense of changing bodies.

Send at once for complete information and literature describing the great 36 "Four", also the 48 "Six" and 60 "Six"—it's mighty interesting.

KISSEL MOTOR CAR CO., 308 Kissel Avenue, HARTFORD, WISCONSIN

Would You Consider Buying a Tractor-If?



—if you knew there was one strong enough to do the power work on a 400-acre farm, yet handy and economical enough for the small place—and would do all this work cheaper and better than horses?

—a Tractor that is not merely an experiment but a **true** and **tried** success, backed by 10 years of successful manufacture.

—a Tractor that is GUARANTEED full 15 tractive —35 brake horsepower with 80% surplus for emergency; guaranteed to have more power per pound and exert less pressure for its power than any other tractor made.

—a Tractor that does 5 times the plowing of horses and 25% to 50% deeper; and that will pull your harrows, mowers and drills; operate your thresher; haul 10 to 16-ton wagon loads; pump water, etc.

—if you will merely consider such a machine, then drop us a line and we will post you fully about the

The Sandusky Tractor

"The Little Fellow with The Big Pull"

4-Cylinder Motor. 3-Speed Control. 8-ft. Wheelbase. 12-ft. Long.

Write at once and we will include a copy of our valuable booklet, "Power on the Farm"—Free.

See our exhibit at Fremont (Nebraska) Power Demonstration, August 17-22.

THE DAUCH MFG. CO.,
Dept. T C-8, - - Sandusky, Ohio.

West Farms
ARE GOOD FARMS

for they have a soil and sub-soil that will satisfy the most exacting. Crops are good there. Wheat runs from 25 to upward of 40 bushels and other crops in proportion.

I am farming myself 1,000 acres with my three traction engines.

I have lately sold $60,000 worth of land to Iowa and Nebraska farmers who will soon commence to improve.

You will recollect I have both improved and unimproved lands, so you can have your choice. One of the very strong features about my proposition is the nearness to a great primary market. Denver with its 230,000 people is only 35 miles away. The roads are good all the way, macadamized from Denver to Brighton, the county seat only twelve miles from the land. The Burlington Route at Hudson only nine miles north, while Watkins to the south is about the same distance on the Kansas-Pacific line. Another strong feature is the price. Running from $15 to $35 only. So favorably situated should appeal to you particularly when I will take a small cash payment and liberal terms on the balance. Actual settlers are what I want, for a model community is what I want to develop. As soon as the U. P. cutoff from Denver to Ft. Morgan is completed, we will have a station and town of consequence right on these lands. But you ought to get my booklet which gives you full details. For health and a place to make money farming, there is no place quite so good, everything considered. Write me telling me your want.

N. P. West, Pres. WEST LAND DEVELOPMENT COMPANY
Incorporated for $100,000. 814 Majestic Bldg., Denver, Col.

BIG CROPS IN SHALLOW WATER DISTRICT, COLORADO.

This photo was taken July 18, 1914, on the M. A. Wagner farm, near South Platte river—second cuttting. We sell such producttive lands $15.00 to $35.00 per acre. Easy terms. 60 acres free breaking if bought before August 15th. 75 farms to select from. Good schools and churches. Close markets, good roads, healthy climate, excellent water. Wheat yielding 35 to 40 bu., corn 35 to 45 bu per acre. Thrifty bearing orchards. No hot winds, plenty of rainfall. Our lands among improved farms selling $55.00 per acre. Write for circulars and excursion rates. Don't delay. Agents wanted.

PLATTE RIVER VALLEY LAND CO., 5th Floor State Bank Bldg., Omaha, Neb.

Railways of the High Andes

By Frank G. Carpenter

LA PAZ—The iron horse of transportation and commerce has climbed over the Andes and is now forcing its way through the wilds of Bolivia. Fifteen years ago all the railways of this country did not cover 300 miles. Today more than 1,300 miles are in operation, more than 500 miles are being constructed, and something like 3,500 miles have been surveyed or projected. When I last came to La Paz I rode over the Peruvian Southern railway from Mollendo to Arequipa, and thence on to Puno on Lake Titicaca.

I crossed that lake on a steamer to Chililaya, Bolivia, and came with the mails on a stage across the plateau to La Paz. This year I have come by the same route as far as the lake, and thence to Guaquil, where an express train brought me in comfort right into the heart of the Bolivian capital.

In leaving La Paz to return to the seacoast I was hauled by mules on a long three-day gallop down to Oruro, where I got the narrow gauge line that crosses the mountains and desert to the port of Antofagasta. I have gone over the same road this year, but it has now been extended from Oruro to La Paz and there are branch lines that will soon connect with the Argentine railway system and give a transcontinental line across southern Bolivia to the Atlantic ocean at Buenos Aires. Then Bolivia had no through railway to the sea. It has now three, the third being the short cut to the Pacific at Arica. The Arica road was completed only about a year ago, and the trains are just now beginning to run safely over it. During my stay in La Paz I have had talks with the managers of the several roads; and at Arequipa and Lima I gathered the latest information as to the Peruvian Southern, which, with its extension from Lake Titicaca to La Paz, forms one of the most important outlets to the trade of this country.

Only Available Ladder

These Andean railways are the only ladders up which one can climb to the golden roof of the South American continent, and they are the only downspouts through which mineral and other products of the plateau can be sent to the seacoast. From here to the Isthmus of Panama there are now five such ladders. The first is Ecuador. It runs from Guayaquil to Quito, passing in full view of Chimborazo and Cotopaxi. The second is the Central railroad of Peru. It climbs over the coastal range to the great copper mines of Cerro de Pasco, reaching an altitude which is far above that of any other railroad point of the world. The third is the Peruvian Southern. It climbs over a pass of more than 14,000 feet to Lake Titicaca; and the fourth and fifth are the Arica-La Paz and the Antofagasta-La Paz roads, which cross the Chilean desert and end at the Bolivian capital.

The highest of these roads is the Central Railway of Peru. I crossed it at an altitude which is more than three miles above the sea, and on one of its branch lines I ascended to a height of 15,805 feet, which is the highest place now reached by rail. The Peruvian Central crosses the Andes through the Galera tunnel, and then goes down into the fertile valley of Huancayo, and it will some day be extended to the navigable tributaries of the Amazon river.

Railroad in Clouds

The Southern Railway of Peru crosses the Andes at an altitude of 14,400 feet. Its highest point is about that of Pike's Peak, which is 14,147 feet above the sea. It then descends to Lake Titicaca, and from there drops down to La Paz, which lies in a hollow almost two miles and a quarter above the sea. The Central railroad goes up three miles in altitude over about 100 miles of track, and its total mileage, not including the Cerro de Pasco extension, is less than 250 miles.

Highest Station on the Antofogasta Road—More than Two and a Half Miles Above the Sea

The Southern road from Mollendo to La Paz, including the trip across the lake, covers a distance of more than 500 miles. It is 223 miles from the sea, where it crosses the Andes, and there it is 1,000 feet lower than the altitude of the pass of the Peruvian Central.

The La Paz-Antofagasta line has a mileage of more than 700 miles, and its highest point on the main line is over 13,000 feet above the sea. The highest point on the Arica line is just under 14,000 feet, but the Antofagasta line is building branches that are almost as high as the highest point on the Morococha branch of the Central above Lima. One of these runs from Ollague to Colabuasi, where there are copper mines owned by the Guggenheims, said to be among the richest mines of the world. The other begins at Rio Mulato, between Oruro and Uyuni, and goes to Potosi, the famous mountain that has produced billions of dollars in silver and that promises to produce like values in tin. The Rio Mulato and Potosi branch crosses a pass 15,814 feet high, or only fifty-one feet lower than the pass to Morococha, where are the great copper mines, largely owned by Americans.

Most Difficult to Build

Of all these lines the most difficult of construction was the Central Peruvian. It was begun in 1875 by Henry Meiggs, and its first eighty-six miles are said to have cost more than $300,000 a mile. That road is of standard gauge, and it has no gradient steeper than four and one-quarter in 100. It has sixty-seven bridges, one of which is 575 feet long, spanning a ravine 300 feet deep. Meiggs also built the greater part of the Southern railway, and that without cogs, and he was the constructor of the road from Valparaiso to Santiago that now forms a part of the first great route between the Pacific and the Atlantic.

Outside the Meiggs roads, the new line just opened from Arica to La Paz has

been the most expensive and the most difficult of construction. The Arica-La Paz road is less than half as long as the Peruvian Southern, and only about one-third as long as that from Antofagasta to La Paz. Its length is under 250 miles. It begins at the seacoast, and crosses the Andes at less than 14,000 feet above the level of the ocean. On some parts of the route the grades are so steep that the rack-and-pinion system has to be used. The maximum grade of the ordinary line is only about 3 per cent, while some of the cog sections reach a grade of 6 per cent. The cog section is longer than that of any other railroad, and there are many engineers who claim that it cannot be worked at a profit. The cog system is about the same as that of the roads up Pikes peak, Mount Washington and the Rigi. It does well for tourist traffic, but whether it will work with the heavy freights is a question. One of the civil engineers engaged in its construction tells me he thinks that the cog part of the road may eventually be run by electricity.

Building Railroads Everywhere

During my stay in La Paz I have met Sir John Jackson, whose company has built the Arica-La Paz system. He is one of the famous engineers of the world and his company has work going on all over the globe. It is arranging to connect the Bolivian and the Argentine railway systems.

When the Panama canal is completed the shortest route from the United States to Bolivia will be by way of Arica. That port is 2,200 miles from Panama, and by the canal it will be less than 3,600 miles from New Orleans. Most tourists will prefer to go by way of Mollendo and the Peruvian Southern, the gradient of which is more gentle and which has also the advantage of the half-way station at Arequipa and the pleasant trip over Lake Titicaca. The quick jump from Arica to the top of the Andes is liable to give one soroche, and many will not care to risk the long rack-and-pinion system. Some will go to La Paz by one route and come back by another. At present the most of the traffic to Bolivia passes either through Mollendo or Antofagasta.

Most Important Road

The Antofagasta-Bolivia railway system is perhaps the most important of the republic. It is now giving a direct service from La Paz to the ocean in forty-four hours. There are three trains a week, with sleepers and diners. This road is about as long as from New York to Cleveland. Leaving Antofagasta, the chief seaport of northern Chile, the train takes you through the nitrate fields and across the Chilean desert to the Bolivian frontier. You are all night and the whole of one day in making that journey, and you arrive at Oruro at about 9 o'clock the next morning. During the first 223 miles you reach an altitude of 13,000 feet. You then drop about 800 feet to the great borax lake, and thence climb over the mountains to the Bolivian plateau. A part of the way is over vast plains spotted with llamas and alpacas, and in plain sight of snow-clad peaks from 16,000 to 20,000 feet high. Oruro, the commercial center of the plateau, is the half-way station, and the distance from there to the Bolivian capital is 150 miles.

Scenic Wonder of World

The Antofagasta road is one of the scenic routes of the world, and geologically and geographically it is one of the most interesting. The Bolivian plateau was once a great inland sea hundreds of miles long and sixty or more miles in width. Parts of it are as flat as a floor, and the road goes for miles over beds of stone and stretches of sea sand. I am told that sea shells are often found, and that fossils of fishes are in evidence. Some of the way is past volcanoes, and you see beds and mountains of lava of the most wonderful character. The road taps the treasure vaults of the Andes and its freight is largely tin and copper ore, which is shipped from Antofagasta to the smelters of Europe and the United States.

Built by Americans

The reconstruction of this Bolivian railway and its extension was financed and built by Americans. Only a few years ago Bolivia and Brazil entered into a treaty by which Bolivia conceded to Brazil a rubber region about twice as large as the state of Indiana for the sum of $10,000,000. This money was used to build certain railroads for the development of Bolivia. Messrs. Speyer & Co., and the National City bank of New York got the contract for the completion and extension of the Antofagasta road. Their scheme involved an expenditure of more than $27,000,000, the capital to be made up of $15,000,000 advanced by the Americans, and of $12,500,000 by the Bolivian government. The American loan was secured by bonds and the guarantee of the government. One of the extensions to be made was the standard gauge from Oruro to La Paz, another was from Oruro to Cochabamba, and a third a line to Tupez to connect with the Argentine system. The Potosi extension was also a part of the contract. This was in 1906, shortly after which time the work was begun. American engineers were brought in and by 1908 the line from Oruro to Viacha above La Paz was almost completed. Other constructions were well under way when the controlling interest in the undertaking was sold to the English Antofagasta and Bolivia Railway company, and that at a big profit.

English Now in Control

In this way the Antofagasta and Bolivia railroad passed out of the control of the Americans and into that of the English. The Americans may still own some of the stock, but the railroad belongs to and is managed by English capitalists. It has been completed to La Paz, and is now advancing toward Cochabamba, a thriving town on the eastern side of the Andes. The same company is building a line from Uyuni to Tupiza, the total length of which will be about 120 miles. A short extension will connect that line with the Argentine railways, and then one can travel across country from Bolivia to Argentina. I understand that the Bolivian government has already contracted a loan for the building of the break from Tupiza to the Argentine frontier.

The Antofagasta road is one of the most profitable roads of all South America. It is the great down-the-mountain chute for the tin and copper ores of the Bolivian plateau, and, as it has a monopoly, it can charge all that the traffic will bear. The freight rates are enormous, and that on coal from Antofagasta to La Paz is something like $20 or $25 a ton. Suppose you had to pay $25 for getting a ton of coal from Washington to Detroit. I venture you would object, even as La Paz people do.

Will Create Business

By the extension of the lines the freight of the road will be greatly increased. Cochabamba is in a thriving agricultural district, with no outlet for its products. Potosi is on the slope of a mountain that was once a great mass of silver, and is now being worked for its tin. It is expected that many low-grade tin and silver mines, which cannot be operated because of the high cost of transportation, will be opened up as soon as the road is completed.

As to Tupiza, in southern Bolivia, that town is of no great importance, but all along the road from Uyuni there are rich tin mines, and many low-grade propositions will be opened up when the railroad goes through. As it is now, the chief trouble of this system is its two different gauges. Some of the tracks are of a forty-inch gauge, while others are only thirty inches. The latter is the case with the road from Antofagasta to Oruro, but arrangements are being made to alter it to forty inches, thus standardizing the system.

A great deal of the Bolivian rolling stock comes from the United States On the Antofagasta line the locomotives are chiefly Baldwins. A great many Rogers are used on the Peruvian roads, and on the Arica line the engines are American, English and German. During the construction of that road there were fifteen locomotives and 140 flat cars in service. The heaviest engine wighed seventy tons.

Our civil engineers have had much to do in laying out the roads of Bolivia, and Americans are now taking contracts for the new construction financed by the English.

(Copyright, 1914, by Frank G. Carpenter.)

Do You Own a Tractor?

If so, you are not getting the most out of your investment unless your equipment includes the Hansmann lines of Hitches and Guides.

The above picture shows the Hansmann Disc-Drill Hitch at work. This Hitch is pulling five double action disc harrows and is standing up perfectly. We build this Hitch in a lighter model and each model is adjustable for either five or three implements. With the Hansmann Disc-Drill Hitch, turning at the ends of the field is done in as small a circle as the engine can make, each implement keeping its path and not coming into contact with the other.

For tilling and seeding with traction power, this Disc-Drill Hitch is indespensible.

THE HANSMANN LINE:

Hansmann Disc-Drill Hitch.
Hansmann Plow Engine Guide.
Hansmann Separator-Grader Steering Pole.
Hansmann Binder Hitch.
Hansmann Corn Husker.

These devices have long passed the experimental stage and every "Traction Farmer" should have them in his equipment.

Our Line will be on exhibition at the Fremont Show and can be seen in actual service in connection with the exhibit of the Hackney Mfg. Co.

Write the home office and factory for complete catalog.

The Hansmann Manufacturing Company

Long Prairie, Minnesota.

DON'T WASTE MONEY

buying a land roller, clod crusher, pulverizer and leveler. You get ALL in ONE machine, and save the work of two extra trips over the plowed ground, when you buy the

IMPERIAL PULVERIZER

and it is the ONLY machine that packs the subsoil, and leaves the surface loose. Makes the best seed bed. Soil retains moisture and produces bigger crops.

Write today for Booklet

Peterson Mfg. Co., 174 River St., Kent, Ohio

The Helper Mixer $35

A money-saver for you. Mixes thoroughly concrete, feed or fertilizer. Mixes two cubic feet per batch. While one batch is mixing prepare the next. Will pay for itself in one week. Also make larger sizes and other styles.

Write for free literature.

THE CEMENT TILE MACHINERY CO.
321 Rath St., Waterloo, Ia.

Plan to attend the Tractor Demonstration at Fremont, Neb., August 17-22.

SILO ROOF FACTS

Thayer's Self-Supporting Folding Sectional Silo Roof has solved the roof problem for silo users. A roof that increases the capacity of silo 4 to 6 feet **AT ONE FILLING.** Machinery does not have to be reset to refill silo, **A SAVING OF TIME AND LABOR.** Any man having seen my folding roof demonstrated would never consider any other kind of roof for a silo, even at a much lower price. My patent rafter irons will put my roof on a stave, brick, tile or concrete silo wall. Complete roofs, ready to bolt to your silo, or get my 12-rafter irons, 12 rod hooks, 24 iron holders and 108 bolts and make your own folding roof. The 4 to 6 feet of increased capacity of your silo will pay for this roof. Catalog sent on request. Write for prices.

H. M. Thayer, Woodhull, Illinois

505 Bu. GRAIN BIN $61.90 BUTLER'S SPECIAL...

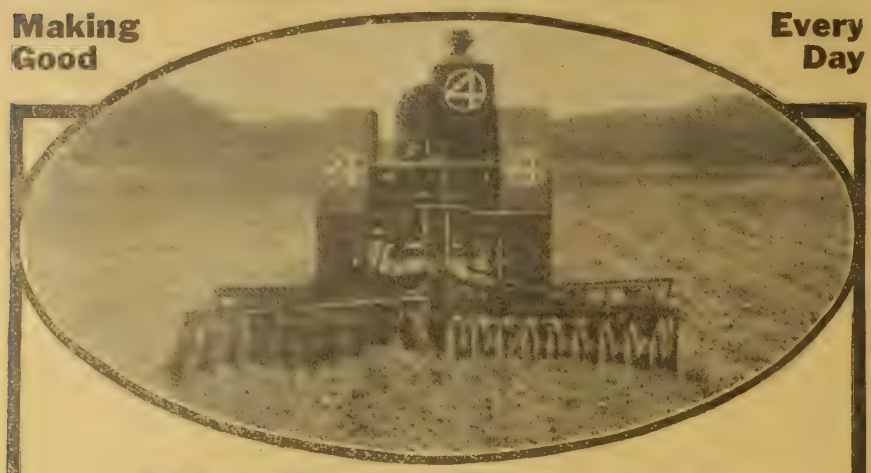
CORRUGATED METAL—RAT AND FIRE PROOF

The best metal grain bin for the price in the world. Defies competition. We make all styles. This is not our highest grade bin but is splendid value. Keeps grain in perfect condition. Large door and other features. Ask for prices of different kinds and grades, also valuable circular giving opinions of experts on storing grain for high prices.

BUTLER MFG. CO., 1212 W. Tenth St., Kansas City, Mo.

WATCH THE BIG FOUR AT FREMONT
AUGUST 17th to 22d

Making Good — Every Day



Big Four Tractors
Every Acre
Well Plowed—Well Disked—Well Seeded

Each day some task successfully completed. Each week a record of good work well done. That's what the Big Four is doing for others—what it will do for you. The first four cylinder tractor was a Big Four and our present line embodies every improvement suggested by 13 years' experience. From seed time to harvest, day after day, the Big Four supplies power to quickly and economically handle the many varied kinds of farm labor. By reason of its steady power it excels at threshing and all kinds of belt work. It is always ready—easily and quickly started—a tractor you can depend upon.

A Size for Every Farm

Big Four "20"	Big Four "30"	Big Four "45"
4 Cyl., 3-Speed	4 Cyl., 3-Speed	6 Cyl., 3-Speed

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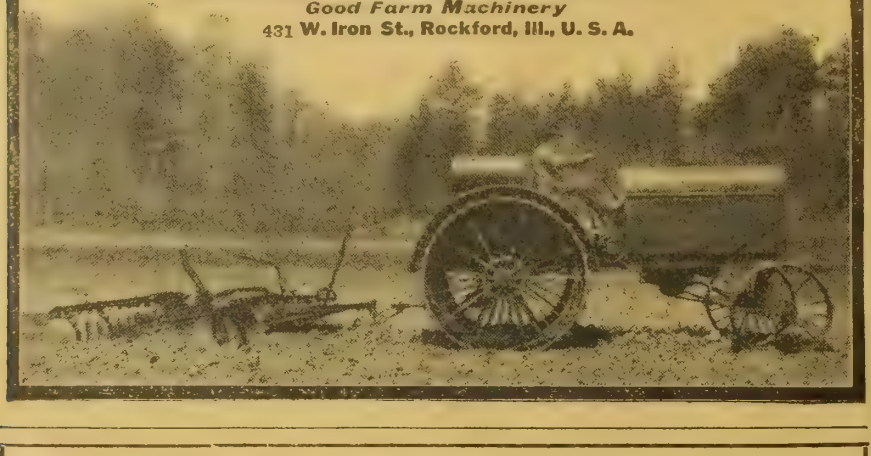
Write for Free Illustrated Catalog.

Emerson-Brantingham Implement Co. (Inc.)
Good Farm Machinery
431 W. Iron St., Rockford, Ill., U. S. A.



Tractor Farming Demonstration
Fremont, Neb., August 17-22

At this demonstration will be gathered scores of labor saving devices that will increase your efficiency as a farmer and make your land produce to the limit of its capability.

There will be demonstrated power machinery for field work and other uses around the farm. Power when you need it, at any season, for any purpose, and for twenty-four hours a day if necessary.

UNION PACIFIC
Standard Road of the West

extends a special invitation to you to be present at this demonstration, for it is to your interest to know how power machinery is being utilized in other sections of the country, and to see for yourself how it can benefit you.

Splendid train service into Fremont from either direction every day of the demonstration.

For further information apply to Local Agent or

W. S. BASINGER,
General Passenger Agent.
Omaha, Nebraska.

YOU CAN BUY

ANY CUT in the Twentieth Century Farmer

for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as there is only one of each.

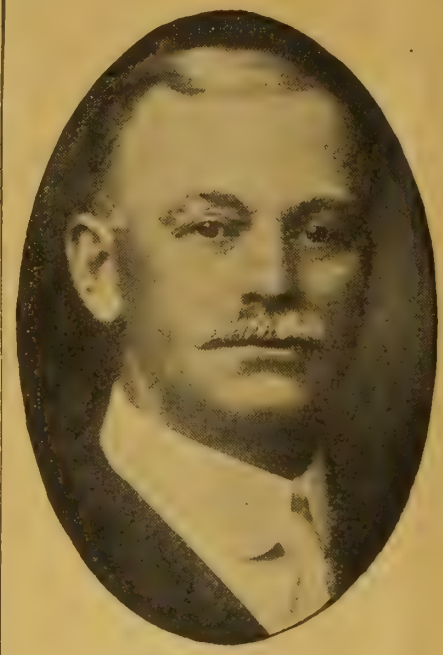
STOCKMEN—ATTENTION

We have thousands of acres Mouse River Loop lands for sale large or small tracts $25 to $30 per acre, $2 per acre down, balance 20 annual payments. Unlimited supply hay, pasture and pure water. Good markets, churches, schools. Come and see the fine alfalfa, corn and cattle. Fare refunded purchasers. Write for special R. R. rates and booklet. Northern Trading Co., Owners, Towner, N. D.

SAVE THE HOGS

$500.00 forfeited if Worm-A-Go does not remove worms in 24 hours—$2.00 a can. $2.00 for 40 pigs.
GREAT WESTERN CHEMICAL MFG. CO.,
114 116 No. Kimball Ave., Grand Island, Neb.

What the Fair Boards Are Doing



JOSEPH ROBERTS,
President Nebraska State Fair

W. R. MELLOR,
Secretary Nebraska State Fair

BIGGER and better than ever before!" This is the slogan of the county, district, state, interstate and national fair the country over. More than this, the fairs usually live up to their promises, conditions being anywhere near favorable. Each year sees new buildings, new departments, better roads and drives and more conveniences for patrons on the state fair grounds. Even in the face of such discouragements as the dry weather and the partial crop failure that prevailed over large parts of the country last year the fairs were attended by good crowds of cheerful spectators, and the exhibits were well worth seeing.

This year conditions promise to be better than last in most states. Fair officials are well pleased with the prospect and are anticipating large crowds to appreciate the improvements they have made on the various fair grounds.

At the Nebraska State Fair the beautiful new agricultural and horticultural hall will be in use for the first time, allowing ample floor space for these exhibits.

Montana has purchased 110 additional acres, making 240 acres now included in the grounds. It has a new horticultural building and new bleachers. An innovation at this fair will be the state spelling bee, at which county champions will contest for state honors.

Utah has added two days to the time usually allotted to its fair, making it eight days.

Perhaps no state has made more improvements during the last year than South Dakota. It has built a new dairy building, a new building for housing the machinery and manufacturies exhibits, besides many minor structures. It has bought an additional sixty acres to add to its grounds, and enclosed the whole 150 acres with an iron fence.

At the Iowa fair visitors will find a new building that was much needed—the women's and children's building. There is also a new and completely modern cooling-out paddock and a cattle barn that will house 108 head.

Missouri has not added any new buildings, but it has added a "better babies" contest and a silo school. These are two popular departments and will add to the interest of this fair quite materially.

At all the fairs clean, fresh paint, better roads and many other small improvements that add to our comfort and convenience and to the appearance of the grounds and buildings have been added. All aboard for the fair! The officials have done their part; now it is up to the people to do theirs toward making it the biggest, best and most prosperous fair ever before held in the state.

If the pastures are getting a little short, don't neglect giving the milch cow some corn fodder or good alfalfa hay. You can't afford to let her fall off in her flow of milk.

Nebraska's New Agricultural and Horticultural Building

Big Profits in Handling Sheep

DOES it pay to keep sheep? Yes, of course it pays, if the person handling the sheep observes common sheep sense in his care and accommodations. Listen to the testimony of a few Missouri farmers who have been engaged in raising and handling a few sheep each year for some time back.

Mr. Reims of Atchison county says: "I marketed my spring lambs this year the first of July at $4.50 per head. Sixty ewes raised sixty-seven lambs. The ewes' fleece average was seven pounds, which I sold at 22 cents per pound." It will be observed that this bunch of sixty ewes yielded $301.50 in mutton lambs and $92.40 in wool, $393.90 in sales of products, an average of $6.56½ per head, and he has the ewes as good as ever, ready to duplicate the performance for next year.

Their original cost probably did not exceed $5 per head, and they are worth just as much now on the market as they were one year ago, if they were judiciously bought, and possibly quite a bit more. They would owe, of course, the interest on their investment from the time they were purchased and the pasture and feed they consumed in the meantime. The manure they leave on the farm is worth all the labor expense connected with the transaction. Feed consumed in fitting the lambs for sale in the mutton market must, of course, be reckoned in the expense of production.

Mr. Thomas of Adair county sold a lot of spring lambs at $4.50 per head. More than 100 per cent of lambs were produced by these ewes; their average fleece was eight pounds, and sold at 22 cents per pound, bringing $1.76 per head, making average income per ewe of $6.41.

These are only individual examples of what sheep owners are doing all over the farm districts where a few sheep are kept in view of making the business profitable. What is true in Missouri is true of most other states where the business is given a little care and attention. Fence a pasture; get a few strong, young ewes, and raise early mutton lambs. It will pay.

Variety for the Sheep

There is no kind of stock on the farm that appreciates variety of feed as much as does the sheep. A sheep in its grazing will not slight a weed or coarse, sour grass as it passes along. It takes a bite here and there of everything in sight and seems to enjoy this kind of pasture more than a straight diet of one kind of grass. The blue grass and white clover sod is conceded by most sheep men to be a great sheep pasture, and it is a most excellent and enduring feed. There is nothing that affords such close cropping and yet does not seem to be retarded in its disposition to keep coming. The matter of variety in pasture is no more pronounced than is the demand for a change of feed during the winter season.

If the best results are to be had on the farm with the little farm flock, give its members a change of winter feed; a little fodder occasionally, some straw, timothy and clover hay, alfalfa, sorghum, roots in the way of sugar beets, turnips, mangels, etc. Of course, every sheep owner knows and fully understands the importance of feeding grain to the sheep—not much, just a little shelled corn, or a broken ear of corn thrown out on the ground on a clean place where there is no dirt to soil it; a grass plot, or the solid ground is best. Under such circumstances every grain will be consumed, and it will be pretty well distributed around among the flock. This, of course, applies to the farm flock where there are not many sheep kept, and the idea is to keep a few sheep to clean up about the farm, produce a few lambs each year, sell off a small surplus, have a little clip of wool to sell, supply the family with mutton and otherwise profit by a very inexpensive industry, economically handled.

It is surprising how cheaply a small bunch of sheep can be taken care of on the farm when things have been arranged in advance to separate the sheep from the growing crops. There are times when the little farm flock may practically have the run of the farm and other times when they must be confined to the sheep pasture. A sheep pasture is not an expensive enclosure to make; it must be tight at the bottom of the fence so the sheep cannot get their heads through. The most economical fence is the woven wire, two-foot or twenty-six-inch, with barbed wire above; two or three wires will be sufficient to turn the sheep, but increased barbed wires above help in keeping out dogs and command the respect of horses and cattle that are inclined to be breachy. You then have a fence suited to all kinds of stock—horses, cattle, sheep, hogs, dogs, etc.

There is very little waste or vegetation on the farm where the farm flock is used in doing the scavenger work of cleaning up weed patches, and the fence lines of fields that have been used in growing a crop through the summer. When all these little jobs of cleaning have been finished up the cornfield is a good place to give the sheep a few weeks' run in the fall; September is preferable. The sheep will trim up the lower blades, and unless the corn is blown down by storm they seldom do much damage to the grain.

The cornfield in the autumn season is a splendid pasture for the lambs when they are weaned from the ewes. In this case troughs should be put up and the lambs given a feed each day of oats and bran before being turned into the cornfield. This, with the weeds and green feed they gather, soon puts them on a basis of thrift and improvement. A little attention will soon secure for the flock variety sufficient to keep its members in fine condition.

There is no kind of stock kept on the farm that responds to feed and good care more promptly than the sheep, and there is no other animal that will exceed them in profit for the labor and feed expended in their attention.

WINCHESTER

"Repeater"

SMOKELESS POWDER SHOTGUN SHELLS

When it comes to getting a high grade shell at a reasonable price, the Winchester "Repeater" has the call among sportsmen who have tried all makes. Although moderate-priced, the "Repeater" is loaded with the best quality of powder and shot. The list of loads furnished in this shell cover most shooters' requirements, and all of them give a full measure of shooting satisfaction. Ask for Winchester Factory Loaded "Repeater," and look for the big W on the box. They are

HIGH QUALITY BUT MODERATE IN PRICE

TRADE MARK

W

They DO Rub-Rub!

Hogs go crazy to rub-rub-rub on the Hog-Joy Oiler. They leave posts, stumps, trees and fences to get to the machine to rid themselves of vermin.

The hogs do *all* the work themselves. You have nothing to do—no work, time or worry—no individual treatments—no special dosing to be repeated every few weeks. You simply put the Hog-Joy machine in the pen, and the hogs do the rest. 5 cents a year per hog keeps them free from lice.

HOG-JOY SYSTEM OF SUCCESSFUL HOG RAISING

Lousy hogs are more apt to contract Cholera and die than hogs that are free from lice. Blood-sucking lice on your hogs mean poor, lean, restless, unhealthy hogs—*less profit for you.*

Why not save feed, keep your hogs healthy and fat and get them to market quicker by keeping them free from blood-sucking and profit-sucking lice with the Hog-Joy Oiling Machine?

Special Offer—$5 Oil Free! 30 Days' Free Use

To quickly introduce the system to a thousand more hog raisers, we are giving away a six months' supply of Hog-Joy Oil—the famous vermin chaser—10 gallons—*absolutely free!* Besides this we give you 30 days' free use of the Hog-Joy Machine. If it doesn't make good, back goes your money. This offer is for a short time only. Write and get all the details of this special introductory price offer and save $5 besides.

Hog-Joy Co., 420N. Fifth Street, **Springfield, Ill.**

Wholesale Distributors: Lininger Implement Co., Omaha, Neb. The Merrill Company, Toledo, Ohio. Stowe Implement Supply Company, Kansas City, Mo. Brinly-Hardy Co., Louisville, Ky., and Memphis, Tenn. (12)

Write for the Facts N-O-W!

Tractor Farming Demonstration

Fremont, Nebraska, August 17 to 22

Arrangements have been made with the DuPont Powder Co. for their experts to come to Fremont for a demonstration of the use of dynamite for stump blowing, subsoiling, ditching, etc., on the mornings of Tuesday and Wednesday, August 18th and 19th. This demonstration will be held on or near the tractor demonstration field. Don't fail to see this interesting and educational feature.

BIGGER CROP YIELDS
FOLLOW DEEP, SEASONABLE PLOWING

Coaxing nature to open up her vast store houses of soil wealth, is largely a matter of deep, seasonable plowing. Just below the shallow depth of the average horse turned furrows is a bountiful supply of crop fertility that yields to the persuasion of a Hart-Parr Power Outfit.

With a Hart-Parr Oil Tractor and Self and Hand Lift Plow you can easily plow 6 to 8 inches deep and do it just when conditions are right. This power plowing outfit is ready when you are ready. And it hangs to the job from start to finish, working long hours and overtime, if necessary, without rest.

Doing a deep, even job of stubble plowing with a Hart-Parr "27" and 4 furrow self and hand lift plow.

After plowing, you can use this same tractor for every kind of field and belt work and do it all on CHEAPEST KEROSENE. It cuts the cost of all farm work requiring reliable power, to the lowest notch. Dollar for dollar, it returns a bigger profit on the money invested in it than any other kind of power, animal or mechanical.

The initial cost is comparatively small and the cost for up-keep and repairs is remarkably low.

The Hart-Parr Power Plow, too, has many desirable features found in no other. It saves the plowman's wages and board. You operate it right from the engine platform and pocket an additional profit.

Our catalog and literature on Hart-Parr power farming machinery contain a lot of profitable ideas for the farmer who is making money but wants to make more, or the farmer who is barely breaking even and wants to show a profit on the credit side of his ledger. Write for this literature today. 132

HART-PARR COMPANY
254 Lawler Street, CHARLES CITY, IOWA

A Big Farm at Low Cost in Eastern Colorado

400,000 acres of state land to be offered by the State Land Board of Colorado. Sales at Colorado Springs, beginning September 3, 1914, and at Limon, September 10, 1914. One-tenth of the purchase price cash at time of sale, the balance in 18 equal annual payments, with interest at 6 per cent.

This land is directly served by the Rock Island Lines and is particularly adapted to dairying and live stock, with sure feed and forage crops. The territory has the advantage of five great markets.

The land is located in one of the most healthful districts in the world; 320 days of sunshine each year, delightful living conditions summer and winter.

Prof. H. M. Cottrell, an expert of national reputation, formerly with the Kansas and Colorado Agricultural Colleges, and now in charge of the Rock Island Lines' Department of Agriculture, has made a careful study of these lands. He advises an average 320 acres of this land farmed right as a dairy farm can be made to return a cash income of $1500 a year besides all the farm products a large family can use.

Raising and fattening beef cattle in Eastern Colorado is an inviting proposition to the stockman who has money. Fresh beef is shipped every week in large quantities into Colorado because the supply of grain fatted cattle is insufficient. The cattle can be raised and fattened on silage and milo at a good profit. The average number of wet days from November first to March first is only twelve. This means dry feed lots and the profits from feeding in dry, sunshiny weather.

The Rock Island Lines' Department of Agriculture is at the service of all farmers now living along the Rock Island Lines and those who are thinking of moving there. Take advantage of this means to obtain greater efficiency and profits as well as a better location.

Inspect this land before the sale and select the exact place you want for a home.

Low fares for the round trip via Rock Island Lines. Write today for full information.

Rock Island

L. M. ALLEN, Passenger Traffic Manager
Rock Island Lines
731 La Salle Station, Chicago

The statements herein made have been fully investigated and can be absolutely relied upon.

Make Plans to Attend the Tractor Demonstration at Fremont, Neb., August 17-22.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Apple Trees Need Spraying

A. A., Nebraska: Will you please tell me what is wrong with my apple trees. They used to bear well, but about two years ago the leaves began to get scabby and die and fall off. They bear just a few apples now, and these are scabby and warty and yellow around the core and also wormy. I would like to know what to do for them.

Answer—Your trees are infested with disease and insects; they need spraying. Would advise you to give them a spray of either paris-green or lead arsenate and also of Bordeau mixture now, and then in the spring begin a regular spraying campaign. Use lime sulphur solution early, before blossom time; then, just after the petals have fallen, but before the calyx cups close, spray heavily with Bordeaux mixture and either the paris-green or lead arsenate, using this same combination again three weeks later and again in August. Paris-green mixture is four ounces of paris-green to fifty gallons of water. Lead arsenate mixture is four ounces of arsenate of soda, eleven ounces of acetate of lead to 150 gallons of water. Bordeaux mixture is four pounds copper sulphate, four pounds of lime and fifty gallons of water.

Seeding Lawns

M. S., Nebraska: Kindly inform me as to when is the best time to put in a lawn, spring or fall, and, if fall, about what time?

Answer—Lawn should be seeded in the spring. About the last of April is the time, if weather conditions are favorable.

Feed for Work Horses

T. A. K., Iowa: Please inform me if you consider it right, after working a team all the forenoon or all day, to turn them into the pasture without feeding them?

Answer—It depends on the kind of work the horses do, on what feed they receive in the morning before going to work and on the pasture. The way a man feeds his horses must depend on his circumstances and on the amount of work they do. If the horses are well fed in the morning and not overworked, they are probably getting sufficient feed if they are in a good pasture from noon till the next morning, or even just over night sometimes. The condition of the horses indicates best whether they are receiving sufficient feed.

Piling Corn for Silage

M. L., Nebraska: I am a reader of your paper and get many helpful suggestions from its pages. Now I am writing to ask your advice. I have a piece of corn which will not mature, and I would like to put it in my silo, but the corn is five or six miles from my home place, where my silo is located. I feel that I cannot afford to hire teams enough to haul in the corn. What I want to know is, can I haul in the corn with my own teams and pile it near the silo? It would probably take me three or four days to haul it down. Would the corn keep in a pile for that length of time or would it be unfit for silage?

Answer—We think it would be entirely practicable for you to cut and haul the corn as you suggest. Be careful, however, about piling it so it will heat. It would probably be best to set up some posts and nail some poles or studding to them three or four feet from the ground and set your corn up against this rack. If weather conditions and the condition of the corn at time of cutting make it a little dry to ferment in the silo, add water by running a

Entered in the Tractor Show

During past weeks we have shown photographs of many of the makes of farm tractors that have been entered for the tractor demonstration at Fremont, Neb., August 17 to 22. We have not shown them all, for the reason that at the last moment there has been a rush of entries, so that now practically every tractor manufacturer in the country has made arrangements to have his machines on exhibit at this time.

The picture in this issue is the Gray tractor, one of the new small machines built for the man with an average-sized farm. You will be surprised to see how many of these small tractors there are and to note the different improvements and advantages of each. Large and small, costly and cheap, all the leading makes of machines may be seen at Fremont next week. Even at the demonstration last year there was not such a variety of tractors. Best of all, they will be working, giving the spectator an opportunity to judge their merits or faults for himself.

stream into the blower when you are cutting. We have seen some very good silage made out of corn cut at the proper time and either shocked or stacked, the silo being filled in the winter. The addition of water is necessary when this is done.

May Vaccinate Neighbors' Hogs

P. T. L., Nebraska: I have read with interest your articles in the Farmer relative to "Hog Cholera, Prevention and Treatment." I have also vaccinated several times, but it has proven no great success, as the disease was in the herd before one vaccination. I am writing you asking the law or ruling of the Live Stock Sanitary Board relative to a person using his syringes in the neighborhood, or to what extent can a farmer help his neighbor vaccinate?

Answer—We are firmly of the opinion that if proper methods are pursued by the owner of the herd, potent serum and virulent virus used when the treatment is given, and the operator knows his business, good results should be obtained, even though the disease be in the herd, providing it is in an early stage. There is no regulation provided by the Live Stock Sanitary Board as to who may vaccinate. A farmer may do this on his own herd and that of a neighbor. We know of several farmers who are doing this in different locations, many of them with very good success.

Breeders' Notes

C. E. Peterson's Durocs

C. E. Peterson of Genoa, Neb., has a reputation of getting just about as much growth on his pigs as any man in Nebraska. Any time you visit Mr. Peterson's herd you can depend on the fact that you are going to find something good. He does not make very much noise, but when it comes to breeding, growing and developing hogs he comes just about as near delivering the goods as anyone we know of. He is no novice in the business, for he has been breeding Durocs for a number of years, and certainly knows a good one when he sees it. His herd is strong in the blood, Crimson Wonder, and his herd possesses the quality and smoothness that usually goes along with this line of breeding. In connection with this he has developed size and bone sufficient to satisfy a most exacting buyer. He has a splendid lot of spring boars to offer at this time. These pigs are sired by Model Critic, Crimson Gano, Red Chief Wonder and others. Look up his ad. elsewhere in this issue and write him, mentioning the Twentieth Century Farmer.

Duroc Herd Headers

To anyone who is in the market for a strictly first-class Duroc-Jersey fall or spring male we believe you will make no mistake in writing Clarence Wallace of Wisner, Neb. We wish to emphasize this statement because we believe that few men in the breeding business come nearer breeding a type of hog that meets the popular demand than does Mr. Wallace. For years he has been breeding along certain lines with a definite type in mind. It is generally understood that in order for any breeder to make a success of the breeding business it is necessary for him to have some definite idea of what he intends to accomplish. This idea is well exemplified in Mr. Wallace's herd, because from year to year he comes to the front with a line of good stuff, always of the big, smooth, heavy-boned kind that enables them to go out and make good either in the show ring or in the herds of other breeders. At this time there is offered for sale a number of great, big, smooth fall boars and also a nice lot of spring boars. Fall boars are sired by Golden Model 4th and Sensation Wonder 2d. Four of these are out of Fancy Advance 2d, grand champion sow at Nebraska State Fair last year. There are one or two among these that should go to the head of some good herd. They are sired by Golden Model 4th. There are also two out of Wonder's Lucy, the fourth-prize sow at Nebraska last year. These are also sired by Golden Model 4th. One of them is an outstanding good individual. The spring pigs are sired by Colonel Chief, Proud Colonel, Golden Model 32d, Long Wonder, a full brother to Wallace's Wonder, and others. Get in touch with Mr. Wallace for any information regarding what he has to offer, and if you are going to attend the Nebraska State Fair do not forget to look him up, as he will have a show herd there that will give you an idea of what he has at home. When writing him kindly mention the Twentieth Century Farmer.

Sale Dates

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 15—Harry Tidrick, Winside, Neb.

Duroc-Jersey Hogs

October 2—F. B. Nelson, Lindsay, Neb.
October 2—F. A. Lemmerman, Creston, Neb.
October 5—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—Harry Tidrick, Winside, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Holstein-Friesian Cattle

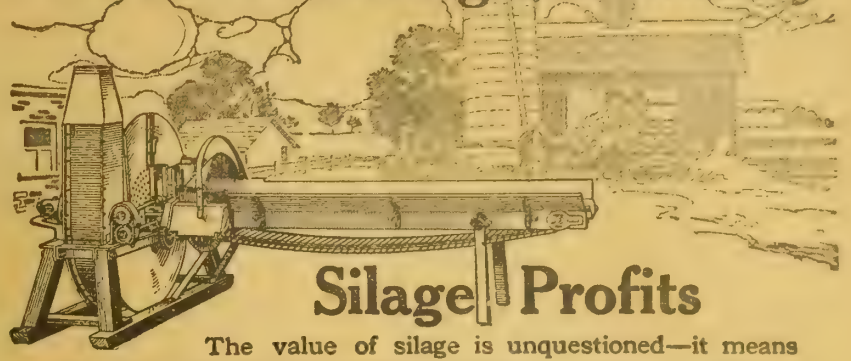
October 19 and 20, 1914—H. C. Glissman, Station B, Omaha. Sale at South Omaha.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt, Neb.

RUMELY

Power Farming Machinery



Silage Profits

The value of silage is unquestioned—it means succulent feed the year 'round. When it comes to a dependable cutter, you can be sure of getting full silage profits by using an

Advance Silage Cutter

Its strong, simple construction is proof against delays. The Advance will be ready when you want it and keep going until the job is done.

The heavy disc stores energy that easily carries the knives through heaviest cuttings, requiring minimum power. The gears and sprockets are few and of liberal size to guard against breakage. The Advance is built for "Safety First;" equipped with a positive, sure-acting safety device.

Ask for Silage Cutter Catalog HA40 It will pay you.

Advance Husker-Shredder and Adams Huskers are leaders in their line. We also have the right power for all such machines. Every Rumely machine is backed by Rumely service—49 branches and 11,000 dealers.

RUMELY LINES

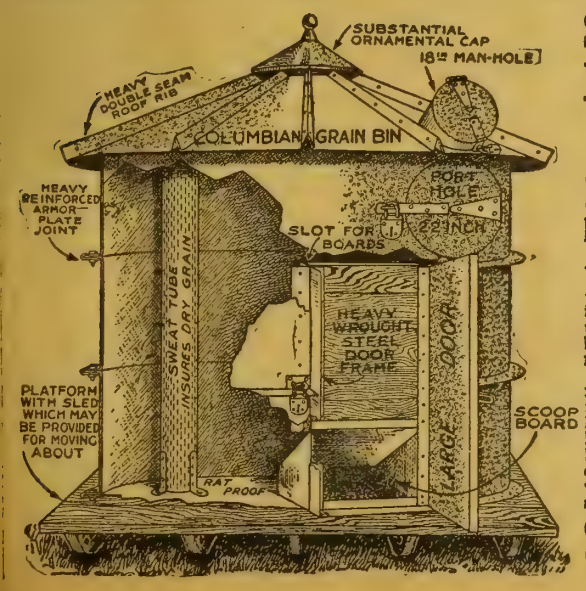
Kerosene Tractors	Engine Gang Plows	Gasoline Engines	Cream Separators
Gasoline Tractors	Threshing Machines	Oil Engines	Corn Machines
Steam Engines	Clover Hullers	Baling Presses	Lighting Plants

RUMELY PRODUCTS COMPANY
(Incorporated)
Chicago Illinois

Lincoln, Neb. Kansas City, Mo. Wichita, Kan.
Des Moines, Ia. St. Louis, Mo. Pocatello, Idaho

Fall and Winter Fair Dates

Date.	Name and Place.	Sec'y or Mgr.
Aug. 20-25	Interstate Fair and Live Stock Ass'n, St. Joseph, Mo.	H. L. Cook
Aug. 26-Sept. 4	Iowa State Fair, Des Moines	A. R. Corey
Sept. 7-11	Nebraska State Fair, Lincoln	W. R. Mellor
Sept. 7-11	Colorado Interstate Fair, Denver	I. W. Eaton
Sept. 7-12	Minnesota State Fair, Hamline	J. C. Simpson
Sept. 12-19	California State Fair, Sacramento	J. L. McCarthy
Sept. 12-19	Kansas State Fair, Hutchinson	A. L. Sponsler
Sept. 14-18	Kansas Fair Ass'n, Topeka	G. E. Clark
Sept. 14-18	South Dakota State Fair, Huron	C. N. McIlvane
Sept. 14-19	Colorado State Fair, Pueblo	J. L. Beaman
Sept. 21-26	Montana State Fair, Helena	A. J. Breitenstein
Sept. 21-26	Interstate Live Stock Fair, Sioux City, Ia.	Joe Morton
Sept. 26-Oct. 3	Missouri State Fair, Sedalia	J. T. Stinson
Sept. 29-Oct. 2	Wyoming State Fair, Douglas	A. Higby, Basin
Sept. 22-Oct. 3	Oklahoma State Fair, Oklahoma City	I. S. Mahon
Oct. 5-10	Utah State Fair, Salt Lake City	H. S. Ensign
Oct. 17-Nov 1	Texas State Fair, Dallas	W .H. Stratton
Oct. 7-17	International Dry Farming Congress, Wichita, Kan.	Ralph H. Faxon
Oct. 7-17	International Congress of Farm Women, Wichita, Kan.	Mrs. Mary Pierce Van Zile
Nov. 16-24	American Royal Stock show, Kansas City	T. J. Wornall
Nov. 28-Dec. 5	International Stock Exposition Chicago	B. H. Heide
Jan. 18-23 '15	National Western Stock show, Denver	Fred J. Johnson



Store Your Wheat for Higher Prices In a Columbian Metal Granary

1000 Bushel Bin $88.88 Freight Prepaid to Your Station

500 Bu. Bin $66.66 Prompt Delivery

HERE'S a chance to store your wheat for less than 9c a bushel—a chance to profit by the advance in wheat that is bound to come. Every indication is that wheat is going up—there is no chance for it to go lower. An advance of only 9c a bushel will pay for a 1,000 bushel Columbian Metal Grain Bin the first year. All the succeeding years it will stand you nothing.

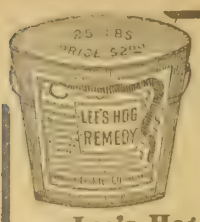
A Columbian Metal Granary will last a lifetime. Made of the finest galvanized steel, there is nothing about it to wear out. It is rat proof—rain proof—dust proof—wind proof—fire proof—lightning proof—moisture proof. It is safe and sanitary and will keep your grain in perfect condition. It is easily portable by being built on a platform with skids. It is sectional in construction and can be added to at any time. You can easily erect it yourself as we furnish everything necessary. You can put it up in your field and thresh directly into it saving men and money, time and teams.

30 Day Prices Never before were such prices made on Metal Grain Bins and they are good for 30 days only. The enormous capacity of our plant and the special equipment we have that enables us to turn out one every four minutes makes such prices possible.

Send No Money Send in your order by long distance telephone, telegraph or letter giving us the name of your bank. We will send bill of lading with draft attached to your banker. You don't have to pay for the bin until you get it. We are selling hundreds of these bins, but if you get your order in promptly we will be able to fill it in 12 hours. We pay the freight to all points in Missouri, Kansas, Nebraska, Iowa and Oklahoma.

COLUMBIAN STEEL TANK CO., 1704 West 12th Street, Kansas City, Mo.

ALSO BUILDERS OF COLUMBIAN METAL SILOS. WRITE FOR CATALOG.



A PET FORMULA

There's hardly a swine breeder but has a pet formula for regular use, ranging from a high-class vermifuge conditioner and bowel regulator down to a simple mixture of salt, copperas and sal glauber.

Lee's Hog Remedy is our pet formula, not because we have found it good, or because a few neighbors have found it good, but because scores of **thousands** of **farmers** have found it to be **good**, and because the very list of ingredients prove it to be good for the purposes for which it is designed—a worm destroyer, bowel regulator and general conditioner.

Lee's Hog Remedy is non-secret. The ingredients are Sulphur, Iron Sulphate (Copperas), Charcoal, Sodium Bicarbonate, Tobacco, Antimony, Salt, Sodium Hypo-Sulphite, Naphthalin, Gentian, Sodium Sulphate (Glauber Salt), Copper Sulphate and Aloes. These and none other. No meal or filler. You cannot beat it, either quality or price.

25-lb. Pail $2.00. 100-lb. Box $6.00. For sale by all Lee Agencies or freight paid in 100-lb. lots.

GEO. H. LEE CO. - - Omaha, Nebraska

DUROC-JERSEY HOGS

MR. DUROC BREEDER

Are you on the market for a herd boar? If so, write me just what you want. I have them sired by Lucy's Select, Proud Wonder Jr. and other top boars of the breed. **L. J. KUZEL, CLARKSON, NEB.**

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

DUROCS AND RED POLLS

25 sows and gilts for sale, bred for April and May farrow. Also some choice young boars. Several big, rugged Red Polled bulls for sale also. Everything guaranteed.

GEO. W. SCHWAB, Clay Center, Neb.

DUROC HERD BOARS

Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd headers I have them. They are out of prize-winning sires and dams. **Clarence Wallace, Wisner, Neb.**

LEISY'S DUROCS

Herd headed by Model's Wonder, one of the best young boars of the breed. A choice lot of boars for sale. I had the top sale on spring gilts last year. Fall sale October 31.

ROBERT LEISY, Wisner, Neb.

CEDAR'S DUROCS

The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.

P. P. CEDAR, GENOA, NEB.

Johnson's Durocs

Choice boars for sale, by Carnival Chief, first prize boar at Kansas, Missouri and Denver; others by Critic Boy by Critic B. Let me hear from you. E. E. JOHNSON, Genoa, Neb.

BIG SMOOTH DUROCS

Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.

HENRY KOEHLMOOS, Pilger, Neb.

I HAVE THE GOODS

Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

POLAND-CHINA HOGS

McCULLOUGH'S BIG POLANDS

We have a splendid lot of Poland-China spring boars for sale. Sired by Smooth Big Bone, Columbus Again and Expansion Again. These boars have been grown right. They are big and smooth with lots of bone. For particulars write **O. J. McCULLOUGH, CLARKS, NEB.**

BERKSHIRE HOGS

BERKSHIRE HOGS

60 spring pigs by Longfellow's Premier. Autocrat and others. They have plenty of size, stretch and bone. Prices reasonable.

GEO. PORTER, STANTON, NEB.

HAMPSHIRE HOGS

HAMPSHIRE BOAR

A splendid lot of Hampshire spring boars for sale; sired by DeKalb's King 100, a son of the famous Major. They are big, smooth, growthy fellows, and are priced worth the money.

WILLIAM PAMP, Benson, Neb.

Plan to attend the Tractor Demonstration at Fremont, Neb., August 17-22.

JERSEY CATTLE

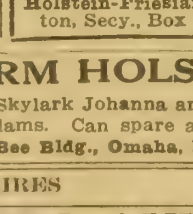
Grade Up

Buy a Thoroughbred Jersey Bull

You can buy cows of high producing value or you may develop them. The bull is the most important factor in development. A thoroughbred Jersey bull pays big returns on his cost every year. Let us send you some Jersey facts.

The American Jersey Cattle Club
324 West 23d Street, New York City

HOLSTEIN CATTLE



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Quality of production and persistency of milking during long periods are well known characteristics of Holsteins. Dropping her first calf at about 2 years old, the average cow, if well cared for, will produce from 5,000 to 6,000 pounds of milk in ten months, and she will increase the production every year until at 5 years she will give from 7,000 to 9,000 lbs. If fed to their ability to digest and assimilate food, many Holsteins will exceed this production.

Send for FREE Illustrated Descriptive Booklets.

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RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

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We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

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AYRSHIRES

LOVELAND FARM AYRSHIRES

The largest herd of Ayrshire cattle in the west. Several choice young bulls for sale, sired by Garlands Success. Can also spare a few females.

LOVELAND FARM, R. F. D. No. 1, Station B, Omaha, Nebraska

PERCHERON HORSES

To get a really valuable sire it is a big saving for you to buy at this time of year a growthy young stud from my big bunch registered Percherons 1, 2, 3 and 4 years old. They have uncommonly large bone and in pasture condition are developing to immense weights. Sire their imported sires and dams. Farm raised and farm priced. Just east of Omaha

FRED CHANDLER, Route 7, CHARITON, IOWA.

Breeders' Notes

Our cover design this issue is a picture of His Highness, the great show and breeding bull at the head of the Ashbourne herd of Shorthorns owned by ex-Governor A. C. Shallenberger of Alma, Neb. As his likeness indicates, he is a bull of wonderful scale. He is deep, smooth, well covered, well balanced, and is considered by Mr. Shallenberger to be the best breeder ever at the head of his herd.

Hampshire Males

With this issue of the Twentieth Century Farmer we are starting an advertisement for Mr. William Pamp of Benson, Neb., who has one of the good herds of Hampshire hogs in Nebraska. Mr. Pamp has about 125 head of fine pigs this year, coming along in good form. Among these are a number of extra choice spring males that he is ready to book orders for at any time. These pigs are sired by DeKalb's King 100, a son of Major, one of the most noted boars of the breed. They are out of sows of top blood lines; in fact, many of their dams represent prize-ring winning strains. If you are looking for something in the Hampshire line, here is an opportunity to get something well worth the money. Write him for further particulars, mentioning the Twentieth Century Farmer.

McCullough's Big Polands

With this issue of the Twentieth Century Farmer we are starting the advertisement of O. J. McCullough, Clarks, Neb., who has one of the really good, big-type Poland-China herds of Nebraska. Mr. McCullough has been breeding Polands for a great number of years and has succeeded in building up a herd possessing a combination of size and quality that is really hard to beat. He has a choice lot of spring boars for sale at this time and among them are a number of herd heading character. These pigs are sired largely by Smooth Big Bone and Columbus Again. These boars are both of big-type character, both in point of general makeup and also as to breed. The latter boar is the son of the many times champion, Big Columbus. These pigs have been grown in the right way and will go out and do good for the purchaser. If you are in the market for a first-class Poland-China boar, get in touch with Mr. McCullough, mentioning the Twentieth Century Farmer.

Big, Smooth Durocs

One of the prominent young breeders of Duroc-Jersey hogs in northern Nebraska who has been forging to the front with rapid strides is Henry Koehlmoos of Pilger, Neb. Mr. Koehlmoos has been buying some very choice breeding stock during the last few years and has by careful mating and breeding developed a herd that will take rank with a great many that have been in the business much longer than he. He has a very choice lot of spring males to offer for sale at this time, the larger part of them being of March farrow. They are sired by H. K.'s Wonder, he by B. & G.'s Wonder and out of the great sow Sweet Rose 2d; Muncie Colonel, Premier Colonel, Colonel 2d, Sweet Rose's Wonder and Golden Model 31st. Mr. Koehlmoos also has very choice fall males sired by Crimson Wonder Select. Better get in touch with him at an early date, as he is pricing these pigs worth the money. Kindly mention the Twentieth Century Farmer when writing.

Kuzel Offers Durocs

L. J. Kuzel of Clarkson, Neb., as about as good a lot of Duroc-Jersey spring males to offer to customers this year as we have ever seen on the farm. Mr. Kuzel has had an extended trade on his Durocs for several years, simply because he has been producing the right kind of hogs and consequently delivered the goods. He is starting to advertise in this issue of the Twentieth Century Farmer, and will be ready to ship pigs at any time. In order to get in on the ground floor and get the good ones before they are gone we would advise you to write him at once so that you will get the pick of his entire herd. They are sired by his two principal herd boars, Lucy's Select, a Chief Select bred boar, and Proud Wonder Junior, a son of a grand champion boar, Belle's Crimson Wonder. These pigs have been grown in the right manner, since they have had plenty of range and alfalfa. They will go out and make good in any herd given average care and treatment. Get in touch with him at once, mentioning the Twentieth Century Farmer.

E. E. Johnson's Durocs

E. E. Johnson of Genoa, Neb., will sell you a Duroc-Jersey spring male worth the money. Mr. Johnson has one of the good herds in Nebraska and the pigs he is offering at this time are of the desirable type and carry as good blood lines as the breed affords. They are the big litter, big type, smooth, easy-feeding kind and have been grown in a way that insures their making good as breeders. The larger part of these are sired by Carnival Chief, he by Lincoln Chief and out of a Uneeda Crimson Wonder dam. This boar was a first-prize boar at Kansas and Missouri state fairs and also won first and was reserve champion at the Denver Live Stock show. He has proven himself to be a very strong breeder, as will be seen by his get which Mr. Johnson has to offer. There are also a few litters by Critic Boy, a son of the grand champion Critic B. Write Mr. Johnson for further information regarding what he has to sell, mentioning the Twentieth Century Farmer.

Porter's Berkshire Males

George Porter, well known breeder of Berkshire hogs at Stanton, Neb., is starting an advertisement in this issue of the Twentieth Century Farmer, in which he is offering our readers the opportunity of purchasing first-class Berkshire spring males. Mr. Porter has been breeding Berkshires for some time and his herd stands second to none in northern Nebraska. The pigs he is offering for sale at this time are sired mostly by Longfellow's Premier and Autocrat. These boars are both sires of proven worth, and the pigs he is offering sired by them are the big, smooth, stretchy, heavy-boned type, with good heads and ears. Mr. Porter is pricing these boars worth the money, and we feel you will make no mistake in writing him if you want something in this line. Kindly mention the Twentieth Century Farmer when writing.

Leisy's Dependable Durocs

Robert Leisy of Wisner, Neb., is starting an ad. in this issue of the Twentieth Century Farmer calling attention to his splendid herd of Duroc-Jerseys. No man in the breeding business in Nebraska has made more rapid progress in the last few years than has Mr. Leisy. He has come to be acknowledged as having one of the really top herds of the west. This was evidenced at his sale last winter, when his entire offering of spring gilts made an average of nearly $100. One of the largest crowds that attended any sale in Nebraska last year was present, and the verdict was unanimous that it was one of the best offerings of spring gilts that they had ever seen sold. His crop of pigs is coming along fine at this time and if nothing unforeseen happens he will probably be in a position to duplicate his last year's performance again this year. He has at the head of his herd at this time a young boar that is a comer, if we know anything about it. This is Model's Wonder, a son of Golden Model Again, he by Golden Model. Just keep your eye on this boar for future reference. His fall sale will be held on October 31, at which time he will have a splendid lot of boars to offer for sale. In the meantime get a line on this herd by writing him saying you saw this mentioned in the Twentieth Century Farmer.

Cedar's Durocs

P. P. Cedar of Genoa, Neb., has about the best lot of spring pigs at this writing that he has ever raised. Mr. Cedar has one of the finest located hog farms in northern Nebraska and has ample facilities for caring for his hogs in the right way. He has been breeding Durocs for a good while and has always been a purchaser of none but the good ones when he went out to get anything to use for breeding stock. As an evidence of the character of hogs that he is raising we have but to cite to you the splendid showing he made at the Denver Live Stock show last year. At this time he won first and second on senior yearling boar, third on aged boar, second on junior yearling boar. On sows 2 years monthsand over he won first; 18 months and under 2 years he won first and third; 12 months and under 18 he won third, also first and second in the 6 months and under 12 months class. He also won first on get of sire and grand champion sow, and afterward purchased the grand champion boar, which is now one of his leading herd boars. The pigs Mr. Cedar is offering for sale this year are sired mostly by Cedar's Critic 2d, grandson of the grand champion boar Critic B. Get in touch with him if you want anything in his line, mentioning the Twentieth Century Farmer. Also do not fail to look him up at the Nebraska State Fair.

Krueger Has the Goods

Gus Krueger of Beemer, Neb., has as good a lot of spring pigs as we have seen for some time. Mr. Krueger has made rapid advancement in the Duroc business during the last few years. He has done this simply by hard work, close application to his business and the exercising of good, sound judgment in the selection and mating of his breeding stock. He has gone out and selected individuals, getting the choicest blood lines from the very best herds in the country. At his winter sale last year he put up an offering that was a credit to the breed. He has a variety of blood lines to select from this year that surely gives the buyer plenty of leeway in the matter of breeding. His pigs represent such sires as Colonel Chief, Golden Model, Fancy Chief, Clipper Chief, Crimson Wonder 10th, Silver Model, Colonel 2d, Golden Model 31st, Wallace's Sensation, Proud Colonel, Model Gano, I Am a Golden Model, Sweet Rose's Wonder, Chief Invincible and others. Fifty-four head of his spring pigs were farrowed on the 1st and 2d of March. The larger part of them were sired by Colonel Chief, and in this connection we want to say that we consider Colonel Chief to be one of the greatest breeding boars in service in the west today. He is owned jointly by Mr. Krueger and Clarance Wallace of Wisner, Neb., and some of the very best pigs we have seen this year are sired by him. If you are looking for a herd boar, you cannot make any mistake by getting something sired by this great hog. Keep Mr. Krueger's herd in mind and write him your wants, mentioning the Twentieth Century Farmer.

Review of Live Stock Market

By A. C. Davenport

WATCHING and waiting for the financial clouds to lift has been the attitude of the live stock markets of the country during the last week. At the beginning of the week tightness of money forced all classes of buyers, both packers and shippers, as well as speculators, to move slowly and cautiously. As a result cattle prices broke sharply at all points and the market dropped with a dull thud. Warnings sent out by the newspapers caused receipts to fall off very rapidly, which saved the market from a still more disastrous break in prices. The total runs at the six big markets for the week fell short almost one-half as compared with the corresponding week of last year and two years ago.

Later in the week, as financial conditions improved under promised aid from the government, and as the banks recovered from the scare, buyers were enabled to operate on a somewhat broader basis and the markets regained much of the lost ground. It was a noteworthy fact, however, that the demand was still much narrower than usual, and that the better cattle were the most sought after. That condition continued in force until the close of the week.

The immediate future of cattle prices can hardly fail to be largely under the influence of receipts. There can be no question but what there are a good many cattle being held back in the country that are all ready to come as soon as the owners feel that the market conditions are favorable. If owners get in a hurry to unload the minute the trade shows signs of recovery and oversupply the market, lower prices might rule for a time. There is, however, a feeling that there are no more cattle in the country than the American people themselves will require, and that good, firm prices ought to prevail, regardless of the condition of the foreign trade. As a matter of course, it is hardly reasonable to expect grass cattle to sell as high as they did at the beginning of the season, but there does not seem to be much chance of good to choice cornfeds selling any lower for some time to come. This, of course, is on the assumption that the beef market will be under normal or nearly normal conditions. The European war is an additional element of uncertainty that makes it more difficult to outline the probable course of values in the future.

Hog Future a Sealed Book

Hogs being largely under the influence of a speculative provision market, had not only the money stringency, but also the sharp fluctuations of the provision trade with which to contend. In consequence of these two influences hogs broke around $1.00 per hundred at some points during the first seven days of the war. During the latter half of the week just closed the market recovered part of the loss in response to improved financial conditions.

The future of the market is a sealed book to everyone. No one can know what a few days may bring forth or what sudden and unexpected changes may take place. This applies in a much greater degree to hogs than to any other branch of the live stock trade. The reason for this is readily seen when it is considered that the foreign demand for hog products has a large influence upon the market and just at present this export demand is a most uncertain quantity. Until ocean routes are open and shipments by water can be made promptly and with reasonable safety, exporters are feeling their way in the dark. No one questions but what there will be the usual export demand from England should the British navy be able to keep the ports of the country open. A good many are of the opinion that the demand may be even larger than usual on the supposition that Denmark, which ordinarily is a large shipper of provisions to England, will be called upon to ship food products across its border into Germany, thus forcing England to buy more freely in the American markets. It is all conjecture and no one can figure on the outcome.

One of the surprises of the live stock trade is the advance in sheep and lamb prices. Ever since the war began the market has been steadily crawling upward until it is now at the highest point touched in some little time. The explanation for this apparently erratic action of the market is to be found in the fact that receipts for some little time back had been running light and the market was already in a very strong position before the breaking out of war. That caused a still further slump in receipts, the total run for the week just closed showing a falling off of almost one-half as compared with the corresponding weeks one and two years ago.

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Prove by 30 days actual use that the Queen is the best Cupola ever made either for looks or service. The Queen is not an experiment; used for 15 years, giving satisfaction to thousands of farmers. Try it before you decide. **Catalog on Barn Ventilation Free.** Worth money to you.

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Send today for circular describing this **Wonderful Tractor.** Don't fail to see it on demonstration field at Fremont, Nebraska.

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South Bend, Ind.

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California

FREE TRIP TO PANAMA-PACIFIC exposition. Write us for particulars. W. T. Smith Co., 1111 City Nat. Bank, Omaha

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

120-ACRE IMPROVED THAYER CO., Nebraska, farm. 2 miles from Williams; 60 acres cultivated; 5 acres alfalfa, balance pasture. Good soil. Price $7,800.00. Good terms. John L. Maurer, Omaha, Neb.

BIG FARM LIST FREE, WITH Photos—Farms in many states, stock and tools included. Farmers' bargains. Buy direct from owners; their addresses free. National Farm Exchange, San Francisco.

FARMS WANTED FOR CASH BUYers, and farm bargains for sale. Write me if you want to buy or sell. Terms, free. Established 1881. Frank P. Cleveland, Real Estate Expert, 1315 Adams Express Bldg., Chicago, Ill.

YOUNG HOLLANDER WISHES TO buy good farm or land. Address Y-142, Twentieth Century Farmer.

Idaho

A NINE-ACRE ORCHARD IN WASHington county, Idaho; trees 13 years old, healthy and in full bearing; raises from 2,000 to 4,000 bushels good apples each year, according to the season. Good crop in the orchard now. Will sell orchard and apples at a bargain. Seven-room house and other improvements, etc. Address Dr. S. S. Weidner, Fairbury, Neb.

Minnesota

200 FARMS in THE FAMOUS PARK region and Red River Valley district, Otter Tail and Wilkin counties. Level or rolling prairie land. Timber land Any size farm you want from $30 to $80 per acre. Easy terms. Otter Tail county has never had a crop failure; 500,000 acres of corn last year, making from 30 to 70 bushels per acre. Natural clover and alfalfa country. Write for free booklet and lists. Park Region Land and Loan Co., Fergus Falls, Minn.

Montana

OUT THEY GO TO BUY 80, 160 OR 320 acres of our new, rich prairie soil. One or two good crops will pay for the land, but you can have five to twenty yearly payments if you so desire. We are selling our lands at from $18 to $30 an acre. Ask for facts and maps and see William H. Brown Co., Mott, Hettinger Co., North Dakota, or 5 N. La Salle St., Chicago, Ill. Agents wanted.

JUDITH BASIN (MONTANA) FARMS—Come to Lewiston. Can show you growing wheat, yielding fifty bushels per acre. Write to Farmers' Land Co., incorporated, Lewiston, Mont.

Missouri

IF YOU WANT FARMS OR ranches in the Ozarks of Missouri, write A. J. Johnston, 221-226 Woodruff Bldg., Springfield, Mo.

North Dakota

NORTH DAKOTA LANDS, DIRECT to Purchaser—Crop conditions in North Dakota were never finer than now and land prices are going up. To obtain settlers along our 1,200 miles of track here we have obtained listings of several hundred thousand acres of choice lands, ready to farm, and will sell these at cost. Prices will never be so low again. Roads, schools, churches, railroads, all established. Very low excursion rates Mondays and Tuesdays. Come and see lands yourself or write for full particulars. J. S. Murphy, Immigration Agent, Soo Line Railway, Minneapolis, Minn.

WRITE FOR ILLUSTRATED BLUE book describing my rich, black Red River Valley farms. Corn, clover and alfalfa successfully grown. Wm. McRoberts, Casselton, N. D.

Nebraska

5% FARM LOANS WANTED. JOHN L. Maurer, Omaha, Neb.

Oregon

OREGON STATE PUBLICATIONS Free—Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions; they will have painstaking answers. We have nothing to sell. Address Room 110, Portland Commercial Club, Portland, Oregon.

Wisconsin

UPPER WISCONSIN—BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

LANDS—Wisconsin

CHEAP FARMS IN A GOOD HARDwood timbered country—80 acres in the splendid Milltown country, four miles from a railroad town, $4,000; first-class, nearly level, clay loam land, about half open, small buildings, very well located. A good little dairy farm, 40 acres, only $2,000. Level field of 20 acres, full set comfortable buildings, close to school and creamery, only 7½ miles to county seat. Eighty acres 3 miles from Centuria, only $2,600. Eighteen acres field, good house, fair outbuildings, clay soil. Easy terms on these splendid bargains and many others. Send for map and list. Baker, C-67. St. Croix Falls, Wis.

OFFICIAL BULLETINS CONCERNing soil, climate and crops of Wisconsin mailed free to those addressing Wisconsin State Board of Immigration, Capitol 1000, Madison, Wis.

AUTOMOBILES

70 USED CARS—WE CARRY THE largest stock of used automobiles ever offered to the public. We are exclusive used-car dealers, which enables us to offer astonishing bargains. We can save you at least 50 per cent on any car you wish to buy. All of our cars are thoroughly overhauled in our own shop that we may know the exact condition of the mechanism. Write for our Bulletin No. 5, prices and large list of satisfied customers. Industrial Garage Company, 20th and Harney, Omaha, Neb.

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YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer. Omaha, Neb.

LEARN THE AUTO BUSINESS—Practical work. No books used. Stationary engineering. Special rate. Write for free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

GOVERNMENT FARMERS WANTED—Examination October 14; good salary. Write Ozment, 39-F, St. Louis, Mo.

POULTRY—Game Cockerels

BLACK-BREASTED RED GAME Cockerels — April - May hatched, range raised, very vigorous, $1.50 each. White Game cockerels same. Enterprise Farm, Beatrice, Neb.

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EGGS! EGGS! EGGS! THIRTYthree pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

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FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned, are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

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FOR SALE—ENGLISH SHEPHERD pups. James Cassell, Fremont, Neb.

60 FOX TERRIERS OF ALL AGES; some bred females. Best rat, pet or watch dogs. T. H. Kaldenberg, Pella, Ia.

FOR SALE—PEDIGREED SCOTCH Collies, grown and pups. Mike Abts, Bellwood, Neb.

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ALFALFA SEED—DAWES COUNTY dry land seed. Samples and prices free. Schwabe Bros., Chadron, Neb.

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PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., Dept. L, Washington, D. C. Established 1880.

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FIR LUMBER—RED CEDAR SHINgles—Quality stocks—direct from mill—great saving. Write Lansdown, Everett, Wash.

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SOUTH OMAHA is the most convenient and centrally located large market for the Nebraska shipper, where his stock can be sold in unlimited quantities with the *least shrinkage* and *risk; lowest freight* and *best transportation,* and be assured of net returns *unequalled elsewhere.*

Nebraska's Home Market

THE SHIPPERS of Live Stock desire *service* when their stock has arrived at the market. The management of the *South Omaha Market* has anticipated this fact and has expended during the past four years *over one million dollars* for permanent and up-to-date improvements to provide the live stock shippers with

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TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, August 22, 1914 | Number 715

Homeseekers Number

HARVESTING WHEAT IN THE SAN LUIS VALLEY

The Wheat crop in the United States for this year is estimated at 930,000,000 bushels. If all the acres planted to wheat in the United States had been located in the San Luis Valley, the crop would have been 1,860,000,000. The grain grown on one acre of land will average that grown on two acres in the rain belt. Can there be any doubt about such land increasing in valu-

A Grand San Luis Valley, Colorado, Opportunity

The United States is harvesting the largest crops in its history. The money derived from their sale will be distributed to the farmers who have produced them. With this vast sum of money in their hands the matter of investing it safely and profitably is important.

The shrewd farmer will invest his surplus money in the same class of property as all thrifty farmers have invested in in the past, which is LAND.

Look about you in your neighborhood and you will almost invaribly find that your wealthiest citizens are those who had the foresight to purchase as much land as they possibly could when it was cheap, usually running in debt for the larger part of the purchase price, but they placed themselves in position to reap the increase in value of the land. It was this increase in value that created most of the wealth.

The man today who wishes to increase his wealth through land holdings, or the renter who has saved up a little money to pay toward a farm can invest with the same certainty of profit as the man who bought land early in Iowa and Nebraska.

It is true that all good land in the so-called "rain belt" is high in price, so high in fact, as to discourage the man who wishes to buy for an investment, as well as making it almost impossible for a renter with a little money to buy at all with the hope of ever paying out.

This is not true however in some districts in the west where crops are grown by irrigation. People who are not familiar with growing crops in this manner look upon this method of farming as something difficult. In reality it is simple and easy. This is confirmed by the fact that not one man in a thousand who has ever farmed by irrigation a few years will ever return to the rain belt to farm, with the worry that it entails through fear of hot winds and drouth or excessive rains and rust.

We own 4,000 acres of land in the San Luis Valley, Colorado. We have already sold $80,000 worth of lands there to farmers who are improving their farms, therefore we know what we can expect from those who buy and make an offer that must appeal to you in the way of a safe investment and satisfy you as to our faith in what the land will produce. The San Luis Valley is a very large district and has all kinds of lands as to soil, and values vary accordingly. Our proposition applies to our lands only.

Our Proposition that Guarantees a Profit

To all purchasers who will put the land bought in proper cultivation in alfalfa or such crops as we may agree upon, we will bind ourselves that in case the purchaser is dissatisfied from any cause whatever to repurchase the land any time within three years at $15 per acre advance, $2,400 per quarter section.

We run no risk in making you this offer as we know that you would not sell it to us for the $15 per acre advance as it is worth more when in cultivation, but it does protect the man who buys. We believe this is the only tract of land offered for sale or will be offered where the purchaser has this protection.

The San Luis Valley has the reputation of raising the largest crops of Wheat, Oats, Barley, Peas, Potatoes and all vegetables of any farming district in the United States. Alfalfa is also getting to be one of the main crops, ten car loads of alfalfa seed having been sowed there this last spring.

Pure soft artesian water supplies every farmer both for domestic and stock purposes at a very small cost. As a stock country it can not be excelled anywhere. The cattle are running on the Forest Reserve land in summer at a very slight cost and through the winter are pastured in the Valley or fed on alfalfa. The dry sunny winter seasons keep them in prime growing condition.

To the man who wants land he cannot afford to miss this safe opportunity to buy land that is sure to make a profit. The man who has any one in the family who is troubled with Asthma or any Throat or Lung trouble, can with all confidence expect to be cured by residing a few years in the San Luis Valley.

For further particulars write at once to

The San Luis Valley Irrigated Land Co.

712 Omaha National Bank Building, Omaha, Nebraska

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Management and Practical Value of Silos

VI—Beef Cattle Do Well on Silage and Come Through the Winter Fat

A VERY interesting and instructive experiment in the feeding of silage was carried on last winter by Messrs. Hildebrand & Brigham at Tamora, Neb. This feeding experiment was carried on under the direction and supervision of the animal husbandry department of the Agricultural College at Lincoln.

All the feeds given the cattle were carefully weighed by some representative of the department, so that the figures given are actual weights and not estimates.

There were seventy-eight steers and heifers fed. These were cattle of practically every breed and cross-breed picked up promiscuously from farmers in the vicinity. They ranged in weight from calves weighing 300 pounds up to steers weighing 800 or better. The seventy-eight cattle were weighed at the beginning of the feeding experiment, December 19, 1913, weighing at that time 44,115 pounds, or an average of 565 pounds each. The cattle cost on an average of 6 cents per pound, a total of $2,637.65.

On December 24 there were twenty-five head of hogs weighing 3,610 pounds, or an average of 144 pounds each, put in the feed yard to follow the cattle, and on March 28 there were eight hogs weighing 870 pounds, or an average of 109 each, put into the yard. The hogs cost $7.25 a hundred, a total of $272.30.

During the feeding period, which lasted until April 30, 1914, the cattle and hogs together were fed 1,656 bushels of corn at an average cost of 67½ cents per bushel, the total cost of the corn being $1,116. There was also fed to these cattle twenty-two tons of alfalfa hay, at a cost of $12 per ton, making the hay cost a total of $264.

Cost of Filling Silo

In the fall these men put into their silo 100 tons of silage. The corn crop in this part of Nebraska was exceedingly short in 1913. It required forty-two acres of corn to make the hundred tons. A careful estimate was made of the number of bushels of corn put into this silo. These men estimated there were 350 bushels in the forty-two acres of corn. This corn was figured at 70 cents per bushel. In estimating the cost of the silage in the silo careful account was kept of the labor involved and interest on the investment; depreciation of silo and machinery was also charged in, together with horses' feed, meals for the men and every other item of expense. Figuring this all in, the total cost of 100 tons of silage, including the corn, was $490, or $4.90 per ton.

There was also fed to the cattle during the feeding period thirty-four and a half bushels of oats, costing $14.50, making the total cost for the cattle, hogs and feed $4,794.45.

These cattle were sold on April 30, 1914, weighing 64,220 pounds, or an average of 824 each, making a gain of 259 pounds per head. The total amount received for these cattle was $4,689.14. The hogs were sold May 5 at $7.90 per hundred, totaling $700.10, making a total amount received for the hogs and cattle of $5,389.24. Deducting from this the total amount paid for the cattle, hogs and feed—$4,794.45—leaves a balance of $594.79. The only item of expense to be taken in consideration outside that already enumerated would be the labor in feeding and the interest on the investment in the cattle and hogs, and the taxes. To offset this they would have the manure accumulated during the feeding period to be returned to the land. These cattle received during this feeding period nine pounds of corn each per day, four and two-thirds pounds of hay and twenty-three pounds of silage, except the last twenty-nine days, as the silage was all fed out on March 31. We wish to call particular attention to one thing in this feeding experiment, and that is the amount of alfalfa hay as compared to the amount of silage fed to these cattle. Many of our feeders and dairymen figure they should feed as many pounds of alfalfa hay as they do silage.

Large Amounts of Silage Profitable

These men, in their feeding experiment, have demonstrated the fact that a larger amount of silage can be profitably fed than is generally used by many feeders. This will at once show the advisability of farmers in general taking hold of the silo proposition. Personally we feel that these men have placed quite a high estimate on the cost of their silage. It will be noted they have figured this at $4.90 per ton. Silage made from good corn is generally put into the silos at $3 to $3.50 per ton, but even figuring it as these men have, at $4.90, the cost of feeding has been materially reduced when alfalfa hay is worth $12, as it was in this case.

Messrs. Hildebrand and Brigham say, in regard to this experiment: "This being our first experience with silage, we wish to state we find from our experience that cattle weighing from 700 to 900 pounds make faster gains and do better than do calves where you want to feed them out. We never had cattle fill better or do better than they did on silage, and it is safe to say if we had fed these same cattle a straight ration of corn and alfalfa without silage we would have lost money on them." This experience is certainly a splendid demonstration of the value of a silo on any farm. When we take into consideration the fact that forty-two acres of corn standing in the field containing but 350 bushels was put into the silo and fed out to a very ordinary bunch of cattle, the value of the silo is certainly evident, as a large part of this valuable feed would have been practically useless without the aid of the silo.

Tenant Finds Silo Valuable

Albert Johnson, living on the farm owned by W. R. Mellor, secretary of the Nebraska State Fair, just north of Loup City, Neb., has has had considerable experience in feeding silage. The feeding and farming operations on this place are carried on as a co-partnership, or on the profit-sharing plan. Incidentally we want to remark that we are firmly of the opinion that both landlord and tenant will generally make more money if farming operations on leased farms are carried on in this way instead of the usual way of the landlord leasing to the tenant at so much per acre.

Messrs. Johnson and Mellor carry quite a number of cattle, horses and hogs on their farm all the time and figure on feeding all the grain and many times more than is raised. A silo 20x36, holding 220 tons, was erected on this farm three years ago. Mr. Johnson had some years of experience in feeding silage in the state of Illinois before he moved to Nebraska and knew the necessity of silos for economical feeding and the obtaining of the best results for the feed used.

Mr. Johnson has always filled the silo with corn, not planting it particularly for silage, but cutting it from the regular field. This silo is usually filled in two days. There are used in the operating two binders, eight or nine teams hauling from the field to the silo, two extra men being used at the machine to help unload and feed; three or four men are used inside the

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Where Will You Locate Your New Home?

Strangers Settling on Strange Lands Are Urged to Give Careful Consideration to Local Conditions

A Pure-Bred Stock Farm in the Corn-Belt Country

EACH year there are hundreds and even thousands of homeseekers in different parts of the country. Farmers and others for various reasons are seeking new homes. Heretofore some have been tenants and by careful management and hard work have accrued sufficient means to buy a home of their own; others have for some reason or other sold the place on which they have been living and become homeseekers. The question is often asked, "Why are so many people always moving—seeking new locations, new homes and new surroundings?" Various reasons can be assigned for these changes. We expect in this article to give some of the conditions existing in some of the different states in the west, and we expect also to call attention to some of the very important matters homeseekers should take into consideration when choosing a new location.

Many are homeseekers each year from the fact that possibly one or two years previously they located in a new country thinking it was just what they wanted, only to find out, to their sorrow, in a short time that for one reason or another this location was not at all suited to them. We want to urge upon our readers the necessity, in making a change in location, first to take an inventory of themselves, so to speak. Ask yourself the question, "For what reason am I moving?" And don't forget the answer to this question when you are looking at a piece of land with the prospect of making a purchase.

Climate Should Be Considered

Undoubtedly many homeseekers become such because of the health of themselves or some member of the family. In order that one may be satisfied and get along as he should financially, health is absolutely necessary and should be given first consideration when making a selection for the new home. No matter what disease may be affecting any member of your family, often shrewd land agents can show conclusively that the locality to which they are taking you is better adapted for the curing of that particular disease than any other part of the United States. It should be your business to make careful study of this matter. We would advise consulting reliable physicians of the locality where you expect to go, and possibly physicians in other localities who may be familiar with health conditions in this particular place. So many times have we known of families making the move into new locations on account of health of some member of their family, only to find that conditions were absolutely opposite to what they expected.

Winter on a Montana Homestead

Altitude is one thing to be taken into consideration in making a move. Some people are so constituted that they can't possibly live in high altitudes, while others can't get along in extremely low altitudes. These conditions should be known to the homeseeker before making a move, and always borne in mind.

What Crops Will You Raise?

Next to health we would class in importance the particular kind, if any, of farming in which you wish to engage. If you want to raise the general farm crops, corn, oats, wheat, barley, etc., you should not think of locating outside of what is known as the corn belt. In most parts of what is known as the corn belt most of these crops can be successfully raised. The good corn land generally sells at a higher price than do lands on what we might call the outskirts of the main corn belt.

Finances quite often cut considerable figure with the homeseeker, and we have often seen on what might be called the outskirts of the corn belt very good corn growing some seasons which have climatic conditions just right to make a good corn crop for that locality. Our advice would be to the man who wants to raise corn and goes to look at land on the outskirts of the corn belt to make careful inquiry about existing conditions in that locality for several years past. Stick around a few days and go out and talk to some of the older farmers who were early settlers in that country; find out from them what corn produces each year.

One contemplating moving to a new country with a view of making it a permanent home cannot be too careful in making the selection. A single visit to a certain locality, even after a diligent inquiry has been made of conditions, may not disclose all the truth about that particular locality. If one has the time—and it would be well to take it—we would advise one or more trips into this particular country at different seasons of the year that you may know climatic conditions, as well as crop conditions,

Gathering Florida Grape Fruit

Wheat Field in Alberta, Canada

more thoroughly than you can possibly know them by making a single visit.

Sufficient rainfall is necessary for the production of a good corn crop. The average rainfall in these localities for a period of eight or ten years should be carefully looked into. If possible, get figures on this from government reports. These reports can be relied upon for this information. You will probably go into some localities where no weather reporting station is close enough to give you the information as accurately as you may desire. In such cases make the most careful inquiries possible from farmers and others living in that vicinity.

Hog Belt Becoming Larger

Generally the man who wants to raise corn will also want to raise more or less hogs and cattle. The profitable hog-growing countries are rapidly extending. Hog growers have found in recent years that a much better profit can be made by an extended usse of the various pasture grasses than by feeding grain alone.

Wheat and barley have been shown by experiment to be valuable hog foods. We feel sure a very extended business in hog growing can be successfully carried on in many localities where corn is not now successfully grown. Alfalfa and other grasses are being grown, on which the pigs are practically fed to a weight of 100 to 150 pounds and then shipped into the corn belt and sold to feeders. In years past this business has been carried on to some extent, but has not been as successful as it is possible to make it in the future on account of shippers being able to successfully protect these hogs from an attack of hog cholera by vaccination.

We have visited farms and ranches in some of the big alfalfa-growing districts where corn is not successfully raised and found 500, 1,500 or 2,000 pigs on these farms growing on alfalfa. These pigs were raised solely for the purpose of being shipped into the corn belt and sold as feeders. We are firmly of the opinion that this business can be very successfully carried on by the man who knows how.

Beef Production on Smaller Scale

The great ranges are practically something of the past. They are rapidly being cut up into small ranges and into farms, making the production of beef cattle a problem to be solved by the small rancher and farmer rather than the man who produces his thousands and tens of thousands of cattle on the open range, as has been done in the years gone by. Cattle can be successfully grown in practically all parts of the country. Different localities have their peculiar conditions to meet. For instance, part of the south has to contend with the tick and Texas fever. The strenuous efforts of the federal and state governments, however, have made very long strides to the front in combating this disease, and further efforts along this line will practically eliminate it. When this is done many of the southern states will, in our opinion, become cattle countries, owing to having practically twelve months in the year pasture season and the luxurious grasses which may be grown on many of their soils.

The cattle growers in many of the northern cattle-growing districts are going to be able to increase the number of cattle kept on their farms and ranches by the use of the silo. In many of these localities corn making from two to four tons of silage per acre can be successfully grown in the average year. By using this corn in the silo a splendid winter feed is obtained, enabling the rancher more successfully to carry his cattle through the winter and to sustain a minimum loss from the elements.

Land Under Irrigation

Much of the water flowing through the various rivers and streams through different parts of the country which have heretofore been absolutely waste is now, by the use of dams, reservoirs and pumps, being used for irrigation purposes. Probably the unscrupulous land agent has used irrigation more largely than any other scheme with which to rope in suckers. It is a fine thing always to have water which may be turned on the crop at the particular time it may be needed. It is one of the finest talking points there is to be able to say to the man that no matter what weather conditions prevail the water is always there, to be turned onto your fields at any time you need it, thus insuring each year a bountiful harvest. This all sounds fine, but many thousands of homeseekers have found to their sorrow that anticipation was great, but realization was practically nothing.

First let us say that we are not condemning irrigation. Thousands upon thousands of acres of useless lands have been converted into what might be called garden spots by this method, but homeseekers should use great care when selecting an irrigated farm, because in most irrigated districts he must always entirely depend on irrigation, and should know his water rights and whether or not he can depend every year upon this supply.

The federal and state laws are such that filings on the water supply in any of these streams are required. A first filing has first right to the water and thorough investigation of the water rights of any particular tract of land which you contemplate buying should be made before you part with your money. We have personally investigated some of these propositions and will cite one.

Some Irrigation Frauds

It is along one of the good-sized rivers. A company had bought a large tract of land and placed it on the market for sale, and made its filing for water, which was the seventh one made. The country was new, just settling up, and consequently not much water was required by the parties who had made previous filing. The prospective buyer was taken over the land, shown splendid growing crops, the ditches full of water and seemingly an ample supply. Investigation into this proposition revealed the fact that according to figures made by United States engineers, which can be absolutely relied upon, there was not enough water flowing down this particular stream at low-water mark to irrigate the acres covered by the first four filings. You can easily see where the sucker came in after this land was put under cultivation.

Another instance comes to mind: A friend of ours told us he was going into one of the western states with a view to purchasing an irrigated tract. We warned him to be careful, and he afterward told us that he probably would have been stung but for this warning. He was shown a tract of land which suited him very well. It was a piece of valley land running right up to the mountain, out of which flowed a fine stream of water. Facilities on this farm were very good for getting the water from this particular stream onto the land. During his visit when inspecting this farm the men working it were putting this water onto the farm. Everything looked fine. He asked the agent about the water right. The reply was: "You can see them taking the water right here now, and it is the first place from the source of the water." Not being satisfied, our friend took the precaution of going to the filing office to find out exactly what water rights this particular farm had, and, to his surprise, found it had none. Previous filing of farms further down the stream had exhausted all the water supply.

We cite these facts to caution homeseekers looking for irrigated farms to be absolutely sure of their rights before buying. After your money is paid it is too late.

Can You Get Water Off?

There is another and very important matter to be considered when buying an irrigated farm. Don't forget that it is as important to be able to get water off an irrigated tract as it is to get it on. In many irrigated districts heavy rainfall comes at times, and if drainage cannot be had the result is loss of the crop simply because you can't take the water off the land. Keep this in mind and look out for your drainage as well as your water supplies when buying these irrigated farms.

The man who contemplates going onto an irrigated farm and does not know how to irrigate should bear in mind the fact that he has something to learn. Successfully raising crops by irrigation is not simply turning the water onto the land and seeing it run down the rows, giving the plants the necessary moisture; you must know when to turn on the water, the quantity to turn on and the proper method of cultivation after it is turned on, for the many different crops raised on these lands.

Truck Needs Good Market

Many of the irrigated farms offered for sale are exploited by the promotion companies as being extremely profitable for truck raising. Very often these farms are very good for truck raising, producing large crops of various kinds of truck; but being profitable is another matter,

Dairying is Becoming an Important Industry in the Northwest

and one which the homeseeker must carefully investigate. He must take into consideration the kind of truck he proposes to raise and can raise and the distance to an available and reliable market. In different parts of the country we have seen some of these farms growing immense crops of truck, which in some places would not pay the freight on account of the great distance to market.

The fact is sometimes pointed out that not far from the particular tract of land offered for sale there is a city of possibly twenty-five to a hundred thousand people, and the statement is made that these people all have to buy what they eat, making a good market for everything that can possibly be raised. Take into consideration when looking at this kind of a proposition how many of the farmers will be in the same position in which you are placed—that of wanting to sell your output to this particular city.

The question of a market for the output of truck is one of vastly more importance than is the nearness to market for the man who raises any of the standard grains or live stock. In the general consideration of the purchase of a farm nearness to market is something that should be taken into consideration. If you expect to spend quite a number of years, possibly the balance of your lifetime, in your new location, it is well for you to make some calculation of the difference in the net price you will obtain from the products of your farm as compared to the net price you can obtain from the same productions on the farm much closer to market. Sometimes it is much cheaper to pay more money for a farm having practically equal

Montana Sheep Ranch—Two-Thirds of the Sheep in the United States Are West of the Mississippi River

advantages with another that is a hundred or more miles nearer to market. It is quite possible that the farm nearer to market will be cheaper in the long run, although it may cost more money per acre to buy, because of the large net price you may be able to receive for your produce.

In the past we have had too many big speculators for the general good of the country. They have bought large tracts of land, cut them up into small tracts and sold them to homeseekers, very often with a small payment down, the balance to be paid in monthly or yearly installments. One big cause for the failure of many homeseekers going into new territory has been the glowing promise put out by the promoter showing what wonderful results can be obtained from the land in anywhere from three or four months up after they begin operations. Men with practically no means at their command have been induced to buy these lands by making this small payment down and agreeing to make future payments monthly, thinking these payments can be easily made out of the money obtained from the sales of the produce.

In very many of these cases the new settler is not fitted for the business he is undertaking. He does not know how to conduct this particular kind of farming and very often does not know how to farm at all. To make a success from the start of any business it is quite essential to understand such business. This is true in farming as well as anything else and more especially true in truck or special farming, and we advise the man who figures on making monthly payments on his land to think twice before he jumps.

We have looked into conditions generally in many different localities and give some facts to be taken into consideration by homeseekers in these localities.

Minnesota

During recent years thousands of homeseekers have gone into Minnesota with the purpose of making it their future home. Minnesota is fast coming to the front as a dairy state in particular, due to the splendid grasses, which grow luxuriantly. Wheat is one of the best sources of revenue of the Minnesota farmer. Oats, rye and flax are successfully grown, and root crops of most kinds always do well. Alfalfa culture is practically in its infancy in this state, but is being successfully grown in many localities where it is being tried.

Previously in this article we spoke of the necessity of looking to market advantages when making the selection of a home. Minnesota is peculiarly well situated in this respect, the Twin Cities furnishing splendid markets for all produce. Truck raising not too far from these cities is carried on very successfully and is proving profitable to many truck farmers.

Among California's Fertile Valleys

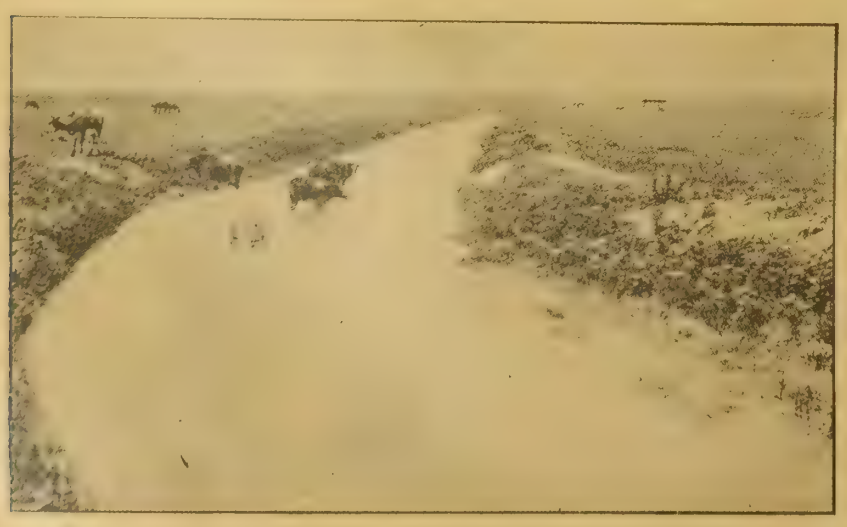
In parts of the state there is still lots of timber for building and fuel purposes. These cutover lands are rapidly being made into good farming districts. Naturally, the winters are more severe in Minnesota than in some of the states further south. They are, however, not what some people further south believe them to be.

As a word of caution we would say to the farmer who contemplates locating in this state not to keep more live stock than he can well take care of during the winter time. Only a small per cent of the land in Minnesota is now under cultivation, leaving many thousands of acres still in its virgin state. Minnesota is being largely settled by foreigners, a great portion of them coming direct from the old country. They have almost universally made a success in their new homes, due largely to the fact that they had training in the old country in the particular line which they are taking up here and also that they are used to hard work and come to their new homes determined to succeed. There are in Minnesota, however, a certain per cent of what we might call "soap-box" farmers, who do a good deal of their farming sitting on a box in the town grocery store cussing the country. These "soap-box" fellows, however, are in every state and by far too many of them in some states.

The school system of Minnesota is not surpassed by that of any other state. Roads are being very rapidly improved, and, generally speaking, Minnesota is a state of good roads. Splendid water is obtained most any place, which is certainly a blessing to any country. There are in this state some years a great deal more rainfall than in others; there are districts in Minnesota requiring tiled drainage. If you contemplate locating, we would advise a personal inspection, as we do in all cases. However, if you see the country in a dry season, consider what may be the condition in a wet season.

Wisconsin

On account of peculiar conditions in this state, Wisconsin has become the leading dairy state in the union. Originally and now in places there are large forests. Lumber companies have for years been cutting off these forests and converting them into lumber. The cutover ground produces splendid grass, making these lands very valuable for dairy purposes. The farmers in these districts realized early the value of the silo and began successfully to grow corn with which to fill these silos. Most parts of Wisconsin seem to be the natural home of timothy and clover, which have materially assisted in making it the dairy state. Alfalfa in many districts does exceptionally well, but in some parts of the state has been tried but very



Irrigation Has Reclaimed Thousands of Acres of Dry Land

Rose-Bordered Mississippi Roadside

There is Water and Pasture for Stock in the Northwestern Mountains

little. Sheep raising in many parts of Wisconsin can be successfully carried on, the winters generally being dry, which is necessary to successful sheep raising. Hog growing is being successfully carried on in this state in most localities, and, as the cut-over lands are being more generally put under cultivation, more hogs are being grown by the settler.

One of the big advantages in Wisconsin to the settler is the abundance of rainfall, which insures the production of plenty of grass. Excellent water is readily obtained from wells and streams in almost any part of the state. There are many thousands of acres of raw land in this state which will be in the years to come the home of successful farmers. Wisconsin farmers are as a rule successful. This state seems to have been fortunate in being settled by a class of people who go there expecting to work. Settlers going into a locality with the natural advantages of Wisconsin determined to make good very seldom fail.

Iowa

Iowa is, without question, one of the very best all-round mixed farming and stock-raising states of the union. There are probably more acres of good tillable land in Iowa compared to its full acreage than any other of our states. All the grains of the corn belt do well in most parts of Iowa. Alfalfa is successfully grown in many districts and the alfalfa area is being extended each year on account of farmers giving the matter more careful study and finding what is necessary to make their particular soil successfully grow this crop. For good horses, hogs and cattle Iowa probably stands at the head. We often hear the remark that prices for land in this state are such that it is impossible for a man with small means to buy a farm and pay out. This will stand investigation. It is not always the man who buys land at the lowest price per acre who is most successful in paying for his farm. It is always necessary to take into consideration what we may be sure such farm will produce each year and the net price we may be able to get for the successive productions. Generally speaking, Iowa lands promise good average results year after year.

Nebraska

Nebraska, from about the central part east, is pre-eminently a mixed farming and stock-raising country, probably surpassed by none. On account of the soil and climatic conditions it is ideal for the production of corn, wheat and alfalfa. Farmers in this part of the state have made extremely rapid strides to the front in the last fifteen or twenty years. Fruit growing along the Missouri river is being carried on in a commercial way to some extent. The different kinds of fruit grown in the temperate zone thrive in eastern Nebraska.

Northwestern Nebraska is, without question, one of the best cattle-growing districts to be found anywhere. What is known as the sand-hill country, on account of the many different kinds of grasses grown there, insures pasture and plenty of hay for winter feed, a combination necessary for the successful growing of cattle. Many of the valleys in this part of the state have been broken up and are more or less successfully growing the grain crops. A trip through this part of the state will show many silos being erected, into which farmers may put considerable winter feed for their cattle. Hog raising in some parts of this country is being carried on successfully, in particular that part of the hog industry which we might call raising feeders; pigs are grown largely on alfalfa and sold to feeders in the eastern part of the state. As in many other states, we find many farmers in northwestern Nebraska turning their attention to dairying.

Southwestern Nebraska is not the cattle country northwestern Nebraska is. It is to a considerable extent like western Kansas. Along the Republican river in this part of the state a great deal of alfalfa is raised, it being one of the most profitable crops in this part of Nebraska. The soil is well adapted to the raising of corn and wheat, both of which crops produce splendid returns when sufficient moisture falls. We find along the Republican river valley, in the heavy alfalfa districts, many splendid herds of pure-bred cattle, probably some of the best herds of the different breeds to be found anywhere. The use of the silo here is bing rapidly recognized by the up-to-date farmer and many of them are looking toward the dairy cow as a sure source of revenue. Northwestern Nebraska produces many potatoes of high quality. Potatoes can be grown anywhere in western Nebraska where there is sufficient rainfall or irrigation is available.

Kansas

Kansas is known as a wheat-producing state, ranking first among the states of the union in the production of this cereal. This is largely due to the great acreage planted to this crop each year and for the reason that it is probably the surest and most dependable of any of the various crops grown in the state. Western Kansas is a country of large ranches, pastures and farms, which are gradually being cut down into smaller tracts, many of them going under the plow to be seeded to wheat.

Years ago the question was asked, "How long could Kansas farms raise a good crop of wheat following wheat?" When weather conditions have been favorable these good crops are still being raised, and this question is still being asked. It has not yet been satisfactorily answered, and we don't know whether or not it will be. We do believe, however, that the time will surely come when a rotation of crops will be absolutely necessary to the successful production of this cereal. The only thing that prevents this part of Kansas being far in advance of what it is now is moisture. Its geographical location places it in what we may call the semi-arid district where rainfall in some years is deficient. Irrigation from wells is being given some consideration in this part of the country, and it is possible that, to some extent at least, this deficiency in moisture will be solved with further irrigation.

Eastern Kansas has a much greater average rainfall than does western Kansas and is fast becoming recognized as one of the reliable grain-growing districts. Corn, as well as the different small grains, generally produces good crops in this part of the state.

One advantage the Kansas farmer has over the farmer of many other states is the fact that they are successfully growing sorghum and the different kafirs, which figure to some extent, and in the future, we believe, will figure much more largely, in their mixed farming and stock-raising operations.

On the small farms of eastern Kansas are found many splendid herds of pure-bred animals of different kinds. Alfalfa in most parts of Kansas is one of the main stays of the farmer, making the raising and marketing of hogs and cattle a very profitable venture. Silos are springing up in many parts of the state, showing that the Kansas farmer is recognizing the value of silage as a feed. This in turn is showing the farmer the advantage and the necessity of taking up dairying more extensively than he has done in the past.

(CONTINUED ON PAGE TWENTY-TWO)

Crops Raised in Wyoming Under "Dry Farming" Methods

Elevators Break the Sky Line in What Was Once Arid Territory

All Aboard for the Highland Colony of the Famous

Golden Prairie District of Wyoming

The pictures shown in this advertisement are from photos taken this season on the farms designated.

15,000 acres choice prairie land to select from.

Our prices range from $12.50 to $20.00 per acre.

Our terms are a small down payment and balance running ten years in annual installments with 6 per cent interest

or

On our celebrated Crop Payment Plan whereby one-half the crop raised each year is applied at market price to pay both interest and principal until the land is paid for.

We are owners—not agents—and sell direct to you.

We have sold over 7,000 acres of our Highland Colony lands in farms of 160 to 640 acres in the past sixty days. A partial list of recent purchasers is found on this page.

Following is a Partial List of Those Who Have Purchased Land From Us During the Past Three Months:

D. L. Gilpin, Mrs. Mary Deatherage and Geo. C. Rillings of Morgan County, Illinois.

E. M. Hanna, F. H. George, Park Chamberlain, G. F. Faragher and S. E. Beam of Jones County, Iowa.

H. R. Startler and E. O. Stanley of McDonough County, Illinois.

Miss Fannie Bates of Hennepin County, Minnesota.

Lyle Craig of Valley County, Nebraska.

Peter Carlson and Henry Carlson of Lancaster County, Nebraska.

Henry Goodhile of Delaware County, Iowa.

R. M. Jamieson of Ida County, Iowa.

A full list and postoffice address of each will be furnished to any interested person who may so request.

We can still supply you with as good as the best.

So buy that Summer Tourist Round Trip ticket, come to our office and we will show you over this goodly land.

The Summer Tourist ticket is good starting any day, with return limit October 31st.

Those coming from points east of Omaha should start so as to connect there with Union Pacific train No. 3, leaving at 4:30 p. m. and arriving here at Cheyenne at 9:45 the next morning.

Our Highland farms lie within ten to twenty-five miles of Cheyenne, the State Capital, and within one to eight miles of Federal, "the newest town in Wyoming."

We have no hot winds in Highland Colony; the highest temperature reached here to date this season (government weather bureau record) is 86 on July 26. Oh, joyful news for the fellow in the valley of the Big Muddy who is perishing from prickly heat.

The winters are milder here than at Omaha or Des Moines. (Government records prove this.)

There is no alkali, no gumbo, no sandhills, no sage brush in the Highland Colony. Just grass-covered prairies waiting to be converted into fertile farms.

Picture showing 1914 crop of wheat and oats on the farm of C. E. Adolphson in the Highland Colony, with farm buildings in the background. Mr. Adolphson came from Bottineau county, North Dakota, and is making a success farming, dairying and raising stock here.

This picture, taken when the field was just heading out, shows 1914 crop of oats on the farm of A. R. Carpenter, Highland Colony, with Laramie Mountains showing in the background. Mr. Carpenter who came from Polk county, Iowa, is one of the most successful farmers in the Colony. He settled on his farm in 1910, being the first settler in the colony and has never had a failure of crops.

New Highland Colony farm home of Mr. Thos. Smith, formerly of Fayette county, Iowa. In addition to being a good farmer Mr. Smith has a herd of purebred Shorthorn cattle which are thriving on the luxuriant grasses of the Highland Colony. The dark strip seen in the background is a field of his corn.

1914 crop of winter wheat on Highland Colony farm of Gilbert M. Brown, formerly of Minnehaha county, South Dakota. To the right of the wheat field may be seen a portion of his alfalfa field from which the first cutting has been removed and is shown in stacks in the background near his farm improvements. In the background to the left may be dimly seen the improvements on the farm of his neighbor, Frank Hunnicutt, formerly of Phelps county, Nebraska.

Modern residence now being built by Mr. C. E. Sorenson on his Highland Colony farm. The house consists of ten rooms besides bath, basement under entire building and is being made modern in every way. Mr. Sorenson owns 640 acres of Highland Colony land and is one of the leading farmers and stock raisers of the district. He came from Minnehaha County, S. D., although originally from Iowa, and says he has every reason to be glad he is located here.

CATTLE AS THEY GROW AND FATTEN ON THE RICH GRASSES IN THE HIGHLAND COLONY.
This picture was taken on a Section of Our Land, Now for the First Time Offered for Sale by Us.

Stock Growing in the Golden Prairie District

Pure Water, Nutritious Grasses and Equable Climate Combine to Make the Production of Live Stock Very Profitable Here

Each year, as land values advance in the central states, the knowledge of the large profits that may be made raising live stock on the well grassed prairies and valleys of Southeastern Wyoming and other portions of the Rocky Mountain region is becoming more general.

Since the first introduction of cattle into the mountain states this region, now known as the Golden Prairie District, has been noted for the high quality of its grass fatted beeves. On August 4, steers from Rocky Mountain pastures brought $9.50 per hundred at Chicago, while a few days previously grass-fed heifers grown by a farmer in the heart of the Golden Prairie District sold on the Denver market for $8.00 per hundred. Almost every fall cattle grown in this immediate neighborhood and fed only on grass top the eastern markets in competition with corn-fed beeves.

The absence of extreme summer heat enables the stock to graze contentedly throughout the summer, and here cattle are never seen standing crowded together fighting flies.

Unlike the grasses in the central state, those growing here retain their strength after ripened and the largest amount of flesh is put on after the pastures become brown.

Our winters are usually mild and open, so that cattle and horses graze the year round and large herds of pure bred cattle go through the entire winter without shelter of any kind.

Where forage is desired, corn fodder, millet, field peas and other roughage are raised, while alfalfa is grown successfully without irrigation and large quantities of prairie hay may be harvested even on the open range.

We Have Some Choice Ranches for Sale.

Owing to frequent inquiries for ranches, we have blocked out several very choice tracts, ranging in size from 1,000 acres up, some of them crossed by never failing streams and with outside range, and all of them adapted for farming as well as stock growing, which we will be pleased to describe in detail on request. Our prices and terms are right and if you will come and look over these tracts and inspect the cattle produced here we are sure we can suit you.

To give you an idea of what it will cost you to inspect our lands, we quote the Round Trip Summer Tourist Rate from a number of points in the central states to Cheyenne and return: Omaha, Neb., $16.00; Sioux City, Ia., $19.90; Des Moines, Ia., $21.35; Peoria, Ill., $25.25; Albert Lea, Minn., $23.05; Elkton, S. D., $22.30; Lincoln, Neb., $16.80; Grand Island, Neb., $14.50; Kearney, Neb., $12.85; Topeka, Kan., $21.00; St. Joe, Mo., $21.00. Railroad fare refunded to purchasers.

Descriptive literature, including sectional map and our signed certificate of guarantee mailed on application.

FEDERAL LAND COMPANY

100 West Seventeenth Street, - Cheyenne, Wyo.

FEDERAL LAND COMPANY,
Cheyenne, Wyo.

Gentlemen: Please send me at once full particulars of the new Highland Colony of the Golden Prairie District, including your signed Guarantee of return of railroad fare and $5 per day if I do not find everything as represented.

Name.....

Address.....

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

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Chicago, 901 Hearst Bldg., H. W. King, Manager
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To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
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Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

We recently spoke of the value of rye as a fall and spring pasture for hogs. It's a good time to sow it any time now.

Are the calves all coming along in good shape and ready to go into the winter? If any of them are not doing as well as they should, a little special care and feed will be a money maker.

Don't wait for the first snow storm to fix up the winter quarters for any of the animals. Look over the barns and sheds, banking them up when needed; nail on the loose boards and batten the cracks. It is easier to do it now than it is in the winter.

How many of us are obeying the law by burning the carcasses of all hogs that die? Don't bury them; burn them. Burning destroys the germs. Burying only covers them up; they may come to the surface and make you serious trouble after a while. Don't let the carcass of the horse or cow lie around to be eaten by the hogs. Bury or burn it and do it at once.

We have just received volume eighty-two of the American Shorthorn herd book. There are recorded in this book 8,999 bulls and 10,999 cows. While these registers are merely books of record of the individual animals whose pedigree history they briefly outline, they are of invaluable service to breeders as reference records. Every cattle breeder should establish his herd library and be able at a moment's notice to look up pedigree or ancestral relationship of animals whenever occasion requires. It is the evidence of registry of all recorded animals.

Report of the Tractor Show

From all parts of the country come requests for complete reports on the Tractor Demonstration. Farmers in the south, the east, the north and the west, who live so far away that they are unable to attend, want to know as much as we can tell them about the results of the tractor demonstration. Since this is not a contest, and since there is no official winner among the tractors entered, we cannot tell which did the best work. In fact, no tractor probably does the best work under all conditions. Some are suited to certain conditions and localities and others are better fitted for use under other conditions.

When you get this issue of the Twentieth Century Farmer the big Tractor Demonstration at Fremont, Neb., will have just been finished. In the next issue we will tell you, as nearly as possible, what happened there. Be sure to read the full and complete report of this greatest gathering together of tractors and tractor enthusiasts in the history of power farming.

Are Automobiles Useful?

It is but recently that the automobile was considered in any light but as a luxury and something to be owned by the rich. In recent years, and more particularly the last two or three, this machine has come to be looked upon not only as a luxury, but as a necessity in many cases.

The wide-awake physician or veterinarian can no longer think of conducting his business without an automobile. Without doubt, this modern conveyance has been the cause of saving many human lives and also the lives of many valuable horses and cattle because the family doctor or the veterinarian has been able to render prompt assistance.

What about the farmer and the automobile? How many of our farmers look upon the auto as something for the city fellow alone to enjoy and something that the farmer should not spend his money for? How many of our farmers have money in the bank on interest paying him 3 or 4 per cent and can't afford an auto, principally because they became prejudiced against them when they saw the city fellow spinning by them on the road and scaring their horses?

We believe the farmer should look at the automobile the same as he does at many of the modern tools and appliances he has on his farm. He should ask himself the question, "Would the auto in any way help me in my operations?" In answering the question there are many things to be taken into consideration.

First, let us say that under no circumstances would we think it advisable for anyone to buy an auto if by so doing he would have to mortgage his farm or home or cripple himself financially.

Good horses not only cost good money, but it costs something all the time to keep them; then occasionally one dies. We feel safe in saying that in many instances does the good farm horse become sick or lame because after a hard day's work he is driven to town. Many of our draft horses have many years cut off their lives by making driving horses of them.

The auto owned by the farmer would do practically all this running around; not only that, but the farmer, after a hard day's work in the field, could do nothing better to promote the health of himself and family than to take a ride for an hour or more in the auto. Surely the old saying, "Health is wealth," proves as true to the farmer as to anyone else.

The writer well remembers the loss of some twelve or fifteen acres of oats one year on account of slow transportation. It was before the day of the auto or the rural telephone. A casting on the binder broke; the broken piece was taken to town, six miles; the dealer didn't have the piece and had to send for it—another day lost. The grain was ripe and heavy. During the time a severe storm came and practically all the remaining crop went down. If we had had an auto it wouldn't have been much of a trip to have gone to some other town for the repairs and probably have saved the crop.

These are the days when time is money. The saving of time to the harvesting crew, the threshing or corn-cutting crew, by using the auto, should a break occur, is liable to be very considerable.

If the auto is a machine for practical use, we surely believe the farmer above all others is the one to get value received from the investment. We believe the farmer should first consider his finances and if able to buy an auto he should consider the matter from all viewpoints and dismiss from his mind any prejudice he may have against one.

Is there a beautiful butterfly hovering over your alfalfa field—orange and black above and yellow underneath? If so, then watch for a dark green worm next year. The Department of Agriculture has issued a warning to alfalfa growers, especially those in the west. The steps to take in fighting this pest, which can completely devastate an alfalfa field in a few weeks, are as follows:

Disk or use alfalfa renovator every winter and during the month of August; cut close to the ground and clean, leaving no alfalfa standing in ditches, etc.; cut as early as possible when it is beginning to bloom; pasture fields part of the time; mow at once if found to be infested, and the sun will kill the caterpillars while curing the hay; encourage chickens, turkeys, toads and birds in the fields. By doing all of these things, the government tells us, the pest has been partially controlled.

Boys and Fairs

No one will see more on a fair ground than the boy. There is no other class of persons who will make closer observation and analysis of all the features of exhibition on the fair grounds, good, bad and indifferent, commendable and uncommendable, than the boy. Very little escapes his notice. The boy from 12 to 16 or 17 years old is an active, high-geared piece of machinery if he has been brought up to this age under normal conditions. He is in the perceptive and receptive mood at all times and very little escapes his notice, even the things that the fathers pass unnoticed.

The present-day big state fair in practically all the progressive agricultural states has invented some scheme for interesting and entertaining the boys—special prizes for the boys for some specified contest to be tried out locally in their own county or community whereby delegates are selected for special state fair honors. It matters not what method of contest is adopted by the fair management, it has its influence in arousing the contest spirit in the boy. It becomes a great incentive to every boy in the contest to attend the fair; whether a winner or not, he has caught the contagion, become inoculated with the agricultural fair spirit and will not be satisfied with anything short of attending the fair and participating as far as lies within his power in the enjoyments, successes and privileges enjoyed by his associates in the contest. It encourages the parents, the neighbors; in fact, it stimulates the fair-going habit in communities and makes the boy generation students and admirers of the agricultural fair.

The plan adopted by many fairs to award the successful local contestants their transportation to and from the fair, and expenses while at the fair, with a systematic training in some features of stock judging and a general outline of the accomplishments of the successful exhibitor, is certainly a fine feature of schooling for the boys.

While this is possibly as far as the fair management can go in this feature of educational stimulus, there is a home duty for every county, every farmers' local organization, that should be put into action in the interest of the boy who is not in these contests or who has not been the successful contestant. Every community of farmers, every school district in each county, should organize to send a class of boys to their state fair, in charge of some good citizen of the community—teacher, business man, farmer—one who is in sympathy with boy nature and who commands the respect and esteem of the boys of his neighborhood. One or two days at the fair under such organized influence will be worth a great deal to the boy. It will be worth millions to the state in the matter of education for better farming and better live stock production. Look after the boy; give him a better chance, with a wider vision of what is going on around him. This is one of the available means of keeping the boy on the farm.

State Fair Silo School

Missouri has instituted an agricultural novelty for its state fair which they call the Missouri silo school. This department of the state fair agricultural training will be in charge of several silo experts of the state, who will have a number of silos on exhibition and deliver lectures on the construction and value of the silo. The intention is to take up this subject from every point of view and answer questions — practical, scientific and constructive—in view of getting this subject more intelligently before the farmers and stockmen who have not yet adopted the use of the silo.

The evidences of the practicability and economy of turning a portion of the green crops to silage will be abundantly verified by what farmers and feeders of the state accomplished last year under the great scarcity of feed caused by the drouth. This season in many localities is repeating the weather damage of the dry summer of 1913 and thus making the silage question one of great concern for the owner of live stock. This commendable system of state fair instruction could with interest and profit be adopted by all fairs, even down to the county fair.

The Professional Feeder

The feeding of stock for the slaughter has in a measure become a profession among a very large class of cattle feeders in the corn belt. After years spent in the work of feeding, where hundreds each year come into the business and other hundreds go out, there are those who persistently adhere to the practice of feeding a lot of cattle, sheep or hogs each season. This class of feeders have been termed professional. They are of the number who have adopted a system and method in their work and are able to get results approximately as they planned when the work was commenced.

The great army of feeders, however, are of the spasmodic or shifting character. This year they feed because everybody seems to be going into the business, and next year they are out because they lost in their last feeding venture. There is also a large grist of new feeders coming into the business each year just as a matter of experiment to see how it goes to be a real cattle feeder. There is a sort of impression that it gives a farmer a business standing to be classed in among the cattle feeders of a community. This is altogether correct when the work is well planned and all the details of the business carefully followed out, which guarantees the best results.

That the feeding of cattle has developed into an industry that deserves the title of a profession is quite apparent to the observer who measures the results of certain feeders from year to year. The work of the scientific feeding experiments that are being conducted throughout the country is corroborative evidence of the knowledge to be gained that places one feeder in advance of another in his ability successfully and skillfully to carry on this work.

The organization of state feeders' associations which has been taken up by a number of the leading live stock feeding states within the last few years is additional evidence of the realization among this class of business men how important it is to co-operate and educate in the best methods of handling the feeding industry.

These feeders' associations and the discussion at their annual conventions of feeding problems tend to increase the desire of becoming professional in the work. These organizations lend great encouragement to the state agricultural colleges and experiment stations where the feeding problem is being studied and discussed, where it is being worked out upon a basis of results. It is to be hoped that every state engaged in the feeding of the meat-producing animals to any great extent will organize in the interest of better results, both in the feeding of the stock and better prices to be obtained for the finished beeves and other meat animals.

Wheat as a Feed

There is occasionally an article appearing in some of the agricultural publications advocating wheat as a feed, on the basis of equality with corn. Some of these are based upon experiment station tests. There is usually, however, some basis of estimate that is governed on the prices of these two grains. When wheat is very low and corn very high is the usual situation upon which these estimates are based.

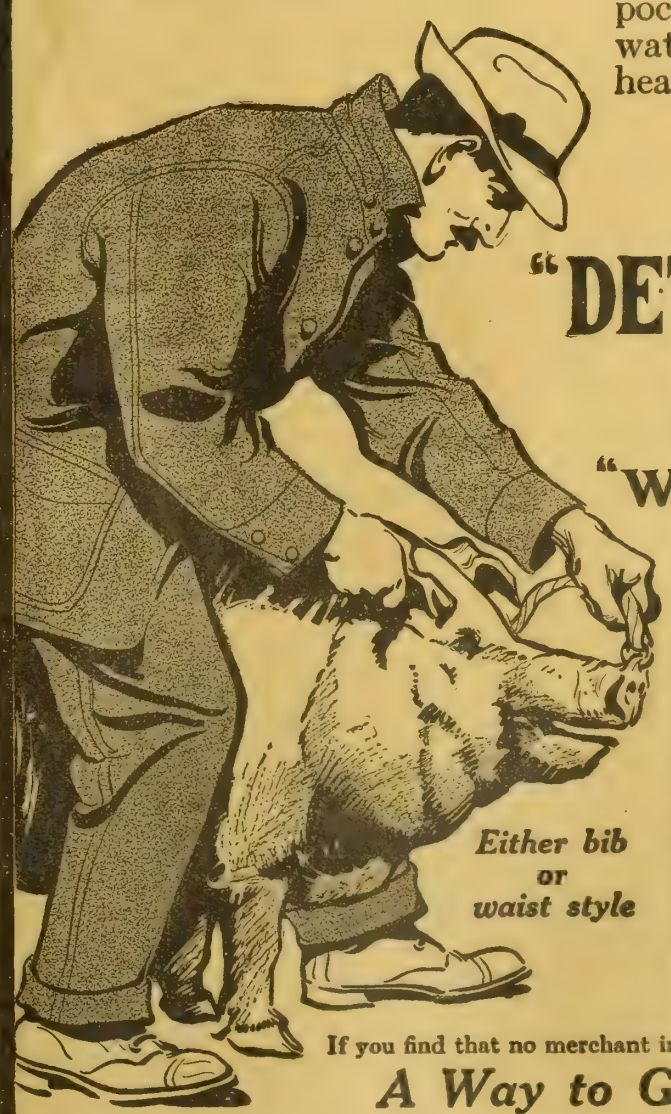
The North Platte Experiment Station in Nebraska, in discussing this subject in a recent communication, says that in its experiments in feeding wheat and corn to hogs it found that with corn at 56 cents per bushel and wheat at 60 cents it costs $4.15 on ground, soaked wheat to produce 100 pounds of gain and $4.72 on shelled dry corn to produce 100 pounds of gain. Where whole soaked wheat was used the cost was $5.08 per 100 pounds of gain. Thus the form of preparation of the feed seems to be a strong factor in getting results.

There is a very slight difference in the prices per bushel of wheat and corn in this experiment, and the very small difference in weight of wheat and corn is also a point of consideration, there being but four pounds difference. The value of cheap wheat as a pig feed is worth estimating in comparison with corn in years when big crops suggest the most economical ration, but under the present war pressure the American pig may not be able to remain long on the wheat diet.

You Know what a Pig's Nose will Stand!

Everybody knows how tough a pig's nose is. Ask a farmer who has worn Finck's "Detroit Special" Overalls how they wear and the best answer he can think of is, "They Wear Like a Pig's Nose."

We spare no effort to make Finck's "Detroit Special" Overalls the most durable and comfortable you can buy. They are cut extra big and roomy from heavy New England denim. There are 12 pockets, including rule, pencil and watch pocket, in every suit, of heavier than usual material.



Either bib or waist style

FINCK'S "DETROIT SPECIAL" OVERALLS

"Wear Like a Pig's Nose"

Union garment makers turn the double re-enforced seams, make button holes, and fasten on buttons with a finish not found in ordinary work-clothes.

Hunt up the merchant who carries overalls with this ticket—the "Pig's Nose" is in red on the blue ticket. Get the most in overalls for your money. Buy Finck's "Detroit Specials."

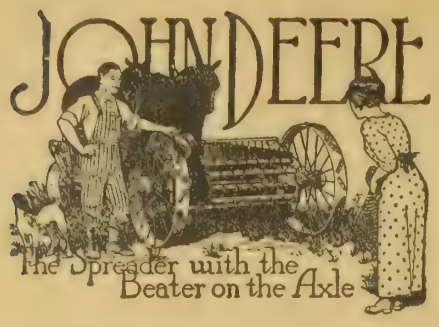
If you find that no merchant in your town carries these overalls, here's

A Way to Get a Pair FREE

To the first man sending us the name of a merchant in a town where Finck's "Detroit Special" Overalls are not now for sale, we will send a pair of overalls (size and style desired), FREE, the moment we get our first order from that merchant.

W. M. FINCK & COMPANY, 1169 Gratiot Ave., Detroit, Mich.

James L. Lee, Treasurer



HERE'S the low down spreader with the big drive wheels. The beater and all driving parts are on the rear axle. That means no clutches to give trouble, no chains to break or to get out of line; it means less than half the parts heretofore used on the simplest spreader.

Only hip high to the top. Easy to load. You see where to place each forkful. The result is an even load that spreads uniformly.

Light draft because the beater runs on roller bearings and the center of the load is comparatively near the team. Staunch, strong and easy to operate.

See the John Deere, the Spreader with the Beater on the Axle. Sold by John Deere dealers everywhere. Send for beautiful booklet, also for

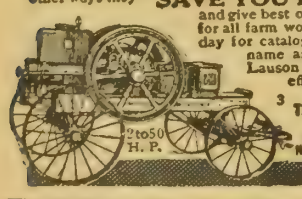
"Farm Manures and Fertilizers" FREE

A Book by Dr. W. E. Taylor, soil expert. It tells the value of manure, how it should be stored, and how applied to the land to get the most out of it. You can get both books free when you write about John Deere Spreaders by asking for package No. Y 15

JOHN DEERE, MOLINE, ILLINOIS

LAUSON FROST KING Gasoline Engines

No Cranking—start easily with a slow turn of fly-wheel. Sumter Gear Driven Magneto does away with batteries, their expense and trouble. In other ways they SAVE YOU MONEY and give best of satisfaction for all farm work. Write today for catalogue, dealer's name and Proof of Lauson Frost King efficiency.



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THE JOHN LAUSON M'F'G. CO. 204 N. W. St., New Holstein, Wis.

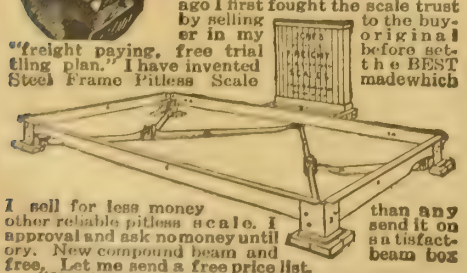
Shetland Pony FREE

Also buggy, harness, bridle and saddle. Many other prizes for girls, boys men and women — bicycles, cameras, watches, tool chests, gold rings, bracelets, pocket knives, etc. Full information and big premium list Free. Write me Today.

E. T. MEREDITH, 494 Success Building Des Moines, Iowa

I Will Send My Scale On Approval

To any business-like farmer who knows the profit in buying, selling and feeding by weight and not by guess. Forty-nine years ago I first fought the scale trust by selling to the buyer in my "freight paying, free trial original before setting plan." I have invented the BEST Steel Frame Pitless Scale made which



I sell for less money than any other reliable pitless scale. I send it on approval and ask no money until satisfactory. New compound beam and beam box free. Let me send a free price list.

"JONES, He Pays The Freight." Binghamton, N. Y.

Management and Value of Silos

(CONTINUED FROM PAGE THREE.)

This Hundred-Ton Silo is a Money Maker for Hildebrand & Brigham of Tamora, Neb.

silo. A distributer is used, and Mr. Johnson tells us that one year he used a tamper in addition to assist in the packing given the silage by the men working in the silo. He believes the tamper is valuable and quite an assistance in properly packing the silage, especially on the edges. The fodder is cut on this farm as nearly mature as possible to make good silage. Mr. Johnson believes it should be cut when a little too dry properly to ferment without the use of some water. Water is added by being run into the blower during the cutting operation.

One year on this farm the silo was filled in January from corn cut at the regular time in the fall and shocked in the field. This venture proved a success and the silage made at this time proved nearly as good feed as that put into the silo at cutting time.

Good for Fattening Cattle

Last year the stock cattle on this farm were carried through the winter on silage and millet straw. This millet straw, let us explain, is not millet hay, but millet that had ripened in the field, and the seed had been threshed from it. The writer saw these cattle soon after they were turned on pasture, and we want to say they looked exceedingly good, some of them good enough for beef.

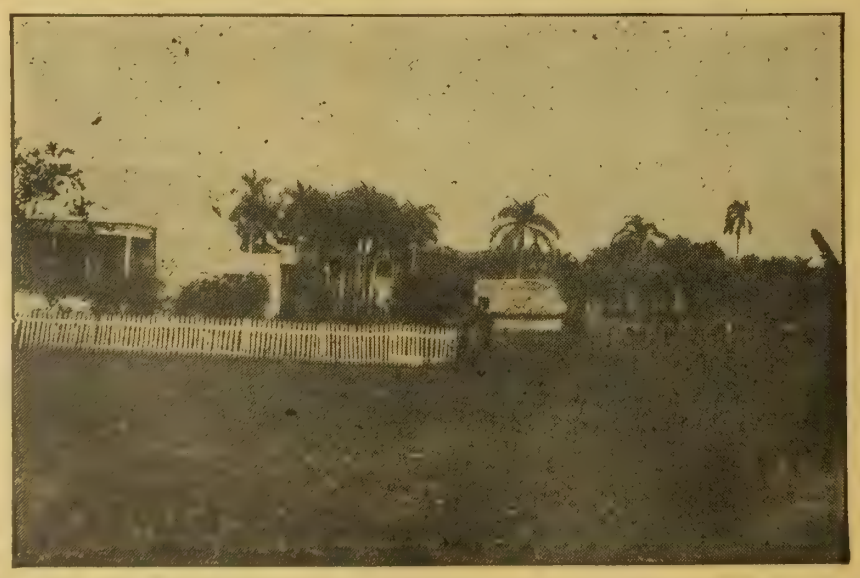
There was fed on this farm in the winter of 1913-14 a car of cattle. They were fed all the alfalfa hay they would eat and from fifteen to twenty pounds of silage each per day, and Mr. Johnson tells us the maximum amount of ground corn and cobmeal he could get these cattle to eat in addition to the alfalfa and silage was eight and one-half pounds. The commission man who sold these cattle saw them shortly after they were put on feed and said they made one of the most profitable gains he ever saw. The feeding period for this bunch of cattle was from October 4 to February 10, and when we say that the cattle brought the top price on the Omaha market for their class on the day they were sold you will at once know they made good beef.

A number of pure-bred cattle are caried by Messrs. Johnson and Mellor, and in the winter time they are fed about thirty to thirty-five pounds of silage, eight pounds of alfalfa hay per day and have the run to millet straw. After coming through last winter on this feed these cattle looked to us like beef cattle.

The last two years on this farm corn was not as good as it might have been, due to insufficient rainfall, Mr. Johnson estimating it at probably twelve bushels per acre, making about four to five tons of silage per acre. Answering our question as to the total cost per ton of this silage, Mr. Johnson told us accurate account had been kept of the labor cost of filling, which figured out 75 cents per ton. In making his calculations he charged his own help and teams at the rate of $4 per day for man and team, $2 per day for man alone, 50 cents per acre for cutting the corn and $20 a day for the power and fuel. Estimating the corn at twelve bushels per acre, worth 70 cents per bushel, we find the cost per ton of this feed in the silo to be $2.70. At the same time alfalfa hay was worth $12 per ton. As stated above, very satisfactory results were obtained by feeding one-fifth to one-sixth as much alfalfa as silage.

The horses on this farm are fed more or less silage, and these people are very well pleased with it as a horse feed. Mr. Johnson says it keeps the horses' coats nice and sleek and is a good bowel regulator. He has had no experience in feeding

Farm Home in the Tropics



The Spanish-American war awakened the interest of the American people in tropical countries, and since that time there have been a number of tropical projects opened up. Among them is Santo Domingo, the second in size of the West Indies. Chocolate is the leading product of this country, though citrus fruits, cocoanuts, cotton, cane, coffee, vanilla, tobacco, hemp and other products are also grown in large quantities. Rice is also one of the big crops.

DISAPPEARED
Coffee Ails Vanish Before Postum

It seems almost too good to be true, the way headache, nervousness, insomnia and many other obscure troubles vanish when coffee is dismissed and Postum used as the regular table beverage.

The reason is clear. Coffee contains a poisonous drug—caffeine—which causes the trouble, but Postum contains only the food elements in choice hard wheat, with a little molasses.

A Phila. man grew enthusiastic and wrote as follows:

"Until eighteen months ago I used coffee regularly every day and suffered from headache, bitter taste in my mouth and indigestion, was gloomy and irritable, had variable or absent appetite, loss of flesh, depressed in spirits, etc.

"I attribute these things to coffee, because since I quit it and have drunk Postum I feel better than I had for twenty years, am less susceptible to cold, have gained twenty pounds, and the symptoms have disappeared — vanished before Postum."

Name given by Postum Co., Battle tle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum comes in two forms:

Regular Postum—must be well boiled. 15c and 25c packages.

Instant Postum—is a soluble powder. A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage instantly. 30c and 50c tins.

The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.

—sold by Grocers.

the silage to sheep in Nebraska, but in Illinois for several years it was successfully fed to sheep, and he is firmly of the belief that silage is valuable as a sheep feed, as well as one for horses and cattle.

Messrs. Johnson and Mellor are like all other farmers to whom we have talked having had experience in feeding silage—they would not attempt to carry on their farming and feeding operations without a silo.

Hog Cholera Day at Lincoln

THE third meeting of farmers at the Agricultural College at Lincoln for instructions on hog cholera and its treatment was held Wednesday, August 12. There were about sixty farmers from various parts of the state in attendance at this meeting. This is the first one of these meetings that we have attended, and we were very much impressed with what we saw and heard. Those present were there for a purpose—that of knowing what is best to do with their herd—and particular attention was paid to the subject throughout the different sessions. In the morning they were taken through the serum plant and shown how serum was manufactured, and carcasses of two or three hogs that had died with cholera were dissected, and it was explained to the farmers present how the farmer may know by dissecting his hogs if they are affected with cholera.

Dr. C. M. Day, field veterinarian of the Nebraska Live Stock Sanitary Board, was present at the meeting and gave a good, practical talk, explaining the serum treatment. Dr. J. H. Gain demonstrated the use of serum and virus and showed those present how to use the needle when treating hogs with these preparations. It will be the practice of Dr. Gain and his assistants to hold one of these meetings on the second Wednesday of each month. The next one will be the Wednesday of the State Fair. This will be a splendid opportunity for the farmers to attend this meeting in connection with the fair. It so happens that the Wednesday of the State Fair is the annual swine breeders' meeting on fair grounds. Swine breeders and farmers, by arranging their trip, can attend this hog cholera demonstration at the college and be at the swine breeders' meeting on the fair grounds that evening. We called special attention to this meeting and its due importance in our last issue, but wish again to call the attention of swine growers to the meeting and urge that as many as possible go to the university farm on that day, where they will learn many practical things about hog cholera, and in the evening attend the swine breeders' meeting on the fair grounds.

International Live Stock Show

THE International Live Stock Exposition at Chicago is the greatest annual live stock show in the world. This has been conceded by the best live stock experts and judges from the old country, a class of men who are born with the spirit never to yield supremacy to any other country in live stock achievements as long as there is a spark of hope left. This great live stock show has, under the direction and guidance of a score or more of the leading live stock men of the United States as supervisors and promoters, been brought to its present high standard of proficiency and is a magnificent monument to the combined efforts, interests, perseverance and skill of the American breeders.

The breeder of high-class farm animals appreciates the importance of the show ring influence. It means something to have well bred stock, and it profits the breeder to have some animals of show ring character in his herd. There is no advertising that is so emphatic and positive in its influence as that of being a competitor in some of the classes in some of the prominent shows of the country.

The next position of influence is to follow in the lines of breeding of the prominent prize winners at the big shows. This kind of evidence sets the breeder right before the critical public, in the eyes of the careful buyer—therefore the importance to breeders who have ambitions to be in the front ranks to become exhibitors and owners of the best prize-winning blood that is available to them.

The coming International Live Stock show, November 28 to December 5, 1914, promises to exceed in most respects any former exhibition ever given. It has been the history of this show from its first effort that each recurring display has merited and received the praise of being the best. It is true just to the degree that the breeders and fitters of show animals are progressive and are progressing, a fact that needs no verification to the visitor, to the critic, to the judge of stock.

London last year imported 8,339,114 carcasses of frozen mutton and lamb, mainly from Australia.

Uruguay, much of which formerly was treeless, within a few years has planted more than 17,000,000 forest trees.

The Venezuelan government has decided to use 1 per cent of the import duties collected for a fund for sanitary purposes.

Fall and Winter Fair Dates

Date.	Name and Place.	Sec'y or Mgr.
Aug. 20-25	Interstate Fair and Live Stock Ass'n, St. Joseph, Mo.	H. L. Cook
Aug. 26-Sept. 4	Iowa State Fair, Des Moines	A. R. Corey
Sept. 7-11	Nebraska State Fair, Lincoln	W. R. Mellor
Sept. 7-11	Colorado Interstate Fair, Denver	I. W. Eaton
Sept. 7-12	Minnesota State Fair, Hamline	J. C. Simpson
Sept. 12-19	California State Fair, Sacramento	J. L. McCarthy
Sept. 12-19	Kansas State Fair, Hutchinson	A. L. Sponsler
Sept. 14-18	Kansas Fair Ass'n, Topeka	G. E. Clark
Sept. 14-18	South Dakota State Fair, Huron	C. N. McIlvane
Sept. 14-19	Colorado State Fair, Pueblo	J. L. Beaman
Sept. 21-26	Montana State Fair, Helena	A. J. Breitenstein
Sept. 21-26	Interstate Live Stock Fair, Sioux City, Ia.	Joe Morton
Sept. 26-Oct. 3	Missouri State Fair, Sedalia	J. T. Stinson
Sept. 29-Oct. 2	Wyoming State Fair, Douglas	A. Higby, Basin
Sept. 22-Oct. 3	Oklahoma State Fair, Oklahoma City	I. S. Mahon
Oct. 5-10	Utah State Fair, Salt Lake City	H. S. Ensign
Oct. 17-Nov 1	Texas State Fair, Dallas	W. H. Stratton
Oct. 7-17	International Dry Farming Congress, Wichita, Kan.	Ralph H. Faxon
Oct. 7-17	International Congress of Farm Women, Wichita, Kan.	Mrs. Mary Pierce Van Zile
Nov. 16-24	American Royal Stock show, Kansas City	T. J. Wornall
Nov. 28-Dec. 5	International Stock Exposition Chicago	B. H. Heide
Jan. 18-23 '15	National Western Stock show, Denver	Fred J. Johnson

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With Your Expensive
Alfalfa and Clover Seed

Don't lose the cost of your seed and labor—get a catch and a profitable yield. Inoculate your soil with the bacteria, or germ, that helps the plant absorb free nitrogen from the air.

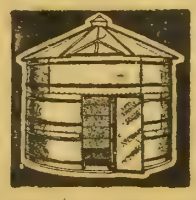
Packed in one and five acre cans.

The Improved German Soil Inoculator. Nobbe-Hiltner Process
NITRAGIN
TRADE MARK REG'D DEC. 6, 1898 NO. 33212
PURE CULTURE
THE SIMPLEST SAFEST AND SUREST SYSTEM OF SOIL INOCULATION FOR ALL LEGUMES

Absolutely Guaranteed to retain strength and virulence six months from date of shipment.

The use of "NITRAGIN," pure culture, insures a good stand—promotes a healthy, vigorous growth—increases the yield, and adds to its feeding value. The use of pure culture for inoculating legumes is endorsed by the United States Department of Agriculture Experiment Stations, and Agricultural Authorities. Prepared in the Laboratories of the German-American "NITRAGIN" Company. Distributed by

ARMOUR FERTILIZER WORKS
Union Stock Yards **Chicago, Ill.**
Write for Booklet and Full Particulars.



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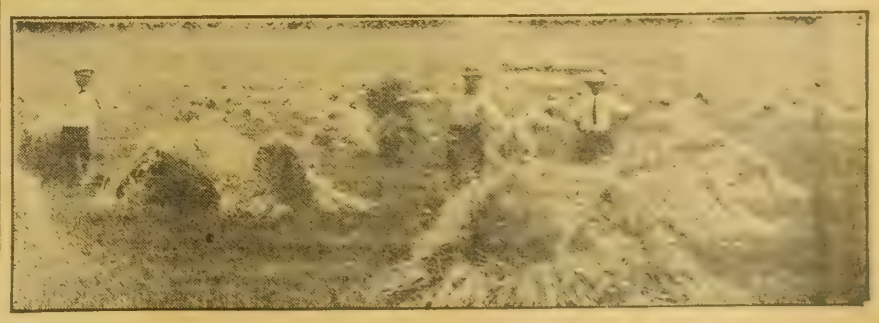
CORRUGATED METAL—RAT AND FIRE PROOF
The best metal grain bin for the price in the world. Defies competition. We make all styles. This is not our highest grade bin but is splendid value. Keeps grain in perfect condition. Large door and other features. Ask for prices of different kinds and grades, also valuable circular giving opinions of experts on storing grain for high prices.
BUTLER MFG. CO., 1212 W. Tenth St., Kansas City, Mo.



BIG CROPS IN SHALLOW WATER DISTRICT, COLORADO.

This photo taken July 25th, in Shallow Water District, Logan County, Colorado. Former crop on same field averaged 41 bu. per acre. We are selling a number of farms in this locality $15 to $35 per acre. 75 improved and unimproved farms to select from. We are eager to complete this settlement. We break 40 acres free of charge on every 160 acres if built on within one year. Good roads, healthy climate, good water, good schools. Come out, see our grain fields. We own the tract, we sell. We make terms to suit the purchaser. Write for circulars and excursion rates.
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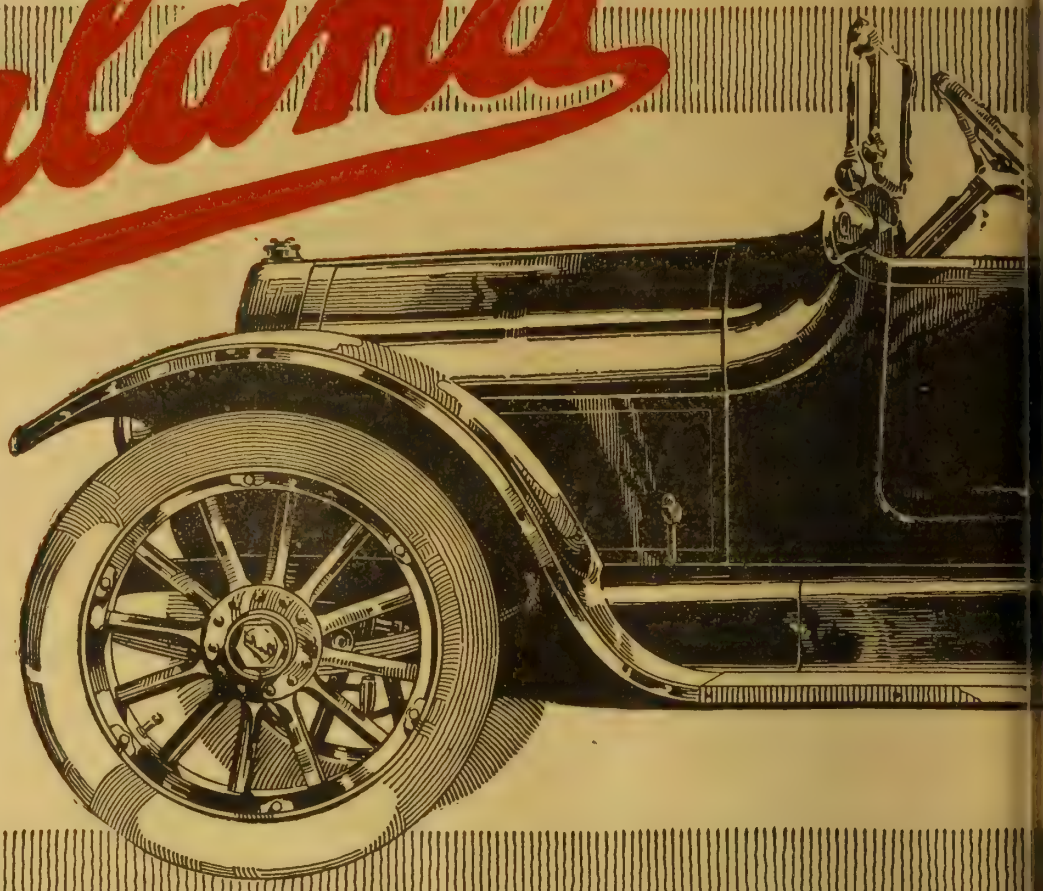
Overland



The Greatest Motor C

WE have always given more car for less money than any other motor car manufacturer in the world.

We have always given a superior car, a more powerful car, a more practical car and the most economical car.

That is why more Overlands have been bought than any other similar type of car ever produced.

Now, with pride, we announce our latest car—Model 80—the greatest value this factory has ever placed on the market.

We wish particularly to call your attention to the fact that while this 1915 model has innumerable improvements, enlargements and refinements, *the price has not been advanced.*

This season we shall build 75,000 cars! This enormous increase in production again places us in the enviable and supreme position of being able to give still more value for still less money than any other manufacturer.

Following are the facts! Read each paragraph carefully!

Model 80 has a brand-new stream-line body. Its full sweeping stream-lines blend and harmonize perfectly with the balance of the symmetrical design. All visible lines are absolutely clean, unbroken and uninterrupted.

The new crowned moulded fenders, new rounded radiator, new hood slightly sloped, and flush U doors with disappearing hinges, contributing the additional touches of exterior grace and modishness which distinguish costly imported cars.

The new tonneau is much larger—both in width and in depth.

The new cushioned upholstery is also considerably deeper and softer.

This model is equipped with the finest electric starting and electric lighting system. All switches, in a compact switch box, are conveniently located on the steering column. Thus in the driving position, without stretching forward or bending down, you start the car, drive the car and control the electric horn and all head, side, tail, and dash lights.

This car has left-hand drive and center control.

The tires are larger this year, being 34 inch by 4 inch all around. These tires

A Few Model

Motor 35 h. p.
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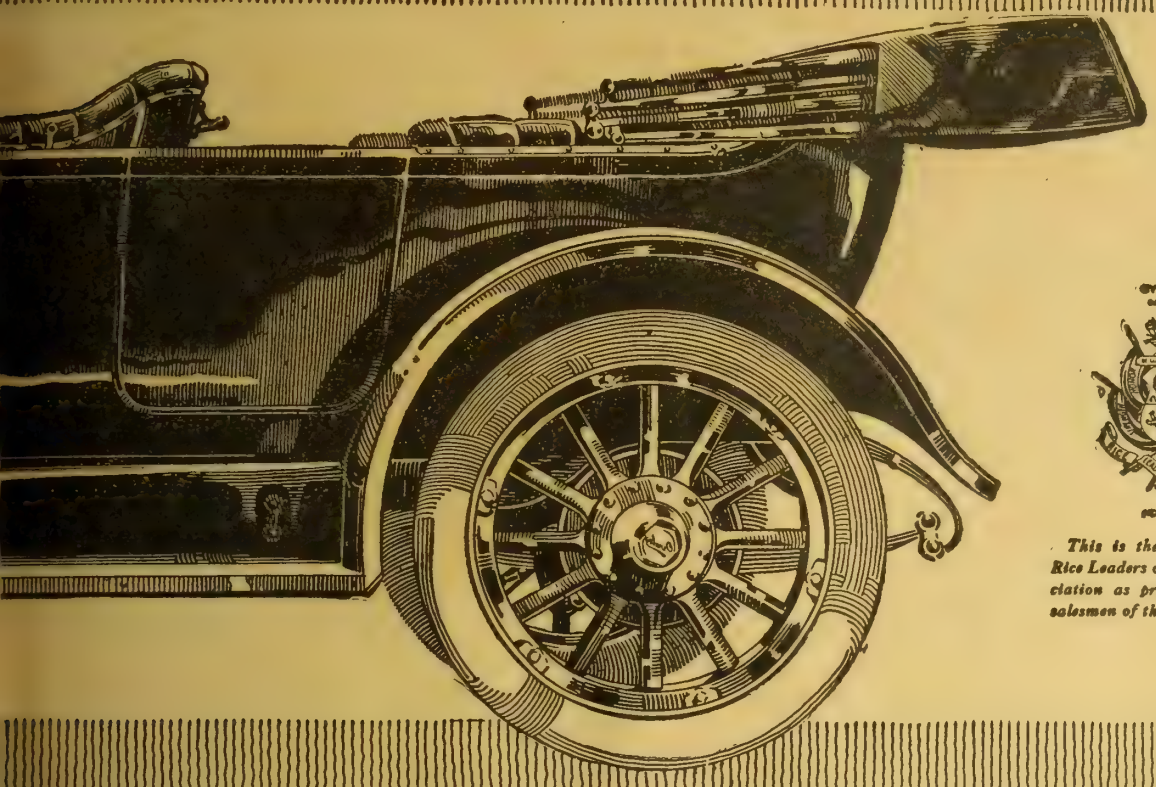
Larger tires, 34
Demountable r
Left-hand drive
Beautiful new
finish
Complete equip

The Willys-Overland

Two passenger Roadster $1050

The Willys-Overland of C

1915 MODEL 80 $1075



BY INVITATION MEMBER OF

This is the car selected by the Rice Leaders of the World Association as prizes for the leading salesmen of the world.

Value Ever Offered

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can be quickly detached from the rims which are demountable. One extra rim furnished.

Ignition is high tension magneto, independent of starting and lighting system. It requires no dry cells

Fundamentally the chassis remains as before. The front axle is larger; the wheels are larger; the frame is heavier and stouter; gears are made of 3½% nickel steel; there are integral grease cups in spring bolts; and other mechanical refinements which are described in detail in our new catalogue.

But otherwise in no possible way could we improve the splendid Overland chassis that is giving such satisfactory service to 50,000 nineteen fourteen owners.

This new Overland rides with remarkable smoothness, taking the ruts and rough spots with the ease of the highest priced cars.

There is the famous, powerful, speedy, snappy, economical and quiet 35 horsepower Overland motor; and a long wheelbase of 114 inches.

This car comes complete. Electric starter, electric lights, built-in windshield, mohair top and boot, extra rim, jeweled magnetic speedometer, electric horn, robe rail, foot rest and curtain box.

This new model is ready for your inspection in practically every city and town in the country.

Dealers are now taking orders. Make arrangements now for your demonstration.

Send Coupon For 1915 Catalogue—FREE

We have just published our new catalog. There is one for everybody—one for you. This new book describes and pictures in detail our model 80—the greatest Overland. Every one should have a copy of this new, interesting and instructive book. It is an authority. Send the coupon for your copy right now. It is free.

The Willys-Overland Company,
Dep't. 107 Toledo, Ohio.

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Greatest Outside Elevator on the Market

For proof, look at section in use on National Steel Elevators, then look at the sections which typifies those in use on every other machine.

See how strong is the National, how weak the others must be.

Our four strong features—**16 Right Angle Bends, Four Wood Ribs** (laid in lead), **Corrugated Steel Keeper Irons, Corrugated Steel Couplers**—are exclusive with us.

Other brand new features provide **strength, efficiency, lightness of draft and ease of operation.**

National also has greater capacity than others and operates with **less power.**

Get book, free crib plans and specifications. Attractive price sent on postal request.

The Hog Trough Type in use on all other makes

The National Section —the Best in the World

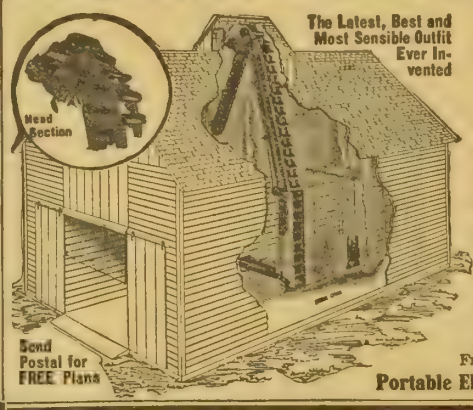
The National is the Best Machine in the Land for Cribbing, Loading or Unloading All Kinds of Grains.

Special outfits made to order for any kind or size crib or barn.

Write for Book Prices etc.

Furnished with Overhead Jack, Shifting Conveyor, etc., if desired

National Steel Elevator



The Latest, Best and Most Sensible Outfit Ever Invented

and Our "Little Giant" Inside Machine

Built with sensible features farmers demand:

Head Section delivers grain into center of hopper.

Spout swings around from side to side.

Hinged Sections go direct to center of cupola.

Short Distance Delivery from filling bucket to spout.

Small Cupola requirements, or can be used without Cupola.

Be sure to send postal for attractive prices and full particulars of this wonderful inside machine. Ask also for book of **modern** Free Crib Plans and Specifications. All free.

Portable Elevator Mfg. Company 920 East Grove St., BLOOMINGTON, ILL.

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BIGGER AND BETTER THAN EVER

Bring the Whole Family and Spend at Least One Day

SPECIAL ATTRACTIONS ARE:

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Pure Food Exhibits — *Better Babies Show*

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For Premium List, write to

W. R. MELLOR, Sec'y, Lincoln, Neb.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

A Subscriber: Will you please tell me the color of the pure-bred Rhode Island Red? Should there be any black in its feathers?

Answer—Yes, to be standard the feathering must show black in certain places. The rooster must be pure red, except where the standard specifies black, which is in the wing and tail. In the wing the lower primary web is black; flight coverts are black, and main tail feathers and sickles are a greenish black. For the hen the tail is black, wings carry black in same place as the male, and the lower neck feathers, or hackle feathers, are edged with black. Black in other parts of the body disqualifies, although the pure-bred may not only show black in other feathers, but also come off a pure lemon color, often showing no feathering of black. These are good layers, but considered culls.

Roup

Mrs. F. M., Kansas: I would very much like to know what ails my turkeys. There is a swelling alongside of the head and bill; the eyes swell all up, and they get in a terrible shape. There were several affected in this way last year, and now it is starting in the young flock.

Answer—No doubt but it is some form of roup, perhaps what is called sore head in some localities, dry roup in others, and with us genuine chickenpox, though you say nothing of anything like a warty sore showing near the the point of swelling. It is a case where it will be necessary to remove the sore heads from the well turkeys as fast as they appear. Give the sick a tablespoonful of castor oil, then at least three grains of quinine a day in a good, soft mash to keep up strength. With this also give sulphur, but rely mostly upon keeping up the strength and doctoring the head, which you had better first wash in coal oil, wiping dry, and swabbing out any matter found in the mouth or about the eyes. After a first washing with kerosene then begin the use of peroxide of hydrogen, diluted half, on the swollen eyes and head, and syringe it up the nostrils and down the throat. This must be done three or four times a day, but turkeys are worth the saving. These are the surest remedies. If these fail, then all others would have sooner failed. For the flock yet well give sulphur in the mash and some Epsom salts in the drinking water. Disinfect their roosting places and keep them from the sick. Sell all later that you save and stock up next year with new and healthy blood.

What Ails Them?

G. E. Conkey Company: We note in issue of July 26 a query, "What Ails Them?" Replying to the query, would say that it is the air-cell mite that is infecting these chickens. It is prevalent in places. Your judgment as to its entering the body by way of the pores is right, as these mites bear close relationship to the depluming mite. You might advise your subscriber to feed her fowls heavily with sulphur. This should be kept up from two to four weeks. There is no danger of hurting the fowls, as sulphur is not injurious. The best way to give it is in a soft mash. It is also necessary that everything be thoroughly clean, and roosts, nests and house be made as sanitary as possible.

Answer—We certainly thank the Conkey company for the remedy. In the region where the editor lives the air-sack mite is seldom or never seen in chickens, although a few times found in the throats and lungs of pigeons. In appearance it seemed to be simply a sort of yellowish powder, the mites being so small as not to be easily seen. The description given of the large size of the mites seen in the fowls mentioned was what puzzled the editor, as the description given scarcely agreed with her knowledge of the air-sack mite, and yet without doubt this must be the true answer. The necessity for thorough disinfection in this case is great, as this disease spreads from bird to bird very rapidly; at least it does with pigeons, the bird often dying, as with some respiratory disease, pneumonia or bronchitis. Then, again, they often become emaciated and die gradually, as with tuberculosis. Indeed, the air-sack mite often forms ulcers in the lungs. Besides the sulphur treatment suggested, breathing the fumes of burning tar or steam from boiling tar is considered beneficial.

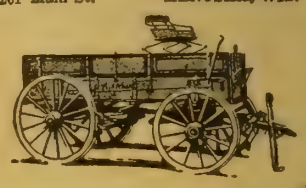
It Takes The Bain to Stand the Strain

WE built our first farm wagon over sixty years ago—and we built it from the farmer's point of view. He wanted a wagon that would endure the strains of rough, rutty roads. **And he got it!**

Today we are building The Bain Wagon from the same view-point--for better and longer service--to give greater wagon value. Toughest oak and hickory--carefully seasoned--go into every Bain. Axles and skeins are extra large. Gearing is heavily braced and ironed. The Bain is built for maximum strength--yet there's no excessive weight. It is remarkably light of draft.

Ask your dealer to show you why The Bain is better. Ask him about the Bain Warranty which backs up Bain Wagon Quality. Or, write for Catalog.

THE BAIN WAGON CO.
201 Main St. KENOSHA, WIS.



CUP ELEVATOR

Always ready for use. Placed inside the crib in the dry. Easy running, durable and strong. Elevates oats, wheat, or ear-corn, **50 bushels in three minutes.**

SET IN YOUR CRIB BEFORE YOU PAY

The first successful **Upright Ear Corn Elevator made—SOLD DIRECT to the Farmer.** Free Catalog showing 8 styles with crib plans which save you money. Write for it today.

INTERLOCKING FENCE CO. BOX 67 MORTON, ILL.

BINDER ATTACHMENT with corn harvester cuts and throws in piles on harvester or in windrows. Man and horse cut and shock equal with a corn binder. Sold in every state. Price only $20.00 with fodder binder. J. D. Borne, Haswell, Colo., writes: **"Your corn harvester is all you claim for it; cut, tied and shocked 65 acres milo, cane and corn last year."** Testimonials and catalog free, showing pictures of harvester. Address **PROCESS MANUFACTURING CO., Salina, Kansas.**

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

The Fairy Tree

The birch tree throws a scarf of green
  Around her silver white,
Woven of little polished leaves
  All delicate and bright,
It sways with every passing air
  And shimmers in the light.

Oh, like a Dryad nymph she stands,
  The birch tree, silver white!
And all day long that flowing veil
  Trembles for my delight.
She stirs it as she moves in it
  As a young maiden might.

And is she then a tree at all,
  My birch, all silver white?
Clothed in a robe of little leaves,
  Alive with wind and light,
And standing by the fairy ring,
  With queenly slender height?

In truth I think she is a fay,
  The birch tree, silver white,
Bound by a spell the long bright day,
  But free again at night,
And she knows all the woodland ways
  Under the gray moonlight.

—Ethel Barstow Howard.

What is a Parasite?

"What a horrible looking fly!" said Rose, almost falling out of the hammock in her efforts to get away from it. The fly settled on one of the ash trees between which the hammock was swung, and Harry got up from the grass where he had been lying, book in hand, and went over to examine it.

"It is yellow, with four lacy wings," he said. "It has a long, thin body made in two parts, a short part, on which the wings and six legs are fastened, and a much longer one behind. Where the two parts are fastened together it is so thin I should think it would break in two. It has a very long tail. Oh, Uncle Jack," he called, "do come over and tell us what sort of a fly this is."

Uncle Jack laughingly arose from the porch, where the grown folks were spending a quiet Sunday afternoon, and strolled over to help his "class in entomology," as he called the children.

"That is an ik-new-man fly," he said. "You spell it i-c-h-n-e-u-m-a-n, and you must never harm one."

"Why not?" asked Rose. "What good does it do?"

"This particular variety kills the borers that do so much harm to the trees. Nearly all ichneuman flies are parasites. Do you know what that means?"

"Yes," said Harry, glad to be able to display some of the knowledge he had acquired at school. "A parasite is a person that gets his living off another."

"Only this is an insect, not a person," said Rose. "What insect does it get its living off of, and how does it do it?"

"That thing you called a tail, Harry," Uncle Jack went on, "is not a tail at all, but an ovipositor. It is a long tube through which the eggs are laid in place. This fly seems to know by instinct what trees have borers inside of them. It will fly to the exact spot on the trunk underneath which a borer is working and curve the long ovipositor over forward, piercing right through the wood, sometimes a half inch or more, right into the borer's nest."

"Oh, Uncle Jack," said Harry, "that thin tail thing couldn't go right through the wood, could it?"

"Indeed it could, and it does it, apparently without half trying. Sometimes it happens that the wood is so firm that the poor fly can't get the ovipositor out again and has to stay there until it dies. However, this seldom happens. Generally it comes out all right, and the fly goes away, leaving trouble behind, for the eggs hatch out and larvae of the fly feed on the borers, eating away the fatty portions and leaving the worms so weak they die."

"Are there other kinds of icheuman flies?" asked Rose, "and are they parasites, too?"

"Yes, nearly all the lacy-winged, thin-bodied flies are ichneuman flies. Some lay eggs in aphides, some in one caterpillar, some in another. The flies' bodies are generally yellow, bronze or black."

"Then I'll remember," said Harry, "not to kill a long, thin fly with little lacy wings and with a yellow, bronze or black body."

"So will I," said Rose, "and I'm glad there is one kind of fly I don't have to chase around with a fly spatter all the time."

HOME EDITOR.

(Prize Story)

The Rescue

By Francis Rettenmeyer, Aged 11, De Beque, Colo.

One winter evening after a heavy

Awards in Picture Contest No. 15

Do you prize winners realize that it is quite an achievement to win the prize in a contest when considerably over 100 verses are entered, as they are each month in this one? It is very hard among so many to decide which verses are the best. The meter must be correct, making them read smoothly; the rhymes must be perfect, and the thought must be original and well expressed. If verses are about equally good in these respects, consideration is given the age of the writer, neatness, spelling, etc. There were an unusually large number of good verses this time and many of them deserve to be printed, but cannot on account of lack of space.

(First Prize)

By Borghild Gustad, Aged 10, Kadoka, South Dakota

I saw this girl while climbing a tree;
I said, "Look Belle," and she looked at me.
She said, "Come down and have some tea,
I'll bet you're hungry as can be."

(Second Prize)

By Kieth Foreman, Aged 9, Perkins, Oklahoma.

This little girl is serving tea;
She has a china set, you see.
I've just been thinking, could it be,
If I'd be good, she'd invite me?

By Pearl Hancock, Aged 10, Verdon, Nebraska.

Birdie, dear, you fly so high,
'Way up in the blue, blue sky;
Pray come down and have some tea
With my dollie dear, and me.

By Faith Campbell, Aged 12, Bethany, Nebraska.

Little birdie in the tree,
Won't you come and have lunch with me?
Don't be afraid of my dolls and me;
We'd like to have you for company.

By Marie Austin, Aged 12, Norfolk, Nebraska.

She's looking at the birds, I think,
And wondering if they want a drink.
Her face is good and kind and sweet;
She hopes they have enough to eat.

By Alma Miller, Aged 11, Ceres, California.

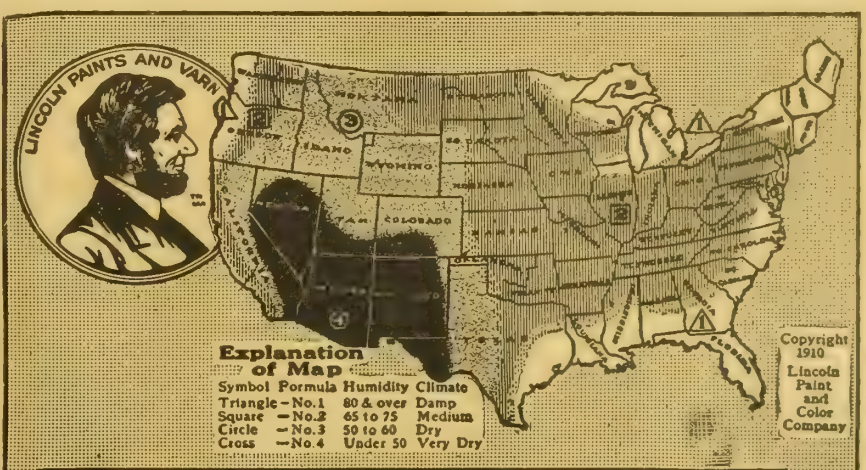
With chair and table and dollies, three,
O, what does my little girlie see?
Is it a mother bird feeding her young,
High in the tree where her nest is hung?

By Margaret Reis, Aged 8, Richfield, Nebraska.

Dolly, dear, is waiting at the table,
And Ruth is looking up with happy face;
Robin Redbreast in the shady tree top,
Before the meal begins, is saying grace.

By Tommy Moore, Aged 10, Pringle, South Dakota.

O, you little girlie,
Wonder what you see!
Can it be a bluebird
In the apple tree?



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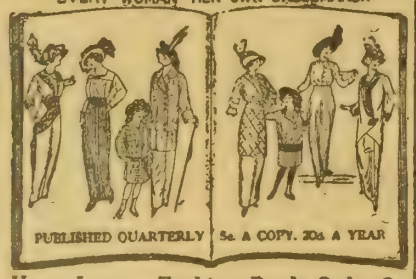

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snow storm I was wandering homeward through the hills. While I was passing a very dense thicket I became aware of something moving about in the snow. I quickly seized a club, thinking some animal was coming my way. After waiting about ten minutes I decided to investigate.

As quietly as possible I slipped between the bushes. About the center of the thicket I found the object of my quest. It was not a wild animal, as I had supposed, but a shepherd dog, apparently in its death struggles. Feeling about, I discovered it was fastened in a trap.

After about half an hour's work I succeeded in taking off the trap from his hind foot. In about half an hour he was drinking milk by the fire with the greed of a dog starved for days.

The following three days I tried to find the owner, but without success; therefore I decided to keep him. I named him Jack, and soon after this he showed great ability as a cattle dog.

(Honorable Mention)

A Trip to Missouri

By Verda M. Hood, Aged 13 Years, Pryor, Okl.

On Thursday evening, four weeks ago, my mamma, papa and I started for Missouri. We went on the 2 o'clock train from Pryor and traveled to Springfield, Mo. We got there at midnight and went to a hotel and stayed until morning. At 9 o'clock Friday morning we started for Bolivar, Mo. We arrived at noon, ate our dinner and then went twelve miles from Bolivar to my uncle's. It rained on us all the way out there.

We visited there a week and then papa came home, but mamma and I went on to Claire county to visit mamma's relatives. My uncle lived on a beautiful farm near Sack river, and grandpa and grandma lived near them. My uncle had a graphophone and I learned to play it, so we had music all the time.

One evening we went swimming and boat riding on the river. I was wading in the water; it was up about to my shoulders, when my foot caught and I nearly fell down, but I struggled and finally got on my feet again. That night my uncle set a line and caught seven big fish, which we had for dinner next day.

We could see the big Buzzard bluffs from uncle's house, and it made a pretty scene, but I did not get to go to the top of them. In a few days we had to come home to Oklahoma. I was very sorry to leave.

Additional Stories

Philomena Grimm, Spalding, Neb.; Hazel Anderson, Stromsburg, Neb.; Ethel Schall, Benedict, Neb.; Anna Hinindera, St. Mary's, Neb.; Edith Reeve, Elmwood, Neb.; Lucy Wemple, Logan, Neb.; Georganna and Ila Watson, Spencer, Ia.; Lois Dunn, Delta, Ia.; Edna McKenzie, Macedonia, Ia.; Nettie Stickler, Ord, Neb.; Lester Krotcher, Orchard, Neb.; Harry Linder, Elmwood, Neb.; Stella Krecklow, Louisville, Neb.; Ellen Doxtad, Emerson, Neb.; Helen Drapela, Clarkson, Neb.; Lucile Sparks, Emerson, Neb.; Mary McKown, Seneca, Neb.; Ralph Aikes, Cleves, Ia.; Peter Walter, Knierim, Ia.; Agnes Spittall, Ayrshire Ia.; Catherine May Hardy, La Junta, Colo.

Styles for Home Dressmaker

Description of Patterns

6246—Ladies' Shirt-Waist—A simple blouse with drop shoulder, low neck and long or short sleeves. These waists are made of pongee, messaline or linen. The collar and cuffs may be detachable and considerable variety thus obtained. The pattern 6246 is cut in sizes 34 to 42 inches bust measure. Medium size requires 2⅝ yards of 36-inch material.

6773—Child's Dress—This little frock is quite a novelty. It has a plain blouse, open only a trifle at the neck, where there is a round collar and regulation sleeve. The skirt may be plaited or gathered and is joined to the blouse at the belt, with visible buttons. The pattern 6773 is cut in sizes 2 to 8 years. Medium size requires 1⅛ yards of 36-inch light material and 1¼ yards of 36-inch dark goods.

5127—Ladies' Corset Cover—This corset cover is just the thing for the stout figure, as it is tight fitting. It is made with a round-shaped neck. The neck and armholes are finished with edging. Cambric or muslin can be used to make this corset cover. The pattern 5127 is cut in sizes 36 to 46 inches bust measure. Medium size requires one yard of 36-inch material, three yards of beading and three yards of edging.

6821—Ladies' House Dress—Linen or gingham can be used for this house dress, with the trimming of contrasting material. The dress is made with the front and back in one piece. The three-gored skirt can be made with the high or regulation waistline. The pattern 6821 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2⅞ yards of 54-inch material and one-half yard of 27-inch contrasting goods.

6815—Boys' Rompers—Every small boy needs a pair of rompers, and here is an excellent pattern for making such a garment. These rompers are made with the front and drawers in one piece and with either the long or short sleeves. The pattern 6815 is cut in sizes 2 and 4 years. Age 4 years requires 2½ yards of 36-inch material and one-half yard of 27-inch contrasting goods.

6791—Children's Dress—Linen, galatea or gingham can be used to make this dress. The dress closes at the front and can be made with either the long or short sleeves. The skirt is cut in two pieces. The pattern 6791 is cut in sizes, 2, 4 and 6 years. Age 4 years requires 2½ yards of 27-inch material, if made with the short sleeves.

5292—Ladies' Apron—This apron is just the thing for wearing around the kitchen, as it covers the entire dress. It fastens at each shoulder and has a pocket in each side of the front. Linen, gingham or percale can be used to develop this apron. The pattern 5292 is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size requires 3¾ yards of 36-inch material.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Of Interest to Women Readers

Glad Songs

Sing me a song of gladness,
Sing me no song of woe;
Life has enough of sadness,
Let all your dirges go;
Cheer me with merry laughter,
Rouse me with songs of glee;
Leave for the long hereafter
Wailing and misery.

Never a song bird swinging
Out in the apple tree
Wastes ever a moment singing
A sorrowful melody.
Always the notes are cheery,
Always his songs are glad;
Sing not your dirges, dreary,
Sing me no song that's sad.

For life has enough of weeping
And life has enough of rain,
And many a soul is keeping
A grief that's akin to pain.
So sing not a song of sorrow
That starts up our tears again,
But sing of the bright tomorrow,
And gladden the hearts of men.
—Detroit Free Press.

Begin on Yourself

Mary rumpled up the paper and threw it on the floor. "It makes me tired," she said, "the way these women's papers lecture the women all the time—always wear a smile; keep your temper; be economical; wear sensible clothes! Why don't they begin on the men? They need it quite as much as we do."

"And, in the meantime," said her Aunt Sarah, who was spending the day, "while we are waiting for someone to begin on the men, what are you going to be doing?"

we going to be doing?"

able as we please," said Mary, laughing.

"I have often noticed," said Aunt Sarah, smiling, "that the little sermons that come our way are not usually received well, because we are so busy watching for someone to begin lecturing other people about their pet sins we haven't time to consider our own. We would get a good deal further with reforms if we would only begin on ourselves."

"It looks as if I had brought a sermon down on my own head," said Mary. "Go on, Aunt Sarah; I'll try to take it to heart."

"No, I didn't mean to preach," said Aunt Sarah, "but what you said made me think of old Mr. and Mrs. Marcy that lived next door to us in Gideon."

"And used to quarrel so dreadfully," added Mary quickly. "They used to frighten me almost to death when I was a child and came to visit you."

"Well, one day," continued Aunt Sarah, "Mrs. Marcy found an article in a magazine that told how to learn to keep one's temper. I happened to be there that day, and she said to me: 'There; I'm going to leave this open right here on the table so father will find it; it is just what he needs!' That evening Mr. Marcy came over to borrow our wheelbarrow and stood a few minutes by the kitchen door talking to me. 'I found the best article in a magazine today,' he said. 'It told all about how to learn to keep one's temper. I left the book open on the table for mother to read; it'll do her good.' It was almost a week before I was over there again, but the magazine still lay open on the table, and both Mr. and Mrs. Marcy were waiting for the other to read it, but had never thought of applying what it said to themselves."

"Let me see; what is this article about?" said Mary, picking up the crumpled paper she had thrown on the floor. "'Greet Your Husband with a Smile.' Well here he comes. Now watch me smile at him. You can never say I didn't have sense enough to take that little sermon to heart."

"Hello, Aunt Sarah!" said her husband, entering. "Hello, Mary! Anything wrong about me? What are you grinning at?"

HOME EDITOR.

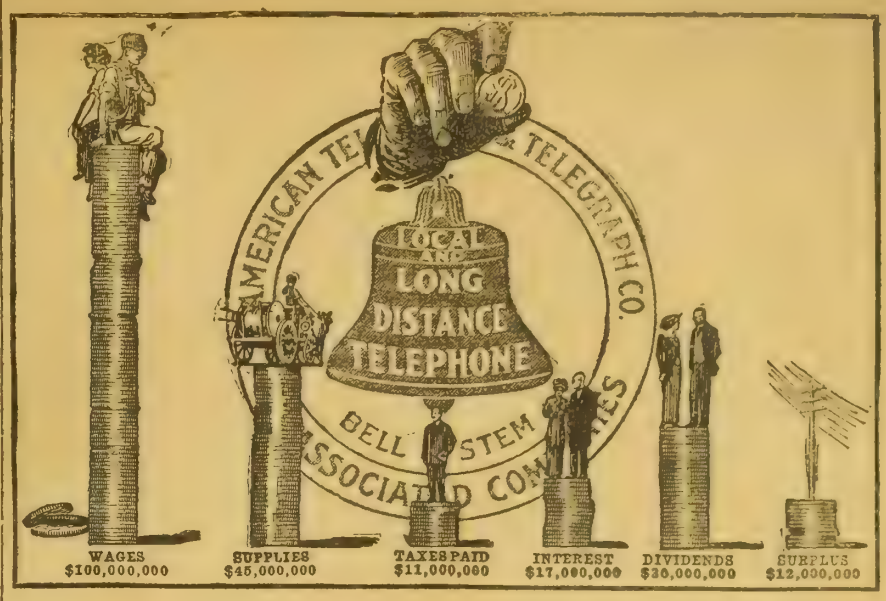
To Make Fine Kraut

Since the first essential in making good kraut is that of securing the proper material, we choose only those heads of cabbage that are good sized, solid, and free from rot. All damp, coarse or partly green leaves on the outside of the heads are carefully trimmed off until the clear, fresh leaves are reached. The heads then are divided into quarters until we think we have a sufficient quantity to make the desired amount of kraut. We also remove the hearts and that part of the leaves just next to them, as these would cause the kraut to be coarser and tougher, but this is not absolutely necessary to the keeping qualities. These quarters are carefully examined, and any dirt, bugs or worms brushed off before beginning the chopping-up process.

We next secure a stone jar, into which the kraut is to be packed. A barrel should be used where a considerable quantity is to be put up, but in either case the vessel should be absolutely clean. The quartered heads then are sliced into a few pieces and enough to form about a four-inch layer is placed into the jar, chopped up as fine as desired and salted to suit the taste. These layers are continued until the jar is full. While the regular kraut cutter may be used in this chopping-up process, a clean, new No. 3 baking powder or fruit can is just as good or a little better, the top being melted loose, leaving the sharp edge to cut with. In barrel kraut making enough of these quarters should be placed in the barrel at each time to make about five gallons of kraut, a quarter of a pint of salt added and a common spade used to chop up the cabbage. For small quantities of kraut a potato masher should be used to pack each layer down well, but for the larger quantities in a barrel one should provide a maul or tamper.

The last layer of kraut placed in the vessel is covered with a piece of clean, white muslin. Clean cabbage leaves are equally as good, and they are more apt to aid in retaining the natural flavor of the kraut. Over this covering we place a board the shape of the opening in the barrel, or a common plate on the jar, weighting it down with a stone. Do not use a metal substance of any kind for this purpose, as it will rust and damage the kraut until it cannot be used. The barrel or jar of kraut should be set away where it will keep moderately warm for a few days, as it will not ferment properly if too cool. At the end of two days, if the brine or juice has not risen

(CONTINUED ON PAGE TWENTY-THREE)



How the Bell System Spends its Money

Every subscriber's telephone represents an actual investment averaging $153, and the gross average revenue is $41.75. The total revenue is distributed as follows:

Employes—$100,000,000

Nearly half the total—$100,000,000—paid in wages to more than one hundred thousand employes engaged in giving to the public the best and the cheapest telephone service in the world.

For Supplies—$45,000,000

Paid to merchants, supply dealers and others for materials and apparatus, and for rent, light, heat, traveling, etc.

Tax Collector—$11,000,000

Taxes of more than $11,000,000 are paid to the Federal, state and local authorities. The people derive the benefit in better highways, schools and the like.

Bondholders—$17,000,000

Paid in interest to thousands of men and women, savings banks, insurance companies and other institutions owning bonds and notes.

Stockholders—$30,000,000

70,000 stockholders, about half of whom are women, receive $30,000,000.

(These payments to stockholders and bondholders who have put their savings into the telephone business represent 6.05% on the investment.)

Surplus—$12,000,000

This is invested in telephone plant and equipment, to furnish and keep telephone service always up to the Bell standard.

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Progress Being Made in Backwoods of Bolivia

LA PAZ—I am amazed at the discoveries now being made in the backwoods of Bolivia. Lying in the middle of the South American continent, separated from the Pacific ocean by a trackless desert, which belongs to Chile, with a great wall of mountains and plateaus running through it from north to south, Bolivia, until now, has been practically a hermit land. It has no seaport, and until within the past generation it had no railway connections with the rest of the world. Today the best part of it is unknown. I refer to that on the eastern slope of the Andes. The discoveries so far have been confined to the high plateau, upheld between the two ranges of mountains. This plateau is on the roof of the world. It is a great plain as big as the state of Ohio, situated at a height of from two and a half to three miles above the sea. It is walled in by mountains, and is so poorly watered that it produces only the scanty grass upon which the alpacas and llamas feed. It is bleak and barren and the winds that sweep over it are so cutting that I often wear a face mask to protect my complexion. This is knitted of alpaca wool. It covers the whole of my head, having only small holes for my eyes and mouth.

Nevertheless, this plateu is one of the treasure vaults of the world, containing vast deposits of silver and gold ,copper and tin. West of this plateau is the desert, descending into the borax lakes and nitrate fields of Chile, and east of it is the main wall of the Andes, on the other side of wnich are vast plains that slope gently to the Amazon and Parana river systems.

A Wonderful Country

Bolivia is a wonderful country. It has all-told an area of more than 700,000 square miles. You could put New England and all of the middle states and all the southern states except Texas inside it, and there would still be room to spare. Nevertheless, it has only about as many people as Chicago, and its pure whites do not number more than the population of either Memphis, Tenn., or Birmingham, Ala. The country has altogether something like 1,000,000 semi-civilized Indians and some hundreds of thousands of Cholos or half-breeds. These people all live on the high plateau of the Andes, a region that has all the cities and towns, and that practically includes the whole of Bolivia as the world knows it today.

East of the Andes is another Bolivia. This is the frontier or backwoods of the country. It is inhabited only by a few thousand savages. Nevertheless it contains half of the area of the republic, and is said to be one of the richest lands in the world. Eastern Bolivia is one-tenth as large as the United States proper. It is equal to six states the size of Illinois, and is one-third larger than Germany or France. The most of this vast territory is well fitted to be the home of a civilized people. The land consists of fertile plains that slope from the Andean wall toward the east, south and north, and gradually fall to a general level, where the highest points are only about 1,000 feet above the sea. The plain fades away at the north into the Amazon valley, and at the east and south into those of the Paraguay and Parana. The country is in fact a continuation of the great cattle fields of Argentina, Paraguay and Motto Grosso, and it may eventually be one of the great meat baskets of the United States. The land already swarms with wild cattle, and great herds are now feeding along the banks of the Pilcamayo and on the borders of the Paraguayan Chaco. There are wild cattle also in northern Bolivia, next to Brazil, very near the tract of 5,000,000 acres taken up by Murdo Mackenzie and the Brazil Land and Cattle company. That tract has the best of pasture and it is already stocked with 150,000 beef cattle.

Country Home in Eastern Bolivia

Eastern Part of Republic the Best

During my stay in La Paz I have met a number of explorers from eastern Bolivia. I have also gone over the maps with Dr. Manuel Vicente Bolivian, the head of the national bureau of statistics and the best posted man in the world on the geography and resources of this country. Dr. Bolivian tells me that the eastern part of the republic is by far the best part of it, and that it will some day support a vast population. He describes it as well watered by tributaries of the Amazon and Parana, and as having a rainfall well fitted for crops. He has given me a report just received from Dr. Guillermo Velasco concerning the country. Dr. Velasco has devoted many years to the study of this section, and in his report he discusses the extension of railways and the opening up of the mineral resources.

One of the great possibilities lies in the petroleum deposits. Eastern Bolivia has a strip of land running north and south for a distance of 200 miles where the oil oozes out of the ground and where it has been used by the Indians for generations for lighting and burning. A number of oil companies have already been formed for the exploitation of these deposits, and concessions have been granted to Americans and others to develop some of them. Among the foreigners who are interested in the region is the Farquehar syndicate, which has vast properties in Paraguay and Brazil and which has to do with the building of the Madeira-Marmore railroad, far up the Amazon valley. Experimental wells are now being put down, and the prospect of discovering flowing wells is said to be good. The chief difficulty will be the getting of the oil to the market. The distance across country to the Atlantic seaboard in a straight line is considerably more than 1,000 miles, and this will necessitate the pumping of the oil over the high plateau of Brazil. If a pipe line should be run from the lower end of the field down to Asuncion in Paraguay, and thence through the Parana valley to Buenos Aires, the distance would be almost twice as great, but the slope would be gradual and uninterrupted all the way to the sea. Such a pipe line would have the markets of the fast populating country of Argentina on the way, and the oil would command a ready market there for both fuel and lighting.

More Gold than Coal

As to coal, so far none of value has been discovered in this part of the world. There is said to be some in the northern part of the Peruvian Andes and on the coast of southern Chile there are great beds that run far out under the Pacific ocean. The latter mines have been worked for generations, and they still supply a large part of the fuel of the west coast. There is no coal in Brazil sufficiently good to make steam or smelt iron, and so far Argentina, Uruguay and Paraguay have shown no fuel of value. Mr. Forbes, an eminent English geologist, who has done some work in eastern Bolivia, says that an enormous carboniferous deposit probably exists at the eastern foot of the Andes and that geologic conditions lead to that belief. No soundings or borings have yet been made, but one evidence is the petroleum springs thirty miles from Santa Cruz.

As to the gold of eastern Bolivia, the Indians have for ages been washing it out from the headwaters of the Beni, and the gravel of that stream shows color all the way down the Amazon. It is believed that a great part of the treasures of the Incas came from the Beni; and the English and American miners are prospecting in that region today. Gold is being found in Matto Grosso, just across the borders from eastern Bolivia. They are working placers in the provinces of Santa Javier and also in Santa Rosa, where during the dry season they bore for thirty to forty-five feet down into the beds of the canals and wash the dirt. Many of the rivers of eastern Bolivia have never been prospected. They have a deep undercurrent, and run over slate and granite so that the rough tools and clumsy methods so far used have not proved efficient, except where there are alluvial deposits thrown up by the streams. These deposits are usually about three or four feet wide, and of about the same depth. Some gold is being found in the River Quisere, which is about fifty miles long. The Quisere flows over a bed of quartz upon which is an alluvial deposit containing gold that could be worked by the use of dredges. There are also quartz deposits in the neighborhood of these rivers, and the placer miners report the finding of quartz, visibly incrusted with gold. There is one quartz vein in Santa Rosa, called the Clemente, whose every test shown gold.

The great difficulty, however, is in the getting in of machinery and the reduction of the ores. So far there are practically no means of transportation.

Question of Communication

And this brings me to the question of communications. South America is at the beginning of a great railroad era. New lines are being built in nearly all of the republics of the southern half of the continent, and many roads have been projected to open up new territory. There are several already planned and surveyed that will materially affect eastern Bolivia. One is the extension of the Antofagasta railroad which runs from the Pacific ocean across the desert to the great tin mining town of Uyuni, and thence on to the plateau of the Andes, ending here at La Paz. This line has built a branch from Uyuni to the town of Tupiza, and it is now within a short distance of the Argentine railroad system, Only about 100 miles remains to be built, but when this is completed there will be a transcontinental route across Bolivia from the Pacific ocean to the Atlantic. This road will pass through the southern part of the country, and not very far away from the oil fields.

Another possibility of opening up eastern Bolivia lies in the railroads the Brazilians are building into Matto Grosso. They have surveyed lines to connect the Atlantic seacoast at the bay of Sao Francisco with the cattle regions of Matto Grosso within a short distance of the Bolivian boundary.

The pastures of Matto Grosso will support millions of stock and they are only about as far from Sao Paulo, the great city of southern Brazil, as from New York to Cleveland. The Brazil Land and Cattle company has formed an alliance with one of the large packing companies of the United States, and they are now erecting packing houses at Sao Paulo. The cattle of Matto Grosso will be sent there by railroad and will be killed, dressed and frozen preparatory to their export to the United States and Europe. The short extension of this projected road would reach the cattle fields of eastern Bolivia and bring them much nearer the seaboard than our cattle fields west of the Mississippi, from where we have shipped vast quantities of meat to Europe.

Great Railway System Planned

Another probability of the near future is that railroads will be built from the Argentine boundary through eastern Bolivia to Corumba, Brazil, with a railway center at Santa Cruz. The latter town lies in the heart of the petroleum territory, and it will eventually be a great railroad center.

A line has been surveyed from there to the Marmore river, which runs into the Madeira and on to the Amazon, and in the far future this may be extended through

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the Amazon valley to Iquitos. Another road has been surveyed from the city of Cochabamia, high up in the mountains southeast to La Paz, to connect with the Santa Cruz extension where it joins the Marmore. All of these lines, with the exception of the southern connection with the Argentine system, are in the future. However, the Bolivian government has decided that the Andean regions and the eastern plains must be united and it is planning railroads to that end.

At the present time eastern Bolivia is practically inaccessible and it cannot be opened up to colonization until railroads are built. There is no way to get into the country except on foot or on mule back, and no way to get the crops out. When the railroad is completed to Corumba the cattle can be driven there and shipped to the markets of eastern Brazil; but just now it is not possible to send them down to Buenos Aires on account of the heavy freight rates on the steamers on the Paraguay and Parana rivers.

So far all of the Bolivian railway building has been confined to the plateau and its connections with the Pacific coast. The most of the cities are still inaccessible except upon mules, and there are towns of 20,000 and 30,000 and more that can be reached only by mules. Away from the railroads there are practically no hotels fit for a white man to live in. The country inns are more like stables than anything else, and in the cut-of-the-way places it is almost impossible to buy food of the Indians or to obtain quarters in their huts for the night. The beds of the inns are platforms made of stone or sun-dried brick, and the bedding is often lousy and dirty. One should carry a camp bed, and he should be supplied with rugs, heavy boots and a rubber coat or poncho. He should also carry along some provisions.

During my stay here I have gone over the exhibit that Bolivia has prepared for the San Francisco exposition. A large part of this comes from eastern Bolivia. It includes with other things, samples of fine timber found there. About one-fifth of that whole country is covered with trees. The area is as large as the state of Missouri and the timber is about the finest in South America. Some of it is so hard it will turn the edge of an ax, and a great deal of it takes a beautiful polish. The cabinet woods include ebony, walnut, mahogany, cedar and lignum-vitae. Some of the trees are of great girth and height, and the wood is so heavy that it will not float. It will require railroads or steamers to bring it to the markets. There are also many rubber trees—trees that bear the silk cotton and those producing vegetable wax. Samples of all these products will be sent to San Francisco.

Among the exhibits from the same region are cacao and tobacco, and also Indian corn. Eastern Bolivia promises to be one of the great corn countries of the future. Corn grows well not only in the low valleys, but everywhere throughout the plains I have described. The samples of corn to be sent to San Francisco comprise twenty-five different varieties, some grains being not bigger than popcorn, while others are as large as the largest thumb nail and a quarter of an inch thick. This latter kind grows on the plateau, where the elevation is not too great. The color is snow white, and the corn is so soft that it appears to be made of flour pressed into shape. Another variety is jet black, and others are red and pink. It is possible that some of these could be crossed with our American corn to advantage.

May Be Great Cotton Lands

Eastern Bolivia may be one of the cotton lands of the future. The people have been experimenting with seed from America and Egypt, and they find that they can grow cotton all the way from 8,000 or 9,000 feet above the sea downward. Indeed, some good cotton is being raised in the depressions of the high plateau of the Andes and on the slopes that lead down into the valleys. Some has been grown even at two miles above the sea. This is the case near Cuzco, Peru. When I called on the governor of that province and asked as to the agricultural development of the Andean region he told me that they were successfully experimenting with cotton and tea. He brought out some cotton balls which he had produced on his own farm near Cuzco. The staple was comparatively short, but the lint was beautifully white and silky. That cotton was planted in January, and it was ready for picking in August. The governor said that tea did very well, and that he believed the mountainsides lining the valley of Cuzco might some day be covered with tea gardens. So far, the bushes have been grown only in a small way. The seed has been imported from Japan and China. The plants are easily grown, and, as the labor used costs only about 15 cents a day, it is thought that the business can be made a profitable one.

One of the reasons for the tea experiments has been the hope that it might take the place of the coca shrub, which is now being grown at comparatively low profits, on account of the fall in the price of cocaine. There are vast tracts in Peru and Bolivia devoted to the growing of this plant, which in its habits is not unlike tea. It thrives in the temperate regions of the western plateaus. It is set out in plantations, and the third year after sprouting it is ready to crop. The leaves are then stripped from the shrub and dried flat. They are then put up in bags, and brought to the cities where they are peddled out to the natives.

All of the Indians chew coca leaves, and the demand for them is enormous. Every farm hand has to have them, and an allowance of coca is a part of the contract with all the miners. The coca leaves are also shipped to Europe and the United States to be manufactured into the cocaine of commerce.

Among the products of eastern Bolivia are rubber and quinine. Bolivia has been producing millions of pounds of rubber every year and there are rubber camps scattered all along the tributaries of the Amazon. Just now these camps are in a bad way on account of the competition, the rubber of South America is having with that of Ceylon and Malaysia, which, although cultivated, can be produced at a far less cost than that of the wild trees of eastern Bolivia.

For a similar reason there is also a falling off in the product of the cinchona tree from which comes our quinine. Quinine is often called Peruvian bark. It first came from Peru, but later from the trees that grow wild in this country. For a long time Bolivia and Peru had a monopoly of the quinine production, and in order to hold it they forbade the sending of cinchona seeds away from the country. However, some were sneaked out and taken to Ceylon and other parts of India. Plantations were started there and within a few years the Indian quinine was competing with that of South America. Later still the seeds were carried to Java, and now Java is producing most of the quinine of the world. In the meantime, the prices have steadily fallen. The bark which in 1882 brought something like $2 a pound in Bolivian money, now sells for a bagatelle, and the cultivated plantations that were set out here are run at a loss.

(Copyright, 1914, by Frank G. Carpenter.)

Successful Shipping Association

THERE are in the state of Nebraska several farmers' shipping associations. Some have have been successful, others the reverse. One of the successful organizations of this kind is located at Albion, Neb., and known as the Abion Live Stock Shipping Association. It was organized in November, 1909, wth 122 members. The following year, 1910, there were thirty cars of live stock shipped by this association, the net proceeds of which amounted to $41,993. In 1911 there were added 115 members, and during that year 109 cars of stock of different kinds were shipped, net proceeds amounting to $114,900. In 1912 seventy-five more members joined the association. During this year 105 cars were shipped, for which was received $118,017. In 1913 seventy-five more farmers became affiliated with the association, during which year 120 cars were shipped, for which these men received $162,013. Up to August 1 this year forty-nine members were added to the roll of membership and from January 1 to August 1 ninety cars of stock were shipped, netting the shippers $118,009.

At the present time the total membership of this association is 436. The membership fee is $1. The association holds annual meetings, at which time are elected regular officers and a board of directors, which have charge of its affairs. The actual work is done by a manager, who is elected by the board of directors, and he is paid for his services $5 per car for each car shipped out.

Mr. A. W. Lamb, manager of this association, tells us that their record shows the average shrinkage for hogs to be about 200 pounds per car. Each shipper stands his own docks and also the losses incurred by his hogs being sold subject. When this organization was started in 1909 there were three local stock buyers located in Albion, each doing a good business. For the last two years there has been no local buyer, as it has been impossible for a local man to buy enough stock to warrant his staying in business. Every car of stock that has been shipped out of Albion for the market in the last two years has been shipped by the owner himself or by this association, which is rather conclusive proof of the confidence farmers and stock growers in this community have in the integrity and square dealing of the management. This organization is run strictly for the farmers. All speculators are barred from becoming members. No man is allowed a membership certificate unless he is a producer of live stock.

In talking to Mr. Lamb about methods used in their business, one plan he followed appealed to us as being very practical and fair, and that is putting in the same car hogs coming, as nearly as possible, from the same distance. This plan eliminates the inequality of shrinkage when the car would be made up partly of hogs hauled possibly a mile and partly of hogs hauled ten or twelve miles. The fellow living close can easily fill his hogs well before starting from home, making his shrinkage large from the scales at Albion to South Omaha. The man who hauls his hogs a considerable distance has a greater shrinkage on his hogs before weighing them at the shipping point, consequently a smaller shrinkage from the scales at Albion to South Omaha than does the man making a short wagon haul. This is a matter of which it might be well for managers of other shipping associations to make note, if they are not already following this plan. Every shipment is settled for in cash as soon as returns are received. All expenses incident to this particular shipment are charged against the car, including the manager's salary and any telegraph or telephone messages necessary.

The dollar membership fee is used for buying incidentals, such as tools, nails, stationary, etc. This paper is firmly of the opinion that if they are managed in the right way these farmers' shipping associations can be of great value in any community. The middleman's profit is cut out and the farmer gets the full price, less expense, for which his hogs are sold. Some of these farmers' shipping associations have been unfortunate in falling into the hands of some manager who has exploited them to his own gain instead of looking out for the interests of the members of the association.

It might be well for farmers in localities who contemplate an organization of this kind to correspond with Mr. Lamb and get their plan of work and a copy of their bylaws and plans.

$500 For Your Old Straw Stacks!

How to Profit $2.50 a Ton From Straw Right On Your Own Place.

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Two years ago William Knop, of Preston, Kansas, didn't realize that his old straw stacks could be made to yield an extra cash profit of $500.00 a year but he **knows** it **now**, because he spread those stacks on his wheat land a year ago, and banked an extra $500.00 as the net result. He estimates his benefits at twice that.

Curtis M. Brown, of Attica, Kansas, did even better by straw mulching his new alfalfa seeding as well as his wheat.

Hundreds of other progressive farmers in various parts of the country have been saving their stacks for years, and are now converting old straw into gold with the use of a straw spreader, simply by turning it back onto the soil and allowing it to do its work as the one great natural fertilizer.

When used in this way the straw stack **saves** money and **makes** money in more ways than one. It eliminates the usual large investment made every year for commercial fertilizer. It returns to the soil those priceless plant elements taken from it in the production of "bumper" grain crops. It builds up the humus supply, conserves moisture, acts as a windshield in preventing soil blowing, and adds as much as five bushels and even more per acre to the wheat yield and increases other crops in proportion.

You will say that all this is an old story to you, that everyone realizes the value of straw as a fertilizer and soil-saver, but that everyone also knows what a strenuous task is before him when he undertakes to spread his fields with straw by the old-time pitchfork and hand method.

Yes, that **is** the strong argument against the use of straw as as a fertilizer, and many stacks would continue to "go up in smoke" and take good dollars along with them if that were the **only** method to be used.

But it **isn't** the only method, in fact the "pitchfork and hand" method is **not** the method used by Knop and Brown and others metioned above.

A new labor-saver, soil builder and money-maker for the farmer has lately been perfected to perform this very service. It is known as the "Simplex" Straw Spreader, and it is being manufactured and distributed among thousands of American farmers by the well-known firm of modern farm machinery experts, the Manson Campbell Co., 375 West 10th St., Kansas City, Mo.

It was the "Simplex" that led Wm. Knop to the way to $500.00 **extra** profit money from his farm last year—just as it is **now** showing thousands of others the way to these most acceptable "extra profits."

The "Simplex" works to perfection under most exacting conditions.

You can attach it to any header, barge or hay frame, fill it high with straw, wet or dry, even old rotten stack bottoms or manure and cover the ground thoroughly and evenly over a strip 12 to 20 feet wide.

You can easily spread 20 acres or more a day, and the labor it performs, the time it saves and the soil it builds, will pay for it in 10 hours' time. It is possible to pay for itself in a single day.

Mr. Manson Campbell has announced a special offer for the readers of this paper, which enables you to put the "Simplex" to the most exacting test—to try it out in your own way on your farm for 30 days without risking a dollar of your money in the purchase, and in 30 days the machine will give you service that will pay its cost **many times over.**

A very interesting and very instructive book on straw fertilizer and the "Simplex" Spreader has just been issued by Mr. Campbell. The book contains pictures of scores of the best known and most successful farmers, agricultural experts and farm journal editors and their experience with the use of straw as a soil-builder and profit-maker. The book and full information about the special 30-day free trial, no-money-down offer to our readers will be sent free and postpaid to all who will write the Manson Campbell Company, 375 West 10th St., Kansas City, Mo. We advise our readers to write for the book and investigate this liberal offer.—Advertisement.

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are the equal of any anywhere in the world. The black top soil runs from 18 inches to several feet in depth. It's rotted vegetation mixed with mineral. No fertilizer ever needed if its fertility is conserved.

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These farms can be had now for from $35 to $50 per acre, on easy terms; small down payment.

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Where Will You Locate?

(CONTINUED FROM PAGE SEVEN)

The Ozark Country

What is generally referred to as the Ozark country—most of it is in southern Missouri and northern Arkansas—is a rather mountainous country covered with more or less timber and brush, somewhat stony in places and containing a number of small, rich valleys. Stock raising is carried on to some extent in the Ozarks, for which many parts of this strip are very well adapted. Dairying is being carried on much more extensively than in years gone by, and the farmer who is taking up and pushing the dairy business is, generally speaking, making it a success. Cotton and peanuts are two of the main crops. Various kinds of tame and wild grasses grow well here. The Ozark country, like many other southern localities, is rapidly coming to the front as a hog-raising district. Some districts in the Ozarks are successfully raising hogs and shipping them into localities where more corn is grown, selling them as feeders at good profits to the raisers.

One of the successful industries carried on in a great many parts of the Ozark region is fruit raising, particularly that of apples and peaches. One traveling along the railroads of this district will see little stations with possibly two or three buildings comprising the town and will wonder why a station was ever made there. Inquiry will reveal the fact that hundreds of cars of peaches and apples are annuallly shipped from these places; they come from back in the hills and mountain sides. The natural climatic conditions of this district seem to be very favorable to the production of these palatable fruits.

Florida

For many years Florida was generally regarded as being best adapted for winter homes for rich men from other parts of the world. There is no question but what this state is ideal for this purpose. It is also an ideal place for a summer home. The fact of its being a peninsula, having water on both sides, tempers the heat of the summer, making the climate most all the year round delightful. Many men from the north have come into this state in years past without a practical knowledge of climatic or soil conditions and in consequence made a failure of their intended pursuits. In later years careful investigation of soil and climatic conditions have shown that parts of this state at least are adapted to the raising of some crops on which good results can be obtained. There is probably no place where vegetables of practically all kinds can be more successfully grown. All the citrus fruits seem to thrive splendidly in central and southern parts of Florida.

Don't go into this state with the idea of making your money out of corn, wheat or oats. We would advise prospective homeseekers to make careful investigation of the locality in which they expect to buy before making the purchase. Look after soil conditions in particular. Some soils in this state require a great deal of fertilizing. Look carefully to the fact as to whether or not the fertilizer you use will do you the good it should.

If you expect to pay some considerable attention to the question of raising truck, see what the average net profit for a number of years on this truck is likely to be. This state is being settled generally by people from the north central states and many of them are well pleased with their new homes and are making a financial success of the venture.

Louisiana

Louisiana is one of our oldest settled states, yet there are thousands of acres of its rich farm lands not now under cultivation. This will undoubtedly seem strange to many of us. This state was sorely affected by the civil war and in some respects has not recovered from the effects of this great calamity. At the time of the war most of the farm lands were owned by large planters, who depended entirely on negro help for their farming operations; on account of the war this help was all lost to them. Their finances were gone, as well as their help and work animals.

Some of these plantations are now owned by the direct descendants of the owners in war days and are farmed by negroes. The planter lets the negro take one or more mules and farm as many acres as he can, dividing the crop with the landlord. In some of these localities these planters have not yet had sufficient help or farm animals to put all their land into cultivation, and consequently it has been lying idle.

The richer lands in this state lie along the Red river valley and in the timber and prairie lands of the southern part of the state. Along the gulf coast many of the swamp land districts are being reclaimed and put under the plow. Louisiana has been noted for its great production of cane, and farmers have made good money in growing this crop. What the present tariff legislation will do in respect to the profits to be made on cane growing remain to be seen. Corn is very successfully grown, as are many of the clovers. But for the boll weevil, cotton raising in this state would be very profitable and has made good returns to the planter before this insect destroyed the industry.

Much cut-over land has been placed on the market in north central Louisiana and to more or less extent successfully farmed. This is the pine country, and soils are not as productive in pine cut-over lands as they are in the cut-over lands of the southern part of the state, where the hard wood grows. If you contemplate buying any of these pine cut-over lands it will be money well spent for you to make a personal investigation, not only of the lands, but the crops that grow and the water. Practically all these lands, to grow crops successfully, must be fertilized. Investigate the cost of this fertilization compared to the crops produced and find what your net profits may be. Many of the cut-over lands in this part of the state we believe will in time be turned into very profitable cattle-growing districts. Profitable hog growing, without doubt, will be more extensively carried on year after year in Louisiana. Stock can be pastured twelve months in the year and the grains on which they are to be fattened can be successfully grown. Some advantages to be taken into consideration by the homeseeker in all southern localities are the minimum fuel and clothing expense and the fact that in most of these localities vegetables can be produced twelve months in the year.

Alabama and Mississippi

These two states have wonderful possibilities, containing thousands of acres of our richest and most productive soil. One of the main things needed in these states, as well as most southern states, is good, energetic, hard-working, northern farmers. In these states a great per cent of the land is farmed by negro tenants under their own systems, which are, to say the least, very crude. Up-to-date agricultural methods have not generally been pursued. Many northern farmers have gone into these states and been very successful.

Mixed farming and live stock raising will undoubtedly prove very profitable here. In many parts of this country alfalfa and other clovers are very successfully grown. Corn is a good crop and in years past cotton has been one of the good money makers. The boll weevil, however, has driven the farmers of this state to diversified farming and various kinds of fruit are successfully grown, and on many of the streams and in groves set out for that purpose pecans are making a good source of revenue. A considerable portion of the farming land of these states is already under cultivation. There are, however, some raw lands that will be valuable for the raising of the various crops grown in these states.

Generally speaking, the health conditions in these states are good, Alabama having one of the lowest death rates of any state in the union. Like other southern states, they are well adapted to live stock raising on account of their long

pasture seasons and mild winters. Hog raising is not extensively carried on, but will become, in our opinion, an extensive industry. Peanuts are largely and successfully grown. Experiments have shown that peanuts make very valuable hog feed. The hog can be grown and fattened on grasses and peanuts, except for the last thirty days or so of the fattening period, when corn must make considerable of the ration for finishing good hogs.

Texas

Texas is practically an empire in itself. If a stone wall were erected around this great state, allowing no imports of any kind, the people would scarcely know it by deprivation of any of the things they now enjoy. They have their own coal and other fuel and raise great quantities of cotton and wool; practically all kinds of grain grow in different parts of this state; building timber is abundant; large oil fields are situated in different parts of the state; alfalfa and other grasses grow luxuriantly in many places; it produces its own sugar. Part of Texas is one of the best grain-producing sections of the United States and many varieties of fruit are profitably produced, and the cattle industry of this great state is surpassed by none.

Probably no state or part of a state has been more discredited on account of unscrupulous land sharks than has the Panhandle of Texas. As much as twenty-five or more years ago this great strip of country was exploited by land sharks as being one of the most wonderful farming districts to be found any place, and great quantities of this land were sold at prices that were ridiculously high. The result of all this was that the settlers going down at that time failed to make good, and consequently that part of Texas received a decided "black eye." The facts in the case are that there is a great deal of merit in the Panhandle of Texas and many farmers now located in that part of the state are making a success of their business. They have learned what to do and how to do it and are mixing farming and stock raising, as should be done in practically all farming districts.

East of the Panhandle country in Texas is what is known as the "black wax belt" and an exceedingly rich and fertile farming country. The grains of the corn-belt farmer are all raised in this district. Cotton is also grown here quite extensively. The farmers are rapidly becoming stock raisers, as well as grain farmers, throughout this part of the state.

Southeastern Texas is the pine lumber part of the state, and as the great pine woods are being cleared it is being converted into more or less of a farming community. The quality of the soil, however, is not what it is in the Panhandle or the black wax belt. South and southeastern Texas have been in the last few years developed to a considerable extent as a farming country. Many localities in this part of the state quite successfully carry on dry farming, raising cotton, wheat, corn and different varieties of kafirs. West and southwest of San Antone considerable irrigation is being done from artesian wells and wells on which pumps are used.

Large tracts of land along the lower Rio Grande river have been sold to homeseekers to be farmed under irrigation from waters pumped out of the Rio Grande river. What we previously stated about the water supply under head of "Irrigation" we want to emphasize when the landseeker is contemplating buying in this district. The soil generally throughout this district is very rich and will readily produce splendid crops if the water is properly applied and good cultivation follows.

In the mountain districts of southwestern Texas are many large ranches. We believe it is one of the good cattle countries. Some valleys between the mountains are being recommended as good farming districts. We question their availability for this purpose.

At the present time, generally speaking, Texas is a very healthy state. There are, however, parts of this state where one should look carefully into this matter in figuring on making a home.

Oklahoma

Oklahoma was so long what was called the Indian Territory that until recent years it has not been regarded to any great extent as the home of the white man. Recent years, however, have brought a very large immigration of farmers from the central and eastern states into this new country. Generally speaking, the soil in Oklahoma is good. Like all other states, however, there are poor spots. Corn, cotton and oats are crops quite successfully grown. Alfalfa in many localities is proving to the farmers that this splendid forage plant is as valuable and can be as successfully grown in Oklahoma as it could be in any other state. But most of the settlers who moved into this state to make their homes had already been taught the lesson of diversified farming or the combination of grain or live stock growing, and consequently this kind of farming is quite largely carried on in this state. We feel safe in saying that, taking into consideration the population, no state has more rapidly developed in successful hog growing than in Oklahoma. Peanuts are very successfully grown in practically all parts of this state. On many of the farms the hogs are brought to within about thirty days of the market on peanuts and alfalfa, being finished up on corn or a combination of corn and cottonseed meal.

There are thousands of acres of rich land in this state not yet under cultivation. The man who goes into this state to make farming his principal occupation should go there with the realization of the fact that he has work to do and plenty of it. This state generally does not have the rainfall of some of the states farther south and southeast and successfully to grow the crops in the ordinary way, intensive farming must be largely practiced.

North Dakota

North Dakota is one of the prairie states, and, as all others of its kind, was used in the early days for ranches. The settler giving his attention to farming began operations in North Dakota in the early '70s. Settling by farmers carrying on general farming operations has gradually increased since that time, until now there is a considerable amount of land in this state being used for raising the general grain crops. But, taking the state as a whole, only a small per cent of the land is now under cultivation. Up to a few years ago fully 50 per cent of the lands of this state were in the hands of speculators, but, generally speaking, sales now being made are to actual settlers.

The small grain crops of wheat, oats, barley, speltz and flax grow well in this state. Wheat is the main one of these crops. North Dakota has become famous for its large wheat fields, being the second wheat state in the union. It is certainly a great sight to travel along among the great wheat fields of this state at harvest time and see possibly twenty or more binders at work in one field.

Alfalfa, timothy, clover and millet are the hay crops principally grown. Cattle raising is carried on in many parts of the state to a considerable extent, the dry winters being particularly favorable to the cattle industry. Very much of the soil in North Dakota is a dark loam, underlaid with a clay subsoil. Dairying is an industry that is rather in its infancy in this state, but is one that will be rapidly pushed to the front. We look for an extended amount of silo building to be carried on in the farming districts of the state. Generally speaking, corn can be well grown for silage purposes and we believe farmers will adopt this modern method of making their farms pay a better revenue than they have heretofore done.

South Dakota

South Dakota is a state of various kinds of lands and soil, possessing some of the best and some of the poorest. The southeastern part of the state is probably one of the oldest settled and the best mixed farming localities of the state. Corn, various small grains and alfalfa grow quite successfully in this section. The corn generally grown is of somewhat smaller variety than in the states farther south. We can include in this territory a few sections of country west of the Missouri river in the central part of the state. This is a much newer country; the settlers here have become prosperous and are raising good crops.

That part of the state east of the river, commencing about the central part and running north, is more of a small grain country. Generally speaking, it has a very good soil, but in some localities is deficient in rainfall some years. Settlers locating here should investigate this matter.

Southwestern South Dakota is what is termed the Black Hills country, part of it being exceedingly rough. It is, however, well watered by various streams along the valleys, in which alfalfa is being very successfully grown. Many of these alfalfa fields are productive through irrigation from the waters obtained from these various streams. Many successful cattle ranches are located in this part of the state.

A large part of northwestern South Dakota is what is generally termed the Bad Lands. Considerable portions of the Bad Lands country is practically useless. The homeseeker contemplating locating in South Dakota can in some

To Make Fine Kraut

(CONTINUED FROM PAGE NINETEEN)

above the kraut, a weak brine should be made and poured over it until it rises above the covering. After fermentation has taken place, however, the kraut is kept in a cool spot, and if it can be left where it will freeze slightly, so much the better, as it will keep in fine condition, be of a milder, sweeter flavor and be less liable to promote digestive ills. Turnips may be peeled, sliced and converted into kraut by the same process, or half cabbage and half turnips may be used, which furnishes more of a variety.

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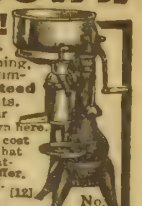
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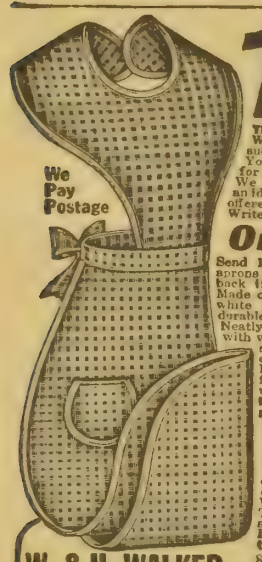
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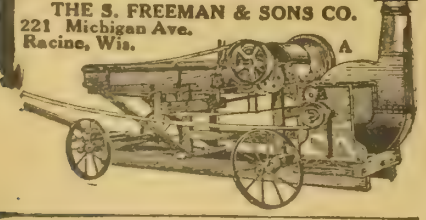

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parts of the state probably find a soil and farming locality to his liking. He can find the ranch country, the irrigated alfalfa district, the rich corn and small grain country. There are cheap lands in that part of the state having a light rainfall, but, however, with good soil and being a good oat and wheat country. Irrigation from wells is being successfully carried on in some parts of this state and it is possible that future developments along this line will insure crops in some localities which are now deprived of the crops capable of being raised on account of insufficient rainfall in some years.

Sheep raising is carried on quite extensively in some of the more hilly parts of the state. This is an industry that could easily be more extended and with good profit. In times past many of the lands of South Dakota have been speculators' lands, but, like most other states, the actual settler is now the buyer.

Wyoming

Until recently Wyoming was considered practically nothing but a ranch country, being especially adapted to sheep raising. The high-priced lands of the east have gotten many farmers and renters in that part of the country to seeking cheaper lands. The fertile valleys of Wyoming have begun to attract thousands and thousands of homeseekers, with the result that at this time considerable oats, wheat, flax, barley and speltz are raised. In many of these valleys, especially those under irrigation, alfalfa is grown very extensively and makes a profitable crop. Of the small grain raised oats is probably the most profitable on account of the good local demand for it as a feed for the live stock grown in that part of the country. Hog raising is not carried on to any great extent in this state, but settlers are beginning to look upon this branch of farming as one of profit. We certainly believe that Wyoming farmers who can grow alfalfa will find hog raising very profitable. Cattle raising has been carried on quite extensively in Wyoming and has proven a very profitable venture. The principal grasses raised here are buffalo and gramma grass. These grasses cure well in the fall and make splendid winter feed. Probably on an average cattle will live well in the prairie countries on these grasses ten months in the year. Sheep raising is carried on principally in the mountain districts. The large ranches in the valley districts are rapidly becoming the homes of small farmers and many of them who have located in this state are making a success of their business and are well pleased with their new locations.

In several sections there are communities practicing intensive farming, sometimes called "dry farming," with decided success.

Colorado

The homeseeker going from the east toward the west comes to Colorado, the first of the mountain states. This state has made wonderful strides to the front in agriculture and live stock growing in the last decade. Irrigation is carried on quite largely and successfully in various portions of this state. Vegetables of different kinds, sugar beets, wheat and other small grains are successfully grown, as well as the king of forage crops—alfalfa. One particular product has made Colorado famous over all parts of the country—the Rocky Ford canteloupe. It seems that the soil and climate in this particular part of the state are such that cantaloupes of the very highest quality are produced. Greeley is one of the biggest potato centers of the west.

The day of the big speculator in this state is practically past. Settlers have demonstrated the value of lands in an agricultural way and consequently the price has, generally speaking, been too high for the big speculator. The sugar beet industry has been very successfully carried on in this state. The by-products of the sugar beet—the pulp and the tops—are used for stock feeding, making that industry a very profitable one.

Many of the farmers and ranchmen in Colorado are realizing the value of the silo and are raising corn quite successfully to be used as silage. Live stock growers in this state have a home market, that of Denver, which requires a large number of cattle, hogs and sheep daily. Denver has also become quite a feeders' market to many ranchmen and farmers in Colorado, and they have taken advantage of this feeders' market by going there and buying feeders and stockers, taking them to their farms and ranches, feeding them the beet by-product and alfalfa and turning them back to the market at a good profit. This gives the Colorado farmer two chances to make good money out of the alfalfa crop—selling it on the market as hay or feeding it to cattle. Colorado is rapidly coming to the front as a hog-growing state, the quality of hogs rapidly advancing. Many breeders of pure-bred hogs of the high class are now successfully operating in this state and are meeting with very ready sales for the animals they produce.

Montana

Montana is rapidly developing along the lines of agriculture. In recent years it has been thoroughly demonstrated that many of the small grains, particularly wheat, grow well in the fertile valley lands of this state.

Generally speaking, Montana is well adapted to the successful growing of all the fruits that grow in the temperate zone. The climatic conditions in the mountainous sections of the state are such that they are generally protected in the winter from very severe storms and in the summer from the hot winds. This state is favored in many localities with valuable coal mines, making fuel quite cheap to the settler. Most of the settlers coming into this state come from the states east of the Rockies. There are, however, quite a number coming from the coast states.

Montana, like almost all our western states, was until within the last few years practically nothing but a ranch country. With the advent of the settler these great ranches are rapidly decreasing and the small farms are rapidly increasing. The growing of alfalfa, timothy and clover can be successfully carried on in practically all the prairie and valley parts of the state.

Hog raising is not carried on to any great extent, but settlers will soon be finding they can make good profits in the growth of theis farm animal. Hogs can be profitably fed and made ready for market where a combination of alfalfa and wheat is successfully grown in this state. In many of the rough parts of the state sheep grazing is carried on to considerable extent.

Idaho

This state has been considered by many people who have gone through it on the railroads as being practically nothing but a country of sagebrush and mountains, but development has been exceedingly rapid here in the last ten to twenty years. Numerous successful irrigation projects have been put in, bringing many thousands of acres of rich lands under a high state of cultivation. Most of these lands under irrigation are well adapted to the raising of the various small grain crops, alfalfa and fruit. In some of them, however, the small grain crops are not extensively raised because alfalfa and fruit raising are proving more profitable to the settler.

In the north central and northern parts of the state are many localities where these various small grains are quite successfully raised without irrigation. These lands are generally more or less rolling; some of them might be termed rough, yet the soil is such that when once they are put under cultivation profitable crops are generally produced. The lands now under irrigation are what we may term high-priced lands, the prices being determined by their location and the crops produced. Sheep raising in the mountains and hilly lands is quite extensively and successfully carried on in this state. Broadly speaking, but a small portion of the lands are now covered with sagebrush. The soil of the sagebrush lands is good, and when once put under cultivation produces well. Settlers going into Idaho to buy irrigated lands will find prices holding up well, yet good profits can generally be made on these lands. There are probably many localities where these sagebrush lands can be obtained at a very reasonable price. Considerable time and expense will be necessary to get these lands to growing crops, and we would not advise the man who must realize soon on his investment to buy here without very careful investigation.

Washington and Oregon

The northwestern coast states are very rapidly developing along the lines of general farming and stock raising; still, a very small per cent of the lands are now under cultivation. Lands changing hands are, generally speaking, going to homeseekers who expect to move onto the farms and make them their homes. Fruit growing is quite extensively carried on in both these states. Prunes, plums, pears, apples, grapes and many of the small fruits grow luxuriantly and produce satisfactory returns to the growers. Wheat, barley and oats are the principal grain crops. Alfalfa is being very extensively and successfully grown in the eastern parts of these states and timothy and clover are in particular grown along the western coast. Hop growing is a large and successful industry in many of the valleys in western Washington and Oregon. On account of the mild climate, cattle growing can be and is successfully carried on. The hog industry is one that has not been given the attention we believe it should have been given, but farmers in these states are rapidly finding that hog growing is going to be a very profitable part of their farming operations. The mild climate, grass grown for pasture and the various grains successfully grown are making hog raising profitable in these states, and the Portland stock yards furnish a convenient market.

We spoke about the advisability, in seeking a new location, of looking carefully into market facilities when making a selection. The live stock market of the northwest at Portland affords farmers growing and marketing live stock in these two states a splendid market practically at their door. Sheep raising has been very successfully carried on in times past, but is decreasing with the lessening of the free range.

Like many other states, dairying is being given considerable attention in this country and profitable returns come from the good dairy herds carefully looked after. We predict that the northwest coast farmer will look more carefully into the dairy subject in the near future. Generally speaking, the climate in these states is mild. There is, however, a vast difference in climatic conditions in different parts of this country, and homeseekers should give this matter careful consideration in making a selection for their new home.

California

California is probably one of the most widely advertised states in the union, coming into prominence first as a gold-producing country and later famous for its citrus fruits. In recent years stock raising and general farming have become profitable and followed to a considerable extent in many of the fertile valleys of the state. Thousands of acres of this fertile land have come under irrigation and many of the small grain crops are being successfully grown. The fruit lands of California are generally well developed and command good prices.

The man with small means should not attempt engaging in the fruit business in this state to any great extent. Lands generally command a good price and are very largely cultivated by the owner. In many parts of this state alfalfa can be very successfully grown. Partly on account of the successful growing of alfalfa, dairying is being taken up to a considerable extent and with a degree of profit that will warrant people in this state following this industry to a greater extent than it is now followed. The different small grains produce satisfactory results in many parts of the state. Trucking is also very successfully carried on in many of the irrigated districts, as well as in other parts of the state where sufficient rainfall is obtained.

Like many of the older settled states, many homeseekers each year locate in California, coming generally from the central western states. We would advise the homeseeker who contemplates locating in California on irrigated lands

to read carefully what we have previously said in this article on this subject. We would also caution the man who has small means about being too sure of getting quick results from his investment.

Don't buy a farm obligating yourself to make specific payments too soon. The climatic conditions of this state are too well known for us to make any comment.

New Mexico and Arizona

These states are what are generally called mountain states and in times past have been used largely for ranch purposes. Crowded conditions in the east, however, have forced numbers of people to seek new homes and many of them have immigrated and located on some of the fertile valleys out here. Irrigation is very successfully carried on in different places in these states. The soils seem to be splendidly adapted to the raising of alfalfa. Some of the smaller grains and kafir are being more or less extensively grown and with the raising of these grains and alfalfa stock raising is being more profitably carried on. Very little of the land in these states has been sold to speculators, most of it going to settlers.

Climatic conditions generally are good. We would advise personal inspection and careful investigation of the land on which you expect to locate. Look after soil conditions, rainfall or the assurances of sufficient water for irrigation.

Canada

The vast prairie lands of Canada have held out an inducement to many homeseekers as a place where they may go and make comfortable homes and acquire the much-sought-for money. Many of them have succeeded in their desire and others have failed. Canada has been very largely spoken of and referred to as a wheat and cattle country, and this is largely true. However, many parts of the prairie district of Canada, which years ago was occupied by nothing but the ranches, are fast becoming the home of the farmer. One of the chief farming industries in years gone by in Canada has been the raising of wheat and oats. Other small grains—barley, rye and speltz—grow in most parts of this country. Some districts in Canada very successfully grow alfalfa, while in others this plant does not seem to do any good. In parts of Canada, particularly south and southeastern Saskatchewan, corn is grown sufficiently to be used profitably in filling silos. We believe that, generally speaking, the farmer who has gone from the United States to Canada and made up his mind when he went to work has succeeded.

This country seems to be the natural home of wheat and oats. But the question arises, Will this ground continue to grow these crops as they have in the past, or will the Canadian farmer have to turn his mind more to a combination of farming and live stock raising, as his American brothers have been compelled to do, in order to succeed? We believe he will.

The English or Canadian government has held out and is holding out many inducements to actual settlers on the prairie lands of Canada. The government in selling its lands reserves all mining rights to such lands; this is one source of revenue of the English government. In southern Saskatchewan is one of the great coal mining districts of the Dominion. The government leases these mines to operators, getting a royalty on each ton of coal taken from them. In this lease provision is made that any settler may go to the mine and buy all the coal he needs for his own use at $1.50 per ton. Provision is also made that the party operating the mine cannot refuse this coal to the settler, saying he has orders ahead or something of that kind.

In many cases the government has loaned money to settlers who have had some adverse condition to contend with for the purpose of buying seed and feed with which to raise a crop. Dairying is an industry in Canada that has been to a great extent neglected. The government realizes the importance of this industry and has been shipping milch cows into the country, selling them to settlers and requiring them to pay but 25 per cent of the purchase price in cash and giving them time on the balance. The government has direct control of the creameries of this country, insuring the farmers who ship their cream the best possible price and a square deal on the test. Through the Department of Agriculture, the government assists settlers in getting the necessary laborers during the harvest season.

Don't, under any circumstances, buy a Canadian farm without seeing it any quicker than you would buy a farm in any other locality. We have heard many enthusiastic real estate men talk to prospective buyers, telling them that they cannot make any mistake by making an investment in that country, and if they can't go up and look at the land themselves to make an investment anyway. Don't do this. If you have an idea you would like to make an investment in a home in Canada, spend the time and money necessary to make a trip, and when you go it would be well for you to see different parts of the country. Succeeding trips at other seasons of the year would probably be profitable. Much of the farming land in southern Saskatchewan is of a loamy nature, underlaid with a clay subsoil, and largely gently undulating. Water is readily obtained through this district at from ten to fifty feet, and a little farther north is a country lying more flat, the soil being in a great part a heavy gumbo. This is probably the highest-priced land in western Canada. Let us here say that one should be on his guard any place in that country where there is gumbo soil regarding water. In most of the gumbo soil districts of Canada water may be uncertain and in some localities absolutely cannot be obtained.

From the north central part of Saskatchewan north one will find more or less brush country, some places being 40 or 50 per cent brush. The soils in this brush land are productive, but would entail considerable expense in clearing to get the land ready for cultivation. One cannot rely on the production of fruit to any extent anywhere in the country.

In looking over these lands, if you see a few stones don't be at all alarmed about them, for they are generally on the surface and not mixed up with the soil or subsoil. The Canadian farmer, generally speaking, is the lover of good stock. We were surprised at the splendid quality of horses we saw in this country. Many high-class herds of cattle are maintained on these farms and they are beginning to grow more hogs, which, we believe, will be found profitable.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Durocs and Red Polls

In a recent communication, George W. Schwab, the well known breeder at Clay Center, Neb., reports everything coming along in first-class shape at Pleasant View farm. At this writing he has twenty head of sows and gilts bred for September farrow and he is pricing for sale. These sows are mated to Cremo and Buddy K 4th Wide Awake. He also has twelve fall boars and a choice lot of spring males and gilts that he will ship out at this time. He also has a number of choice Red Poll bulls of breeding age for sale. They are of the very best blood lines and are strong in dual purpose quality. These cattle have been bred along these lines for years, and have a right to be good. Besides the bulls, he will also price a few females of different ages. Get in touch with Mr. Schwab for further information, mentioning The Twentieth Century Farmer.

Oak Grove Polands

We wish to call the attention of our readers in this issue to the advertisement of John L. Naiman of Alexandria, Neb., proprietor of Oak Grove Poland-Chinas, who is offering a choice lot of spring males for sale. Mr. Naiman has one of the very best herds of Poland-Chinas in southern Nebraska, and the boars he is offering for sale at this time are right in every way. He has a number of boars of February and March farrow, and also some of April. One thing that should attract the prospective buyer to these boars is the fact that they are all immune, and that no chances are taken of their dying by disease. These spring boars are all sired by Blue Valley Oak, he by the great Blue Valley, and they are out of sows weighing from 400 to 700 pounds, strictly big type, good quality. Get in touch with Mr. Naiman at once, asking particulars as to what he has to sell. During the last twelve months, he has shipped hogs to twelve different states, and they have given thorough satisfaction in every instance. Kindly mention The Twentieth Century Farmer, when writing.

Schultz' Durocs

We called on George W. Schultz of Yutan, Neb., last week. He has about the best lot of Duroc-Jersey spring pigs that we have ever seen on this place. His pigs are very growthy, with plenty of stretch, good bone, good color. In fact, he has a number of spring males coming along that are just good enough to go into anybody's herd. He has one litter of ten, sired by Golden Model 31st, that are plumb good ones. In fact, they are an exceptional litter for one of this size. Another extraordinary litter of ten, is sired by Gold Dust Jim, from the former herd of Jacob Wernsman of Cedar Bluffs, Neb. The bulk of the pigs, however, are sired by King Cleatham, he by Cleatham's Pride. They are out of dams by Belle's Chief, Belle's Chief I Am, Essex Colonel, by High Colonel, and others. Mr. Schultz will start an advertisement in an early issue of this paper and will have somethin to say regarding these boars. In the meantime, if you are interested, write him, mentioning The Twentieth Century Farmer.

Widle & Sons' Durocs

One of the greatest treats we have had for some time was the occasion of our visit to the Duroc-Jersey herd, owned by R. Widle & Son at Genoa, Neb., last week. We spent considerable time in looking over both their show herd and also the lineup they are going to have for their sale on October 13. In regard to their show herd, we want to say that they are the best they have ever had. The herd is complete, with the exception of an aged boar and junior yearling sow, and with a couple of exceptions, they are all sired by the grand champion, Critic B. The first place this herd will be exhibited will be at the Nebraska state fair, and we have no hesitancy in saying, that they are going to cause trouble for somebody. Their sale offering for the October 13 sale will contain forty-five head, consisting of ten fall boars, twenty spring boars, ten fall gilts and five spring gilts. Included in this offering will be part of their show herd, and, in fact, every animal going in the sale will be a good one. Along with this, every animal going in the sale is immune from disease. We will have more to say regarding this herd in a later issue. In the meantime keep them in mind and do not fail to look them up when you get to the state fair at Lincoln.

Sale Dates

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 15—Harry Tidrick, Winside, Neb.

Duroc-Jersey Hogs

October 2—F. B. Nelson, Lindsay, Neb.
October 2—F. A. Lemmerman, Creston, Neb.
October 5—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—Harry Tidrick, Winside, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.
March 12—Edgar Taylor, Plainview, Neb.

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Review of Live Stock Market

By A. C. Davenport

THE cattle markets of the country are plainly on a war basis, but it is far from certain that the war is entirely responsible for the course of the trade the last few days. During the first week, immediately following the declaration of war, the money stringency bore down hard upon the market, breaking prices and causing frantic efforts to be made to shut off shipments. These efforts were so successful that the movement of cattle from western ranges and feed lots to market was greatly reduced as compared with a year ago. The reduction in receipts came just at the time when under natural shipping conditions receipts of range cattle would be expected to show a large increase.

As the money stringency was relieved and bank credits were restored, the cattle markets resumed a normal condition, but the receipts had been shut off and up to present writing it has been impossible to get them started again. It would appear that farmers and ranchmen, being under no necessity of shipping, chose to follow a cautious policy and hold their cattle back until absolutely certain that the financial squeeze was past. Others may have been influenced into holding their cattle with the expectation that the war would advance the market and that they would realize better prices later on.

Whatever may have been the reason or reasons, the fact remains that the country has kept the markets during the last week on a starvation diet. Receipts everywhere have been so light that values have steadily advanced until choice corn-fed beeves touched the highst point since 1912. At the same time range cattle and grassers of all kinds and all sorts of butcher stock sold higher than ever before in the history of the trade.

The advance so far as choice corn-feds were concerned was no surprise. The bulls had been predicting some such rise in values as the natural outcome of the known shortage of such cattle in the country. Such an advance might have come, war or no war. On the other hand, the advance on grass cattle and the medium grades of corn-feds was entirely unexpected. At the opening of the range season prices were very high, but it was only reasonable to assume that they would come down as soon as the shipping season was under full swing. As noted above, the bank scare stopped the run, with the resut that prices advanced instead of declining. In other words, the market during last week was very high because of the shortage of cattle at market points, and not because of any unusual demand brought about by the foreign war.

The future of the cattle market is hard to see in advance. The recent sharp advance, which appears to have been brought about by light receipts, could easily be wiped out by heavy receipts. Before this can appear in print such a reaction may already have taken place. At the same time cattlemen are looking for a good, strong market throughout the season. They figure that the home demand for killers and feeders will be sufficient to maintain values at a high point, regardless of any foreign demand. As a matter of course, if in addition to the American demand there should develop a foreign trade, the market would be just that much better. Looking at it from another point of view, that of the consumer, it hardly seems possible that beef can go much higher without compelling many people to give it up in favor of cheaper food.

Hog Market Very Uncertain

In the cattle trade the most certain thing is the uncertainty, and when it comes to the hog market it is uncertainty in capital letters repeated and emphasized several times over. Uncertainty is about all there is to the hog market. Being largely under the influence of a wildly speculative provision market, hogs have run up and down the scale of prices with acrobatic agility.

It has been a war market, but it is the war of the bulls and bears of the provision trade and not the war of nations that has been the dominating influence thus far. Up to the present time there has been no export trade to warrant any advance in prices, but the possibility that a big foreign demand will come sooner or later is a great bull influence, the tendency of which is to send prices skyward. On the other side, the bears taking advantage of the present obstruction of ocean waterways and the suspension of exports have thrown their whole weight on the side of lower prices. Thus prices have fluctuated as the bulls or the bears temporarily gained the advantage.

All ideas as to the future of the trade are mere guesses, and when it comes to that one man's guess is about as good as another's. The bulls naturally are depending upon the war to create an unusually good demand for the product. While they admit that the market is in the grip of speculators and is liable to sharp fluctuations, they feel that prices must continue high so long as the war lasts. The bears, in their efforts to put prices down, have been greatly hampered by the splendid fresh meat demand, buyers for that account taking a considerable percentage of the receipts. The beasr have also had to contend with moderate receipts. The total hog run at eleven market points during the week just closed showed a decrease of over 50,000 head, as compared with the same week a year ago. For the year to date there is now a shortage at these same points of 1,000,000 head as compared with the same period last year, and a shortage of almost 2,000,000 head as compared with 1912. These figures are significant, to say the least.

Receipts of sheep and lambs at the six big markets are very moderate, running for the time being quite a little behind one and two years ago. At the same time the demand has been very good and prices at all points strong. The war has apparently had little or no influence on the trade, the sheep market having been in a normal condition all the time. It appear that the high price of beef has helped the mutton trade. In consequence of this range sheep and lambs have sold higher than ever before during the month of August.

Sheep men without exception feel very confident as to the future of the market. They have made up their minds that sheep are bound to continue good sellers throughout the season and that there is no danger of prices going very low so long as beef and pork continue on anything like the present high plain. Under normal conditions everyone would have expected prices on range stock to decline somewhat from the present record-breaking point as soon as the shipping season should be fairly under way, but a foreign war may give rise to abnormal conditions so that no one can form any very clear idea of just what the future may hold in store.

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GOVERNMENT LAND—GET 320 acres. We stock your land, buy your crop. Some means required. Particulars free. Wyoming Settlement, Janet Wyo.

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FARMS WANTED—WE HAVE DIrect buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

WANTED—TO SELL YOUR PROPerty, no matter where located, quickly; pay no commissions. National Farm Exchange, San Francisco.

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YOUNG MAN, WOULD YOU ACCEPT and wear a fine tailor-made suit just for showing it to your friends? Or a Slip-on raincoat free? Could you use $5 a day for a little spare time? Perhaps we can offer you a steady job? Write at once and get beautiful samples, styles and this wonderful offer. Banner Tailoring Co., Dept. 873, Chicago.

LEARN THE AUTO BUSINESS — Practical work. No books used. Stationary engineering. Special rate. Write for free catalogue. Lincoln Auto School, 2352 O St., Lincoln, Neb.

GOVERNMENT FARMERS WANTED —Examination October 14; good salary. Write Ozment, 39-F, St. Louis, Mo.

WHEN WRITING TO ADVERTISERS kindly mention this magazine.

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We have farmed a part of this land for three years and know what crops will do here. We were not afraid to put $18,000 in tractor engines and other improvements to put in these crops. WE ARE FARMING THIS LAND FOR A PROFIT and we would like you to visit our fields and see what can be done.

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The food produced on West Farms and the fine water and invigorating climate are vital factors in raising stock as well as people.

We have rural delivery and telephone—all the convenience of the city and live in the country.

You likely have teams and tools to work a farm—the money to make the first payment, buy a few cows, some brood sows and some good pullets, but you have got to locate where you can get a regular cash income to care for the family—besides, you want a farm home that will increase in value.

You are eager to get located in an invigorating climate where wife and children will be well, strong and happy. You want to live in a community of enterprising, intelligent people who are neighborly and believe in progress. Then settle on West Farms.

Any good cow will yield you $120 per year, so that five good cows will easily support an ordinary family. Hens do especially well there, but no better than hogs. No disease to annoy either. Children thrive there like weeds. The broad prairie inspires them. Life there is clean and wholesome. It's a superior place to make money and raise a family.

Listen—many of your neighbors started with practically nothing. They got a tract of land at only a few dollars per acre, kept farming it until the development of the country increased its value to $100 and $150 per acre—a natural increase.

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The Land Department of this paper will tell you our lands have superior merit and that our booklet is worthy of your confidence. I want you to see these lands and find them better than you expect. For booklet free, or other inforamtion write

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OF THE
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21 AUG 1914

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, August 29, 1914 | Number 716

Bright and Breezy

Shop Talk.

Salesman—Now here madam, is a piece of goods that speaks for itself; I—

Customer (interrupting)—Then suppose you keep quiet a moment and give it a chance.

—◈—

Good Authority

"Do you know, my dear," asked the young husband, "there's something wrong with the cake? It doesn't taste right."

"That is all your imagination," answered the bride, triumphantly, "for it says in the cook book that it is delicious."

—◈—

The Hired Man Again

A farmhand had worked in the field from dawn till darkness, doing the chores by lantern light. "I'm going to quit," he said to the farmer at the end of the month. "You promised me a steady job."

"Well, haven't you got one?" was the astonished reply.

"No," said the man, "there are three or four hours every night that I don't have anything to do and fool my time away sleeping."—Success Magazine.

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Prattle of the Youngsters

In the Dictionary

Teacher—What were Webster's last words?

Pupil—I don't remember, ma'am, but they all began with Z.

—◈—

Comforting

Edward's mother had lost her engagement ring at a picnic and was feeling very badly over it.

"Don't cry, mamma," said Edward soothingly, "you've still got your wedding ring. You're still married to daddy."—Mother's Magazine.

—◈—

Poultry Foliage

A group of children played with an old pillow. Presently they began guessing as to its contents. A little boy finally settled the question.

"Why, don't you know even that much? Pillows are always filled with hen's leaves."

—◈—

Rats

After the teacher had been describing cocoons as brown, woolly-looking rolls, she asked the children if they had ever seen any.

"Yes, ma'am," said Carl. "Some ladies wear 'em in their hair."—Mother's Magazine.

All Aboard for the Highland Colony of Wyoming

15,000 Acres Choice Prairie Land to Select From. **Our Prices Range from $12.50 to $20.00 Per Acre.**

Our terms are a small down payment and balance running ten years in annual installments with 6 per cent interest } *or* { On our celebrated Crop Payment Plan whereby one-half the crop raised each year is applied at market price to pay both interest and principal until the land is paid for.

We are owners—not agents—and sell direct to you.

We have sold over 7,000 acres of our Highland Colony lands in farms of 160 to 640 acres in the past sixty days.

We can still supply you with as good as the best.

So buy that Summer Tourist Round Trip ticket, come to our office and we will show you this goodly land.

The Summer Tourist ticket is good starting any day, with return limit October 31st.

Those coming from points east of Omaha should start so as to connect with Union Pacific train No. 3, leaving at 4:30 p. m, and arriving here at Cheyenne at 9:45 the next morning.

Our Highland farms lie within ten to twenty-five miles of Cheyenne, the State Capital, and within one to eight miles of Federal, "the newest town in Wyoming."

We have no hot winds in Highland Colony; the highest temperature reached here to date this season (government weather bureau record) is 89.2, August 16. Oh, joyful news for the fellow in the valley of the Big Muddy who is perishing from prickly heat.

The winters are milder here than at Omaha or Des Moines. (Government records prove this.)

There is no alkali, no gumbo, no sandhills, no sage brush in the Highland Colony. Just grass-covered prairies waiting to be converted into fertile farms.

To give you an idea of what it will cost you to inspect our lands, we quote the Round Trip Summer Tourist Rate from a number of points in the central states to Cheyenne and return: Omaha, Neb., $16.00; Sioux City, Ia., $19.90; Des Moines, Ia., $21.35; Peoria, Ill., $25.25; Albert Lea, Minn., $23.05; Elkton, S. D., $22.30; Lincoln, Neb., $16.80; Grand Island, Neb., $14.50; Kearney, Neb., $12.85; Topeka, Kan., $21.00; St. Joe, Mo., $21.00. Railroad fare refunded to purchasers.

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Gentlemen: Please send me at once full particulars of the new Highland Colony of the Golden Prairie District, including your signed Guarantee of return of railroad fare and $5 per day if I do not find everything as represented.

Name.....

Address.....

P. S.—Did you read our double page illustrated advertisement of the Highland Colony in the Twentieth Century Farmer of August 22d? If not, it will pay you to look up the paper and read it now. In that advertisement you will observe our statement that the government records here showed the highest temperature here this season to be 86 degrees on July 26th. This was correct when the copy for that advertisement was sent in but on August 16th the temperature reached 89.2 which is the maximum here for this season. Please compare this record with the weather bureau reports from stations in the central states this month.

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

State University Consolidation or Extension

Presentation of This Subject by a Regent of the University and President of Nebraska Farmers' Congress

By George Coupland

THE question of physically uniting the agricultural college with the other colleges of the University of Nebraska upon the state farm in Lincoln is to be decided by the voters at the next election. It is most important that a wise decision be made and a policy inaugurated which will make the university in all its departments highly efficient and not wasteful of the taxpayers' money.

As to the wisdom of separating the agricultural college and building it up as a separate institution at the state farm, two and one-half miles from the main university plant, there is difference of opinion in regard to the question. Many statements have been and are being made and published that it would be wasteful of the public money and not good educational policy to consolidate the university at the state farm.

To the farmers of Nebraska this question is a very important one and their vote will doubtless have large influence in the final determination of future university policies. To enable them to have an intelligent idea as to the questions at issue, I have undertaken to present, as judicially as possible, a plain statement of the facts as they exist.

The average voter rightfully asks the question, "Is it going to cost me any more to consolidate at the farm than to buy additional land adjacent to the city campus and extend the university there?" And also, "Will it be a benefit to the agricultural college to be physically a part of the university, or would it be best to develop it at the state farm as a separate institution?" Also, "Would it be for the general good of all the students in all of the colleges to have the university built up as one institution upon one campus?" These are the plain questions at issue.

Question of Expense

To get a clear understanding as to the cost side of the question we should first remember that the last legislature voted a three-quarter mill tax to run for a period of six years, which, it is expected, will raise during that time approximately $2,500,000. Should the voters decide against consolidation at the state farm, then two-thirds of this money is to be used for the purchase of land adjacent to the city campus—composed of six blocks, about fourteen acres in extent, exclusive of the streets—and the erection of buildings thereon, and the other one-third of the tax is to be used to erect buildings for the agricultural college upon the state farm for its development as a separate institution. Thus under the law it cannot cost the taxpayers of the state any more or any less than that amount during the next six years, for that part of the question has been definitely settled by the legislature.

As I am writing this article I have before me a printed statement, issued by a Lincoln committee, which has been scattered all over the state, saying that to consolidate the university at the state farm will be a waste of $3,000,000. Now, what are the absolute facts in regard to the original cost of all the buildings upon the city campus? According to the records in the state auditor's office, the total cost of all the buildings upon the city campus was a little over $750,000. Of these buildings not quite $500,000 worth would enter into a permanent scheme of development on the city campus, this being the careful estimate of the university architect.

Cost of Extension

To get a clear-cut idea as to the relative cost of the two schemes: The six blocks of land contiguous to the city campus will doubtless cost about $500,000, adding approximately twelve acres, exclusive of the streets, to the present campus. This would give altogether, including the athletic field, a little over thirty acres, still leaving us with by far the smallest state university campus in the whole country, and without doubt it would be only a very short time before more land would be needed.

To acquire this small amount of land will cost as much as all the good buildings are worth upon the city campus, and in addition a new heating plant, made necessary by separation of the agricultural college, would cost about $150,000. These two items alone, looking at the question from the immediate present, would cost nearly as much as the state has ever spent for buildings upon the city campus.

If it is decided to consolidate at the state farm these buildings and present campus will not be wasted, but can be used for other state purposes and save the taxpayers a good deal of money. I have investigated very carefully the added cost which would be made necessary by running the agricultural college as a separate institution, and I find from the experiences of other states that it would mean increasing the cost of maintenance at least 40 per cent.

Why Operate Two Plants?

Should we fail to consolidate at the state farm, the extra buildings which will be needed by the agricultural college, and which must be provided, will cost more than all the good buildings now upon the city campus. In states like Iowa, Kansas, Michigan and Oregon, where the agricultural college is separated from the main university, they have as much money invested in buildings at their agricultural colleges as they have at their main university plants. For Nebraska to undertake the building up of a separate agricultural college two and one-half miles apart from its main university plant would be the rankest kind of business folly. Business prudence, beyond question, says, "Consolidate at the farm."

The state owns 320 acres at the farm; it is an ideal location for a university, and, in my opinion, the state does not need to purchase any of the adjacent property, for there is already ample provision for the things which the university requires. For purely agricultural research and experimentation work, the state should buy a half section or a section of land two and one-half or three miles from the state farm, and there carry on continuous investigations, which will be of increasing value to our great agricultural interests.

With the $2,500,000 voted, and all of it judiciously spent for buildings, a magnificent and permanent university plant can be built at the state farm, giving nearly three times the amount of floor space contained in all of the buildings now upon the city campus, and its yearly cost for administration and operation would be many thousands of dollars less than the expense of running two separate institutions.

Educational Considerations

Educationally, is it wise to set off the agricultural students apart from the other students of the university? The organic law founding the agricultural college said it was to be a physical and integral part of the university and not set off by itself upon a separate campus. For the purpose of endowing this agricultural and mechanics arts college the state was given 90,000 acres of land, and the income from it, with the Morrill fund subsidy given for this same purpose, has amounted to nearly $1,500,000 during the last forty years, which the state of Nebraska has received and converted into its university treasury.

Because of the fact that it was impossible physically to develop the agricultural college upon the congested twelve acres comprising the city campus, the students in agriculture have experienced numerous difficulties, one of these being compelled to waste eighty days of eight hours per day during their four years' course in traveling between the city campus and farm campus. This, and some other things which are incident to the separation, have prevented the growth and usefulness of this subsidized college, and the Board of Regents has unanimously reported to the legislature "that it is most firmly convinced that this separation impedes the progress of the agricultural college and is a detriment to the students therein, and that should the college remain physically separated from the main university plant it can never realize its full effectiveness and usefulness to the state."

Experience of Other States

That it is unwise to separate the agricultural students from the main university and deprive them of the general advantages of university life, is the universal opinion of the leading agricultural educators and state university presidents of the country.

Leading men in many states who by experience as educators, administrators and members of boards of regents, both in states which have united institutions and those where their agricultural college is separated, say to Nebraska, "Do not make the mistake of separating your agricultural college from the main university,

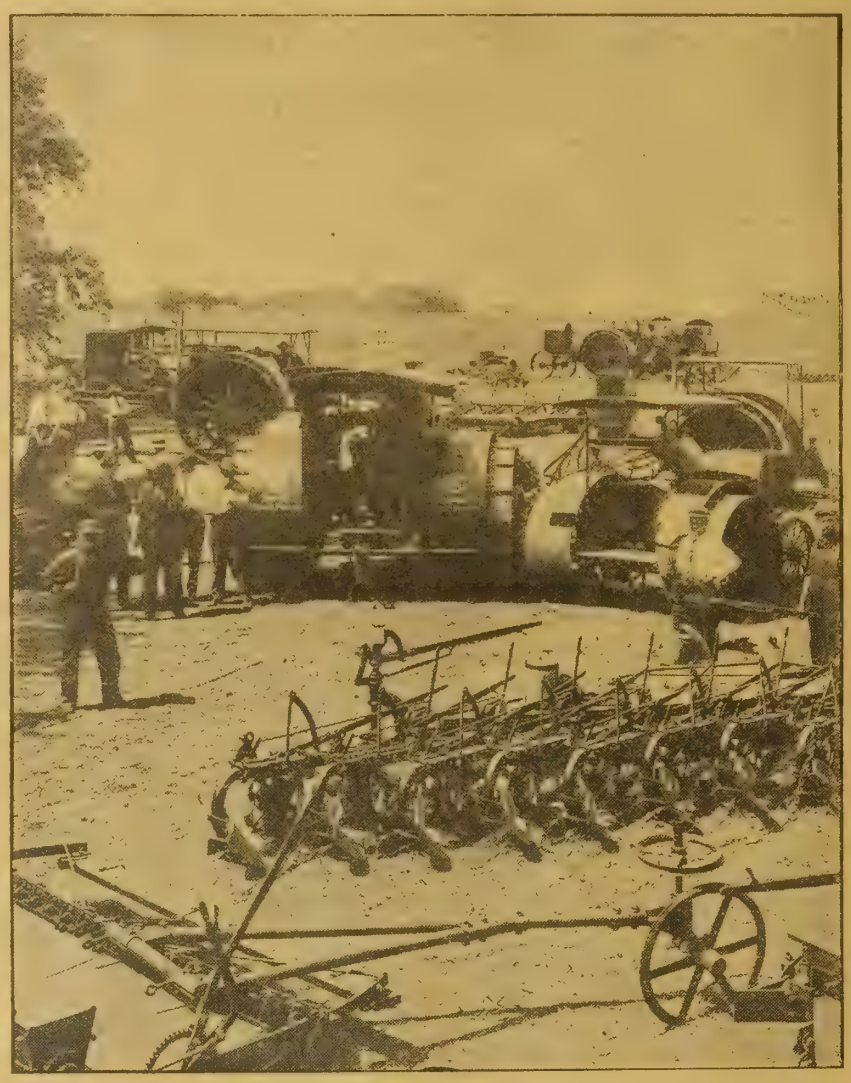
(CONTINUED ON PAGE EIGHT)

Large and Small Tractors at Work Interest

PRACTICAL power farming for the average corn belt farmer is of but recent origin. A few years ago the mention of the tractor directed our attention to the big wheat ranches of the Dakotas, Minnesota and Canada.

Thousands of farmers during the last week have visited the big Power Farming demonstration at Fremont, Neb., and carefully inspected the many tractors shown. They looked over the big machine, pulling with ease twenty-four plows, and the tractors pulling the twelve, ten, eight, six, five, four, three and two bottom plows. A very large proportion of these farmers for the first time thought the tractor was practical for the average corn belt farm.

This is, without doubt, a power age. The automobile probably had more to do with setting the farmer to thinking about the practicability of power for farm use than any other one thing. The farmer's first thought of the automobile was that it was for the city man, to be used for pleasure. A few years have shown the farmer that he is the man who needs the automobile—the man who can make the most practical use of the automobile. Just so with the tractor. This machine was originally made for the big wheat farmer, with probably no thought of its eventually being made practical for the use of the average corn belt farmer.



Scene on Demonstration Grounds

If one had an idea that the corn belt farmer was not interested in the tractor as being a machine he might use with profit on his farm, this idea was at once dismissed after a day's visit to the big tractor meet last week. The most impressive things about the attendance at this show were the very large proportion of farmers in attendance and the keen interest they took in the work of the various machines. Not only were the farmers themselves there, but their boys, their girls and their wives were there also. They not only saw the plow start at the end of the field, but they followed it through the field, noting every detail.

The corn belt farmer is an investigator. He is not the man to jump at conclusions. When some new farm implement or machine comes out the farmer at once looks it over and sees what it is doing and can do. He looks carefully into the proposition as to whether or not such implement or machine is practical for him; if the manufacturer or dealer can show the farmer the machine is right he is ready to invest his money.

The question the farmer is now asking himself is, "In what way is the tractor better suited to my work than the horse?" We watched these tractors at work last week with a great deal of interest, having used horses for power all our life on the farm.

Help to Conserve Moisture

The Twentieth Century Farmer has urged upon our farmers the necessity of doing all they can to conserve the moisture by intensive cultivation. We have urged the necessity of getting into the stubble fields at once with the disk. The average farmer is rushed to the limit with work at harvest time. Many of them are not keeping

Head of Big Tractor Parade

Some of the Machines in the Show

Big Wheat Growers and Corn Belt Farmers

any more horses on the farm than are actually needed for their general farm operations; consequently, it is impossible for them to follow the binder with the disk.

A tractor of sufficient power can be used by our farmers whereby they can attach a disk behind the binder and do these two important jobs at the same time. The importance of following the binder with the disk was most thoroughly demonstrated at the big Fremont show in the field plowed on Tuesday and the one plowed on Wednesday. The field plowed on Tuesday was double-disked soon after cutting the grain; the one plowed on Wednesday was not disked, being just as it was left when the grain was cut, which is the way a very large proportion of the grain belt stubble fields are when plowed.

The field on Tuesday looked almost like a garden after the big plows had finished their work. A clod of any size could scarcely be found; the soil was moist, notwithstanding no rain had fallen for more than six weeks. The field was in condition to go right on with a grain drill and do a good job. Sufficient moisture was there to germinate the seed.

The field plowed Wednesday was cloddy, some of the clods being as large as a bucket. Before this field could be properly seeded at least two harrowings and probably a disking would be required. There was practically no moisture in the soil. Seed sown now couldn't germinate until it rained. Not only that, but considerable more power was required to plow this field than that plowed Tuesday.

Right Thing at Right Time

In our general farming operations too many of us don't pay enough attention to the importance of doing our work at the time it should be done. For crop yields plowing at the right time and in the right way is of vast importance. Fall plowing, as it is generally called, is done at a season of the year when weather conditions are not most favorable for using horses. It is generally hot; the flies are bad and the ground is often dry and hard to plow. The consequences often are that if the field is to be used for crops the next year, the plowing is not done in the fall, the weeds are not killed as they should be and the work in the spring is piled up. If the field is to be sown to fall wheat the plowing, and often the seeding, are delayed.

A very important matter is to have the plowing done to the right depth. In no way can this be done as well as by the use of the tractor. The tractor can pull the plow, the disk and the harrow at the same time, thereby conserving every bit of moisture possible. Plowing at the right time, to the right depth, and disking and harrowing at the right time are all important factors in the yield per acre and should be given more attention than is usually given them.

Each Has Its Place

Every tractor shown at the recent big show has its place and is adapted to a certain sized farm. The man with 80 or 160 acres has no use for the ten or twelve-bottom plow. The man with the 1,000-acre farm couldn't get along with the small machine with two or three bottoms.

The farmer, in looking for a machine of any kind, is figuring on making a saving in his investment in labor, either for the man or the horse. Generally speaking, he can't afford to buy a machine that won't cut down his investment in one or both of these lines.

Good horses command a good price. The average grain belt farmer can't afford to invest the amount of money necessary to buy a tractor unless that machine can be used for other purposes than for plowing. He wants a machine that will take the place of his horses to such an extent that the number of horses required for his farming operations can be materially reduced. The small farmer wants a machine that will pull the plow, harrrow, disk, cultivator, binder or mower, or haul the load of grain to town. This same machine he wants to use to furnish power to pump his water, shell his corn, grind his grain and run the pulleys for any kind of small work he may have to do.

The manufacturer is meeting the demand of the farmer. It does not make any difference what size or general kind of tractor the farmer wants, he will be able to get it, and get it with efficiency in proportion to its size and the price he may want to pay.

Dont's for Amateur Painters on the Farm

DON'T forget to paint the chimney and the roof gutters on the house.

Don't buy the cheaper paint, as good paint will wear longer and present a neater appearance.

Don't start to painting till you have good, strong ladders and scaffolds on which to stand while you are at work.

Don't hire a professional painter at an exorbitant price to do your painting for you when, with a little experience, you can as well save two-thirds of his price by doing the job yourself.

Don't paint the buildings merely for appearances. Brush the paint in well, so it will stop up the pores of the lumber and plug up the bad spots in it, thus preventing further deterioration of the building.

Don't use a poor paint brush or you will daub and streak up the work. With a good brush you can spread the paint on evenly, not only economizing in the amount used, but doing a much better job of painting.

Don't paint any building while it is wet or damp, as the paint then will readily crack and peel off. Let the surface to be painted be perfectly dry and it will readily absorb the oil, and the paint thus will stay on well.

Don't fail to paint the farm buildings every other year and you will not find it necessary to use so much paint when you do the job, nor be as long at it, while the general condition of the buildings will be kept up to a higher standard than by painting only once in several seasons.

Don't paint on that part of the building that is exposed to the sun while you are at work. Paint on the west and north sides of a building during the morning hours and on the east and south sides in the afternoon, and you will find the work more agreeable, while the sun does not crack or blister the paint so readily.

Don't attempt to paint while the wind is blowing. If you do, the wind will blow dust and many other articles onto the freshly painted surface, ruining the appearance and damaging the wearing qualities of the paint. Nor will paint put on under such conditions adhere to the building as it would if applied while there was little or no wind blowing.

Don't confine your farm painting simply to the buildings. There are scores of other profitable uses for it about the farm, some of which are of just as much importance as that of painting the buildings. Much of the fencing, especially that around the yard, could be greatly improved in neatness of appearance and wearing qualities by the application of a good coat of paint every season or two. The buggy, wagon and automobile will last longer and look better if treated to a thorough painting when they begin to fade and scale off. All farm tools and implements, even singletrees and doubletrees, ought to be given a coat of paint every few seasons to prevent checking, warping and decay of the wood and rusting-out of the iron and steel parts.

Tractor Show Report

The National Power Farming Demonstration at Fremont, Neb., was a big show—a much bigger show even than last year. There were forty-eight machines there and each and every machine did good work, according to its size and type. There were so many things to be seen there that will be of interest to the farmer who was unable to attend that we are having prepared a detailed report of the show that will give, as nearly as it is possible to do so, an idea of what the spectators learned about the machines exhibited on the great demonstration grounds. This report will be published in our next issue, which issue will be one of especial interest to the man who is considering the practicability of using a tractor on his farm. Judging from the size and character of the crowds at the demonstration, this means every farmer of the corn belt and the western states.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Have your seedbed well prepared for fall seeding of alfalfa. Seed costs too much to throw it away by planting it in a poorly prepared seedbed.

One of the agricultural colleges recently analyzed a number of so-called "hog cholera remedies." They were found to consist largely of water, the balance being of drugs that could have no possible effect on the hog cholera germ.

The man intending to make a fall hog sale wants to keep everlastingly at it from now until sale day. Don't try just to put on fat, but fit them on pasture and grain. Remember that animals sell largely by the way they look to the buyer.

During the fiscal year just ended the number of applications received at the United States patent office for patents or inventions numbered 69,000. Thomas A. Edison is said to be the most prolific inventor in the country, having to his credit something like 1,000 patents, for which he has paid the government thousands of dollars in patent fees.

Farming on paper is becoming a very popular pursuit. There are a number of periodicals published, beautifully illustrated and attractively gotten up, that are particularly intended for the city man. He is enabled to spend a delightful evening on an imaginary farm whenever he feels the call of the land. Farmers should not be too scornful of this modern amusement. It brings the city man into closer sympathy with the country and does the farmer no harm.

Warning to Seed Buyers

The present European war will undoubtedly be the cause of sending skyward the price of at least one line of goods used by the farmer, and that is garden and grass seeds.

Probably few of us have ever given any consideration to the question, "From where comes the seed we annually plant, and the grass seed we sow?" Many of these varieties of seeds are practically all produced in European countries.

To the ordinary farmer the price of garden seeds doesn't make any great difference, but the price of alfalfa, red, white and alsike clover, sugar beets, mangels, meadow fescue, redtop, etc., does make a difference with him, and he wants to make up his mind now that he is going to pay an advanced price for these seeds for the next two years at least over what he has been recently paying.

These seeds are largely produced in Turkestan, Russia, Germany and France. The principal part of them are shipped to this country through Hamburg, Germany.

Some may ask the question, "Why do we get so many of these seeds from foreign countries?" For several reasons, viz., labor in those countries is much cheaper than in the United States, so the seeds can be produced and shipped to us here cheaper than we can raise them. Generally speaking, the American farmer has not taken hold of the industry of producing seed for sale. On account of climatic conditions seed of higher quality can be produced in some of the foreign countries.

Alfalfa seed has already advanced from $2 to $3 per bushel, and we may reasonably look for a much greater advance. It is not too late now for many of our farmers to get some alfalfa seed this year. If they can, we certainly believe it will pay to save all the alfalfa and clover seed possible. We are sure to have to pay a stiff price for this seed and it is possible it can't be obtained at all in sufficient quantities to supply the demand.

This may be a blessing in disguise in one way—it may spur our farmers to the necessity and profit of paying more attention to seed production. Many imported seeds can be successfully and profitably grown in the United States. Just now, however, the important thing is to look after the supply of seed for the next two years at least.

The men in the old country, who at this season are generally gathering the seed crop, are in the army. The seed over there will not be saved, and if it were there is no telling when it could be gotten over here. They will be short of seed for their own planting next season, even if the war ends soon.

Undoubtedly, seed men will come in for their share of cussing for forming combinations, etc., to boost the prices of seeds. Just bear in mind the fact that they can't get the seed. Many of our big wholesale seed men have large quantities of seed bought or contracted for in these countries, but they cannot possibly get them over here.

We are fearful that the situation may become very serious. It is up to the farmer to do all he can to save all seeds possible.

Laugh at Dry Pastures

Weather conditions in August, 1914, are a repetition of many Augusts in the corn belt. Little rain fell in many localities; pastures suffered, many of them becoming practically worthless. The loss sustained by farmers and dairymen on account of these dry pastures has been very great. The flow of milk from the dairy cow has decreased materially. The beef steer and calf have quit growing, and in some instances lost in weight.

Some of our farmers and dairymen, however, are not sustaining this loss. The man who has a silo and silage capacity to have sufficient silage left over for the summer is laughing at the dry pasture proposition as far as the decreased flow of milk or the loss in flesh by the steer or calf is concerned.

We are calling the farmers' attention to this condition just now because many of them are sustaining loss. However, there is yet time to build a silo and fill it with corn for next year's use. If you have never tried it you will find it invaluable as a winter feed. If you can possibly arrange to do so, have enough silage to help out the dry pasture that may come next summer.

One of our roads to success is to cut out the leaks. Study how to prevent losses as well as how to produce crops. One of the sure ways of cutting out the leak caused by dry pastures is to have silage available for summer feed if you need it.

It's an ill wind that blows nobody good. New Jersey poultrymen report that the army worms which have invaded that state are furnishing their hens with ample quantities of animal food which stimulates the fowls to an increased egg production.

The year 1913 was a banner year for the comparatively new sand-lime brick industry. The output last year reported to the United States geological survey was valued at $1,38,325.

Hog Cholera Don'ts

Hog cholera is making its appearance in many localities. In some places the disease is making serious inroads in the herds. This is the season of the year when the disease begins to spread badly.

It stands every farmer and hog grower in hand to do everything possible for him to do to help in keeping his neighbors' hogs from infection, as well as his own herd.

We want to call your attention again to a few "don'ts" which may be of assistance to someone:

Don't go into your neighbor's hog lot if you have sick hogs at home, and don't allow him to come into your lot if his hogs are sick.

Don't go near any public stock yards unless you disinfect your shoes before going into your hog lot.

Don't bury the carcass of a hog that dies of disease; burn it.

Don't feed the carcass of any other animal to your hogs; bury or burn it.

Don't let your hogs have access to running streams; they may be full of cholera germs.

Don't let your dog prowl around day or night if there are any sick hogs anywhere in the country. He is liable to bring the disease home.

Don't overlook the necessity of keeping your hogs clean of lice.

Don't neglect the worms in the pigs; get after them and clean them up. These parasites weaken your hogs, making them much more susceptible to disease.

Don't leave a pig in your herd after he shows signs of being off; take it for granted he has cholera and quarantine him. If you don't know hog cholera call a competent veterinarian, and if your hogs have this disease don't wait another day to get serum and vaccinate.

Don't use or allow anyone to use on your hogs serum that has not been tested. Look for the label or tag on the bottle.

Don't, under any circumstances, buy or take home a hog out of a public stock yards.

Don't put a new hog in the herd without first placing it in quarantine for at least three weeks.

Don't haul hogs for your neighbor if his hogs are sick.

Don't treat your hogs with the simultaneous method if there are no sick hogs close to you. If you do it is possible to get poor serum, and then you can't protect your hogs from dying from the disease you have given them. The disease may also be spread to the neighbors' herds.

Don't make an abrupt change in the feed for your hogs; especially, don't change at once from old to new corn. If you do you will be almost sure to get the digestive organs of your hogs out of fix and have them in splendid condition to contract the disease.

The fight against hog cholera is the farmer's job. Don't depend on serum. Clean up and keep clean, disinfect the premises and keep them disinfected. Use care and sense in feeding and watering your hogs and the disease over the country will be materially reduced.

Factors in Corn Production

The probable corn crop in a great part of the corn belt has been a subject of serious discussion during the last month or six weeks, due principally to the spotted rainfall. In many individual fields other conditions than rainfall have been material factors in this crop of corn.

We want to call the attention of our corn growers to some of these factors figuring in a reduced corn crop at this time while the object lesson is before their eyes. Too often at planting time, when soil conditions are ideal, do we feel sure we are going to have a season with plenty of rainfall. We may be going to plant corn in a field that has been well manured and the soil in a high state of cultivation. The object in view is a big yield; consequently we are inclined to plant three or four grains to the hill, when we should have planted two or three, and probably never over two.

Earlier in the season we called particular attention to the necessity of good cultivation—intensive cultivation, we might say, to conserve the large amount of moisture then in the subsoil. We mentioned the fact that it was entirely possible that later in the season we would be short of surface moisture and need all we could conserve to bring the corn crop through.

In many parts of the corn belt we have had this shortage of surface moisture and the cornfields in many localities now show plainly the man who was on the job all the time with the surface cultivator, as well as the man who didn't plant too thick.

At this time we can find many fields of corn badly fired and possibly an adjoining field looking nice and green and showing practically no effect of the dry weather. Examination will nearly always show the fired field to have been planted too thick or to have been short of the right kind of cultivation. The years like the present one generally show up the good and poor farmers in any locality.

We will call your attention to these matters again at planting and cultivating time and are doing it now more to forcibly impress on you what we will say to help in next year's crop. Anything we may say or do now can't help this year's crop.

Gentleness with Animals

The spirit of gentleness and kindness must prevail on the farm. No advantage can come from being severe and cross with the animals. Some owners and operators of farms seem to be out of humor with everything with which they come in contact—horses, cattle, sheep, hogs and even poultry. The first impulse is to make things get out of the way, cause them to move quickly to one side or the other. This demand is emphasized by a blow, a kick or some loud command of the voice, all or any of which the animals soon learn to obey, but which cause nervous excitement that makes them undesirable animals for the person who deals gently and desires to make pets rather than wild beasts of his live stock.

This principle of gentleness in the handling of the stock on the farm adds to the selling value of each animal. You cannot find a buyer in a hundred years who is hunting for a timid, shy, wild, untamed animal of any breed, who becomes interested when you tell him that you have a very nice cow or heifer for sale and she is as wild as a deer. This is exactly what the buyer is not looking for, and if you sell her to him it must be at a big discount in price.

When there can be enumerated among the qualities of the horse or cow for sale "gentle as a lamb," a "regular pet," "perfectly safe with children," etc., this is the basis of what all buyers want and are willing to pay for it. Add to gentleness, then, the usual good physical qualities and your animal is half sold to any buyer wanting a good animal. It is just as easy, and a little easier, to have the farm animals, heifers, colts, etc., quiet, so they can be led around by the halter and handled by the children long before they are needed for actual service. The heifer should never come up to the milking age not completely broken to handle so that there would not be occasion for "breaking the heifer." The heifer should be broken when she is yet a calf to being handled, haltered, led, tied and given to understand that her best friend is her owner and caretaker.

There is a difference between making pets of young farm animals and breaking them to be easily handled. Too much playing with such animals cultivates a disposition often to show undue familiarity and the young thing becomes a nuisance and often unruly or cross. The lesson designed is to encourage health, thrift and gentleness among the young stock and thus enhance their values.

Do you ever think of the horse you are working these long, hot days? You know how good and refreshing a cool drink of water is to you. Your horse will appreciate a cool drink just as much as you do. If you supply him, years may be added to his usefulness.

The New-Day Car

The HUDSON Six-40 for 1915 is the finest example you will find today of the new-type high-grade car. Go see how many advances it shows over the cars you know.

Howard E. Coffin was the chief designer. The whole Hudson corps of 48 engineers have devoted four years to this model. Since last year they have added 31 new features. Now it shows you in finished form the ideal coming car.

The Advances

The greatest late-year advance in motor construction has been the adoption of Sixes. That means continuous power. HUDSON engineers have done most to this end by making the Six economical.

They have made it light. This new HUDSON Six-40 weighs 2,890 pounds. Old-type cars of this power and capacity weighed around 4,000 pounds. We save you this difference, yet this car has proved itself one of the staunchest cars built.

A new-type motor used in the HUDSON has reduced fuel cost about 30 per cent under old-time averages.

The new-style streamline body is here brought to perfection. And here are many new refinements, new ideas in equipment, new comforts and conveniences. Some of the best HUDSON features are not yet found in any other car.

The New Price

This car also sets a new price standard for high-grade cars. Last year's model sold for $1,750. This year, to meet the demand, we shall build three times as many Now this new model with 31 improvements is sold for $1,550, because of this trebled output.

There is no reason now, if you pay over $1,200, for not having a quality Six.

End of Over-Tax

This new HUDSON Six marks the end of over-tax. This lightness reduces tire cost immensely. This new-type motor brings down fuel cost. And the price is the lowest ever quoted on a car of the HUDSON class.

Go see what all these new things mean before you buy a car.

Hudson dealers are everywhere.

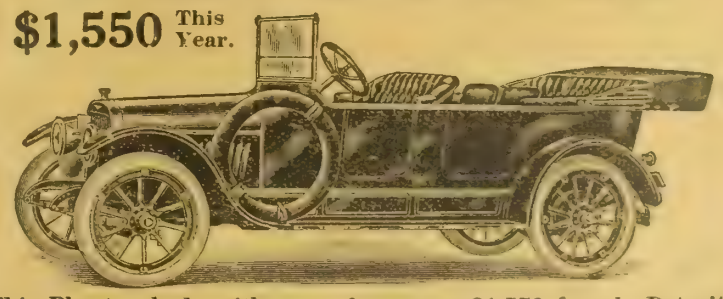
New catalog on request.

Some 1915 Features

A perfect streamline body.
Disappearing tonneau seats.
Invisible hinges — hand-buffed leather upholstery.
Gasoline tank in dash. Tires carrieed ahead of front door.
"One-Man" top with quick-adjusting curtains.
Dimming searchlights.
Simplified starting, lighting and ignition system.
Wiring in metal conduits.
Locked ignition and lights.
New speedometer drive.
Automattic spark advance.
New-method carburetion.
Trunk rack on back.

HUDSON Six-40 for 1915

$1,550 This Year.



This Phaeton body with room for seven, $1,550 f. o. b. Detroit.
Standard Roadster same price.

Hudson Motor Car Company, 8108 Jefferson Ave., Detroit, Mich.

JOHN DEERE

WHEEL PLOWS WITH QUICK DETACHABLE SHARES

Unscrew One Nut—That's All

THE latest improvement on John Deere Sulky and Gang Plows is John Deere Quick Detachable Shares. Unscrew one nut and the share comes off—slip share on, tighten the one nut and you are ready for work. Shares on or off quick, that's the idea. Here's what it means to you:

1. No trouble to change shares.
2. Eighty per cent of time saved.
3. No danger of damaging share.
4. Share is drawn up closer.
5. Share is stronger—not weakened by bolt holes.
6. Resharpened or sprung shares can be drawn into place—no drift punch necessary.
7. No unequal strain on share.
8. No injury to hands in taking share off.

We have beautifully illustrated booklets on the following plows with John Deere Quick Detachable Shares:

New Deere Sulky and Gang. (High Lift Frame Plows).
John Deere Two Way Sulky. (Side Hill or Irrigated Land).
John Deere Stag Sulky and Gang. (Low Lift Frameless Plows).
John Deere Engine Gangs. (For Traction Engines).

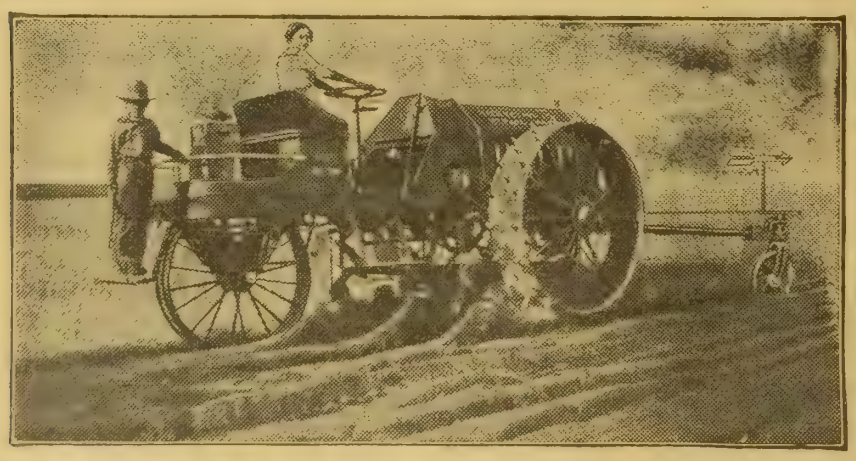
Mention the booklet above that you want and ask also for our big free book—

"Better Farm Implements and How to Use Them."

Describes the John Deere full line of farm implements. This book should be on every farm. Tells how to adjust important tools.

Ask for package P 15 Address your letter to

JOHN DEERE, PUBLICITY DEPT., MOLINE, ILL.



HACKNEY AUTO-PLOW

THE "ONE-MAN" OUTFIT

Gasoline-Kerosene-Burning Motor—Heavy Transmission—Leads the Word as a Combination Tractor and Farm Power Machine for Plowing, Seeding, Discing, Harrowing, Harvesting, Road Grading, Orchard work, Hauling, Grinding Feed, Sawing Wood, Threshing, etc. Send for our literature.

HACKNEY MANUFACTURING COMPANY, 574 Prior Avenue, St. Paul, Minn.

More Power PER GALLON

Emerson Type S Engines have an entirely new arrangement of valves and spark. On a given quantity of fuel they develop *more* power than other engines of the same bore stroke and speed. Write today for *FREE* book proving the above seemingly extravagant claims of superiority. A size for every farm.

EMERSON-BRANTINGHAM IMPLEMENT CO. (Inc.) 40916

Good Farm Machinery 439 West Iron St., Rockford,

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

WHEN the summer days are over and the flock of young poultry has grown large and strong the coops that have so nicely accommodated them get entirely too small, and yet they crowd in them because there is nothing alive any more a creature of habit than a chicken. Undertake to break them from roosting in these close quarters and you find a task at hand each night. Sometimes you must get the old roosting box clear out of sight, and even then some may come back and roost on the ground where once they found shelter in it. Never mind if it does mean work to force them to roost in roomier and more airy quarters, the work is not so bad as having the crowded chickens taking catarrh, and this they will be sure to do if you allow them to roost in the coops in large numbers when the nights cool off and the days heat up. The first symptom is a watery discharge from the nostrils, next sneezing and shaking the head, yawning or gapping. You will notice nothing like sores or matter in the mouth, though farther down in the windpipe may be plenty of thick phlegm. Quinine in the mash and arsenite of antimony, three-thousandenths of a grain a day each, are the drugs recommended to heal, but a better plan is not to let them take cold through overcrowding.

Worms

Young chickens quite often show up in the fall the victims of some kind of worms. There are many kinds, but all are doctored pretty much along the same lines, unless it may be tape worms. The symptoms are always droopiness, extreme hunger, a staggering gait as they walk, and sometimes they will have epileptic fits. The worms may be brought on the place by introducing new chickens, or the young chickens may get them out on the range somewhere, though in such cases not many of them die in the first year after bringing them on the place. It is in the years after that they multiply until they become a menace to all the poultry. Worms to a greater or less extent are always being picked up by fowls, especially the young-old fowls. The worms they pick up may not do them one bit of harm unless they are fed heavily on animal food of some kind. This favors the multiplication of the worms.

There are many remedies, but the surest every time is castor oil and turpentine, half and half, a teaspoonful at a dose, three times the first day, twice a day for several days, then turpentine once every week in a mash until you know the flock is rid of them. The droppings must be placed where the chickens cannot scratch in them, then treated heavily with lime.

Turkeys

Young turkeys that show up lame along this time of year are either too closely inbred or too much overfed, or both, which makes it worse. So many people confine turkeys in limited quarters. It can be done for a while, but if carried on month in and out it soon weakens the vitality of the flock until in three or four years you have no flock worth speaking of, but a flock of cripples. There are poultry keepers who will tell you that you can keep and raise them in limited quarters just as easily as chickens if you can keep the blackhead away from them. Other poultry keepers doubt this statement, unless each year you put in a new flock hatched from the eggs of healthy range turkeys; then for one year or two you might get good results, but not longer than this.

Consolidation or Extension

(CONTINUED FROM PAGE THREE)

or it would be bad business policy and certainly not wise educationally."

For nearly seven years I have been a member of the Board of Regents of the university. My observations and investigations in many states and my experiences in Nebraska have led me to the firm conviction that the state university, and especially the agricultural college, has a very vital relationship to the progress of the state, and for that reason it is of the utmost importance that a wise settlement of the consolidation question shall be reached.

Personal interests, no matter of what character, should be relegated to the rear. The university belongs to the people of Nebraska. As long as our civilization lasts it doubtless will endure. My earnest appeal to you men who live upon the farms of Nebraska is to support and vote for consolidation at the state farm, for it means less taxes, better education and an ideal location for the university, and protection of the boys and girls who attend it.

Summer Days

Call for a dainty, wholesome food—such as

Post Toasties

with cream.

There's little work and much satisfaction in every package of these crisp bits of perfectly cooked and toasted Indian Corn.

Appetizing flavour, substantial norishment and convenience of serving are all found in Post Toasties.

Sold by Grocers

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Helping Mother

A boy can help his mother
In a very funny way,
So it will not seem like working,
But another kind of play.
When he has to pick the sticks up
Having fun will never fail
If he plays he's a policeman
Taking robbers into jail.
—Selected.

The Editor's Corner

Many of the stories are about birds and we are asked to identify a number of birds you have seen, but cannot name. Helen Drapela of Clarkson, Neb., says there are two nests in their trees made of grass, feathers and strings and lined with wool or cotton. The grown birds are the size of a kingbird and have yellow breasts, are black and yellow above and have black tails and bills; they are very quarrelsome and have driven the kingbirds away from the orchard and grove. We suspect that these are what is known as the Arkansas kingbird or western kingbird. If so, they are close kin to the common kingbird and fine insect eaters; their call is much the same.

She also describes some small, shy birds, with yellow breasts and gray backs and a soft, sweet song. The description is not full enough to give us a good idea of the birds. They may be either the warbling or the yellow-throated vireo. These both have hanging nests, something like orioles.

Lucy Wemple sends us with her story a letter telling us of the way they build wren houses. She says: "We take a tin can and nail it to a board and cut the end out of it, letting it protrude for a little platform for the bird to roost upon." They make the opening too small for sparrows and other birds. A silver quarter is a good measure for cutting this hole. These cans, fastened to telephone poles or trees, will attract many wren families, and, judging from the letters we get, they are among your favorite birds.

The stories this week were about pets, picnics, auto rides and storms. There was one about a burglar that turned out to be only the wind, and another from a Nebraska girl about a visit to a South Dakota homestead.

THE EDITOR.

(Prize Story)

An Adventure in India

By Paul Ashenhurst, Aged 15, Lorena, Tex.

Bob was a little American boy, whose father was a missionary. He lived in India. Bob's best friend was a little native boy named Jen. Jen owned a pet elephant. The two boys would ride the elephant, and it took care of them just as a big dog sometimes takes care of children in this country.

One day the boys and Bobo, the elephant, went for a walk in the woods. They had walked around a long time, when suddenly Jen, who was in front, heard a cry from Bob. He turned and ran back to where Bob was. He was just in time to see a poisonous snake glide into the underbrush.

Jen's quick eyes saw what had happened. The snake had bitten Bob. Jen's mind worked rapidly. He whistled shrilly. The elephant came quickly. Jen placed Bob on Bobo's trunk and Bobo lifted them both to his back. They went back to town as fast as they could, and, thanks to a good doctor's treatment, Bob's life was saved.

You may be sure that since then the two boys are better friends than they were before.

(Honorable Mention)

My Pigeons

By Don Garrison, Aged 11, Huggins, Mo.

One day one of my neighbor boys came to see me and brought me a pair of pigeons. I felt very proud of them, so I fixed them a box and nailed it upon the east side of our barn for them to live in. They are mostly white, and I called them "Pintoe" and "Quickfoot."

When I first got them one could not fly. When it was large enough they would both fly around in the barn; now they stay in the barn instead of in the box. We have a large barn and it is a nice place for them to stay.

One morning I was sick, so I did not feed them early, and they came and flew all around the house as if they were trying to find me.

One evening papa sent me to the pasture after our horses. It was growing dark and I looked down in the path in front of me and saw two white birds. At first I did not think, but then I saw it was Pintoe and Quickfoot. They arose and flew back to the barn.

I feed them wheat so they will live in our barn and will not fly away.

Two Good Books

For those who are fond of nature stories there have recently been published two delightful little books, one about insects and the other about animals. "Wilderness Babies" tells little stories about the baby animals and the wonders of their lives. "Grasshopper Green's Garden" tells about the lives of some of our common insects. While the things told in these books are all true, yet they make stories that no child could fail to enjoy. These books were written to be used as readers in school, but for the child who is not fortunate enough to have such an interesting reader in use in his school they make splendid story books. They have good pictures of these animal and insect babies and their parents, and are in large, clear print, making them easy for even quite small children to read and enjoy. They were written by Miss Julia A. Schwartz of Omaha and are published by Little, Brown & Co., 623 South Wabash avenue, Chicago. The price is 60 cents apiece.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Honor Department Story)

Escaped from Death

By John Wiebe, Aged 14, Bingham Lake, Minn.

Three or four years ago, when I was not yet as big as I am now, I went into the pasture to play. Two of my sisters and one of my brothers went with me. We had a fine time gathering flowers and having frolics.

All went on well and we went on through the pasture until we came to an old well. No pump was there, but the well was surrounded by boards. Other boards were laid across on top, so my brother and I climbed on the well and threw stones and boards into the water. My brother got tired of this and climbed down and went away a distance with the girls.

All at once I wanted to go with them in a hurry and I stood up on top of the well and gave a jump in order to get down, but I failed, and down into the well I went. But, to my surprise, I got hold of one of the top boards and in that way I was hanging so very near death. I gave a great shout and the others caught sight of what had happened and came flying with high speed. They got hold of me just in time and pulled me over the boards with a hard jerk.

Then we went home and told mother what had happened. She could hardly believe in such a thing, but she had to. This is a true story.

Additional Stories

Annie Eggers, Yutan, Neb.; Una Clark, Union, Neb.; Henry Mahlendorf, Anoka, Neb.; Vernie De Buhr, Blue Springs, Neb.; Mabel Gertsch, Platte Center, Neb.; Emily Gould, Sidney, Neb.; Evylene Edson, Poole, Neb.; Loree Wolf, Pierce, Neb.; Harry Cochrane, Walworth, Neb.; August Lukes, Protivin, Ia.; Francis and Forest Rettenmeyer, De Beque, Colo.; Mary McCord, Bliss, Okl.; Vinnie Pierce, Prosperity, Ark.

An intelligent cow and an intelligent automobilist made each other's acquaintance in New York state the other day, according to the Youth's Companion. The cow, standing in the road, refused to let the automobile pass. Thereupon the driver of the car alighted and milked the cow —who then gratefully and gracefully withdrew from the roadway.

Picture Contest No. 16

Write a verse of four lines about this picture. Each of the two children writing the best verses will receive a book as a prize. The verse must be original. In awarding the prizes consideration will be given to writing, neatness, construction of verse and the originality of the matter. Try to say something the others will not think of. Often the verses, while good, are all very much alike. Give your name, age and address. Verses should be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha. All verses must reach this office not later than September 12.

LESS MEAT

Advice of Family Physician

Formerly people thought meat necessary for strength and muscular vigor.

The man who worked hard was supposed to require meat two or three times a day. Science has found out differently.

It is now a common thing for the family physician to order less meat, as in the following letter from a N. Y. man:

"I had suffered for years with dyspepsia and nervousness. My physician advised me to eat less meat and greasy foods generally. I tried several things to take the place of my usual breakfast of chops, fried potatoes, etc., but got no relief until I tried Grape-Nuts food.

"After using Grape-Nuts for the cereal part of my meals for two years I am now a well man. Grape-Nuts benefited my health far more than the medicine I had taken before.

"My wife and children are healthier than they had been for years, and we are a very happy family, largely due to Grape-Nuts.

"We have been so much benefited by Grape-Nuts that it would be ungrateful not to acknowledge it."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Of Interest to Women Readers

Where Brains Are Needed

"I claim it takes more brains to farm,"
said Ebenezer Brown,
"Than what it does to get ahead and
make a splash in town;
Why, I know six or seven chaps from
this here neighborhood
Who went away to cities, where they're
busy makin' good.

"You take Chicago and New York—size
up the big men there—
The lawyer, doctor, merchant and the
multimillionaire—
You'll find they've all been farmer boys,
or lived in towns at least
Where they could have a chance to learn
the ways of bird and beast.

"Now take these city chaps who come to
cultivate the land—
I don't mean millionaires who farm for
fun, you understand—
But take the common city folks who try
to farm, and say!
It's pitiful the way they try to make their
farmin' pay.

"I've saw a dozen of 'em fail; I never
seen one yet
Who managed to be prominent or not get
into debt;
And so I claim a man may make an
awful splash in town
And not have brains enough to farm,"
said Ebenezer Brown.
—S. E. Kiser.

Saving Money

Not long ago an unhappy girl wrote to the editor of the "Questions and Answers" columns of one of the magazines, "How can I save money? I spend every cent I earn and am always in debt." The editor gave her some sage advice as to keeping accounts and other things that might help her estimate where her money had gone, but would not be particularly valuable to prevent her spending the money.

Some women want everything they see; they are not satisfied if an acquaintance gets something new until they have one, too, whether it is the latest model freak belt or a pearl ring. This bad habit of an untrained mind is fostered by the influences of the city, where things are constantly being so displayed as to tempt the passerby, and where a good many women are accustomed to think they must have everything new that comes out.

In the country the women are more sensible, and then, too, they are in closer touch with the earning department of the family than their city sisters, and know much better how hard the dollars come. When you see the money coming in and help with the hard work whereby it is earned, you are not going to be so careless in spending it on the fads of a moment. You want things that will be of lasting value.

For this reason the country woman is a better spender than the city woman; she buys less for the styles of the moment than for the lasting quality of the goods; she sacrifices quantity of costumes to quality of material.

There is a way, though, in which the more sober and earnest class of city women are learning to conserve their means that might well be taken up much more widely than it is in the country—that is the value of food products. Most food is now sold in packages under a brand name, and the pure food law, making it necessary for net weights and amounts of adulterants to be printed on the packages, is pretty generally complied with. To how many do these printed notices on packages mean anything? You can save a lot by learning something of the harmful or useless materials that are used to adulterate foodstuffs and by noting the amounts stated on the packages you buy, as well as the net weights. The cheapest in money is not always the cheapest in the long run. This is a suggestion for the women in particular who want subjects to study in club work during the coming year. A dozen women can look into food products much more effectively in combination than one alone, and you will be surprised if you take the matter up to find out how practical and how interesting it is.

HOME EDITOR.

Politeness in Children

I am not one to criticise childhood adversely or to try to fit old heads upon young shoulders; among children I always find friends; yet I think it proper to insist upon less rudeness and thoughtless selfishness in our younger generation. It is possible to give children less latitude and still maintain harmony by recognizing their rights and privileges. The pendulum of discipline has swung from the too much repression and over-teaching of etiquette in our ancestors to the opposite extreme of untrammeled natural expression. Who has not been shocked by the disrepect to old age and to foreign nationality so common now, by the jostling grown-ups in public, by the persistent ostentatious talking in company, thus disturbing, if not annihilating useful mature conversation, by the amount of personal attention needed in public audiences to keep children straight, by the lack of rudimentary table manners, by the boisterous entrance of children in the home when parents and older ones are engaged in conversation, by gum chewing in public, even during recitation on programs?

The fault may be apportioned among parents, teachers, grown-up associates and religious instructors. Parents often omit all religious instruction and make the most of childish expression with but spasmodic repression, then expect children to manifest due reverence and respect. Teachers fail to use anecdotes in due measure, line upon line, to point the moral, but prefer to spend time upon myths. Grown-up associates, oftener men, recite to children with great gusto their former exploits of bravado, and tease boys or set to them examples of discourtesy, with no thought of consequences. Religious instructors too often occupy their allotted hour merely amusing rather than teaching children.

Personal interest is made the only incentive for attention or respect. "To be polite is to do and say the kindest thing in the kindest way." And the child grows up to maturity.

Iowa. MRS. W. K.

To keep fly paper from blowing off the table, or wherever it is placed, tack a sheet of it to a small board about the same length. It will be found much easier to move.

Styles for Home Dressmaker

Description of Patterns

6769—Ladies' Waist—This waist, although plain, has the stylish sleeve, with extension of the upper end to the neck edge. The armhole is also very large, and front and back are plain. The closing is in the center of the front. The pattern 6769 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2¼ yards of 36-inch material and five-eighths yard of 36-inch contrasting goods.

6756—Ladies' Skirt—Simple and ornamental, this skirt is cut in a single piece. It has a center front closing, with an overlapping seam, while two plaits at each side extend a few inches on each hip and provide a little fullness, which is drawn in again at the knee. The pattern 6756 is cut in sizes 22 to 32 inches waist measure. Medium size requires two yards of 54-inch material.

6819—Ladies' Dressing Sacque—Any of the pretty crepe materials can be used to make this sacque, with the trimming of a contrasting material. The sacque is made with the back and sleeves in one. The pattern 6819 is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 2¼ yards of 44-inch material and one-half yard of 24-inch silk to trim.

4634—Ladies' Apron—Gingham, percale or chambray can be employed in the construction of this nice-appearing one-piece apron. The apron can be made with or without the sleeves. The pattern 4634 is cut in sizes 32, 36, 40 and 44 inches bust measure. Medium size requires 4¾ yards of 27-inch material.

6762—Child's Dress—In this dainty frock there is the long seam down the shoulder and outer arm, dividing the sleeve and body into two parts. In addition the front is again divided by the line of closing, which has an ornamental tab near the neck. The pattern 6762 is cut in sizes 2, 4, 6 and 8 years. Medium size requires 2¼ yards of 36-inch material and one-half yard of 27-inch contrasting goods.

6748—Girls' Dress—A modification of the sailor suit is here shown. It has a blouse, with body and sleeves in one, and a sailor collar at the neck. It is slipped on over the head. The sleeves may be long or short. The pattern 6748 is cut in sizes 6 to 14 years. Medium size requires 2¼ yards of 36-inch material and five-eighths yard of 27-inch contrasting goods.

6716—Ladies' Dress—A pretty design for gingham, calico, cambric, printed and plain cotton crepe and other wash fabrics. It has the loose blouse of the moment, with plain sleeves, long or short, and side front closing. The skirt has three gores. The pattern 6716 is cut in sizes 34 to 46 inches bust measure. Medium size requires 4¼ yards of 36-inch material.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Treasure Vaults of the Andes

By Frank G. Carpenter

LA PAZ, Bolivia.—The San Francisco exposition will have a wonderful exhibit showing the treasure vaults of the Andes. For months Bolivia has been collecting specimens to show its mineral resources, and it will undoubtedly have the finest mineral collection abroad at the fair. Exhibits already prepared fill a room seventy feet long and twenty feet wide, and Dr. Manuel Vincente Bolivian, who is to take the collection to San Francisco, tells me that when complete it will be three times this size. I examined the specimens already collected. They embrace every sort of metal, from bismuth and tungsten to gold, silver, copper and tin. Bolivia has the richest tin mines of the world, and it now supplies about one-fourth of the world's production One block of tin ore to be sent to the fair weighs 500 pounds, and of that 70 per cent is pure tin. This is in striking contrast to the less than 5 per cent ores of other parts of the world. Another sample weighs 2,000 pounds, and it contains more than 1,200 pounds of pure tin. It comes from the mines of Simon Patino, who is now the tin king of the world. He has an income of about $100,000 a month from his tin mines at Nucta, which seem inexhaustible.

Exhibits of Copper and Tungsten

Another large exhibit consists of specimens of copper. These come from various parts of the country, and especially from the mines of Coracora and Carangas, where the ore lies in layers of sandstone, nine or ten feet in thickness. The copper runs through the sandstone in grains, and all that is necessary is to pulverize the stone and wash out the sand. You have then the pure grains of copper, ready to be put up in barrels and shipped off to Europe. Other copper specimens are ingots or charqui, some of which weigh several pounds, and others are pure copper in the shape of seamoss, or in great sheets or plates covering many square feet. I saw one such plate that would cover a dining table. The exhibit will also have copper water bottles, basins and utensils made by the Indians.

Another mineral that will be shown in great variety is tungsten, used so largely in our modern electric lighting. The tungsten comes from the department of Potosi, which now supplies the most of this metal used in the world. The owners of the mines are known as the tungsten kings. They control the world's output and fix the prices.

The exhibit will contain also many samples of silver and gold, lead mixed with silver, and copper and tin. The gold is in coarse grains and nuggets, washed out by the Indians. Just outside La Paz the Spaniards picked up a nugget that weighed thirty-three pounds and was worth $9,000. Last year a nugget as big as the palm of a man's hand was found near the same place.

Add to World's Wealth

To these specimens will be added some of blocks of ore, weighing three or more tons, which Bolivia has been showing at Ghent, and the whole collection will form one of the finest mineral exhibits ever seen at any exposition. It will give a fair idea of the wonderful possibilities of the Andes. These mountains are highly mineralized throughout their whole length from the Gulf of Darien to the Strait of Magellan. The republic of Colombia at the north has added hundreds of millions of dollars' worth of silver and gold to the wealth of the world. Ecuador and Peru have produced vast sums, and also Bolivia and Chile. They are now washing gold from the sands at the Strait of Magellan.

I have already written of the wonderful copper mines of Cerro de Pasco, that produced many millions in silver before the silver ore ran into copper. Between the years of 1630 and 1824 those mines yielded more than 54,000,000 pounds of pure silver, and for many years they turned out 1,000,000 ounces of silver per annum. Indeed, it is said that $60,000,000 worth of silver has been taken from under the very ground on which the town of Cerro de Pasco now stands. I doubt not that an equal value in copper will be produced from the mines now being worked below where the silver lay.

Silver Mines of Potosi

The greatest of the silver mines of Bolivia have been those of Potosi. There is a mountain there that has produced more of that metal than any other place in the whole world. The mines were found about fifty-two years after Columbus discovered this hemisphere, and from then on until the nineteenth century the average product was more than $12,000,000 a year, or $1,000,000 a month, for 294 years. The total sum amounted to over three billions of dollars, and it is estimated that almost four billions have been taken out to this day. The mountain of Potosi is now honeycombed with mines, and the silver ore is largely exhausted; but the silver seems to have run into tin, and a British company is working the mines for tin, with the silver as a byproduct. In Cerro de Pasco, the silver and gold mixed with the copper pay all the expenses of the mining, and the copper is pure gain. It will probably be so with the tin of Potosi. The mines have always shown great value in tin, but the ignorant miners threw the tin away. They separated it from the silver, allowing vast quantities of the cheaper metal to be washed off by the streams. Potosi mountain has now something like 7,000 abandoned silver mines scattered over it, and there are hundreds of these that will soon be

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On Goodyear Tires. All advances—due to doubled cost of rubber—were withdrawn on August 19th. This applies to dealers and consumers.

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All-Weather treads—the matchless anti-skids. They are tough, double-thick and enduring. Resistless on wet roads with their deep, sharp grips; yet flat and smooth, so they run like a plain tread.

Upper Class Tires How to Get Them

These things make Goodyears the upper class tires. No other maker employs them. And no other method combats one of these troubles in an equally efficient way.

These things mean safety, sturdiness and strength. They mean maximum mileage and minimum trouble.

When one tire gives them—and others don't—you should get the tire that does.

Any dealer will supply you if you say you want this tire. He will sell it to you at a price impossible were it not for our mammoth output.

It is up to you. Note again these extra features. Then ask some Goodyear user what it means to have such tires.

Find out why Goodyear leads.

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(1852)

worked for silver and tin. I am told that the mountain also contains copper.

Mine as Reward for Kindness

The Huanchaca silver mine has produced more than 9,000,000 pounds of pure silver, and the mileage of its underground workings is said to be longer than that of any other silver mine in the world. The mines have recently been equipped with modern machinery, and a long railroad has been built to connect them with the smelter at Antefagasta. Those mines were discovered in the nineteenth century by a poor Spaniard, who for twenty years had hunted for silver and gold and had found none. As the story goes, he was considered especially unlucky, and was laughed and sneered at by all, but the Indians, to whom he was kind. The Huanchaca mine was shown him by an Indian woman as a reward for his kindness during her illness, and as a result he died a rich man. More silver was taken out after his death, and the total product has now equaled about $125,000,000. The mines are still yielding. They employ altogether about 3,000 workmen, including 1,000 women, who are engaged in sorting the ores.

During my stay in Cerro de Pasco I heard much about the vanadium deposits that lie on the tops of the Andes, only a few miles from the American smelter, known as La Fundicion. The mines belong to the Vanadium Trust company, which, I am told here, is a branch of the United States Steel company. It controls the product and uses it for making vanadium steel. The chief mine was originally owned by an Italian, named Fernandini, who still holds a large interest. It has made Fernandini rich, and he is now buying haciendas here and there in the Andes and breeding fine stock.

Difficulties of Gold Mining

There are extensive quartz mines on the Amazonian side of the Andes. One of these belongs to the Inca Mining company, a Pennsylvania combination, which altogether has taken out about $7,000,000, and another is the Santo Domingo mine, that has produced half as much. During my stay in Arequipa I met Mr. B. H. Collins, the manager of the Inca company, and had a chat with him about his mines and the difficulties with which the company had to contend before they could make them profitable. The mines are situated on the Madre de Dios river, not very far from the headwaters of the Amazon. They are on the Atlantic slope of the Andes about 550 miles east of the Pacific ocean. To reach them, one has to go by the railroad across the coast range, through a pass higher than the top of Pike's Peak, and then up the branch line which leads from Julliaca to Cuzco. At Tirapata the miners leave the railroad and go across the country by a wagon road and mule trail for a distance of about 142 miles. The company had to build the road themselves, and that across a pass over 16,000 feet high. The road has sixteen bridges and it goes through gorges 600 feet tall. A mule trail that forms the end of the route winds its way for thirty-eight miles up and down and along the sides of the cliffs. It cost $400,000, and the total expense of the entire route was enormous. The mining company got a concession of something like 1,000,000 acres of land for building the road, and has been exploiting this for rubber.

Two Mining Girls at Huanchaca

The Inca Mining company has imported from the United States and carried over this route stamps and mills and also a reduction plant to take care of 100 tons of ore daily. Among its other machinery is a steamer, made in Chicago, that was brought down to the coast of the Pacific and carried over the mountains in pieces, 700 mules being required for the transport.

Americans Heavy Investors

Entirely separate and apart from this Inca company is the Incaroo Mining company. The former mine is in Peru; the latter in Bolivia. Both are largely owned by Americans, and the first entirely so. The Incabor has, I believe, some Bolivian capital invested in it, but the most of its stock is held in the United States, and one of the chief owners and president of the company is Mr. Horace G. Knowles, who was formerly United States minister to Bolivia. The vice president and manager is David G. Bricker, a well known American miner, who discovered the famous Olla de Oro mine, and the treasurer is Thomas K. Miller, the secretary of state of Delaware. Mr. Knowles tells me that this mine promises to pay beyond the hopes of its owners. He showed me four gold bricks that had been turned out last month, and allowed me to photograph him with two of the bricks in his hands. Each of the bricks weighs, I should judge, about thirty pounds, and is worth in the neighborhood of $4,000. Mr. Knowles says the mine is rapidly developing, and that he believes it will within a short while produce 100 pounds of fine gold per month. It is equipped with an American plant, and has one of the most modern and efficient mining installations of all South America.

In addition to his work for this mine, Mr. Knowles has organized a company for the general development of the mineral resources of this part of the Andes. He thinks that Bolivia is the great unopened treasure vault of the world, and rightly says it has never been prospected. The company, of which he is the president, is known as the Bolivian Development and Exploitation company, and its capital stock is held both here in Bolivia and in the United States. The list of stockholders includes President Ismael Montes, ex-President Villazon, the president of the Bolivian senate, most of the members of the cabinet, as well as several other leading statesmen and commercial men of this country. He tells me that a great deal of the stock is held in the United States, its investors being scattered from Boston to Los Angeles. The plan of this company is to send out engineers and prospectors over this vast mineral territory, and to investigate what they find through a corps of competent engineers, headed by Prof. Francis Church Lincoln of Boston, a well known geologist and metallurgist. If the mines stand the test of this examination they are then to be submitted to the American stockholders, who will purchase or sell them at such prices that the parent company will get back about four times what it puts in, and at the same time retain 25 per cent of the stock of the operating company.

Danger in Disputed Titles

This method of development and speculation is well known in the United States, but it is new in Bolivia and is popular. I understand that the company has already on its lists of either examined or to be examined properties a number of gold, silver, tin, tungsten and copper prospects and mines. It is also investigating certain quarries of marble and alabaster that Mr. Knowles says are so fine that the stone should find a market at high prices all over the world.

The plan, as far as I can see, is an excellent one, and especially so considering its connection with Bolivian statesmen and capitalists. The great danger, however, is as to the securing of mining titles that cannot be disputed. This has been a very serious matter in the past as to all valuable Bolivian properties, although President Montes is now attempting to have enacted new mining laws and regulations that will remedy these dangers and materially aid in the opening up of the country in a mineral way.

I have been much interested in hearing Mr. Knowles express his great faith in the mineral possibilities of Bolivia. He says that this country was the original source of the gold of the Incas, and that it is bound to become a second Transvaal. He has curious theories regarding gold discoveries and gold booms, concerning the reliability of which I am not well enough posted on the history of such matters to judge. He says the great gold discoveries of the world come in cycles, and that the same number of years elapsed between the great finds in California, Australia, Colorado, South Africa, Alaska and Nevada. For instance, in 1849 the time for one of these periods came, and we had the gold of California. There was a rush from all over the world to San Francisco, and a flood of yellow metal was poured into the markets. After that a fixed number of years passed and we had the gold discoveries of Australia, with a rush to that island continent. Then the wheels of time turned round just so many evolutions and gold was found in Colorado. Another twist of the wrist of Dame Fortune and up came the gold of the Transvaal, and so it was for Alaska and so for Nevada. Now the requisite number of years has again gone by, and this time Mr. Knowles says the gold is to come out of Bolivia. A little investigation as to the actual dates of these events will demonstrate whether this theory is based upon fact, and if so, the judgment of the would be miner or investor must decide for him whether the same rule will hold good in the future. At any rate, the theory is an interesting one.

FRANK G. CARPENTER.

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79c

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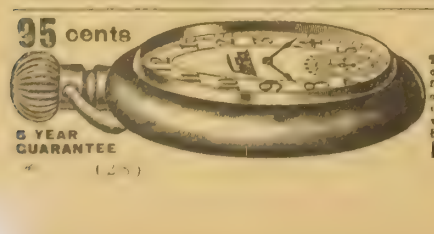

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Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

What Feed to Buy for Pigs

D. E. L., Iowa: I have 150 pigs and have to buy feed for them. Which would you advise me to buy, corn at 65 cents per bushel or oats at 30 cents? I am a reader of the Twentieth Century Farmer and like it fine.

Answer—Corn at 65 cents and oats at 30 cents a bushel are about the same price, pound for pound. The corn is a very little higher. Would advise you to buy both. The proportions depend upon the purpose for which you are feeding. If for fattening, feed two-thirds corn to one-third oats; if you are growing them, feed one-third corn to two-thirds oats. They should be on pasture in either case.

As Seen by a Farmer

E. R. D., Nebraska: Thinking that it might be of interest to the readers of the Twentieth Century Farmer to read an account of the hog cholera day held at the Nebraska state farm August 12, I will describe briefly a few of the things which most interested me.

We were first taken through the serum plant by Dr. Johnson, who has direct charge of the production. Great care is used in all these processes to keep everything clean and in a sanitary condition.

They have made application for a government license and have passed the necessary inspections. While it may not be necessary for them to have a license, it will give them a standing they would not have otherwise.

The serum is taken from healthy hogs that have passed the tuberculin test. The tail method of bleeding is used because it is considered the more economical way. The serum is all tested on susceptible pigs, so there is no danger of getting any impotent serum.

The virus blood is taken from shoats which have been inoculated with cholera blood, i. e., when the disease reaches a certain stage the hog is killed and all the blood saved. Each carcass is examined by a competent veterinarian, and if any other disease is discovered the blood from that hog is rejected. All virus is tested on susceptible pigs to see if it is sufficiently virulent.

We were next shown the lesions caused by hog cholera by a post-mortem examination of three hogs. These were small, red specks, showing principally on the kidneys, lungs and lining of the bladder; also a congested condition of the covering of some of the glands, more especially those of the neck.

We then listened to a lecture by Dr. Day, who is field man for the State Live Stock Sanitary Board. Dr. Day was formerly in the employ of the Department of Agriculture at Washington, D. C. He gave us a very interesting talk on the history of serum, saying in part that after Dr. Dorset had made the discovery he had it patented in the name of the people of the United States, so that there could be no monopoly in its production. He also told us of his work in the field and how impossible it is for one man to cover the territory.

In the afternoon we listened to Mr. Russell, associate editor of the Twentieth Century Farmer, who gave us a talk on sanitation and hogs in general. This was well received, coming from a man of practical experience and great research. Dr. Gain then gave us a demonstration of vaccinating, thoroughly explaining the process.

We were greatly pleased by the courtesy shown us and think that every hog raiser who wishes to save his hogs should attend one of these meetings.

It is no longer a question as to whether we should use serum, but a question as to where we can procure a reliable article at a reasonable cost. Dr. Gain told us that in three weeks their surplus would be gone and that with the present plant they would be unable to meet the demand.

What we need is a liberal appropriation from our next legislature for new buildings, equipment and working capital. If the hog growers would make it a point to see their legislative candidates before election, they might be more easily influenced than after they were safely elected. There are certain interests who may be expected to have a strong lobby at the next legislature to oppose any appropriation for this plant.

Editor's Note—We are glad to get this view of hog cholera day at the university farm. We believe this to be an institution of practical value to the hog raisers of the state and are always glad to hear from our readers on such matters and give their letters publicity.

Sows that Do Not Come in Heat

C. L. J., Nebraska: I have four pure-bred Poland-China sows whose pigs I weaned about eight weeks ago, and the sows do not come in heat. These sows were bred first when 8 months old and they averaged 270 pounds when 10 months old. Could you advise me what to do with these sows to bring them in heat? Would letting the boar run with them tend to bring them in heat sooner?

Answer—This trouble is probably caused by the feed the sows are getting. We do not know of any certain remedy you can give. One well known hog raiser says he feeds burnt corn to sows at this time with good success, but as to the reliability of this remedy we do not know. Sows exceedingly thin or exceedingly fat often do not come in heat, but we infer from your letter that this is not the condition in your herd. It has been our experience that some sows do not show any visible signs at this period. We have practiced with success doing as you suggest—turning the boar in with them. Would suggest a change of feed first and then, if desired results are not obtained, turn the boar in with the sows.

Are Pit Silos Successful?

T. S., Nebraska: Could you give me a pointer on silos dug in the ground? Some say they will mould the silage. Here it is 150 feet to water and we can dig one and cement it up ourselves if it will do. This country was all hailed out in June, and we planted the ground to flint corn and would like to make it into silage.

Answer—No doubt you can use a pit silo in your part of the country. The only objection to these silos is they cannot be used in soils where water is liable to get into them. If your subsoil is sufficiently firm, you can dig the pit and cement it underground successfully. We have even seen some pit silos where the subsoil was so hard that it was not necessary to cement them, and they were successful. You need not be afraid of silage moulding in one of these silos, as some of the best silage we have ever seen came from pit silos. From what you say of your soil you will no doubt have splendid silage and can probably realize more from your corn than in any other way.

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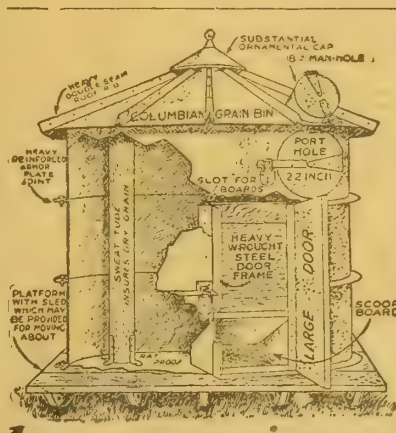

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IT would be the height of folly to sell your wheat now when every indication is that by holding it a short time you will be able to get two or three times its present price. The Big European War is bound to put up the price of wheat higher probably than it ever has been. You can store your wheat easily and cheaply in a Columbian Metal Granary and sell when prices are highest. For 30 days we will supply you with a

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Lee's Hog Remedy is non-secret. The ingredients are Sulphur, Iron Sulphate (Copperas), Charcoal, Sodium Bicarbonate, Tobacco, Antimony, Salt, Sodium Hypo-Sulphite, Naphthalin, Gentian, Sodium Sulphate (Glauber Salt), Copper Sulphate and Aloes. These and none other. No meal or filler. You cannot beat it, either quality or price.

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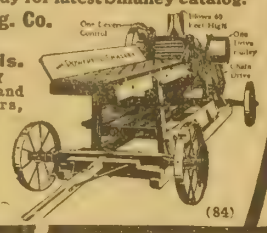

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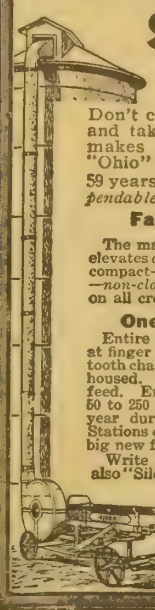

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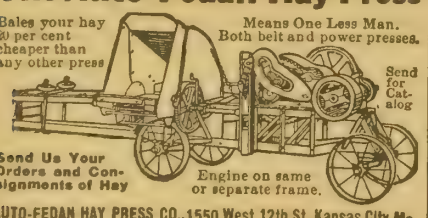

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The Bee Publishing Company
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Review of Live Stock Market

By A. C. Davenport

WAR waged on the high price of beef by the public in all sections of the country is having its effect upon the cattle market. Government investigations and newspaper agitation have served to awaken the interest of consumers and bring them to the fighting point. The weapon used in this economic warfare is "reduced consumption," the most deadly that could be devised by the consumer against the producer.

War in Europe is having little or no appreciable effect upon the cattle market and at the present time there is no expectation that it will be felt to any great degree in the very near future. The market at the present time seems to be entirely under home influences, with the law of supply and demand a large factor.

A week ago it was pointed out in these columns that the market, which was then at the high point of the year, would be very apt to break should receipts become a little larger. As expected, the run became heavier and prices during the last few days have been steadily declining, and now at the close of the third week of August are all the way from 15c to as much as 50c lower, depending upon the kind and quality.

Present indications are that receipts during the coming week will continue large as compared with recent weeks. Dry weather pastures in many sections are forcing a good many immature native cattle to market, while the season is at hand when range cattle should begin moving more freely. The same dry pastures that are sending cattle to market are also reducing the demand for feeders and leaving more cattle for the killers.

Left entirely to itself, the cattle market might reasonably be expected to go still lower so far as grass stock is concerned. But the market is not being left to take a natural course. While receipts are likely to increase, the consuming demand promises to decrease under the influence of the popular agitation against high-priced beef. This of itself must have a bearish effect upon the market, but that is not the only bear factor. The packers, who have been getting a large part of the blame for the high price of beef, are as anxious as are consumers to see lower prices for cattle and may be expected to make use of bear tactics that they know how to use so effectively whenever receipts become large enough or demand small enough to give them the opportunity.

With consumers and packers all conspiring for lower prices, the market is left with no support other than supply, but that is already larger than for some weeks back and may continue large enough for a few weeks to come to be a source of weakness to the market rather than a source of strength.

After the whole situation is carefully gone over it becomes very apparent that the indications all point to a lower market for a short time at least. Of course, at times like the present there are many things that might happen to change the natural course of the market, but at present writing nothing of the kind is in sight. Possibly the best beeves, especially choice cornfeds, may not sell any lower, but they constitute an extremely small percentage of the total receipts.

Cattle Should Continue High

While the trade is generally anticipating lower prices for grass cattle, the general situation is still very strong. It must be borne in mind by producers that there never was a time in the history of the trade when grass cattle sold as high during the middle of August as they did this year. It follows, then, that there is room for a considerable break in values and still leave it a bull market. The fact is that, barring the agitation that is being carried on by the newspapers, the cattle market is occupying a very strong position and everyone anticipates that it will continue that way throughout the year. While, as noted above, receipts during the last week have shown considerable increase over recent weeks, they are still lighter than for the corresponding week a year ago, and everyone knows that receipts to date at the six big markets are considerably over half a million head short of last year. Thus while the fight that is being made by consumers for lower beef will undoubtedly hold the market down to a lower level than it would otherwise attain, producers can still feel confident of a high market.

Hog Market Unsteady

There is not very much to be said regarding the hog trade, as general conditions have remained very much the same as pointed out a week ago. The market continues to fluctuate quite rapidly, advancing and declining with more than usual rapidity. The declines, however, during the last week have outweighed the advances, so that the market has averaged lower than the previous week, but decidedly higher than during the first week of the month. As noted before in these columns, the war influence is felt in a speculative way in the provision market, and that in turn is reflected in the hog market.

The future of the market is so uncertain that it is impossible to form any clear idea as to the probable course of values. At this time of the year it is always a hard matter to look into the future by reason of the uncertainty of the corn crop, and the possibility of severe losses of hogs through disease. This year the foreign war leaves everyone in the dark as to the export demand for provisions, making the situation still more uncertain.

In times past the packers have adhered to the old custom of breaking the market during September and October so as to get prices down before the opening of the winter packing season. Only once in

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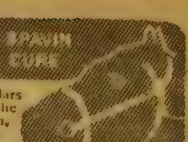

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Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd headers I have them. They are out of prize-winning sires and dams. **Clarence Wallace, Wisner, Neb.**

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Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

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Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

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twenty years have they failed to do this. This year the trade is divided in sentiment, some believing that there will be a foreign demand later on sufficient to prevent the packers from carrying out the old established custom, while others are expecting to see hogs sell lower during the next two months. It is all mere guess work, as no one can under existing conditions figure out anything at all definite. Most hog men are accepting the uncertainty and letting it go at that.

While lambs have developed a little weakness during the last few days, the market has continued in a very satisfactory condition throughout the month of August. Sheepmen without exception are well pleased with the condition of the trade and are congratulating themselves that there has been no widespread public agitation regarding the price of mutton with which to break the sheep market. At the present time the outlook is very good, and while prices may possibly ease off a little, there is every reason for believing that they will continue strong for some time to come. As a matter of course, the future of the market will depend to a considerable extent upon the demand for feeders. Given a good corn crop, there can be no question but what the feeder demand will be very large, and that will be a big help in maintaining prices on all kinds of sheep and lambs. A good many sheepmen have gone so far as to predict that good range fat lambs will continue selling right around $8.00 on the basis of Omaha for some little time.

Our Cover Design

The picture on the cover page of this issue represents a grade mare and her twin mule colts. These colts were foaled last spring, and the picture was taken when they were just a week old. The colts are both living and have made a splendid growth. They were born and are owned on the farm of George M. Mansfield near Elk City, Neb.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Henry Stuthman Heard From

In a letter under date of August 16 Henry Stuthman of Pilger, Neb., reports everything coming along in first-class shape with his Durocs. Mr. Stuthman has the reputation of having one of the very best herds of Durocs in Nebraska. The best evidence of this fact is the class of stuff that he has been offering for sale for the last several years, and also the class of stuff he has been buying for breeding purposes. At this time he has several extra choice fall boars and also a few spring boars that he will price worth the money. He will hold his fall sale on October 17, at which time he will have a lineup to offer that will be well worth keeping in mind. Don't forget to watch these columns for further announcements regarding this herd. In the meantime, if you want to get in on the ground floor, write him for further particulars as to what he has to offer at private treaty. Kindly mention this paper when writing.

Kuzel's Durocs

L. J. Kuzel of Clarkson, Neb., writes us that his Durocs are especially good this year, both as to growth and individual makeup. We know this to be a fact, for the last time we called on Mr. Kuzel he had a splendid lot of spring pigs coming along just about as well as any we have seen. This is nothing unusual, because you can always rest assured you will find something good on this farm. These pigs are sired by Lucy's Select, Proud Wonder, King Echo Top, Colonel Sensation, Chief's Model, Red Chief Wonder, Dusty Advancer, Brigg's Jumbo and others. If you are looking for a first-class male pig of early farrow, and one that is bred right and grown right, get in touch with Mr. Kuzel, mentioning the Twentieth Century Farmer.

Baeder's Durocs

John Baeder of Scribner, Neb., tells us that his pigs are coming along very well up to this time. Mr. Baeder is one of our substantial Duroc breeders and will have some very choice stuff at the State fair at Lincoln. His spring pigs this year are sired largely by Baeder's Golden Model, Prince Critic, Van's Crimson Wonder and Blue Ribbon Model. Mr. Baeder is conveniently located adjoining the town of Scribner, and anyone wanting to look at his herd will find it is easy of access. Get in touch with him for further particulars, mentioning the Twentieth Century Farmer.

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BIG CROPS IN SHALLOW WATER district, northeastern Colorado; winter wheat yielding 35 to 40 bushels; emmer, 90 bushels; oats, 60 bushels per acre. Have 75 farms to select from at $15 to $35 per acre, easy terms. Land pays for itself in two years. Don't miss these bargains. We are closing out this summer the last of the Murray and Johnson ranches, scattered amongst improved farms selling at $30 to $55 per acre. Watch for our wheat and farm home cut in next issue. Write for circulars. Agents wanted. Platte River Valley Land Co., 5th floor State Bank Bldg., Omaha, Neb.

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A NINE-ACRE ORCHARD IN WASHington county, Idaho; trees 13 years old, healthy and in full bearing; raises from 2,000 to 4,000 bushels good apples each year, according to the season. Good crop in the orchard now. Will sell orchard and apples at a bargain. Seven-room house and other improvements, etc. Address Dr. S. S. Weidner, Fairbury, Neb.

200 FARMS in THE FAMOUS PARK region and Red River Valley district, Otter Tail and Wilkin counties. Level or rolling prairie land. Timber land Any size farm you want from $30 to $80 per acre. Easy terms. Otter Tail county has never had a crop failure; 500,000 acres of corn last year, making from 30 to 70 bushels per acre. Natural clover and alfalfa country. Write for free booklet and lists. Park Region Land and Loan Co., Fergus Falls, Minn.

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FOR SALE—623 ACRES, NEAR TOWN, western Kansas wheat belt; all tillable; title perfect; $25. Will exchange for property in or near Los Angeles, Cal. W. Morse, Fairbury, Neb.

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OIL UNDER THE HIGHLANDS OF Louisiana! When you can buy $50 farm land at from $15 to $20 per acre and stand a chance of getting a big oil well that will make you rich over night, it is worth looking into, isn't it? That's what you can buy in Louisiana today; that's the kind of a bargain you can get now in this land-with-a-future. Other states have had their inning; now it's Louisiana. Watch the wise farmer; follow him into the prolific, healthful uplands of Louisiana; but don't delay; look at these bargain tracts at once. I will give you information free. Write William Nicholson, Immigration Agent, Kansas City Southern Ry., Room 429, K. C. S. Railway Bldg., Kansas City, Mo.

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FARM NEAR OMAHA — 160 ACRES within five miles of Omaha street car line. Good improvements. No better soil in Douglas county. Has 30 acres in alfalfa, produces five tons per acre sold last season at $14 per ton. Close to alfalfa mill. Farm will rent for $1,200 per year. Must be sold to settle partnership. Price, $112.50 per acre. Address T. E. Stevens, 712 Omaha Nat'l Bank Bldg., Omaha, Neb .

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WRITE FOR ILLUSTRATED BLUE book describing my rich, black Red River Valley farms. Corn, clover and alfalfa successfully grown. Wm. McRoberts, Casselton, N. D.

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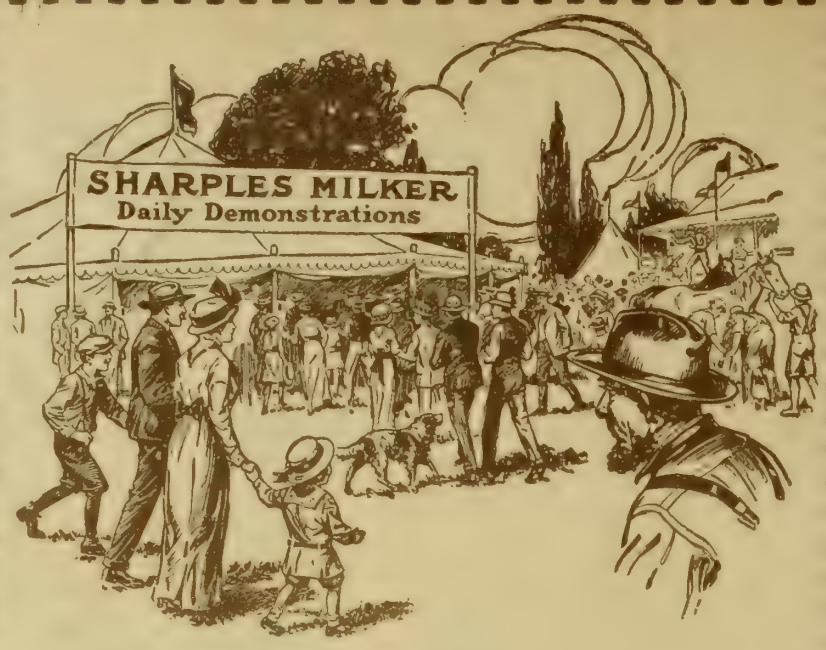


At the Fair This Year

WHEN the inviting shade of the big SHARPLES tent beckons you inside, slip into the welcome arm of a big, comfy chair in a cool corner—and while you rest your tired feet, watch the SHARPLES MILKER milk your neighbor's cows.

Smoke if you want to—the ladies don't mind. Relax and get all the good out of your little recreation trip. Feel that this big exhibit is your show—because we have gone to a lot of trouble to make these exhibits both interesting and instructive—but, after all, comfort is the thing which intensifies all our pleasures.

If you are interested in dairying—and everyone is nowadays—here you will find food for thought. Cows strange to the machine will be milked at regular intervals. Here you will learn, in a few minutes, why the SHARPLES MILKER is now milking a quarter million cows. You can see the reason for its remarkable success instantly. Better still, you can talk with farmers and dealers who have shared in the upbuilding of that success—undisturbed.

The things a man finds out for himself are the ones most worth while to him. People learn—they are not taught nowadays. Farmers have a way of doing their own thinking. And if an article does not possess merit you cannot make them believe that it does. And on the other hand, if it does possess that merit you can't keep them from finding it out. We investigate and "buy" things in this progressive age. Farm implements are no longer "sold.'

Every member of the family is interested in the MILKER, it seems. And it is right that they should be; because if a man can use a MILKER and it will do him good, the sooner he knows about it the better. We cannot put off the inevitable—and why, then, should we try? If a man can't use a MILKER it won't hurt him to know about it, because it is a big, new idea. But if he can use it, now or any time, why deny himself so good an opportunity of seeing it?

Clarifiers will be shown, too, and gasoline engines. And Separators, Whey Machines, and much else which interests the dairy fraternity.

Something Happens Every Minute at the Sharples Milker Show.

It's really interesting! You will be delighted with your visit—so will we.

Fairs and Expositions—1914

Name	Location	Date
California State Fair	Sacramento, Cal.	Sept. 12-19
Connecticut State Fair	Hartford, Conn.	Sept. 7-11
Illinois State Fair	Springfield, Ill.	Sept. 18-26
Indiana State Fair	Indianapolis, Ind.	Sept. 7-11
Iowa State Fair and Exposition	Des Moines, Ia.	Aug. 26-Sept. 3
Kansas State Fair	Hutchinson, Kan.	Sept. 12-19
Michigan State Fair	Detroit, Mich.	Sept. 7-18
Minnesota State Fair and Exposition	Hamline, Minn.	Sept. 7-12
Missouri State Fair	Sedalia, Mo.	Sept. 26-Oct. 2
Nebraska State Fair	Lincoln, Neb.	Sept. 7-11
New York State Fair	Syracuse, N. Y.	Aug. 31-Sept. 5
Ohio State Fair	Columbus, O.	Aug. 31-Sept. 4
Oregon State Fair	Salem, Ore.	Sept. 28-Oct. 3
The Allentown Fair	Allentown, Pa.	Sept. 22-25
Tennessee State Fair	Nashville, Tenn.	Sept. 21-26
Utah State Fair	Salt Lake City, Utah	Oct. 5-10
Vermont State Fair	White River Junction, Vt.	Sept. 15-18
Virginia State Fair	Richmond, Va.	Oct. 5-10
Wisconsin State Fair	Milwaukee, Wis.	Sept. 14-18
Interstate Live Stock Fair	Sioux City, Ia.	Sept. 21-26
New Jersey-Penna. Interstate Fair	Trenton, N. J.	Sept. 28-Oct. 2
Spokane Inerstate Fair	Spokane, Wash.	Sept. 12-20
Pacific Inernational Live Stock	Portland, Ore.	Dec. 7-12
Dairy Cattle Congress	Waterloo, Ia.	Oct. 12-18
National Dairy Show	Chicago, Ill.	Oct. 22-31
Maine State Fair	Waterville, Me.	Sept. 1- 4
New Hampshire State Fair	Salem, N. H.	Sept. 1- 5
Rochester Industrial Exposition	Rochester, N. Y.	Sept. 7-19
Maryland Interstate Fair	Hagerstown, Md.	Oct. 13-16

THE SHARPLES SEPARATOR CO., West Chester, Pa.

Chicago Dallas Minneapolis Kansas City Omaha San Francisco Portland, Ore. Winnipeg Toronto

AGENCIES EVERYWHERE

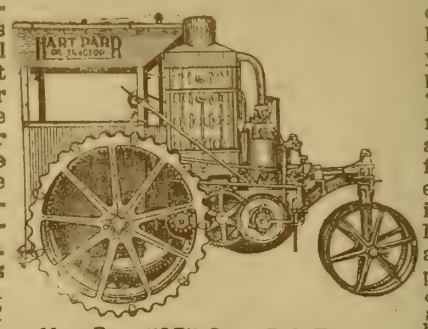
Choosing a Tractor

You get in a Hart-Parr 27 B. H. P. Oil Tractor, all the good features the "Corn Belt" farmer demands in a tractor.

For the Hart-Parr "27" is built especially for Corn Belt farms of 160 to 300 acres. And you get in it these four great features: Reliability, simplicity, adaptability and economy of operation and up-keep—all at a price you can afford to pay.

We are the pioneer builders of oil tractors. So you get in this Hart-Parr "27" a field and tractor building experience found in no other makes. And we build with big margins of safety and strength. All this assures you a tractor built on time-tried, field-tested lines—the best guarantee of reliability.

The Hart-Parr "27" has fewer manufactured parts than any other. It contains only 300. Others contain 800 to 1,500 each. Fewer parts mean fewer complications—less chance for breakage. The main frame is a single rugged casting. Drivers are solid steel castings — not built up nor pieced—and are cast with our famous wave form lugs. These give 31% greater surface contact than others. All this means the last word in simplicity of of construction.



Hart-Parr "27" Corn Belt Tractor

The Hart-Parr "27" is a general purpose outfit. Use it for plowing. Disc, seed, harrow, harvest, thresh, haul, fill silos, shred corn and grind feed with it. It does all this better, quicker and cheaper than horses or other mechanical power. That's adaptability.

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Due to mammoth output, modern machinery and efficient methods, the Hart-Parr "27" is the lowest priced tractor on the market, horse power and quality considered. Many tractors cost much more. None gives you the same satisfactory service, year in and year out. No other power investment returns as big a profit.

All this should lead you to choose a Hart-Parr "27" when you buy farm power. The "27" will make money for you and save money for you. Our literature describing the entire Hart-Parr line and our data on power farming costs are safe guides for the buyer. Write for it today.

NOTE—The Hart-Parr "27" is identical in design and construction with the Hart-Parr "35," exhibited at Fremont Demonstration.

HART-PARR CO., 254 Lawler St., Charles City, Ia.

RUMELY

Power Farming Machinery

Green Pastures All Year

To the man with an Advance Silage Cutter winter and summer are alike, for he has green, succulent feed all year. Silage means more and cheaper beef, milk and mutton. Bigger profits are yours with an

Advance Silage Cutter

It cuts your silage in any one of 9 different lengths with the least amount of power and effort. It has a positive acting safety device and has *straight* knives, easy to adjust and easy to sharpen. The heavy disc easily carries the knives through the toughest cuttings.

Get Silage Cutter catalog HA41. It gives interesting information.

The Advance Husker-Shredder and Adams Husker are leaders in their line. We also have the right power for all such machines. Every Rumely machine is backed by Rumely service—49 branches and 11,000 dealers. Supplies and parts on short notice.

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TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, September 5, 1914 | Number 717

Grand Opera Stars Choose Tuxedo

The Favorite Tobacco of World's Best Singers

THE world's great singers, the bright stars of grand opera, ***must*** have confidence in the tobacco they smoke, must choose a tobacco that has no harmful effect on their throats.

Leading singers at the Metropolitan Opera House during the current season—Slezak, Jorn, Gilly, Didur, Griswold, Witherspoon—find Tuxedo ***the one*** tobacco they can smoke with thorough enjoyment and absolute safety.

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"Tuxedo is the ideal smoke in my opinion. If you find your energy sagging, try a pipeful of Tuxedo. It's a wonderful bracer."

Tuxedo

The Perfect Pipe Tobacco

Tuxedo ***cannot*** sting, bite or irritate the delicate membranes of the mouth or throat.

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If you try Tuxedo for a month and cut out other smokes, you will find that you are getting the utmost satisfaction and enjoyment possible out of your smoking, and at the end of the month your general health will be improved.

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"A smoke of Tuxedo adds zest to my work. I swear by it and endorse it above other tobaccos."

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"Tuxedo is a good, wholesome tobacco with a mildness and fragrance all its own. It adds many degrees to my pipe pleasure.

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Famous green tin with gold lettering, curved to fit the pocket 10c

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In Glass Humidors, 50c and 90c

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TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Retired Farmers and Why They Retire

Experiences of Middle Aged Men Who Have Left the Farm, as Told by Themselves

THE cities and towns of the middle west are full of retired farmers. Most of them are elderly people, or, at least, have reached middle age. The question is often asked, "Why do so many farmers retire from the farm when they have reached middle age?" It is an easy matter to hazard a guess as to the reason, but only by making a fairly comprehensive investigation can we really know why it is that our farmers move into town in such large numbers.

Is the farmer happy and contented in town as he is in the country, or does he wish himself back? These are also questions in which we are all interested, especially the man or woman who is considering a move to town.

The Twentieth Century Farmer desires to give its readers the experiences and opinions of some farmers who have retired from their farms and made for themselves homes in town or city. Last spring we made arrangements with Mrs. George A. Loveland to interview a number of these retired farmers, asking them some of these questions and getting from them what information might be possible as to these questions.

We are publishing a number of these interviews in this and succeeding issues of the Twentieth Century Farmer, and believe that our readers will find them of interest as being the experiences of real farmers. Every experience is related just as it was told to Mrs. Loveland, only the names being altered.

No Use for the City

When I went to call on the Wilmers the other day I found the front door open, but the two rooms in view were all torn up, so I went around to the kitchen door.

"Come right in this way," called Mrs. Wilmer when she caught sight of me. "We've been having some hardwood floors put down. Rugs are so much more sanitary, I think, than carpets."

I stepped in carefully, and came upon Mr. Wilmer, varnish can and paint brush in hand, "touching up" the woodwork. "I want to be doing something," he explained, "now that I'm not farming any more."

"You have lived in town about four years, haven't you?" I asked.

"Yes, four years last January. We bought this place. You see my health broke down—I've done lots of hard work in my day, and I couldn't keep it up any longer; besides, the boys got married and wanted us to come to town and take it easy and let them run the farm; and two of my daughters are employed in town, and they like to have us make a home for them, but I get pretty homesick for the country, especially on a spring day like this. I realize, though, that my days of farming are over, but I putter around the place here and try to keep busy and contented."

"Well, I for one have no use for the city," put in Mrs. Wilmer, emphatically. "I don't like the city, and I never will. I feel so sort of cooped up and shut in. Yes, we have a garden, and I keep a few hens, but I don't know how much longer they'll let us keep them," and she scowled fiercely at the thought of "they"—the authorities.

"If you didn't have your sons to run your farms would you sell them and loan your money out?" I asked.

"Oh, no," they both said unhesitatingly.

"We have 500 acres, worth $100 an acre, but we wouldn't sell. We want to feel we've got our land," Mrs. Wilmer explained. "Of course, the boys pay us rent the same as a stranger would, and we go out real often. All our children are living right around us. We visit back and forth, but it isn't like living on the farm with them. I had twelve children—ten of them have grown up and are living now. I get so lonesome here in town; some people think the farmers' wives get awful lonely on the farm, but it's the other way with me. I was never lonesome on the farm; I had my work and my children. It was the happiest time of my life. I wish I could live those days over again," and her eyes filled as her thoughts carried her back.

"Yes, we worked hard, and suffered many privations in the early days, but we were young and hopeful. My father crossed the Missouri river on a ferryboat at Nebraska City in 1862 and homesteaded some land in the Salt Creek valley near Saltillo. I was 10 years old then, and can remember some of our early struggles. Father thought his land was too near the creek; it would get overflowed in wet seasons, so he gave up his homestead right and bought some other land farther back. We think a lot of our land down there now and we wouldn't consider selling. One of my boys got the fever to go to Idaho and stayed there nine months—it was a terrible long nine months to me—but he didn't like it and was mighty glad to get back to Nebraska."

Retired Renter

"Do you know that just two blocks from you," asked a certain friend of mine one balmy spring day—a friend who has a genius for doing kindnesses, "there is a dear old couple, the Tates, whom you would find it very interesting to know? They began farming in Lancaster county thirty-eight years ago, but they are both crippled up with rheumatism now and are living with a married daughter. I know they are homesick for the country, this time of year particularly, and it would do them good if you would call on them. Besides, as I said before, you'd find them interesting."

I acted upon the suggestion very promptly, and found both Mr. and Mrs. Tate sitting in easy chairs by the open door in the daughter's pleasant parlor; he, a stalwart, grizzled figure, 68 in May, and she a tiny, frail bit of a woman, 66 in May. "We're both 'May flowers,'" she said, smiling.

"Yes," Mr. Tate explained in answer to a question, "I've had all kinds of experience. I have been a renter, and I have farmed my own place, and then I sold, and here I am now doing nothing. If only I had my health I'd be out in the country now; seems as if I could hardly stand it to be shut up here when all nature is full of new life. I've got some irrigated land near Wheatland, Wyo., and I ought to be out there looking after it, but you see I'm all crippled up," and he looked ruefully at the two canes lying on the floor by his chair. "Guess I'll have to sell that, too. Why did I sell my farm here in Lancaster county? Well, Mrs. Tate's health failed, and—"

"I hadn't ever been sick before," Mrs. Tate put in, "except once I was in the hospital. Why, I never took a drop of medicine till I was 50. I tried for a year or so to keep a-going. I'd go

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Tractors Demonstrated at Fremont Show

Full Description of Power Machinery at the National Power Farming Demonstration

The Spectators Were Scattered Thickly Over the 135-Acre Field on Thursday.

By A. H. Gilbert

THE greatest tractor meet ever held was witnessed by visitors at the National Power Farming Demonstration at Fremont, Neb., August 17 to 22.

Some enthusiastic manufacturers had their goods on the grounds several days previous to the opening, and this same enthusiasm was characteristic of all manufacturers, citizens of Fremont and visitors throughout the entire week.

Monday was a perfect day for the opening and, due to the thorough organization of the Twentieth Century Farmer and the Fremont Commercial club, all was in readiness. The tractors were there, the tents were up and the streets, stores and residences decorated to welcome the visitors and assure them that the whole city was very much alive and boosting for the demonstration. Early in the morning the streets were swarming with visitors and the roads leading to the demonstration grounds were lined with vehicles of every description. The parade, which took place from 1 to 3:30 p. m., was observed by a host of people.

Tuesday, "Nebraska Day," started the demonstration off on the right foot and revealed to all present that the few makes of tractors seen in their home communities lacked much of representing all the up-to-date tractor machinery on the market. During the forenoons of each day of the week private demonstrations were made to prospective purchasers and other interested parties. On Wednesday, Thursday and Friday at 10 a. m. the DuPont Powder company gave demonstrations of dynamite farming, including subsoil farming, blasting stumps and ditching. At this same hour the tractor short course was conducted in the headquarters tent. Charts, engines and models were used to explain the principles of the internal combustion engine. As special features of the short course interesting talks were given by President Sweeney of the Sweeney Automobile school at Kansas City, Prof. Rose of the American Thresherman, Profs. Seaton and Chase of the University of Nebraska, Mr. Wort of the Kansas Agricultural college and Mr. Yerkes of the Civil Service department, Washington, D. C.

During the afternoon from 1:30 to 4:30 the public demonstrations took place. The exhibit was characterized this year by the number of small tractors, which are built to meet the needs of the small farm. Some were demonstrated for the first time and many are on the market for the first season.

Each tractor made a splendid showing, and it was proved beyond doubt that there is a tractor built to meet the needs of practically every farmer. While no machine is fool proof, they are all made to run, and many are perfected to such an extent that responsibility for their success is passing from maker to user.

The city was thrown open to its visitors and all were of the opinion that Fremont is a mighty hospitable city and an ideal location for the tractor demonstration.

Over thirty companies were entered in the tractor meet, many of them having several different types and sizes of machine. The companies and machinery represented were as follows:

Moving picture men were busy catching the crowds and the machines in action.

* * *

The Avery company, Peoria, Ill., was there with five different sized engines, the 8-16, 12-25, 20-35, 25-50 and the 40-80 H. P. They drew plows from their own factory, ranging in size from three to ten bottoms, depending upon the size of the tractor. All sizes were operated by one man only. From the various sizes manufactured and demonstrated they claim that the farmer can best select the tractor suited to he size of his farm.

Each engine is provided with double fuel tank and double carbureter, making it possible to use either gasoline or kerosene. Private demonstrations were made on either kind of fuel.

* * *

The Bull Tractor company of Minneapolis, Minn., exhibited two tractors. This was one of the lightest tractors on the ground and did excellent work in the field. It attracted its full share of spectators and called forth many favorable comments.

The Bull tractor is a three-wheel outfit, weighing 3,000 pounds. The motor has two cylinders, opposed, and is rated at five H. P. on the draw and twelve on the belt pulley, while running at a speed of from 750 to 800 revolutions. It is a very simple outfit, having no transmission and no differential. It pulled two fourteen-inch plows at a good depth and faster than a team would travel.

* * *

The Bullock Tractor company of Chicago was represented by two "Creeping Grip" tractors, a large 60-45 H. P. and a small 30-20 H. P. These differ from the ordinary round wheel tractor from the fact that they have a so-called square wheel, enabling them to travel easily in soft ground, sand, loam or grades, with a minimum loss of power in slippage. They are spring mounted, and the three point suspension relieves frame and engine from all tortional strain. All wearing journals are bronze; the motor is of the slow speed, heavy duty type, and the transmission gears run in grease, which insures long life and no cutting out.

The wheels are of the oscillating type (pivoting from one point), preventing unnecessary

wear. The creeper shoes are of one solid steel casting, made of manganese steel, the same as is used in stone crushers, railroad frogs and switches. The plowing done by these outfits was good and the tractors handled the plows with ease at a speed of about two and one-half miles per hour.

* * *

The J. I. Case Plow Works, Racine, Wis., were represented by a four-bottom, power lift engine gang plow and a J. I. C. harrow. The Omaha division was also showing the Wallis tractor, which is described under that heading.

The combination of bumpers lining uprod and rear furrow wheel makes it impossible for beams of the plow to spread apart or swing out of line. It is possible to raise the bottoms as desired and necessary in any particular order. A gauge wheel for each bottom insures uniform depth of furrow. Each beam is provided with a break pin, which, when the plow meets with an obstruction that it will not roll over, breaks and allows the beam to pivot or swing upwards, preventing the breaking of a share or bending the beam.

* * *

The J. I. Case Threshing Machine company, Racine, Wis., was represented by three engines. Two were of their standard make, 20-40 H. P. type. These were equipped with a two-cylinder opposed motor, two speeds forward and reverse. One special feature of this display was to show the perfect control when throttled down to a very slow speed. One engine was kept running almost constantly each day at a speed of seventy-five to eighty revolutions.

One 12-25 H. P. small tractor also was used, which attracted many visitors because of its neat appearance, smooth running and ease of handling. In the plow line they had a six-bottom Case-Racine stubble plow, a six-bottom Case-Racine breaker plow and the small four-bottom Case-Racine plow. All were of the automatic lift. They also had a Perfection road grader on display, and one of the features of the tractor meet was the road grading demonstration, which pleased all.

* * *

The Dauch Manufacturing company of Sandusky, O., had three of their Sandusky tractors on the ground, and also one of their own make motors and transmissions for display. This tractor is a lightweight, general purpose machine, having its big five-inch bore by six and one-half-inch stroke from cylinder motor set crosswise the frame. This arrangement, combined with their transmission (three speeds forward and reverse), gives one advantage of their patented feature of direct drive on low or heavy duty speed. The Sandusky tractor handled four fourteen-inch plows easily, and they claim that it will furnish belt power for the operation of a thirty-two-inch separator.

* * *

The John Deer Plow company of Omaha were there with three engine gang plows, six, eight and ten bottoms respectively. These plows were all of the lever lift type, some single beam and some double. The Deere plows have many features which make them stand out by themselves, and they worked up to their usual high standard.

* * *

The Emerson-Brantingham Implement company of Rockford, Ill., added a large display to the demonstration. They entered with two Big 4 tractors, one a 20-35 H. P. engine which weighs 8,200 pounds. This has a four-cylinder 5x7 motor, which runs at a speed of about 700 revolutions per minute.

One 45-90 H. P. tractor has a 6½x9-inch motor, with six cylinders. This engine has a weight of 22,000 pounds and pulled a twelve-bottom plow. The Big 4 engines are all arranged with splash oiling systems, accessible motors, convenient method for taking up wear in connecting rods, and are designed to burn gasoline, kerosene or distillate at all loads.

This company was further represented by the famous Reeves 40-80 H. P. tractor, which runs at a speed of 500 revolutions. It drew their ten-bottom, air lift gang. Besides these, they had a double disc and seeder attachment and a ten-foot clod crusher and packer.

Everytime a tractor came to a standstill a crowd would gather about it

The Grand Detour Plow company of Dixon, Ill., exhibited two five-bottom power lift engine gang plows and one power lift, three bottom lightweight plow. The automatic power lift device is a vast improvement over the old style method of riding handle levers and straining back and limb. With the Grand Detour plows no time was wasted in turning, as by pulling on a cord the plows were lifted and lowered one after another, leaving an even end.

* * *

The Gray Tractor Manufacturing company of Minneapolis, Minn., demonstrated their 20-35 H. P. tractor. It certainly is in a class by itself, as it has one rear drive wheel, which is a steel drum five feet wide by five feet in diameter.

Before the demonstration—Everyone wanted to examine the machinery.

The one drive wheel eliminates the differential and simplifies the other gears.

The machine is low and compact in construction and all parts are accessible from the ground. The machine is equipped with hardened steel shafting and Hyatt roller bearings throughout. During the demonstration it drew a six-bottom John Deere plow and made an excellent showing.

* * *

The Hart-Parr Manufacturing company, Charles City, Ia., entered with one 35 H. P. brake kerosene tractor, which drew a six-furrow self-lift plow of their own make. The Hart-Parr company has built a tractor which they claim has only one-fourth as many manufactured parts as the ordinary tractor of the same horse power. They are strong on simplicity.

Their tractor is equipped with special "hold-fast" lugs, which give it a positive footing on practically all kinds of ground. These lugs are composed of heavy angle iron, and their design was certainly a happy thought.

* * *

The Hoke Tractor company of South Bend, Ind., were there with two tractors. Both were 30 H. P. brake and 15 drawbar. Their motor has four cylinders and burns gasoline. It is of the handy one-man type and can be attached to nearly any farm implement desired. It couples direct with an extension steering rod, making it possible for one man to operate even a binder alone. It has one speed forward and reverse, varied by throttle from two to four miles per hour. By means of their frame raising and lowering device it is possible to operate the tractor satisfactorily with one wheel in the furrow for plowing. It draws two fourteen-inch, self-contained plows.

* * *

The Holt Manufacturing company of Stockton, Cal., was represented by a delegation from the Peoria factory. They furnished three Caterpillar tractors, which were the backbone of the Holt exhibit. The Stockton factory sent a carload of typical California plows, which excited considerable interest. Two disc outfits and one big Stockton gang, showing how deep plowing is done in California, brought out many comments as to the power of the Caterpillar in deep plowing.

The Caterpillars were the regular 60-40 H. P. engine, which drew the ten-bottom plow; the regular 30-20 "Baby Caterpillar," whicl interested the crowd with its work on soft ground and its easy turning ability, and the giant 100 H. P. six-cylinder engine, which drew the twenty-four-bottom plow eight or more inches deep. The big plowing outfit created a great sensation, for it actually did the work and handled it nicely.

* * *

The Hume Manufacturing company of Hume, Ill., were present with two engines. They were equipped with the high standard 30 H. P. Waukesha motor and made for all kinds of farm work. Each drew a four-bottom La Crosse gang plow and, having but one front wheel, could make exceedingly short turns.

The Hume engine presented a splendid appearance, and the designer has worked for simplicity. It is supposed to burn any kind of fuel, the gears and shafting are made of high grade material, and all vital parts run in oil, insuring perfect lubrication. The drive wheels are seventy-three inches high and sixteen inches wide, with tubular spokes.

* * *

The International Harvester company of America, Chicago, were represented by five tractors, the 12-25 H. P. Mogul tractor, pulling four P. & O. plows; the 15-30 H. P. Mogul tractor, pulling five P. & O. plows; the 18-35 H. P. Titan tractor, operating five P. & O. plows, and the 36 H. P. Mogul tractor, pulling eight P. & O. plows.

This company demonstrated to the satisfaction of all spectators that power farming is here to stay and that different sizes of tractors must be made to meet the demands of large and small farmers. The excellent showing made by their large and small machines was good evidence that they are building along safe and practical lines. The small and large Moguls

(CONTINUED ON PAGE NINE.)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
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Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

The cold fall rains will soon come. All animals need a shed then as badly as they do in the winter time.

Wheat should not be sown on the same ground for more than two seasons in succession, not only because it exhausts certain elements of the soil, but because the Hessian fly is more apt to increase its destructiveness where the ground is sown to wheat for several years.

The importance of giving all thin, out-of-fix animals on the farm a little extra care now, so as to start them in good thriving condition, cannot be overlooked at this time. A few weeks turned in the meadow, where they can get a full food of the second growth grass, is about the surest plan to pursue with this class of farm animals.

While harvesting the potatoes this fall, take note of several strong-looking, healthy hills, digging these separately from the rest. Place these potatoes in gunny sacks and bury them in one end of the storage pit. They keep in better condition for planting than if stored in cellar-bin or barrel, and besides, they will not be where they tempt the housewife into using the largest and best potatoes during the winter.

Make provision early for filling in with new trees wherever any have died during the summer. Prune back about one-third of this season's growth. Wrap corn stalks or common screen wire around the trunks of all trees, to protect them from mice and rabbits. Cover the ground with a heavy coating of manure for next season's cropping of the land, which should be put to some leguminous growth.

Apple Demand Increasing

That there is a constant and growing demand for the apple orchard is quite apparent all over the central and eastern states, where new orchards are being started and where the old orchards are being renovated by means of pruning, spraying and the many methods of saving old trees. Districts of country in many states where orchards, only a few years ago were regarded a detriment and a nuisance to the farm, are now becoming the highest priced acres and are used as the selling inducement for attracting buyers to the farms. The orchards are now set forth as the leading feature of improvement. State laws are being enacted making spraying and the insect treatment of these orchards compulsory on the part of the owner. No land owner should be allowed to breed insects in his orchard to the detriment of his neighbor.

Investors are now buying hillside lands in the Ohio river valley at comparatively high prices and having apple orchards planted as a matter of speculation. Lands considered too hilly for farming are being planted to apple orchards. Recent experience in apple growing has proven such properties very profitable, under present day cultivation and management in growing and marketing of the fruit.

The development of a large foreign apple trade for the American product has caused fruit growers to see as sure money in the orchard as in the grain fields, and at a less outlay of labor and money. The apple is the standard fruit of this country and fills a place and demand in the market that no other feature of fruit can supply or displace. The next twenty years will see great strides made in the apple orchard development of the United States, and the districts of greatest growth will be the central western states and the eastern states, a district once famous for its fine apples of excellent quality.

Thirty-Dollar Calves

From reports of sales over various cattle-raising districts $30 seems to be the prevailing price paid for calves for fall delivery. Such reports are coming from Texas on the south on up to the Black Hills country of western Nebraska and South Dakota. This would indicate that there is a well grounded belief among cattle dealers and large cattle handlers that there is a pronounced shortage in beef cattle and that the basis of supply starts with the calf, and that possession means the only safe fortification in this trade under existing circumstances.

There was a sale recently made of 1,200 steer and heifer calves, just as they came in the herd at Canadian, Tex., at $30 per head, to be delivered November 1. Similar sales were made in this locality last year at $25 per head, which was commented on at the time by various opinions as extravagant, even dangerous, yet this advance of $5 per head follows, with no evidence that the purchasers were hurt or contemplate any serious injury now in their calf speculations.

Another report says that Hall & Ormsby of Comanche county, Kansas, large cattle handlers, have closed a purchase for 3,600 calves, steers and heifers for which they pay $30 per head, to be delivered at weaning time. The weight of these calves is estimated at about 350 pounds per head when delivered. These sales are range-bred calves and will be gathered for weaning and delivery in the latter part of October or first of November.

There has been considerable speculation during the calf-growing period by cattle handlers all over the range country. Some early deals have netted the purchasers from $2.50 to $5 per head, where resold at the $30 price, which seems at the present to prevail. A few reports of $32 per head have appeared in the western Nebraska cattle districts. There is a pretty general belief that a good grade of calves will be selling above these prices before the autumn trade is closed. Calves cannot be keyed to any established price per head regardless of size, breeding or condition.

When the ordinary grade calves of the country command such prices and the outlook for a still greater scarcity of meat stares the whole meat-consuming country in the face, why do not farmers and ranchmen exert greater effort to keep more cows and raise more cattle?

Feed for Young Animals

Every farm that winters stock should have a stalk, straw and hay cutter, some kind of cutter that will cheaply and conveniently cut fodder, cane or any kind of coarse feed into half inch lengths for the calves, colts and sheep; of course, you need not deny the horses and milk cows this sort of prepared feed. The cut feed may be dampened and a little shorts, bran or cornmeal sprinkled over it and fed in troughs, boxes or mangers, and it will be found not only a very excellent developing feed, but one of the most economical feeds that can be produced on the farm.

There are a great many patterns of fodder cutters on the market and of all capacities, from the hand power cutter up to the big engine or horse power machine that cuts enough to last for weeks or months when stored in bins and mixed as used. It is a significant fact that the man with only two or three animals can afford to have a feed cutter. The saving of feed in one feeding season will more than pay the cost of the cutter. Of course, the larger the number of stock kept the more benefit proportionally is derived from its use.

The greatest advantage will be observed where weanlings are being put on feed. The short cut, easily masticated feed will be quickly consumed and more of it. The calves, colts or lambs will be able to eat the fine cut fodder when, if thrown out to them in the full stalk, they could eat but very little of it and be hungry, practically starving. They will eat a great deal of coarse hay when finely cut that they would not attempt when given whole in the racks or mangers. Young growing animals should be encouraged to eat all their appetites crave, and to do this they must be humored by putting the feed in the most appetizing form. Get a feed cutter and be convinced of its value.

Hessian Fly Insurance

The Hessian fly has done serious damage in many wheat-growing districts during the last season. In a bulletin issued by the United States Department of Agriculture they speak as follows about remedies to be applied in keeping this pest from doing such serious damage:

"The most important step to take is to select carefully the time for the sowing of your wheat this fall. From a long line of experiments we have learned that wheat sown after certain dates is practically free from infestation. The date for sowing wheat to evade the Hessian fly is also the date to sow for the best yield."

Suitable dates for sowing wheat are as follows:

Sow wheat after September 26, north of 41st parallel.

Sow wheat after October 1 north of 40th parallel.

Sow wheat after October 5 north of 39th parallel.

Sow wheat after October 10 north of 38th parallel.

Sow wheat after October 15 north of 37th parallel.

Sow wheat after October 20 north of 36th parallel.

The 41st parallel runs just south of Ottumwa and Red Oak, in Iowa, and Plattsmouth and Grand Island in Nebraska.

The 40th is the north line of Kansas.

The 39th just south of Kansas City, Mo.

The 38th just south of Hutchinson, Kan.

The 37th is the south line of Kansas.

The 36th through Sapulka, Okl.

Death of C. C. Carlin

The announcement of the death of C. C. Carlin of Des Moines, Ia., August 26, 1914, was received by his friends and associates in the agricultural paper work of the Missouri valley country with the most profound feeling of sorrow and regret.

Mr. Carlin was a man of ability in his line of work. No man stood higher in the estimation of the pure-bred live stock breeders of his acquaintance for fairness, integrity, reliability and honest representation.

For almost a quarter of a century he has been identified with agricultural paper work in some of its departments. In the early history of the Twentieth Century Farmer he was for several years employed on its advertising staff. For a number of years he has been with the Iowa Homestead, where his services were a recognized help to that publication.

He will be missed by the hundreds of live stock exhibitors at the big live stock shows, where he has served for many years as official reporter of awards for many publications.

C. C. Carlin was a modest, unassuming, quiet gentleman; a genial, clever companion, a friend of all mankind.

While it is essential that buildings for the live stock and poultry protect the inmates from cold, every building should be built with a view to supplying it with an abundance of light and pure, fresh air summer and winter.

Seed Corn Time

The time for selecting the next year's crop of seed corn is now at hand. Don't wait until husking time to do this important work. Every spring we find hundreds of farmers hustling around for seed corn, paying big prices, sometimes getting what they want and sometimes not.

Within the next three weeks every farmer should gather his seed for next year. Go into the field and don't be in too much of a hurry. Note not only the ear and stalk on which it grew, but the conditions surrounding the stalk and hill.

Far too many thousands of cornstalks standing in the fields in the corn belt are not bearing an ear, a positive detriment to such field. When selecting your seed corn don't pick for seed an ear that may have been fertilized with pollen from a barren stalk. Examine the stalks in all the hills closely surrounding the stalk from which you expect to get the seed ear, and if there are any barren stalks don't select this ear.

In selecting seed corn we are inclined to go to that part of the field showing the largest stalks. These largest stalks don't necessarily mean they have the greatest vitality. It is possible we will find just as large and vigorous stalks and ears growing elsewhere in the field under less favorable conditions. Wouldn't this signify that these ears have more vitality and consequently are more valuable as seed ears?

Many of these things should be taken into consideration when selecting your seed corn. They can't be given any consideration if you select the seed from the crib after husking.

Economy in Cow Feed

The milk cow on the farm offers the best chance, all things considered, for profitable investment that the small farmer can make. No matter how other food products are influenced by war prices, there is a constantly increasing demand for the products of the milk cow that will always keep them at a good remunerative price, corresponding with feed values that are necessary to maintain the cow. It is a mistaken idea that the cow should be maintained upon the most expensive commercial feeds. These are not objectionable from the standpoint of results in milk production, but the profit on the milk cow on the farm depends largely upon how cheaply she can be kept, and yet be made to produce the largest yield of milk.

The matter of feed economy must be studied carefully by the handler of the milk cow, and this means the planning for and preparation of the cheaper kinds of feed adapted to milk production. This introduces the growing of the many root crops for autumn and winter cow feed. The raising of the sorghums and similar fodder crops that are easily, cheaply and abundantly produced and are so well adapted to the encouragement of larger yields of milk.

One of the very necessary features of feed supply is variety. It is practically impossible to provide the milk cow too great a variety of feed, if milk production is the object in view in the care of the cow. The cow should be regarded as a milk machine, employed in the converting of feed into milk. Over-ripe or damaged hay, fodder, straw or other kinds of feed designed for the cow will work against your efforts at producing the largest possible quantity of milk. Cows may be increased or decreased in the quantity of milk they give by the quality of feed with which they are provided.

As far as possible the cow owner should provide on the farm the kind and amount of feed the cow needs. Use as little of the commercial feeds as possible. Do this first from the standpoint of economy in the cost of the feed, thereby decreasing the cost of the milk your cow turns over to you. The milk must be made at the least possible expense, but the greatest possible yield must be produced.

Keep cows on the farm; they are good money-makers. The best cows are the cheapest after you have them paid for. It will not pay to keep light milkers, no matter what your feed advantages may be. The sale of cream, with the pig-feeding or calf-feeding that the skim milk affords, will make the easiest money that the farm earns.

Remember the next hog cholera day meeting at the Nebraska state farm is on Wednesday, September 9. It will pay you to attend.

Did it ever occur to you that the poultry on the farm was quite a source of income? Then did it ever occur to you that the good wife does all the work of raising and taking care of this product? Some rainy day surprise your wife by giving the chicken house a good cleaning and whitewashing. Don't do it just once, but often.

If you have more pumpkins than you want to feed now, they can be kept for some time by carefully piling them up and covering them well with straw. Pumpkins in the winter time are fine feed for the cows and hogs.

At a recent hog cholera day meeting a farmer told us that he introduced hog cholera into his herd by not quarantining the newly purchased boar. Be careful; you will soon be buying one.

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A car with speed ranging from 5 to 50 miles without shifting gears.
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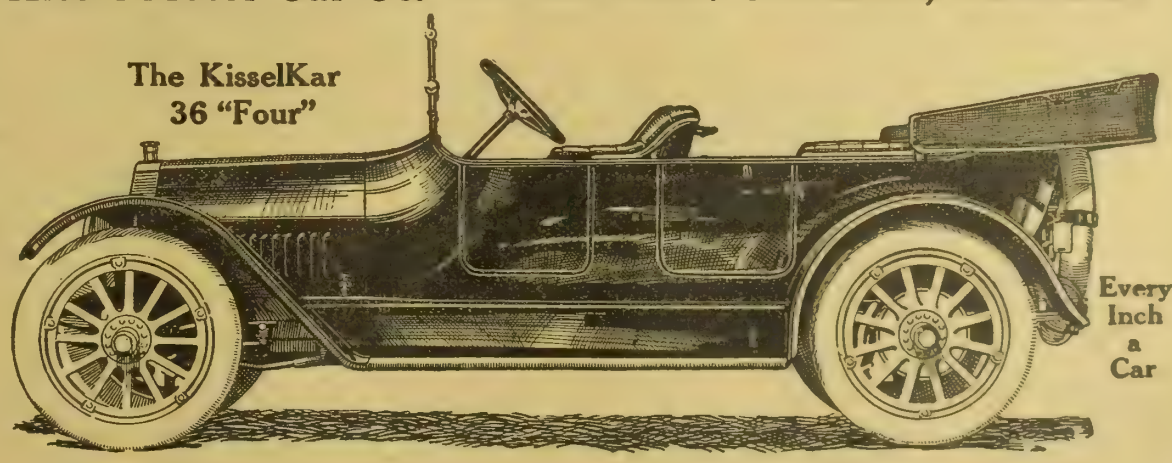

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"FLOUR CITY" TRACTORS

Were the Favorites at Fremont

because they demonstrated that they combined the two essentials in a successful farm tractor—staunch construction and abundant power.

The conservative design eliminates unnecessary weight without sacrificing strength. The even balanced, 4-cylinder vertical motors, the bevel gear transmission and simplified construction insure a smooth running, long-lifed and economical tractor.

The "FLOUR CITY" is manufactured in four sizes—15, 20, 30 and 40 H. P.—a size for every farm and condition.

Our new booklet sets forth the views of farmers after using the "FLOUR CITY" for a number of years. It is the best evidence you can get. Send for your copy today, stating number of acres in your farm.

KINNARD-HAINES COMPANY

844 Forty-fourth Avenue, North. MINNEAPOLIS, MINNESOTA.

The "FLOUR CITY" pulling 10 bottoms at the Fremont Demonstration.

Meeting of the Fruit Growers

Methods of Growing and Marketing Discussed

THE Southeastern Nebraska Fruit Growers' and Shippers' association held its second annual picnic and association convention on the Isaac Pollard fruit plantation, adjoining the little town of Nehawka, in Cass county, August 19, 1914.

This is a beautiful and picturesque location for such a gathering and, associated as it is with one of Nebraska's most extensive and successful orcharding industries, founded by Isaac Pollard, one of the most prominent horticulturists of the state, proved a fitting tribute to the life of this grand old man. This man has for the last half century planted orchards and groves of shade trees and builded forests of evergreens that will stand a monument to his memory long after the present generation of men has passed away.

It was in one of these groves of stately maples, on the lawn in front of Mr. Pollard's residence, that the picnic and exercises of the association meeting were held. Approximately 100 interested, enthusiastic orchardists were gathered from different points in eastern Nebraska, western Iowa and adjoining territory to hear the reports of the work of this association and to discuss things of interest in orcharding, especially in the growing and marketing of the apple.

The exercises were diverted from the printed program to one of five-minute extemporaneous talks by the various fruit growers, who were called upon and who directed their discussion in whatever line of inquiry or experience they were most interested in presenting. This proved to add both diversity and interest to the meeting and resulted in a general appreciation of the value and importance of these annual meetings.

The picnic and social feature which this association has instituted as a means of bringing the families of its members together has proved one of the very best systems of cementing the bonds of community interests into abiding faith and confidence in business integrity and cooperative advantage and security. The picnic feature of a large horticultural association can never be fully or accurately described, and it can never be appreciated but by being a guest. Everything usual for such an occasion, from orchard and farm, had been prepared in the most tempting form and was brought there in great abundance for a feast, such as the horticulturist's wife, mother and daughter are skilled in manufacturing and preparing. The large audience of fruit growers, with the many guests, representing the railroads, packing houses and newspapers of this district, were seated at tables spread on the lawn and enjoyed one of the most bountiful feasts that skilled domestic art could produce.

The trains as they arrived at the depot were met by automobiles and the visitors taken to the Pollard grove, where there was a long procession formed and driven to the orchards, one of 125 acres, the other of forty acres. Here an explanation of the entire history and management of the orchards and trees was given by E. M. Pollard, the present operator and manager of this large industry. This was followed by an inspection of the large cider and vinegar plant; the grading, sorting, boxing and barreling of apples for shipment, which is now in full operation with the earlier varieties; the cooperage factory, where the barrels are being set up ready for the rush of the apple harvest soon to be on hand; these, with many other features of a large, well equipped apple-producing plant, were inspected by the visitors and members present, making one of the greatest educational opportunities that one is permitted to enjoy, even in a lifetime of ordinary observation.

The reports gathered from all parts of the apple-producing districts of the United States indicate that the apple crop of 1914 will not be far from a normal yield the country over. The eastern district, which is comprised of all that section east of Michigan, is reported to have a good yield and a large surplus for shipment. The central district, comprising the Missouri and Mississippi valley country, is not up to average conditions and will not be in a position to ship out a very large surplus, while the western district, comprising the Rocky mountain and Pacific states, has a full crop and apples to spare.

The fact that foreign trade will not be in shape to take the 3,000,000 or 4,000,000 barrels that they usually demand will throw this back for the home market and home consumption to provide means of disposal. This looks like cheaper apples from the viewpoint of present conditions, although these conditions may be changed some before the distribution of the shipments takes place. At all events, the southeastern Nebraska association is in the trade and will be in a position to give its members just as good a show for fair prices as the supply and demand warrant, which is all they ask or claim in the business operation of their association. This is strictly a business and educational association for the advantage and advancement of the fruit growers of the district it represents.

Fire Losses

Property burned is property destroyed, wiped out, obliterated from the sum of the nation's wealth. A house may "rise phoenix-like from the ashes," but it is not the same house. It may be furnished with insurance money, but the household goods which went up in smoke have not been recreated. The building and furnishings may be better than the old. The property owner who had the forethought to insure may be even a little better off in a financial sense than he was before, but if such be the case it is merely because a great many more people are a little worse off. The insurance company simply has paid out some money that it had previously collected. The company loses nothing by the transaction. The loss falls on the insuring public and the company makes its rates in accordance with its losses.—Louisville Courier-Journal.

Tractors Demonstrated at Fremont Show

(CONTINUED FROM PAGE FIVE.)

were of interest to the 160-acre and the 1,000-acre farmers.

* * *

The Joilet Oil Tractor Company of Joilet, Ill., exhibited two tractors. The four-wheel tractor, 40 H. P. brake and 22 H. P. drawbar is unique because it is built like a gigantic automobile. All bearings are nickel, steel roller bearings, running in oil. On the road they claim it travels four and one-half to ten miles per hour and two miles per hour while plowing. This machine has square shafts in the gear case, making keys unnecessary. It weighs 8,700 pounds and pulled five fourteen-inch plows.

The Bates Steel Mule, another machine exhibited by this company, has a weight of 3,600 pounds and develops twenty H. P. on the belt and twelve on the drawbar. This engine draws two or three fourteen-inch plows, cultivates corn, mows, harvests grain, drills, discs and, in fact, they claim it will do all traction work on the farm, one man operating the entire outfit.

* * *

The Kinnard-Haines company of Minneapolis, Minn., were there with their 20-40 H. P. Flour City four-cylinder tractor. It has a vertical motor which burns gasoline, kerosene or distillate. This tractor weighs 9,500 pounds and drew a six-bottom-self-lift P. & O. plow. They also had their larger 40-80 H. P. tractor, which has four cylinders and burns kerosene, gasoline or distillate. It weighs 18,500 pounds and drew a ten-bottom John Deere plow. The Flour City tractor did splendid work and pleased the visitors.

* * *

The La Crosse Plow company of La Crosse, Wis., had ten plows, beam and disc. These varied in size and were automatic and independent. They were used with several tractors, and mention of the plow is made in connection with the tractor in most cases.

* * *

The Lininger Implement company of Omaha represented the Hackney Auto plow. This machine looks like a large three-wheel automobile with the drive wheels in front, and it went like an auto. It is designed for heavy duty tractive work and may be used for belt power if desired. The machine has two speeds, forward and backward, and is strictly a one-man outfit. It is 20 H. P. on the drawbar and draws three fourteen-inch plow bottoms underslung.

* * *

The Multi Tractor company of Lincoln, Neb., had a new machine on the field. This tractor is equipped with the latest two-cylinder 12 H. P. Cushman engine, and the tractor, without plows, weighs but 2,300 pounds. It handled two fourteen-inch standard plows very easily. The plowing speed is about two and one-half miles per hour. A special feature of this little outfit is the Cushman patent system of plowing. It is so arranged that the plow, on entering the ground, is given sufficient suction to enable it to enter readily. In plowing position it floats free at the rear, the depth being determined by front bail.

* * *

The Oliver Chilled Plow works of South Bend, Ind., had their twenty-four bottom Oliver engine gang, which was used with the 100 H. P. Caterpillar. The plow consisted of four six-base units, each base cutting fourteen inches, the units fitting together like the units of a sectional bookcase and being handled by one hitch. This plow cut twenty-eight feet wide, and when drawn at the rate of two and one-eighth miles per hour it plowed at a rate of almost seventy-five acres per day.

* * *

The Pioneer Implement company of Council Bluffs, Ia., represented the Heider Manufacturing company of Carroll, Ia. They were there with two Heider engines of the four-cylinder, heavy duty type. These machines weigh 5,000 pounds and use the friction drive with a variable speed, from one to five miles per hour. They drew three-bottom La Crosse plows, and burned either kerosene or gasoline. The Heider is strictly a one-man outfit, and the tractor follows the furrow, which makes it possible to get a straight line draft on the plow and at the same time pull from the center of the engine.

* * *

The Parlin & Orendorff Plow company of Canton, Ill., had nine power lift plows in the field, ranging from three to ten bottoms each. The style, construction and quick, easy action of these self-operating plows were pleasing to all in attendance. The comments heard from onlookers concerning the work of these plows were many and favorable. The designer of the P. & O. plow certainly combined simplicity and efficiency in this product.

* * *

The Rumely Products company, inc., of La Porte, Ind., had four entries in the demonstration, embracing sizes for every farm. The famous Rumely Oil-Pull, which operates successfully on kerosene and cheaper fuel oils at all loads and at any kind of work, was represented by their two sizes, Type E, 30-60, and Type F, 15-30. The Rumely Oil-Pull 15-30, the general purpose engine, was demonstrating its place as a handy gasoline tractor for the average farm. The Rumely Ideal Pull attracted much attention as a one-man outfit, with its three-bottom, self-contained plow. The control of the outfit is centered in front of the operator's seat.

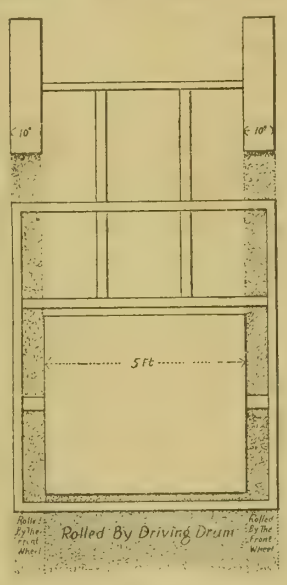
In the plow line they used the five and eight-bottom Rumely self-lift.

* * *

The Wallis Tractor company of Cleveland, O., was represented by two 15-25 H. P. Cub tractors. This machine is equipped with a four-cylinder motor and has a total weight of 8,500 pounds. It has an automatic circulating oiling system, transmissions, two-speed sliding gear, and the speed ranges from one and one-half to four miles per hour.

The Gray Tractor's Rear Drive Wheel Will Save You Enough Money to Pay for All Fuel Used

THERE was one feature, in particular, of the Gray Tractor which attracted the practical farmers at Fremont Power Demonstration Week, Aug. 17-22. This was the especial advantage found in the single, wide drive wheel which together with the front wheels rolls a surface 80 inches wide. In plowing, all weeds, trash or corn stalks are flattened to the ground so they are completely covered by the furrows. The wide drive-wheel distributes the weight over a wide area, preventing solid packing of the soil and giving perfect traction.



The Gray Tractor rolls the width of its plows.

THE GRAY TRACTOR

The "Gray" is a genuine farm tractor. We are not exploiting its advantages on any other kind of work. It will travel on soft, mellow, plowed ground. Its extreme simplicity enables it to be built much lighter than tractors of equal power have heretofore been built. Its motor and simple transmission are of the highest grade construction possible. Its durability is unexcelled.

We want you to investigate the "Gray." We want you to be convinced that it will do your work most economically. To practical farmers who "want to be shown" we will go more than half way and will prove to them on their own farms, without outlay on their part, that the "Gray" will do all we claim.

GRAY TRACTOR MFG. CO.

160 Central Ave. Northeast
MINNEAPOLIS, MINNESOTA

Special Points of Construction on the Gray Tractor

1—Low, compact construction.
2—No differential.
3—Heat treated, case-hardened gears cut from drop forgings, ground to size and running in oil.
4—Gearing enclosed in dust proof and oil tight housings.
5—Hyatt Roller Bearings throughout.
6—Every part easily accessible to man standing on the ground.
7—Two speeds forward and one reverse.
8—Drawbar pull direct from the rear axle.
9—Rear axle in special spring bracket to prevent undue strain.

CLIP OFF AND MAIL TODAY.

GRAY TRACTOR MFG. CO.,
160 Central Ave.,
Minneapolis, Minnesota

Please tell me about the Gray Tractor and what it will do.

Name.....
Town.....State.....
I farm.....acres.
I now use.....horses.....tractor

RESULTS COUNT

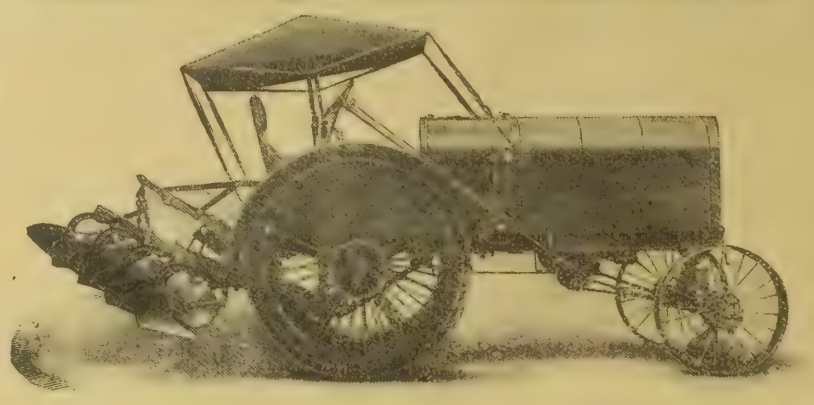
DURABILITY and SERVICE

Characterized Performance of

BIG FOUR TRACTORS

—AT—

FREMONT POWER FARMING DEMONSTRATION

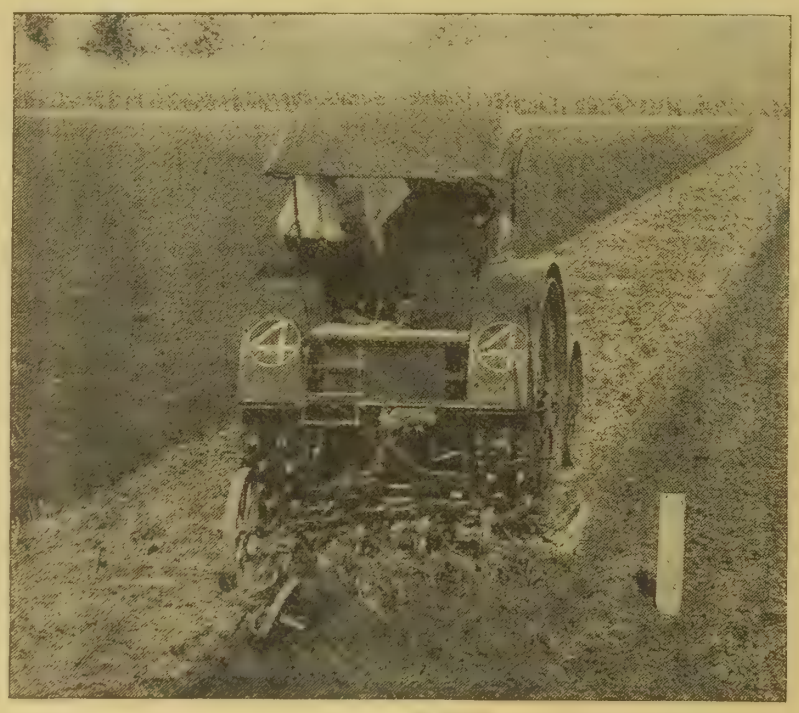


Every day the Big Four Tractors made good. From the start of the demonstration to the finish they were on the job, doing the work allotted to them quickly, cheaply and well.

The Big Four "20" with the Emerson No. 70 Power Lift Plow backed in and plowed out the fence corners, plowed up the head lands and proved conclusively our claims for all around service and one man operation.

The plow, the power plow hoist, and tractor are a complete unit. The plows are raised and lowered by the power of the motor. It makes no difference, so far as the plow hoist is concerned, whether the machine is moving or standing still. A touch of the plow lift foot pedal instantly raises the plows. Press the same pedal again and they drop back into the ground. The power lift is simple without complications and does not have a single part in motion except when raising or lowering the plows.

What the Big Four is doing for others, it will do for you. The first four cylinder tractor was a Big Four and our present line embodies every improvement suggested by 13 years' experience. From seed time to harvest, day after day, the Big Four supplies power to quickly and economically handle the many varied kinds of farm labor. By reason of its steady power it excels at threshing and all kinds of belt work. It is always ready—easily and quickly started—a tractor you can depend upon.



A Tractor with a successful past is worth a thousand with a brilliant future

A Size for Every Farm.

BIG FOUR "20"	BIG FOUR "30"	BIG FOUR "45"
4 Cyl. 3-Speed	4 Cyl. 3 Speed	6 Cyl. 3-Speed

Emerson-Brantingham Implement Co.
(INC.)

Good Farm Machinery
Established 1852

431 W. Iron St.
Rockford, Ill., U. S. A.

Emerson-Brantingham Impl. Co. (Inc.) Good Farm Machinery Established 1852. 431 W. Iron St. Rockford, Ill. U. S. A.: Please send me free big Four Catalog me

Name .....

Address .....

It has three wheels and has spring mounting, front and rear.

The Wallis tractor is shaped something like a torpedo, and all working parts are well protected from the dust. It made a big showing at the demonstration.

* * *

The Ward Tractor company of Lincoln, Neb., was represented with a one-man outfit, drawing three fourteen-inch bottoms, being hung under and to the rear of the tractor proper and hung in such a way that they may be leveled and adjusted for depth from the platform of the tractor. The plows may be lifted up and the machine backed into almost any corner desired. The power plant consists of a two-cylinder Cushman engine, six-inch by seven-inch cylinders; engine mounted in such a way that it gives a straight gear drive onto the differential gear shaft, and then onto a small sprocket direct to a large sprocket on the drive wheel by means of a very heavy hardened steel chain. It has two speeds, forward and reverse.

* * *

The Waterloo Gas Engine company of Waterloo, Ia., was represented by their light weight 10-20 H. P. tractor, the Waterloo Boy. This engine had its share of visitors, who were in search of a small, one-man tractor. It drew three fourteen-inch plows and burned kerosene. The steering is automatic after the first furrow, and the plow is accessible from the seat.

* * *

Accessories Shown.

Besides the regular entries for field demonstration, several companies were there to display their goods and increase the size of the big fair.

The Cushman Motor works of Lincoln, Neb., were there with their light weight, four H. P., four-cycle, throttle governor engine. It is a vertical engine in a class by itself, as it weighs but one-fourth as much as the standard four H. P. horizontal farm engine.

* * *

The Fremont Foundry and Machine company of Fremont, Neb., had on display two small Fuller & Johnson engines. One was a four H. P. four-cycle horizontal general purpose farm engine, arranged to burn either kerosene or gasoline and mounted on trucks. The other was a small air-cooled, one hand one-quarter H. P. vertical pump jack engine. This engine was attached to the pump in the headquarters tent, which supplied water for all the engines and also water for drinking purposes.

* * *

The Hercules Electric company of Indianapolis, Ind., sent two magnetos, which were for display purposes and were also used in connection with the tractor short course. The magnetos used were the Type 4 Wizard alternating current and the Type B direct current friction magneto for make and break sparks.

* * *

The Power Gas Products company of Minneapolis, Minn., had a new and unique exhibit at the demonstration. They claim that "Power Gas" is a heat-resisting lubricant. They say "Power Gas" in a motor gives more power, smoother operation, fewer repair bills, longer life, the elimination of carbon, and, in automobiles, 15 to 50 per cent more mileage to the gallon of gasoline.

* * *

President Sweeney of the Sweeney Automobile School of Kansas City, was a popular man at the demonstration. He was a tireless worker on the grounds and gave a practical talk at the tractor short course, which was pleasing to all. His display tent attracted many visitors, and their large auto trucks hauled a great many people to and from the demonstration grounds.

* * *

The Waukesha Motor company of Waukesha, Wis., had three motors on display at the headquarters tent. They were 3 3-4x5 3-4, 4 1-4x5 3-4 and 4 1-2x6 3-4 cylinder motors. These were mounted on demonstration stands in such a way that visitors could see the completed engine.

Waukesha motors were used in Heider, Rumely, Joliet and Hume tractors at the demonstration.

* * *

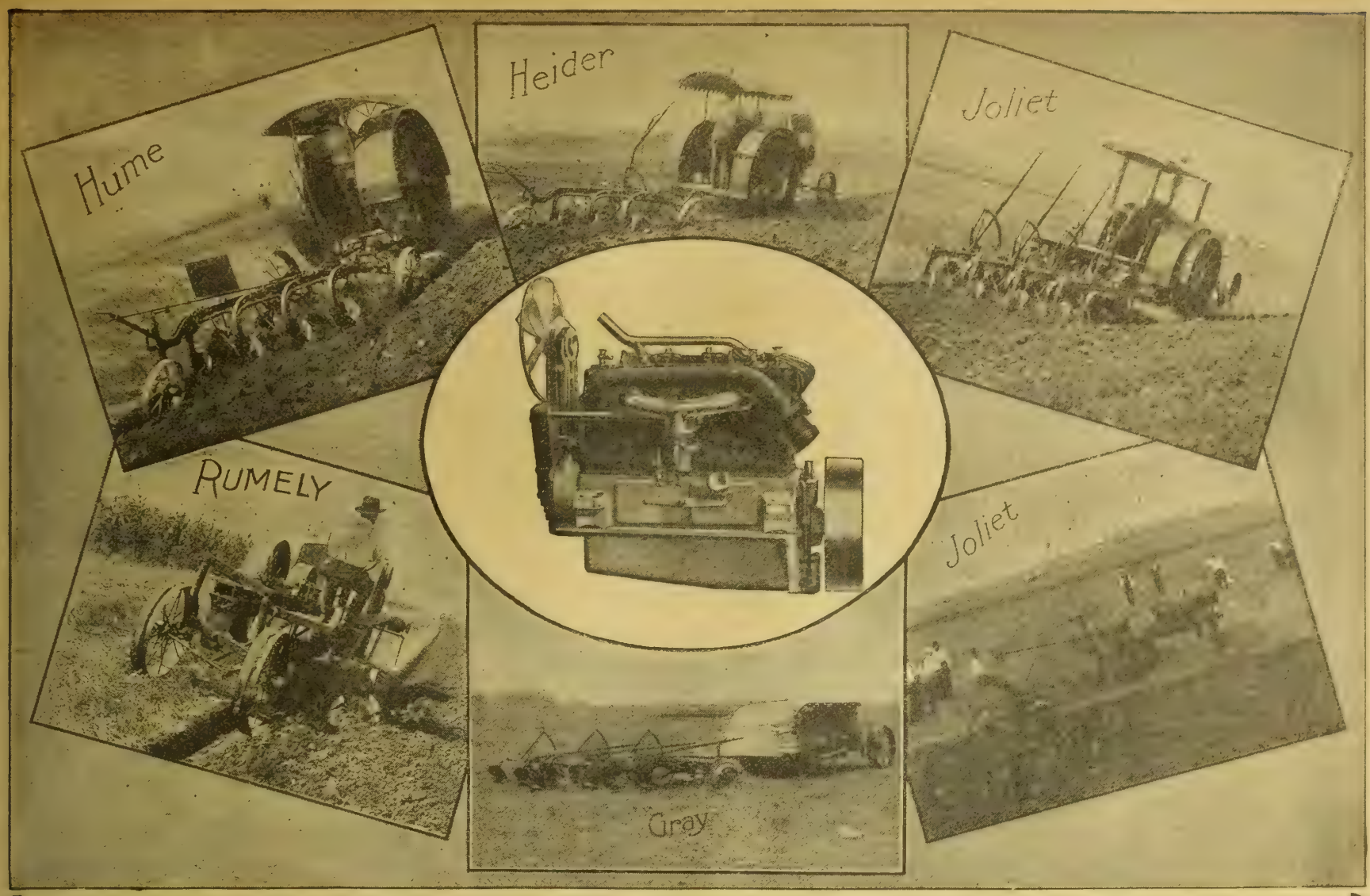
The Webster Electric company of Racine, Wis., displayed one of their oscillating magnetos. These magnetos are not driven at a high speed. In fact, they do not revolve. The indicator simply oscillates through a small angle for each impulse of the engine. This particular design makes it possible to get as good a spark at the first revolution as when the engine is running at full speed.

* * *

The Walker Starter company of Leon, Ill., showed for the first time their new starter for gas engines. The demonstrations made daily before the vast crowds of visitors showed that owners and prospective purchasers of tractors are interested in this new invention.

Fall and Winter Fair Dates

Date.	Name and Place.	Sec'y or Mgr.
Sept. 12-19	California State Fair, Sacramento	J. L. McCarthy
Sept. 12-19	Kansas State Fair, Hutchinson	A. L. Sponsler
Sept. 14-18	Kansas Fair Ass'n, Topeka	G. E. Clark
Sept. 14-18	South Dakota State Fair, Huron	C. N. McIlvane
Sept. 14-19	Colorado State Fair, Pueblo	J. L. Beaman
Sept. 21-26	Montana State Fair, Helena	A. J. Breitenstein
Sept. 21-26	Interstate Live Stock Fair, Sioux City, Ia.	Joe Morton
Sept. 26-Oct. 3	Missouri State Fair, Sedalia	J. T. Stinson
Sept. 29-Oct. 2	Wyoming State Fair, Douglas	A. Higby, Basin
Sept. 22-Oct. 3	Oklahoma State Fair, Oklahoma City	I. S. Mahon
Oct. 5-10	Utah State Fair, Salt Lake City	H. S. Ensign
Oct. 17-Nov 1	Texas State Fair, Dallas	W. H. Stratton
Oct. 7-17	International Dry Farming Congress, Wichita, Kan.	Ralph H. Faxon
Oct. 7-17	International Congress of Farm Women, Wichita, Kan.	Mrs. Mary Pierce Van Zile
Nov. 16-24	American Royal Stock show, Kansas City	T. J. Wornall
Nov. 28-Dec. 5	International Stock Exposition Chicago	B. H. Heide
Jan. 18-23 '15	National Western Stock show, Denver	Fred J. Johnson



SCENES AT FREMONT TRACTOR DEMONSTRATION—A FEW OF THE MANY TRACTORS EQUIPPED WITH WAUKESHA LONG STROKE MOTORS

WAUKESHA TRACTOR MOTORS

"WIN IN A WALK" AT THE BIG FREMONT SHOW

At the Second Annual Tractor Farming Demonstration, Fremont, Neb., August 17-22, Waukesha Long Stroke Tractor Motors clearly demonstrated their absolute superiority over any and all competitors.

Thirty-five thousand wide-awake farmers, tractor manufacturers, dealers and mechanical experts from all over the United States attended this marvelous demonstration—and all went away thoroughly convinced of these remarkable facts about Waukesha Long Stroke Tractor Motors:

—More Waukesha Motors were used in Tractors at the Fremont demonstration than any other one make.

—More Waukesha Motors were used than all other stock makes combined; and, at that, only one-fourth of the tractor manufacturers who use Waukesha Motors, exclusively, exhibited at the Fremont Demonstration.

—Throughout the six days' exhibit not one Waukesha Motor stopped because of any defect in construction or operation.

—Every tractor equipped with a Waukesha Motor handled heavier loads compared with size of motor equipment than any other in all tests.

—That the design, the quality of materials and the workmanship of Waukesha Motors far excels that of any other tractor power equipment demonstrated.

The Choice of Thirty-Five Tractor Manufacturers

Below we print a list of twenty-one tractor builders who are now equipping their engines with Waukesha Motors. Fourteen or more, in addition, have already contracted for Waukesha Motors and will make their announcements of "a change for the better" at a little later date. Within the next few months we expect to close with a number of other tractor manufacturers who will standardize their product by equipping with Waukesha Long Stroke Tractor Motors. Here is the list now using Waukesha motors:

Allis-Chalmers Co., West Allis, Wis.
American Gas Engine Co., Kansas City, Mo.
Anderson Tractor Co., Minneapolis, Minn.
Chase Tractor Co., Syracuse, N. Y.
Denning Motor Implement Co., Cedar Rapids, Ia.
Geo. W. Elliott & Co., De Smet, So. Dak.
Gray Tractor Co., Minneapolis, Minn.
Heider Mfg. Co., Carroll, Ia.
Hume Tractor Co., Hume, Ill.
Joliet Tractor Co., Joliet, Ill.
Killen & Walsh Mfg. Co., Appleton, Wis.
Knapp Tractor Co., Rochester, N. Y.
Kuhnert & Ryde Co., Chicago.
Lawter Tractor Co., St. Marys, Ohio.
McKinney Traction Cultivator Co., St. Louis, Mo.
Nevada Manufacturing Co., Nevada, Iowa.
Petro-Haul Mfg. Co., La Grange, Ill.
Rumely Co., La Porte, Ind.
Smith & Sons Mfg. Co., Kansas City, Mo.
Strite Tractor Co., Minneapolis, Minn.
Swaney Tractor Co., Carroll, Iowa.

Demand the Waukesha Motor

Mr. Farmer: You should demand the Waukesha Motor in the tractor you buy because the Waukesha is designed especially for Tractor service and it "delivers the goods."

Mr. Dealer: You should sell Waukesha equipped tractors because they sell easily and make good.

Mr. Manufacturer: You ought to equip your engines with Waukesha Motors because of their efficiency in service and because they are a powerful sales asset.

You can see a demonstration of a Waukesha equipped tractor at the Minnesota State Fair.

The "Why" of Waukesha Superiority

is fully explained in an interesting bulletin which we will gladly mail free to anyone interested. Write today for this bulletin and learn why the Waukesha is the best tractor motor for your purpose.

WAUKESHA MOTOR CO., 205 FACTORY ST., WAUKESHA, WIS.

ANOTHER SCENE AT THE FREMONT SHOW—EVERY TRACTOR IN THIS PANORAMA IS EQUIPPED WITH A WAUKESHA MOTOR

JOHN DEERE

The Spreader with the Beater on the Axle

HERE'S the low down spreader with the big drive wheels. The beater and all driving parts are on the rear axle. That means no clutches to give trouble, no chains to break or to get out of line; it means less than half the parts heretofore used on the simplest spreader.

Only hip high to the top. Easy to load. You see where to place each forkful. The result is an even load that spreads uniformly.

Light draft because the beater runs on roller bearings and the center of the load is comparatively near the team. Staunch, strong and easy to operate.

See the John Deere, the spreader with the beater on the axle. Sold by John Deere dealers everywhere. Send for beautiful booklet, also for

"Farm Manures and Fertilizers"—Free

A book by Dr. W. E. Taylor, soil expert. It tells the value of manure, how it should be stored, and how applied to the land to get the most out of it. You can get both books free when you write about John Deere Spreaders by asking for package No. Y 15

JOHN DEERE, MOLINE, ILLINOIS

The extra wear costs you no more

Save money by buying the best work clothes. Over one million farmers insist on having

FINCK'S "DETROIT SPECIAL" OVERALLS

They are made of the heaviest New England denim, cut extra full and roomy, and made as well as the best Union garment makers can make them. There are twelve deep pockets in every suit. Suspenders are broad, with a good length of real elastic, and don't slip down.

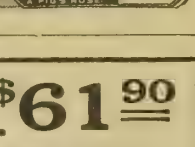
A PAIR FREE. To the first man sending us the name of a merchant in a town where Finck's "Detroit Special" Overalls are not now for sale, we will send a pair (size and style desired) of overalls free the moment we get the first order from that merchant.

"Wear Like a Pig's Nose"

W. M. Finck & Company, 1169 Gratiot Ave.
JAMES L. LEE, Treasurer **Detroit, Mich.**

Makers of the best in overalls for over 25 years

The "Pig's Nose" ticket is on every garment. Don't buy unless you see it.



505 Bu. GRAIN BIN BUTLER'S SPECIAL... $61.90

CORRUGATED METAL—RAT AND FIRE PROOF

The best metal grain bin for the price in the world. Defies competition. We make all styles. This is not our highest grade bin but is splendid value. Keeps grain in perfect condition. Large door and other features. Ask for prices of different kinds and grades, also valuable circular giving opinions of experts on storing grain for high prices.

BUTLER MFG. CO., 1212 W. Tenth St., Kansas City, Mo.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

TO GET strong breeders and be sure of them try this plan. It is one strongly recommended by breeders of healthy stock and eggs fertilized almost to the last one:

Select the nicest, hardiest of the cockerels hatched the latest of this fall's hatches. Give these cockerels extra good attention this winter. Don't let the cold stunt their growth. Of course, they are not going to grow so fast as in summer, but the elements for growth will be there latent. They will be ready for growing big when the grass comes.

Next spring, before there are any signs of maturity, put these cockerels in a little run to themselves and keep them there until you need them for another year's breeding, at which time they will be from 15 to 18 months of age, and all this time have been eating and growing and living happily with their comrades.

At this age they go into the breeding pens or with the flock of hens, and if these be healthy the number of hatchable eggs and the number of strong, growthy chicks you will get will be a surprise to you, especially if all the years before you have had to waste a hundred eggs to get fifty chicks, and out of each fifty you may barely keep twenty-five over chickhood. Try it. Fence wire is cheap. On the farm is room for plenty of spare grassy plots. A store box, roofed with tar-felt roofing and lined with cheap tar paper, will make a nice roosting house for them; and this first summer of life for them, if you have any brooder chicks without mothers, you can put them right in this cockerel yard and keep them there until nearly fall. These cockerels usually live in peace with themselves and the little chicks with them.

Adding the Wild Blood

That wild turkeys are extremely hardy and immune from the diseases to which the domesticated turkey is so prone goes without question. Long continued storm or drouth, ice and snow, it all makes no difference to the wild turkeys; they go on living, and the little ones go on growing fast and feathering soon, and in less than a month of age have learned how to hide away from or fly up out of reach of enemies in a way the domestic poult never learns.

In summer, or any time, the wild turkey knows how to find water and food, and in the cold winter time prefers to roost right out in the wind, rain and snow, his head tucked warm under one wing, and snow and ice lying thick on his back, and from which he does not take cold; in fact, they seem to harden under such usage.

Our domestic breeds are bred down to little chance for living long. The poults die easily, and the old stock, in many cases, cannot live more than two years. Into these sickly flocks introduce the blood of the wild stock, and how they come back to life and health. One wild gobbler in the flock will work wonders in coming flocks.

Breeders of turkeys have invested in the eggs or chicks of the wild turkey. They have given these to the domestic hens, then turned all the poults, domestic and wild, out with these hens. Almost from the start, they declare, they note a difference plainly visible between the looks and growth of the two kinds. The domestic poults, under the stress of bad weather, long wet spells especially, would die with indigestion, gapes, etc., while the wild marched on as healthy as when started. Not only this, but they matured faster in every way than their tame relations. Where the wild gobbler has been introduced the half-wild poults show a decided advantage in speedy growth and feathering over that of the domestic poults running with them; in fact, most of the half-wild poults come up to the wild in strength, fast feathering and immunity from the diseases that attack the tame poults. If wild blood were introduced more freely than it is into our western turkey flocks larger droves of fine turkeys would be coming off the farms than now come off them for market or breeders. One man in every neighborhood that would specialize in wild turkey blood would soon upbuild the turkey trade in that section.

Crates for Belgian Hares

Too many beginners in the keeping of Belgian hares make the mistake of providing hutches that are entirely too small. Quarters for the doe and her young must be roomy, as well as airy. When the young die off without seeming cause it is, more often than not, due to crowded quarters. It is the same with the hutch in which you keep the buck. If too small, for lack of exercise he takes on too much fat, and some morning this breeder you paid a good price for is found dead, simply because you made his hutch too small.

In shipping Belgian hares you should ship according to the distance you are sending. For long trips of several hundred miles you must give the pair or trio you send space they would get along safely without if going but 100 miles or such a matter. A trio going several hundred miles will need a well slatted crate at least one yard long by half that number of inches wide, but if going 100 or 200 miles could safely be shipped in a crate half that length and width.

Remember that in shipping the crates must be made to admit plenty of air from the top and two sides, as so often they get other expressage jammed on top and at the side of their crate, and might possibly get smothered if but one side only was slatted. In shipping, general directions for feed are: Drinking fountains fastened securely in the cage, plenty of clover hay, oats, corn on the ear and cabbage or other vegetables to gnaw at. A tag on the crate should tell the men handling it to see that water is kept in the drinking can.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

The Old School House

Over the crumbling walls
A wild vine wanders.
Under the roof all day
A brown owl ponders,
Rabbits at twilight play
Among the grasses
In the old playground—once
For lads and lasses.

Yet 'tis a schoolhouse still,
Though now new teachers
Set here the daily tasks
For shy wood creatures.
Here chipmunks sit erect
To say their graces,
Or wash with velvet paws
Brown velvet faces.

Over the door the wren,
Her four eggs hiding;
Soon all her crumbs will be
By four dividing.
Squirrels, too, have their sums,
For all their gadding—
Shellbarks and chinkapins
And acorns adding.

Where once the window was,
A pair of spiders
Work out geometry
Without dividers;
And sparrows in the dust
(When they're not fighting)
Do rows of tracks they call
Spencerian writing.

Here, too, the holidays
Through the long daytime
Come, as they came to us,
Recess and playtime;
And the old ruin rings
From floor to rafter
With the glad songs of birds
And Bunnies' laughter.

—William Hervey Woods in Youth's Companion.

In the Tiger's Den

"What makes those funny holes, Uncle Jack?" asked Rose. She and Harry were walking with their uncle down the roadside toward a neighbor's, where Uncle Jack was going to look at a horse.

"Yes, what are they, Uncle Jack?" said Harry, bending down. "There are a whole lot of them, and they look as if someone has stuck a little lead pencil in the ground."

"I think they are tigers' dens," said Uncle Jack, "but I'm not sure. If you will get me a spade, Harry, I will find out."

"You're fooling us," said Harry, hesitating.

"No, I'm not," said their uncle. "Go ahead. Rose and I will wait here until you bring the spade."

"Well, don't tell her anything till I get back," called Harry, running off toward the tool house, with the two dogs jumping excitedly about him.

He soon returned with the spade and sank down on the ground, hot and panting. Uncle Jack took the spade and began digging carefully beside one of the peculiar holes. He dug a small hole, through which he opened up the full length of the vertical tunnel, which was made just as if someone had thrust a small pencil in the ground, as Harry said. Out of this tunnel he took a strange little creature.

"Oh, what a funny worm!" exclaimed Rose, looking at it as it lay on Uncle Jack's notebook. "It has a hump on the top of its back and there are claw things on the hump!"

"And what a jaw!" said Harry. "I'll bet it can bite."

"That is the larva of a tiger beetle," said Uncle Jack. "It lies in wait just at the mouth of its tunnel, holding on by these six legs in front and by its hump in back. When a worm comes along, or a bug or a butterfly alights near its hole, out pops the wicked looking head, and the worm or insect is seized by these strong jaws and pulled inside, where it is eaten alive."

"No wonder it is called a tiger," said Rose.

"But it was not at the top of the hole when you got it," said Harry. "You dug it out of the bottom."

"It heard us coming," said Uncle Jack. "It is safe from birds or other enemies because it drops to the bottom of its tunnel when it hears them coming."

"Does it eat army worms?" asked Rose.

"Yes, or any other worm that crawls on the ground."

"Then we don't care if the birds can't get it, do we?"

"Did you say it turned into a beetle?" asked Harry.

"Yes, in the spring they come out as tiger beetles. These are the bright green beetles with bronze spots that fly from under your feet and always alight facing you, so they can watch you."

"I know them," said Harry. "They are about half an inch long and can run like anything."

"That's the one," said Uncle Jack. "It can run and fly, too."

"I found one once," said Rose, "under a brick in the garden. It was digging a hole. I was going to ask you about it then, but I forgot."

"It was no doubt burying the eggs that later on hatched out into the funny worms," said Uncle Jack.

"Well," said Harry, "I never used to dream there were such a lot of things to be learned about bugs and worms. I'm going to leave this spade here till we come back. Watch it, Don." And they went up the road, with Shep following them, but Don stayed by the spade and looked wistfully after them.

HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words,

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Prize Story.)

Two Ducks

By Agnes N. Sanders, Aged 12, Walla Walla, Wash.

Papa got thirteen duck eggs of one of the neighbors one time. There were six ducks that hatched, and they kept dying until only two were left. We children thought they were so cute when papa brought them over in a bucket. The old hen had hatched them in the granary. Papa made a pen in the yard for them and mamma fed and watered them.

One time Bertha and I drove the old hen away from the ducks. We said she didn't need to be with them any more and put her out of the yard and left the ducks in the yard. We put them under a box every night so that the rats wouldn't eat them.

One night I was putting them under the box the same as usual, when I got a big splinter in my foot. I ran into the house to mamma and told her how I got it in my foot, and when papa came over from milking he took all the splinter out, he thought. But it didn't seem to get any better, so papa took me to the doctor, and he got the splinter out by chloroforming me. It was deep in my foot and was an inch long. That was six years ago.

One of the ducks died more than a month ago. My aunt has some ducks nearly grown now and they are company for our other duck. She goes around with them and acts as if they were her ducks and is awfully proud of them.

(Honorable Mention.)

Which?

By Arthur Jensen, Aged 13, Rockville, Neb.

One day last spring I made a chickencoop for my fourteen little chickens. The coop was on a foundation two feet high. After it was done my brothers made fun of it because it was so high. They said those on the ground were better. When evening came I drove my chickens into the coop I had made.

That night it rained three inches and nearly everything was flooded. In the morning I went to look at my chickens and they were dry and happy as the night before. But when I went to look at mama's chickens, which were in coops on the ground, they were all drowned.

Additional Stories

Mary T. Heelan, Arabia, Neb.; Rhoda Spangler, Arlington, Neb.; Mabel McCullough, Concord, Neb.; Marie Carr, Lander, Wyo.; Kathryne K. Parker, Klondyke, Ariz.

Picture Contest No. 16

Write a verse of four lines about this picture. Each of the two children writing the best verses will receive a book as a prize. The verse must be original. In awarding the prizes consideration will be given to writing, neatness, construction of verse and the originality of the matter. Try to say something the others will not think of. Often the verses, while good, are all very much alike. Give your name, age and address. Verses should be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha. All verses must reach this office not later than September 12.

SISTER'S TRICK

But It All Came Out Right

How a sister played a trick that brought rosy health to a coffee fiend is an interesting tale:

"I was a coffee fiend—a trembling, nervous, physical wreck, yet clinging to the poison that stole away my strength. I mocked at Postum and would have none of it.

"One day my sister substituted a cup of piping hot Postum for my morning cup of coffee, but did not tell me what it was. I noticed the richness of it and remarked that the 'coffee' tasted fine, but my sister did not tell me I was drinking Postum for fear I might not take any more.

She kept the secret and kept giving me Postum instead of coffee until I grew stronger, more tireless, got a better color in my sallow cheeks and a clearness to my eyes; then she told me of the health-giving, nerve-strengthening life saver she had given me in place of my morning coffee.

"From that time I became a disciple of Postum, and no words can do justice in telling the good this cereal drink did me. I will not try to tell it, for only after having used it can one be convinced of its merits."

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OUR SPECIAL OFFER—IF you use patterns, or if you order any pattern shown in this or any other issue of our magazine, we will send you the very latest issue of **"EVERY WOMAN HER OWN DRESSMAKER"** for 2c. Just send your address and 2c. to Pattern Department Twentieth Century Farmer, Omaha, Neb.

Styles for Home Dressmaker

6323—Ladies' Shirtwaist. Linen, madras or crepe de chine can be used to make this shirtwaist. The waist closes at the front and can be used with either the long or short sleeves. The high or turn-down collar can be used. The pattern 6323 is cut in sizes 34 to 42 inches bust measure. Medium size requires 2¾ yards of 36-inch material.

6364—Ladies' Skirt. This plain two-gore skirt is one of the fashionable peg-top designs. The material widens out just at the hips and thus a little fullness is given in both front and back. The raised or regulation waistline may be used. The pattern 6364 is cut in sizes 22 to 30 inches waist measure. Medium size requires 2¾ yards of 36-inch material.

6512—Ladies' Shirtwaist. This shows a simple style for the tailored effects. The tucks are in front, only the closing is made with the usual box plait. The collar can be detachable or form part of the waist. The pattern 6512 is cut in sizes 34 to 44 inches bust measure. Medium size requires 3¾ yards of 27-inch material.

6825—Ladies' Dress. Linen or serge can be used for this dress. The dress closes at the left side of the front and can be made with either the long or short sleeves. The three-gore skirt can have either the high or regulation waistline. The pattern 6825 is cut in sizes 34 to 44 inches bust measure. Medium size requires 5 yards of 36-inch material and ½-yard of 27-inch contrasting goods.

6549—Girls' Dress. Any of the wash materials can be used to make this dress, with the collar and cuffs of contrasting material. The dress closes at the front and can be made with either the long or short sleeves. The pattern provides for a pair of bloomers, which are attached to an underwaist. The pattern 6549 is cut in sizes 2, 4, 6 and 8 years. Age 8 years requires 4 yards of 36-inch material and ½-yard of 36-inch material for the underwaist.

6551—Children's Dress. Serge, linen or gingham can be used for this dress. The dress is made in the box-plaited style and closes at the back. The long or short sleeves can be used. The pattern 6551 is cut in sizes 2, 4, 6 and 8 years. Age 8 years requires 2⅞ yards of 36-inch material and ½-yard of 27-inch contrasting goods.

6550—Ladies' Apron. This apron is cut on sacque lines, plain from shoulder to hem. It may have the neck high, round or square. The closing is in the back. Gingham, calico and other wash materials are used for this apron. The pattern 6550 is cut in sizes small, medium and large. Medium size requires 4⅛ yards of 36-inch material.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Of Interest to Our Women Readers

The Reckoning

What do they reck who sit aloof on thrones,
Or in the chambered chancelleries apart,
Playing the game of state with subtle art,
If so be they may win, what wretched groans
Rise from red fields, what unrecorded bones
Bleach within shallow graves, what bitter smart
Pierce the widowed or the orphaned heart—
The unhooded horror for which naught atones!

A word, a pen stroke, and this might not be!
But vengeance, power lust, festering jealousy,
Triumph, and grim carnage stalks abroad.
Hark! Hear that ominous bugle on the wind!
And they who might have stayed it, shall they find
No reckoning within the courts of God?
—Clinton Scollard in New York Sun.

Rural School Teachers

Many rural schools report that it is difficult to get good teachers, and more difficult to retain teachers that have been secured and have proved themselves competent. Not only is this a serious problem confronting the rural boards and the patrons of the schools, but it is a serious problem with the normal schools, where the teachers receive their training. These schools want to be able to furnish teachers for the rural districts and very often the graduates refuse to take the country schools.

To help them solve this problem and to discover why they were having difficulty in persuading their pupils to take the rural schools, one normal school in North Dakota asked the following questions of its senior class:

"Are you willing to accept a rural school position?" "If not, why not?"

Just how the seniors in this class felt on the subject may be judged from the answers, giving their reasons for being unwilling to teach in country schools. We quote these answers from the Journal of Education:

Poor buildings, poorly heated and ventilated.
Yards small, treeless and dirty.
Lack of equipment.
No janitor.
Too many grades.
Too short periods.
Irregular attendance.
Terms often too short.
Salaries often too low.
Unsatisfatcory boarding places.
No good place to study.

Boarding place often too far from school.

Too much exposure—and not to the weather alone.

Little or no chance to attend church.

Too few lectures, entertainments, books, magazines and newspapers.

Too few agreeable companions.

Can very seldom get to town.

Too lonesome.

Little chance for advancement—why go to a normal school if not for something better?

Perhaps these graduates were unfair and prejudiced. Without doubt

some of them were. Perhaps conditions are not as they describe. However, they must have some reason for thinking that such conditions exist in rural schools. You may think the teacher expects too much, but remember, she expects no more than she is able to get in the town and city schools, if she can secure a town or city position. It may be asking too much to remedy these defects in the rural schools, if they exist, but only by so doing can the country secure as competent teachers as the towns and cities can.

HOME EDITOR.

The Table Oilcloth

I have read articles lately suggesting the use of oilcloth on the dining table as being more economical than white tablecloths. A white tablecloth is not always immaculate, but it certainly helps teach children, as well as the rest of the family, neatness. The oilcloth incites to untidiness at the table; men feel they may lop just any way on an oilcloth, and children know if a thing is spilled or spattered it has done "no harm." It hasn't to the oilcloth table cover, but it has to the child's mind, as it has helped along a habit of carelessness.

Another great point which, to my notion, makes the white linen tablecloth more utilitarian than even a colored one, or the oilcloth, is the fact that the white tablecloth makes less work. Of course, there are some who will hold up their hands in horror at this idea, but it is true. The oilcloth needs washing after every meal, at least a good wiping off. Now, take the aggregate washings and wipings of the oilcloth for a week and compare the time spent in this work with the time required to wash and iron a tablecloth. I believe the actual time and labor spent over the oilcloth exceed the time and labor spent on the tablecloth.

I live on a farm of some 700 acres, and there is always a hired man or two or ten, as the case may be. With the ordinary family (with help) we can use a tablecloth a week. We turn it in the middle of the week, and sometimes, in case of an accident or extra soiling, a tray cloth or napkin is spread over the soiled places. This can hardly be done with a lightweight tablecloth, but a good, heavy quality of table linen seems to stay clean much longer than a thin quality does.

Now, as to the expense of the tablecloths. We have used three tablecloths of the heavy type mentioned for three years and more as every-day cloths, and they are not yet worn out. Their first cost was not very great. I feel sure a linen tablecloth will outwear an oilcloth. Now, in making every-day tablecloths, as I say, I get a heavy real linen. A cotton cloth is not as good, no matter how well mercerized, because the cotton washes much harder and stains and holds stains easier. We never seem to have any trouble with stains, because we put the table linen in cold water over night before washing, but we do not put it to soak with a lot of other dirty clothes, which make it grimier than it ever would be itself. We do not get a cloth to hang down very far over the edges of the table, as it gets into the men's laps and so gets soiled that way. For an every-day cloth we get a cloth about sixty-four to seventy inches wide, the narrower width preferred, and we get it to hang down over the ends of the table about an equal distance to the side fall of the cloth. This does not give us a lot of extra length and width to iron. These cloths are easily washed, and, if ironed well, as I say, may be used a week with reasonable care. A tablecloth left on the line until it is dew wet will be ideal for ironing. We always iron our cloths on both sides, wrong and right, as this leaves a clean, smooth surface whichever side is used, and we iron them dry. The smooth linen does not catch the dirt that a rough cloth would. I hardly dare say it, but these common tablecloths are even hemstitched. I look at it that they last as long and look better and seem nicer, that it pays, but each person has her own ideas and solves her own problems to suit herself.

The white tablecloth is prefered over the colored one, because it looks better and it stays clean just as long. You can see a spot on a white cloth better, perhaps, but, then, as long as the soil is there why not know it? The white cloth can be boiled or bleached, while the colored cloth subjected to hard wear sometimes (perhaps not always) gets stained and spotted so that even when washed it is not very attractive looking. I favor white for many things, because it does not fade and can be subjected to any kind of cleaning desired. The farm tables I see are as attractive as the city tables, and very often hold much better meals. The idea that because one lives on a farm all daintiness and decencies must be forgone should be an exploded theory.

South Dakota. MRS. A. H. M.

Fair time means vacation time for a large number of us. There are few who cannot go either to their state or county fair or to some local celebration. It does us all good to get away from home a few days, even if it is necessary to work twice as hard after returning to make up for lost time.

It seems foolish to begin thinking about woolen dresses and furs when the thermometer is hovering around the 90 mark, but we feel more foolish when the winter arrives suddenly, as it has a habit of doing, and catches us unprepared.

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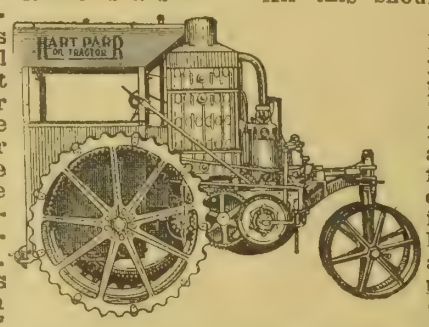
The Hart-Parr "27" has fewer manufactured parts than any other. It contains only 300. Others contain 800 to 1,500 each. Fewer parts mean fewer complications—less chance for breakage. The main frame is a single rugged casting. Drivers are solid steel castings — not built up nor pieced—and are cast with our famous wave form lugs. These give 31% greater surface contact than others. All this means the last word in simplicity of of construction.



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NOTE—The Hart-Parr "27" is identical in design and construction with the Hart-Parr "35," exhibited at Fremont Demonstration.

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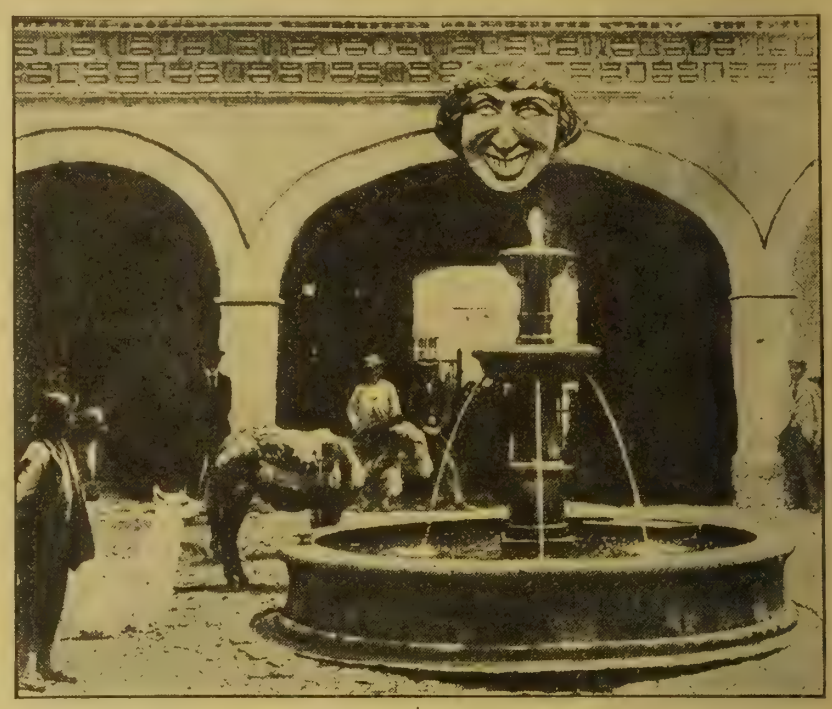
Fortunes Are Being Made in Tin in the High Andes

(Copyright, 1914, by Frank G. Carpenter.)

ORURO, Bolivia.—Tin is now king in Bolivia. This country once produced one-third of all the silver mined in the world. It is now turning out more than one-fourth of all the tin, and it has such vast deposits of that mineral that it will some day drive the mines of Malaysia and Cornwall out of existence. Tin is found almost everywhere in the western chain of the Andes. It is mined on the high slopes about Lake Titicaca, and there are great tin deposits in the main ranges of the Cordillera Real and its numerous spurs. Right here in the heart of the Bolivian plateau, eight hours' ride by train from La Paz, is a tin mine, out of which they have been taking ore for generations. The mine has a tunnel that starts into it out of the very heart of the city, and one has to walk through this less than half a mile before he comes to the workings. These have been extended to a depth of 700 feet, with solid tin all the way. No one knows how far down the ore goes. The mine was worked by the Spaniards for silver, but later on changed from silver to tin and the bulk of the product is now in that metal.


The Old Potosi Mint

Tin and Stone Sandwich

The tin ore lies in veins between layers of rock. It is the meat of a mighty stone sandwich that has to be blasted out and carried to the surface. There the great chunks of tin and rock are broken to pieces and sorted over by Indian women, who pick out all the ore that will pay to be sent away for reduction.

During my stay here I visited this mine. Back of the buildings containing the machinery of its main works are mounds of broken stone and piles of valuable ore. The mounds look like gravel. They are the waste of the mine, having only about 1 per cent of the metal. The good ore looks like that of silver or lead. It is so dull in color that no one would imagine that it could produce the shine one finds on a new dishpan or wash boiler.

I spent some time watching the Indian women at work. The ore comes out in chunks, some of which are ten times as big as your head. The women break the chunks into pieces with heavy steel hammers and pick out the bits that contain tin and silver. They have faces the color of copper, and as they sit on the ground pounding away their black bare feet and rosy bare calves can be seen showing out from under their very full skirts. They are dirty and frowsy and their hair and bodies form the homes of unmentionable insects. They are muscular. Their continual pounding gives them large arms and they are noted for the size of their biceps. They keep at the job from daylight to dark, and their earnings are about 50 cents of our money. They are paid by the amount that they do, and it was with difficulty that I got them to stop work and pose for my picture.

Fifty Cents for Day's Work

Nearly all of these girls were chewing coca and their cheeks were swelled out by the fat quids inside them. While I waited some of the miners came out and I photographed them. I asked as to wages and they told me they were paid about 50 cents for ten or eleven hours' work underground. The men are brought up in the mines and are skilled in the handling of ore.

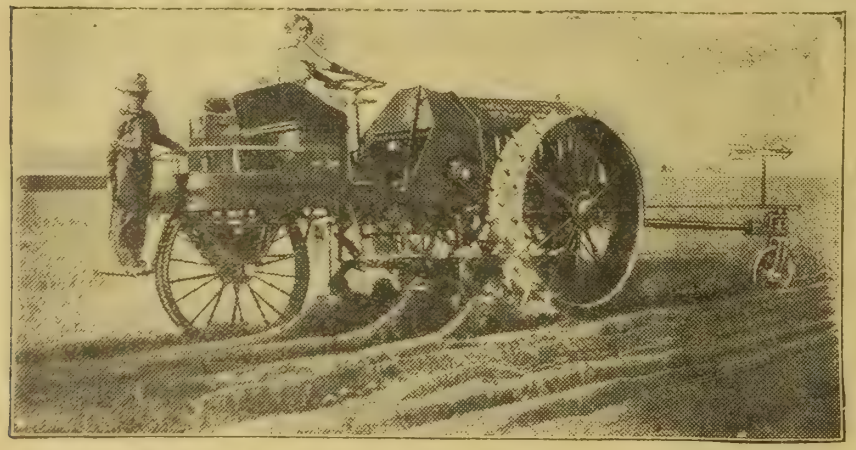
The mining company that owns this mountain of minerals has three different properties, all of which are producing silver and tin. It has hundreds of miners and keeps 250 women at work. The Oruro mines have always paid well, and today they are producing good dividends. I visited them when I was here some years ago, and before the railroad to La Paz had yet been constructed. The fuel then used was the llama manure, brought in by caravans from all over the country.

It took four tons of that stuff to run the forty-horsepower engine twenty-four hours, and I remember going with one of the managers of the mine into the pit where the fuel was stored. It then contained 150,000 pounds of llama droppings. The stuff looked like gray bullets or gravel, and it was as dry as a bone and gave forth no smell.

Today the company is using coal at a cost of about $50 a ton. It has installed the most modern machinery, and it is saving money by employing anthracite gas engines that give a 75 per cent fuel efficiency, using one pound and a half of anthracite per hoursepower per hour. This saves a great deal in a region where the coal freights from the sea coast are from $25 to $30 per ton.

Millions Thrown Away

I have already written of the mines of Potosi that were opened up by the Spaniards. Since their beginning they have produced three or four billion dollars' worth of silver, and it is now thought millions of dollars more were thrown away in the tin which was mixed with the silver. The people did not understand the value of the baser metal. They could not realize that it might some day be worth $1,100 a ton, which has been its selling price within the last year, although it is now very much less. So they took out the silver and left the tin on the dumps, whence it has been washed away by the streams. All this is changed and the great profit is now in the tin, the



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Potosi owners having originated a syndicate to operate the property on a silver basis. They will work the mines almost solely for tin and will capitalize them largely on their fame in the past as silver producers.

There are other tin mines of enormous value in the Potosi district. La Salvadora has produced as much as 1,700,000 pounds of pure tin in a month and the Uncia mines are now yielding more than a half million pounds of that mineral every twelve hours. The Uncia mines are the property of Simon I. Patino, who might be called the tin king of the world. He is worth many millions, and it all comes from tin.

Tin King of the World

It is only a few years ago that Patino was a poor clerk, working for a few dollars a month. He had Indian blood in his veins, and no one supposed he would ever be more than a hireling. Then he found this prospect and tried to get his employers to work it. They had no faith in him or his property, and so he denounced the claim for himself. In some way he managed to get a small capital. At first he practically lived in the mine, laboring there with the few Indians he could hire at low wages. He finally struck a rich vein and since then the mine has paid as high as $5,000,000 a year. It sometimes yields as much as $200,000 a month.

Patino has suddenly jumped from poverty to extravagant riches and he has hard work to invest the surplus. He is interested in banks and he has bought houses and haciendas and mines of various kinds. He has built a railroad from the Antofagasta line to Uncia to get his ore out to the steamers; and is installing the best machinery. Of late years he has been living in Paris and his properties are now managed by agents. I have already referred to the great blocks of tin from the Patino mines that will be shown at the world's fair at San Francisco.

I hear other romances of tin fortunes made on these Bolivian highlands. One relates to a German mechanic named Kemp, who opened a mine when tin was selling for $1,100 a ton. He had no trouble in disposing of the property to a Chilean syndicate, which paid him $100,000 in cash and an equal amount in the shares of the mines, which were then estimated at par.

Romances of Mine Owners

Kemp had no knowledge of the value of money, and he supposed that his $100,000 would last him forever. He took it and went off to Europe. He spent right and left and within less than two years his fortune was gone. He then came back to Chile, expecting to get another $100,000 by the sale of his stock. In the meantime the price of tin had fallen, and the shares that Kemp took at par were each worth 16 cents instead of $5. He thought he had been tricked and threatened the company with a lawsuit. The officials replied that there was now no money in mining and that he could have the property back as a gift. He took it and for a time almost starved. He could not get enough food for his Indian laborers. Then the price of tin rose and he was able to recapitalize the mine. He organized a new company and the shares are now above par. Those which Kemp has, at their face value, are worth at least $125,000.

I have already written of the Bolivian Exploitation and Development company, the president of which is Mr. Horace G. Knowles, our former minister to Bolivia. Mr. Knowles tells me that his prospectors have recently discovered a wonderful deposit of stream tin in one of the Bolivian rivers. The most of the tin now mined here is in quartz, but this stream tin is in nuggets and lumps from the size of an egg to that of your two fists or larger. It is said to be very rich, containing 53 per cent of oxide of tin. The deposit runs through the bed of a river for a distance of twenty-six miles.

Mr. Knowles thinks that the tin of Bolivia has scarcely been touched; he says that his engineers are sending in reports of many finds that promise to pay big dividends upon their development. He believes that when our canal is completed the tin ores of Bolivia will go to the United States rather than to Europe. We are now using 40 or 50 per cent of all the tin mined, and the tin we get from Bolivia is taken down to the seacoast in the

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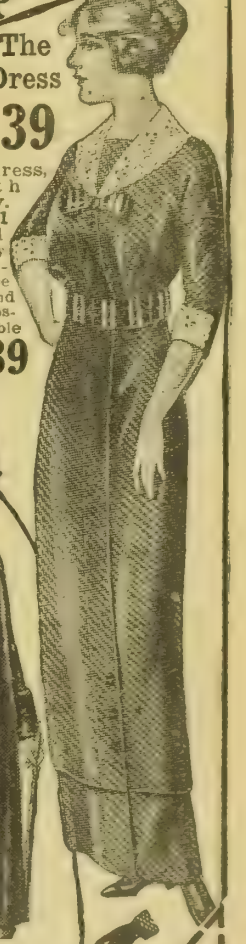

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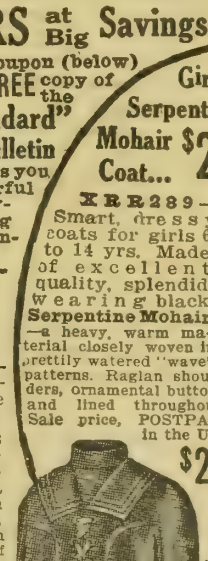

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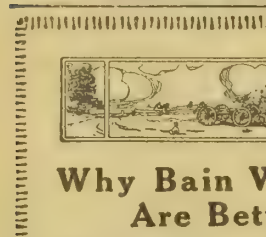

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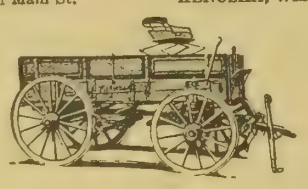

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ore and shipped off to England, where it is smelted and then carried across the Atlantic to be used in our factories. Mr. Knowles thinks that the enormous canning industry of California should establish its own tin plate mills, and that the tin ore should go north along the Pacific coast from the mines to the mills.

Tin Reaches Us Through Liverpool

At present it costs about $60 to get tin from these mines to Liverpool, and, of this, $15 covers the freight to the seacoast. The other $45 is taken up in various charges, including $13 for carrying the ore from Antofagasta to Liverpool. The distance to San Francisco, Los Angeles or Puget sound is very much less, and the great saving in the charges of the go-betweens who handle the tin between England and the United States would make a fine profit for the American factories. We are now using almost $50,000,000 worth of tin bars and blocks every year. The export of Bolivia is worth much less than this, and the United States could take all of its product and still not have enough to satisfy its demands.

In the meantime tin prospecting is going on in many parts of this country, and the new railroads, now building, will open up highly mineralized territories that will probably increase the tin product. The old mines are being re-equipped with modern machinery, and many think that the future output will be such that it will drive the more expensive Malaysian tin out of the market. At present they are using 1,200-pound stamps to crush the hand-sorted ore, which is then run through screens of from six to sixteen meshes per inch. After that the tin is concentrated and shipped off to England. In the past the ore has been taken out of the earth in the most wasteful ways. Much of it was carried out of the mines in buckets of rawhide, up ladders, on the backs of Indians. Thousands of tons of the richest ore were crushed between stones and then washed out in streams of water by the Indian women. Much of this ore so treated carried from 40 to 50 per cent of metallic tin; the lower grades were rejected because they would not pay for the labor.

New Mining Laws Are Needed

Before leaving the subject of Bolivian mining I would say that the future of the country depends largely upon the passage of the laws advocated by the president and congress. Just now the protection of mining investments in Bolivia is not so good as in Peru. There is a regular business in the contesting of titles by the lawyers, and in fighting for mines that other men own. I am told that there are many shyster lawyers and others who make a practice of laying claim to every mine supposed to be good and of contesting its title as soon as it is denounced. Said one of the leading railroad men of Bolivia to me yesterday: "I might go to the heart of the backwoods in the eastern part of this country and lay claim to a mine a hundred miles from where any white man ever trod. If I did so I venture that within two days after that mine was a matter of record there would be a half dozen applications filed, disputing my title and swearing that the contestant had record proof that he owned it. This is especially so of any mine, thought to be good, and that even long after the mine has been profitably worked. Not long ago the engineers of the largest American copper syndicate came to La Paz and spent six months looking over the ground. They found plenty of good prospects, but refused to invest under the present laws and went over the border to Chile, where they could be sure of their titles."

"One has also to watch the papers that his own lawyers prepare making his claim," this man continued. "I know of one case in which a big proposition was almost lost by an error in the description. The lawyer in giving the feet or meters from a certain point used the word "northeast" where he should have used the word "north." When the error was called to his attention he said it was a slip of the pen, but had it been so recorded it would have resulted in vitiating the title to a property worth hundreds of thousands of dollars. I have no doubt that that error was intentional and that with a view to a lawsuit in the future."

Moreover, any large property taken up by a Gringo is sure to have four or five contests filed against it by people who wish to embarrass the owner, and who expect to be bought off before they will relinquish their suit. I know of a case in which a Bolivian, who has been successfully operating a mining property for years, went to London and sold his mine to a British syndicate on the basis that the title was clear. When he returned he found that five different suits had been filed, claiming the mine, and it cost him $200,000 to settle them."

Some Tricks of Bolivian Notaries

Such things are injurious to the development of Bolivia, but I hear of other cases even worse. I am told, for instance, that the notaries public sometimes issue papers to themselves for the same properties concerning which they are paid to get titles for others, and antedate their own claims. If the mines turn out good, they can then claim prior titles. Another method is to leave some important clause out so as to furnish ground for a suit as to defect of title, and a third way is to forge false papers and claims. I know of many mines of value in Bolivia now in the hands of foreigners that are costing their owners much to defend them, and it certainly behooves all Americans coming here to invest in mineral properties to take these matters into consideration.

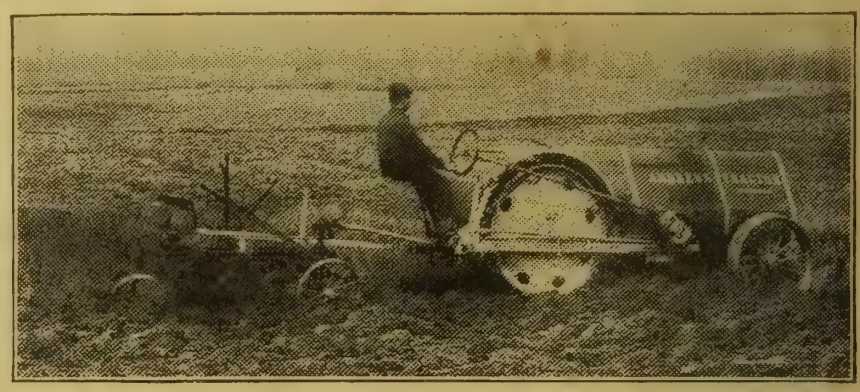
The new laws, if they can be passed, will remedy many such evils. One of these has already been enacted. It provides that the contestant to a mining claim must deposit $200 with the government to show the good faith of his suit, and that this is to be forfeited in case he cannot make good. Another law provides that the annual dues and fees for holding the title to a mine must be all paid by December 31 of each year. In the past such dues have been allowed to run on and the mining title be considered good if they were paid in a lump. In fact, a man might have taken out a claim to a property twenty-five years ago and paid only for his first papers. Everyone would suppose the title to have lapsed, and another claimant, taking it up and working it, might then find that the first claimant had at last paid his back dues as a whole, and that his original title was good. This new law will prevent any such action and will put Bolivia on a sound mining-investment basis.

Peruvian Mining Laws Good

During my stay in Peru I asked many questions as to the mining laws there. I learn that they are excellent, and that such property is more easy to acquire and hold than in the United States. Every Peruvian district has its mining delegate, and anyone, foreigner or native, may go before him and claim mining property. This is called the denouncement, and the claimant pays a fee for it. This fee is for the registration and the advertisement of the claim in two designated journals. It gives the discoverer the right to the claim for five months from the date of filing his papers; and if at the end of that time he still wishes to hold the property the mining delegate will fix the corner stones and give him possession. After that the only payment required to continue the claim is an annual tax of $15, and the claim holds good as long as the money is paid. As a rule there is no disputing of titles, and the Americans tell me that the foreigner has just as good a chance to hold and to work his mines as the natives.

FRANK G. CARPENTER.

Barney Oldfield Would Envy This Farmer



While the larger tractors were chugging and plowing at Fremont, recently, a little four-cylinder tractor was entering the field at Minneapolis. It is not new, although nothing has been said about it until now. The manufacurers have been insistent upon doing their experimenting on the quiet—of waiting until their machine was actually practical and economical for a farmer to use before they put it on the market. They have had years of experience in making all or parts of other tractors and they were in a position to profit by the experience of the other machines.

The "Andrews" as it is called, is a three-wheel, four-cylinder tractor weighing about 4,500 pounds and capable of pulling two or three fourteen-inch plows under conditions such as are usually met with. It is low, compact, exceedingly durable and one man can handle it and the plows easier than he can plow with a four or five-horse team—yes, and cheaper, too.

There are a number of exclusive features on the little "Andrews" which will make it popular with all farmers. For instance, the transmission mechanism has been simplified to the limit, there being only two gears and the friction drive provides a variable speed of from one to four miles per hour, forward or reverse. The rear driving wheel is a steel drum, the ends, or heads, being flanged and hot-rivetted to the rim and axle. The power from the transmission is delivered to the drive wheel by means of a heavy duty roller chain which runs over large sprockets.

The engine is four cylinder, double opposed type, is forced air cooled and lubricated through the gasoline feed. No radiator or intricate oil mechanism are needed. When doing light work, either of traction or stationary nature, two of the cylinders can be cut out, thereby saving gasoline expense.

The front wheels are mounted on automobile steering knuckles and provided also with springs which take off the jar. The front axle oscillates vertically, thereby providing three point suspension to the frame so that the tractor can travel on rough, uneven ground without straining the frame or reducing the traction value of the drive wheel. The right front wheel travels in the furrow and steers the outfit..

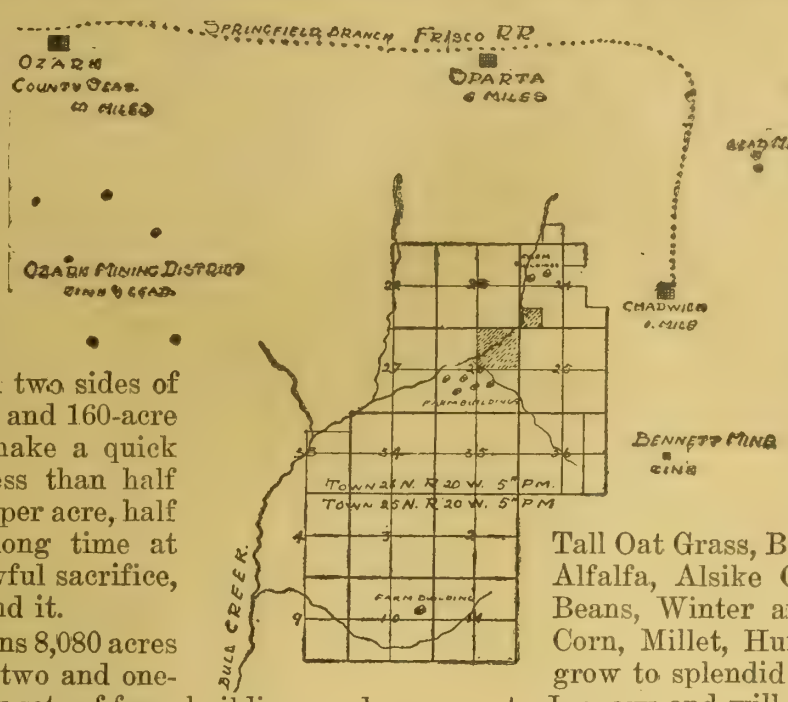
When one sees the "Andrews" working he is reminded at once of Barney Oldfield's racing car because of the low construction and long hood in front. This removable hood covers the entire mechanism so the tractor can work in wet weather or can be left out in the field without damage.

The Andrews Tractor is a combination of all the best points in other tractors with several exclusive features of real value added. It has been received with enthusiasm wherever shown and should be seen or investigated by any farmer who contemplates buying a tractor or who wants to cut down the present expense of his teams. It offers big opportunities also for dealers, as there is no tractor made which directly competes with it. It sells at $695, which is exceedingly low for such a thoroughly high class machine. Farmers or dealers will be given full information upon application to Randolph & Smith, Distributers for United States and Canada, Twenty-sixth and University avenues, Minneapolis, Minn.—Advertisement.

An Incomparable Ranch Bargain

SPRINGDALE ranch yields me a yearly income of $30,000 better management could make it $40,000. I am pasturing on it now $75,000 worth of cattle.

I have so much property I am obliged to sell. It's worth from $30 to $35 per acre. Lands on two sides of it have sold for $50 in 80 and 160-acre pieces. I have got to make a quick sale so I offer it for less than half what it is worth, viz: $15 per acre, half cash and the balance long time at 4½%. I know it's an awful sacrifice, but my necessities demand it.



Springdale ranch contains 8,080 acres being five miles long by two and one-half miles wide. Has six sets of farm buildings and seven barns. It has fifty-six springs and a stream running through. Notice the etching herewith showing how it's situated with respect to towns, railroads, mines, etc. A fine automobile road connects it with Springfield only 26 miles away—a city of 60,000 people, a great railroad center and the fastest growing town in Missouri. Beyond Springdale ranch 14 miles is the new $3,000,000 power site dam which supplies electricity for light and power to all nearby towns. Springfield, Joplin, etc., are supplied by it. Wires carry electricity right by my ranch so I could have cheap light and power. An electric line is promised from Springfield to Chadwick a mile from my ranch.

Now these lands will produce any crop grown in this state. To appreciate what the lands will do, let me give you some illustrations.

Peach trees are planted from 130 to 160 to the acre, and with proper care and cultivation, produce from $100 to $500 to the acre. With proper care apples net from $200 to $800 per acre; strawberries net from $200 to $400 per acre; grapes net from $200 to $300 per acre; watermelons from $100 to $150 per acre; raspberries, blackberries, dewberries, June berries, crab apples, plums and cherries yield from $75 to $400 per acre.

Record in vegetables: Onions, $200 per acre; tomatoes, $75 to $100 per acre; Irish and sweet potatoes, $100 to $200 per acre; string beans, from $200 to $450 per acre. The State Board of Agriculture in last year's report, gave the average yield of corn as 29 bushels. On one piece of upland the average yield last year was 58 bushels, while yields of from 40 to 60 bushels are not uncommon. Tobacco nets from $200 to $400 per acre.

Record in grasses: Timothy, Kentucky Bluegrass, Virginia Bluegrass, English Bluegrass, Blue Stem Orchard Grass, Tall Fescue, Tall Oat Grass, Bermuda Grass, Red and White Clover, Alfalfa, Alsike Clover, Japan Clover, Cowpeas, Soy Beans, Winter and Spring Vetches, Sorghum, Kafir Corn, Millet, Hungarian Hay, Milo Maise and Rape, grow to splendid advantage. Grass lasts from April to January and will support one steer to every two acres.

Record in dairying: The fact that cows can, on these lands range from nine to ten and a half months, means less barn feed, hence more profit in dairying. The abundance of blue stem grass provides variety of forage, which makes rich milk. C. H. Eckles, professor of dairy husbandry, University of Missouri, says: "The Ozark region is conceded by all competent to judge, certain to be noted far and wide in the future for this industry." One South Missouri dairyman received $14,456 a year from eighty-three cows. Another $120 from each cow. Another $850 from fourteen cows.

Record in poultry products: Statistics show that by intensive poultry growing you can raise an average of 800 chickens on an acre of ground. The United States census report declares South Missouri to be the most favorable in the country for poultry raising. One South Missouri poultryman marketed from sixty hens, during January, 120 dozen eggs; during February, 112½ dozen. These hens averaged 25 eggs a month each during the two coldest months. His poultry has practically never known disease. Henry Steinmesh, Germany's poultry expert, at the St. Louis world's fair, said: "Southern Missouri, in my judgment, is the finest poultry region in the world."

There is hardwood timber enough on this ranch to pay for it. The lead and zinc mines about it promise well, in fact some of them have been great producers. Borings have shown lead and zinc on this ranch. Whoever buys Springdale ranch will surely double his money and more very soon by the increase in value of the land alone, to say nothing of its income. Here's an opportunity for you to make a fortune by a single deal. An inspection of this property will more than confirm all I have said.

Let me send you my printed matter, or better still, come to Springfield and I can show you all you will want to see in a day.

THIS RANCH WILL CARRY A LOAN OF $60,000..

A. J. Johnston, Owner, 221 Woodruff Bldg., Springfield, Mo.

A. J. JOHNSTON, 221 Woodruff Bldg., Springfield, Mo.

Dear Sir: Kindly send to my address your illustrated booklet "Springdale" without any obligations on my part.

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Are you farming 160 acres or less?

Are you using horses for farm power?

Do you ever find yourself desperately in need of more power for a short time?

Are you waiting for a tractor suited to your needs; one that you can afford to own and run?

Would you buy a tractor which would provide ample power for any emergency on your farm if it cost less than the horses needed to do your extra work?

The thousands of farmers who are now facing this condition will find a light on their problem in the work done by the Mogul 12-25 oil tractor in the demonstration at Fremont, Nebraska. This machine, built on a radically new design for the use of small farm owners, weighs less than six horses, does the work of twelve in the field and twenty-five in the belt It really will do more work than twelve horses, because it can work longer hours, twenty-four hours a day if necessary. With it you can do your plowing, disking, harrowing and seeding on time and at the best time. With it you cut off all expense of keeping horses during the large part of the year that they are not working.

This machine is worthy of your most careful consideration. Ask the local dealer to get you reports on the small farm work it has already done. Ask him for catalogues of the tractor, or, if you prefer, write to us.

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Careful manufacture and good galvanizing insure maximum service from APOLLO Sheets. APOLLO Roofing and Siding Products are sold by weight by leading dealers. Send for "Better Buildings" booklet.
AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

Interstate Fair at St. Joseph

By H. J. Gramlich

THE fair season opened its colossal doors for the year at St. Joseph, Mo., August 10. Although the date was a little early and stockmen were fearful of a hot week, the exhibits in all departments were large and of splendid quality.

Heretofore the St. Joseph people have held their stock show at the stock yards. This year a reorganization took place, and the new management decided to prepare the beautiful park near Lake Contrary for a permanent fair grounds. In doing this they planned upon not only a stock show, but likewise an agricultural fair in which all phases of farming might be represented. Much of the credit for the splendid showing made must be given to Secretary H. L. Cook and his efficient co-workers. The fair was surely well managed and its magnitude may best be judged by saying that it was of state fair caliber.

Fairly Good Attendance

The territory tributary to St. Joseph has been blessed with but scanty rainfall this season, and consequently many people stayed at home who otherwise would have made the fair a visit. Another factor which influences attendance down in that section is the large number of big fairs in the proximity. The Kansas City Royal, the Sedalia, Hutchinson, Topeka and even Lincoln and Des Moines fairs all lie reasonably close, and consequently patronage is divided. Everything considered, however, the gate admissions were good and a person on the grounds could scarcely judge how many thousands were in attendance because of the largely spread-out grounds.

The new grounds are already quite well equipped for handling a fair. The big race track grandstand is fitted out below for the draft horse display and a splendid showing of Percherons utilized every available stall.

Good Exhibits Well Housed

Agricultural hall was utilized by nine county collective exhibits. Arnold Martin of Pawnee county, Nebraska, easily pulled the blue in the class, while the Fillmore county, Nebraska, exhibit ranked second. The winner of first received $150 in the open class and practically as much in the individual entries. Upstairs in the Agricultural building was the poultry show. A large frame structure was devoted to domestic science displays and furnished a center of attraction for the women visitors at the fair.

The cattle, hogs and sheep were accommodated in large tents, which were well ventilated and reasonably cool. The live stock display was especially commendable. Some herds were present from as great a distance as Wisconsin. Quality was good in every department. While entries and classes were not as large as at some fairs, yet those animals that were on display were uniformly good, and it would have been difficult to have found a more even exhibit.

Dairy cattle were well represented, there being two herds of Jerseys, two of Guernseys, one of Holsteins and one of Brown Swiss. Graves of Missouri pinned the ribbons. Considerable interest was manifested in these dairy cattle, despite the fact that the fair was in a packing town and in the heart of a beef-producing region.

Good Beef Cattle Show

All beef breeds were well represented. Shorthorns constituted a fine show. The calf and yearling classes contained upwards of ten entries each and quality reigned supreme. Rapps of Nebraska won the most money, although Saunders of Iowa received the bull championship and Harding of Wisconsin the female. The Saunders yearling that was such a sensation last year as a calf is still in the running. He weighs 1,800 pounds now and carried the purple ribbon away from the show. While Des Moines may witness a larger show than this, it is doubtful if competition can be any keener. McMasters of Illinois pinned the ribbons in a very acceptable style.

Herefords were a nice, even bunch and their exhibition won much praise. Like the Royal, St. Joseph has always ranked high as a Hereford gathering point. McCray captured three of the four championships, his imported bull, Farmer, being the senior champion. In Angus there were but two herds, Caldwell of Missouri securing the bulk of the ribbons. Three full herds of Red Polls made a nice showing for the breed. These represented Nebraska, Iowa and Illinois. The 2-year-old Larabee bull was easily the champion male and today ranks as one of the best of his kind in America. One herd of Galloways and two of Polled Durham constituted the balance of the cattle show.

Percherons Were Favorites

The horse show was a Percheron show. Exhibits were large and competition keen. The showing was done in front of the grandstand on the race track. Most of the entries were American-bred, although one importing firm was present with ten head. Judging was done by the writer. The Percheron Importing company of St. Joseph received the stallion championship on their 5-year-old black Joel, an undefeated 1913 winner. He was a bit thin and the contest was close between him and the blue roan Reinhard, winner in a large class of 3-year-olds. The latter horse had the advantage in action and possibly was a trifle cleaner; however, the black carried a trifle shorter top and was a little more massive.

In mare classes the aged matrons proved the strongest. There were nine of these, headed by the Brown & Walker black Falcon, Lady of Iowa. She is a grand goer, of ample scale and correct stamp. McCully of Missouri took second in this class on an 8-year-old grey of smooth trim build, while the grey mare from the Lee stables stood an easy third. In younger classes the get of Helix won quite well. Honors were pretty well

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The "CAMP" Hydraulic Grain Dump and Elevator is the most simple made. Has only 1-5 the mechanism or parts of others. Practically all gears, chains, worm screws, etc., are eliminated. Has continuous drag chain for elevator and hopper — cannot buckle. The Hydraulic Jack is the only one made that requires no power or friction brake when lowering wagon.

Do not buy a grain dump until you investigate the wonderful "CAMP" machine.

Manufacturers of Portable and Stationary Cup Elevators and Hydraulic Jacks.

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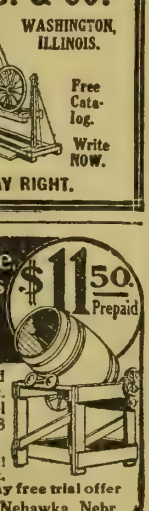

Save money on silo bases, feed yards, troughs, posts, walks, etc. This machine gives "whirl-pool mix," wheel barrow load every 3 minutes, has tilting dump.

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BINDER ATTACHMENT with corn harvester cuts and throws in piles on harvester or in winrows. Man and horse cut and shock equal with a corn binder. Sold in every state. Price only $20.00 with fodder binder. J. D. Borne, Haswell, Colo., writes: **"Your corn harvester is all you claim for it; cut, tied and shocked 65 acres milo, cane and corn last year."** Testimonials and catalog free, showing pictures of harvester. Address PROCESS MANUFACTURING CO., Salina, Kansas.

divided between the Brown & Walker and the Lee stables.

Not Many Hogs or Sheep

The hogs were not as numerous as at some previous St. Joe fairs, but those that were there were good. S. McKelvie and Tom Shattuck, both of Nebraska, pinned all the ribbons. Polands and Hampshires made the largest showings. In the former the judge held consistently for the big type. The Meese herd from Ord, Neb., secured the boar championship. Several herds of Berkshires and Chester Whites gave the judges considerable competition.

Sheep were not a large show, but Prof. Blizzard, the judge, found some extra choice entries. The Harding lambs were quite consistent winners.

Retired Farmers

(CONTINUED FROM PAGE THREE.)

out and tend to my little chickens and gather eggs, hobbling on my cane, but it wasn't any use. Besides, the children begged us to quit working so hard."

"Yes," Mrs. Wright, the daughter, said earnestly, "we tell father and mother they have done their work in life; they ought to take it easy now and let us do for them. Fourteen children mother has had, and every one that grew up turned out well; good, honest, hard-working people, and successful enough, too. Father is so interested in our farm and keeps in touch with everything going on. We own eighty-five acres near Emerald and Mr. Wright and a man go out there with the teams and plant the crop and later harvest it; he has wheat mostly, though he is planning to put it all in alfalfa in time. Between times Mr. Wright keeps the teams working for one of the paving contractors here, and all winter he has them busy in the coal yards. He makes more to run the farm himself than to rent it."

"What was your renting experience, Mr. Tate?" I asked. "Did you have good landlords?"

"The best there were," he answered enthusiastically. "I was on one place thirteen years. It was a fine farm. I always looked around and picked out good land."

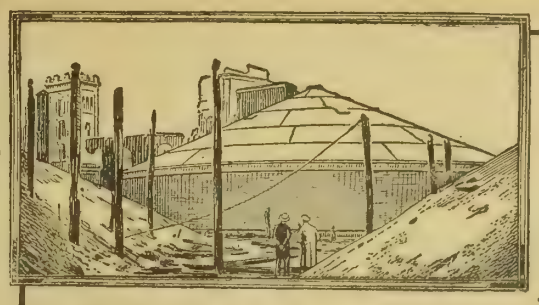
"Yes," said Mrs. Wright proudly, "father's a good judge of land, and he's always had the reputation of being a splendid farmer."

"That farm," went on Mr. Tate, "belonged to an Ohio man; then he sold it; I was on another place eight years; that belonged to a man from Chicago. I always paid grain rent—one-third of the crop, though it's two-fifths now. At first my landlord had an agent, who measured out his share of the crop and sold it and sent him the money, but it wasn't more'n a year or so before he left everything to me. I'd just send him the $350 or $400 it came to and he'd write back a 'Thank you.' One time when Mrs. Tate was in the hospital he came clear out from Chicago to see that she had everything done for her that should be. We used to make butter those days and sell it instead of milk, as so many do now."

"No," he went on in answer to another question, "they never specified what I was to plant, nor how to cultivate, or anything of the kind; and, of course, they paid for all the repairs, paid the taxes and insurance. On the whole, I believe you can make more money to rent than to own a farm, but still I wanted a place of my own and I saved money enough to buy and pay for a good piece of land, but, as I said before, Mrs. Tate's health failed and we sold."

They were both very loyal to Nebraska, and when I mentioned that I had been born in Omaha Mr. Tate said, "Well, I guess you're glad of it, aren't you?" When I told them something of farming conditions in Vermont, where we had spent a summer, and said that one thing they could raise there was timber; that a cousin of ours had received $5,000 for the white pine on about twelve acres, Mrs. Tate promptly rejoined:

"Well, I should think your cousin would take that money and come out to Nebraska, where we can raise corn and alfalfa and wheat."



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And you will find them extremely expensive, too, because they have to be constantly repaired.

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It resists fire—never requires painting or repairing—and is absolutely and permanently water-tight.

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The Evening World.

SHINGLES TO BLAME

MASSACHUSETTS is still bending a thoughtful brow over the ruins of Salem.

Everybody agrees that the one thing which contributed most to the spread of the fire was—shingles. House after house burst into flame the instant the rain of sparks touched the tinder-like shingle roofs.

• • •

—a dry, weathered shingle makes about the finest kindling known. In a closely populated town a brisk wind carries flames over shingle roofs as fire sweeps over sunburnt prairie grass.

The Bay State is using the Salem fire to start a strong argument against shingles. It will do the rest of the country no harm to listen.

Write Nearest Branch Today for Descriptive Booklet 4285

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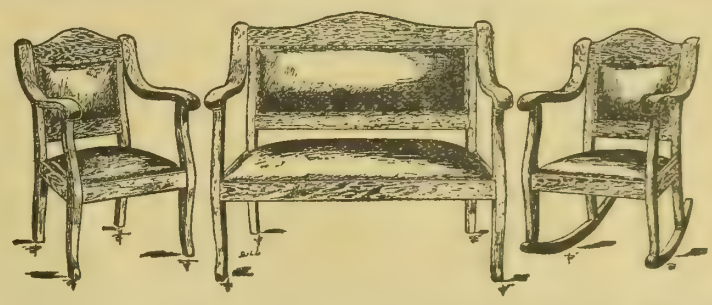

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You will likely be in Omaha in September or October for a visit and to do your fall shopping.

When here make it a point to visit our splendidly equipped home furnishing store, the most complete in the West, embracing 3½ acres of floor space and carrying the best lines of furniture, rugs, carpets, draperies, and stoves. You will be delighted at what you see and will find especially low prices prevailing. We do not sell cheap furniture, but sell good furniture cheap.

Our complete mail order catalogue enables you to order by mail, at any time, anything you need.

Last year we added to our list of mail order buyers 9000 names in Nebraska, Iowa, Kansas, Missouri, Wyoming and South Dakota. We have hundreds of testimonials from them stating that goods purchased from us were entirely satisfactory.

We have a handsome, useful souvenir for you when you visit our store.

If you do not expect to be in Omaha soon, cut out the coupon below and send to us. We will then send you the handsome souvenir and our catalogue. Your name will be put on our mailing list and we will send you information on special bargains from time to time.

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An Offer of Very Superior Merit

OAT FIELD IN THE SAN LUIS VALLEY, COLORADO

100 bushels of oats per acre are not uncommon. The result of good land, good farming and good climatic conditions.

In the issue of August 22d we showed a field of wheat. In this issue a field of oats. As a farmer you can see the difference in the crop grown in the San Luis Valley and what you are raising on your farms in the rain belt. Also you have years when your crops are destroyed by drouth and hot winds, some times from flood and rust.

Why not farm where crops are sure every year, where when you sow the seed in the Spring you are sure of bumper crops in the Fall, where the seasons are favorable for raising cattle and hogs, where pure artesian water is plentiful for men and beast.

We have sold $80,000 worth of our land to people who are making farms for themselves and have 4,000 acres left.

This Land We Will Sell on a Guarantee, as Follows:

To all purchasers who will put the land bought in proper cultivation in alfalfa or such crops as we may agree upon, we will bind ourselves that in case the purchaser is dissatisfied **FROM ANY CAUSE WHATEVER** we will re-purchase the land any time within three years at $15 per acre advance over the purchase price. This is $2,400 per quarter section.

Come with us and see what the farmers are doing in the San Luis Valley. If others want to sell you land let them give you a guarantee like this. If they have a proposition that will make you money they can afford to do it, we take no risk as the land is worth it. DEAL WITH RESPONSIBLE PEOPLE.

We own the land and can sell on terms to suit purchaser.

Price from $50 to $60 per acre, including water.

Write us at once for particulars or call at our office.

The San Luis Valley Irrigated Land Co.

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Improve Soil by Plowing

THAT proper preparation of the seedbed is one of the most important steps in soil building and increasing crop yield is apparent on close study of conditions in any community. The farmer of today who expects to maintain the high state of fertility found in his soil when it was still in the virgin state must give more careful consideration to his methods of plowing and seedbed preparation.

That soil is improved by continuous stirring is a truth only denied by the ignorant and unobserving. This is nature's way of aiding in soil building. The plows, discs and cultivators of nature are the roots of trees and plants. If the naked eye could only penetrate the soil during the growing season one would see the roots and rootlets shooting out and down into the soil as animated beings, and as the season progresses the soil is loosened by their action more than it is with the average plow throughout the grain belt.

The vast amount of work done by these roots and rootlets cannot be comprehended unless a careful study of their root system has been made, yet we can get some idea of their work when we understand that the roots of the alfalfa plant penetrate the soil from a few feet in depth to more than thirty—those of the corn, wheat, oats and barley from a few inches to eight or more feet. These gigantic "natural plows," as they may well be termed, are working wonders in the way of soil improvement and crop production. It is this great work of nature that has aided so materially in retaining our soil fertility and rewarding our farmers with bounteous crops rather than our methods of seed-bed preparation and crop cultivation.

It is a deplorable fact that a country so young as ours, and with a soil so new, is producing less than half as much grain as is being produced in our mother country, where the lands have been under cultivation for thousands of years. Benjamin Franklin wisely said, "Plow deep, while sluggards sleep, and you will have grain to sell and keep." It is too common a practice today to hurry through this soil stirring operation known as plowing. Too little thought is given to time of plowing, depth of plowing and number of times soil should be stirred. If it were possible to break up soils three or four times a year their fertility would be increased.

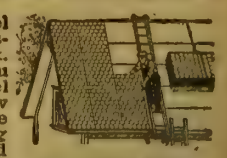
It is said that "tillage is manure," that "frequent tillage is our best and cheapest manure" and that tillage and manure are one and the same thing.

The old Roman farmer plowed his land never less than three, and sometimes nine times for a single crop. Upon this principle England has constructed an agriculture that not only reclaimed its worn-out soil, but made it increase its productiveness more than three fold.

Plowing or stirring the soil mixes the organic matter with the minerals, thus affording better ventilation; it gives the soil better ability

Special LOW Prices On Edwards STEEL Shingles

Prices on Edwards Steel Shingles have been chiseled down to bed rock. Never before could you buy these famous steel shingles at such low prices. This is the one big money-saving chance you have waited for. You can now buy steel shingles that **won't** rot, rust, crack, burn or leak for the cost of old out-o'-date wood shingles. Edwards STEEL Shingles are in successful use on over 135,000 homes.



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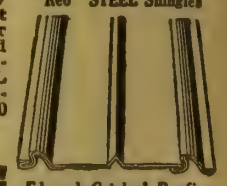

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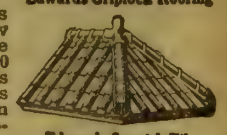
Outlast Any Building!

Come in big clusters ready to put on. A few nails, hammer and the hired man's arm lay 100 at a clip. Ten times **faster** and ten times **easier** than putting on wood shingles. Absolutely rust and leak proof. Guaranteed against lightning damage under $10,000 bond. Ask us about this.



Edwards Spanish Tile

We Sell Direct Freight Paid

—with **no** middleman's "rake-offs." We **under**-sell and **out**-sell everyone on high-quality steel roofing, steel garages and other steel building products. Drop us a postal. Simply say "Tell me about your steel roofing" and we'll send our startling low prices. (164)

Edwards "Steelcote" Fireproof Garage, $49.50

THE EDWARDS MFG. COMPANY
948-998 Lock Street Cincinnati, Ohio

Gas Engine Owners, STOP CRANKING!

No longer run the risk of being killed or seriously injured in starting your engine. The latest wonder of the twentieth century is now within your reach.

THE Walker Starter

is the only starter in the world which will start your gas engine instantly upon the pressure of a button, regardless of temperature or humidity.

It will absolutely eliminate all Danger, Delay and Annoyance.

Manufacturers Wondered!

and thousands of farmers were startled at the wonderful demonstration at Fremont.

It is as simple as a child's toy, yet durable as a battleship and as easy to operate as a doorbell. It is 100% efficient and sold under a positive guarantee to give absolute satisfaction or money refunded.

Let us tell you all about it.

Walker Starter Company
100 Main Street, Lacon, Illinois.

PATENTS That Protect and Pay Send Sketch or Model for Search.
BOOKS, ADVICE and SEARCHES FREE
WATSON E. COLEMAN, Patent Lawyer, Washington, D. C.

GOVERNMENT Positions are easy to get. My free booklet X78 tells how. Write today—NOW. EARL HOPKINS, Washington, D. C.

Does it pay to advertise? By all means, yes. And the extent of the results obtained through advertising depend almost entirely on the judgment displayed by the advertiser in the selection of a publication that has the confidence of its readers. The Twentieth Century Farmer has the explicit confidence of its many readers, owing to the fact that it absolutely refuses to accept advertising matter that is known to be deceptive and unreliable.

Your Hogs Will Root for You and Grind Their Own Feed With the Hog Motor

Run by one pig—it feeds thirty hogs on full feed. The mill grinds all kinds of grain, coarse or fine, mixed or separate. **Saves grain—no waste.** The hog operates it by rooting against the projections at the bottom. This natural root-motion means exercise; slow eating; better health; more weight; better grade of pork; more money and less work for you. Agents wanted. Send for booklet.

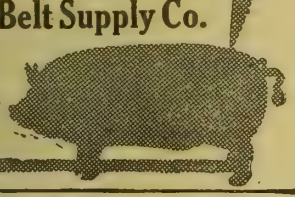
HOG MOTOR COMPANY
702 Andrus Bldg., Minneapolis, Minn.

GRAIN BELT BRAND
Vegetable Hog Potash

The Perfect Worm Expeller, Appetizer, Conditioner and Bone Builder.

Send $2.50 today for trial 125-pound bag. Your money back if not entirely satisfactory.

Grain Belt Supply Co.
South Omaha, Neb.



MEN WANTED IN AUTO BUSINESS

Big demand for trained men. Earn from $75.00 to $150.00 per month. Learn all about automobiles in six weeks by **THE "SWEENEY SYSTEM"** of practical experience. In our machine shop, garage and on the road you learn by actual experience how to repair, drive, demonstrate and sell automobiles.

FREE—Write for 64-page catalogue. This beautiful book costs us 50c apiece, but we will send it free.

SWEENEY AUTO SCHOOL, 1115 East 15th St., Kansas City, Mo.

Free Land Information

Send a two-cent stamp and find out what you want to know about any locality you are interested in.

Tell us just what the location is and we can tell you about its crops, climate, live stock, government lands, etc..

This service is free to our readers. Address

Land Information Bureau
Twentieth Century Farmer
Omaha, Nebraska.
Over 100,000 farm families read it.

to store up and deliver moisture to the growing crops and gives more room for plant roots to perform their proper functions.

There is a right and wrong time to plow and there is a right and wrong way to plow. No matter what the character of the soil, it is a crime to plow when it is too wet, and the offender is always punished, quickly and surely. The passing of the plow through the soil presses the soil grains together until it becomes dense and impervious to water or plant roots. The soil thus turned becomes like unburned brick dried in the sun, and ventilation is completely shut off. Its usefulness as a home for growing plants is almost completely destroyed.

Many times the surface of the ground seems sufficiently dry, but the subsoil is too wet, and the passing of the plow through the soil will press it together under the plow, forming a stratum known as plow-pan, which will hold water above it, thus destroying proper drainage, also preventing moisture from rising when needed.

Early plowing is always to be recommended when weather conditions are favorable, as it gives the vegetable matter more time for decomposition, better aerates the soil and gives more opportunity for increasing the subsoil moisture.

Depth of plowing is a great factor in crop yield. The reason for plowing at all should answer the question of depth. It must be conceded by all that the primary object of plowing is to obtain a seed-bed most favorable for plant growth and development. There must be sufficient room for this development, and a deep seed-bed, well filled with organic matter, will so increase the storage capacity for water and so reduce the evaporation that a sufficient amount of moisture will be secured to produce a fair crop, even in seasons when in shallow, ill prepared seedbeds the crops are far below normal.

Now don't understand us to say that you should plow from ten to fourteen inches deep this fall, regardless of the depth you have plowed in the past. Depth of plowing should be increased gradually, say from one to three inches annually, until the required depth is reached.

A shallow seedbed cannot possibly hold sufficient plant food, moisture, air or heat to produce a bumper crop. A careful study of the root systems of our principal crops will convince anyone that shallow plowing and too long a time between plowings is the principal cause of our low yields and increasing loss of soil fertility. Your soil below where it always has been plowed is close, compact or hardpan, and in either case it is impossible for plant roots to penetrate it. Without penetrating to a great depth it is impossible to get sufficient plant food or moisture; thus low yield or entire crop failure results.

Demonstrations of corn and small grain growing held in different sections of the country show that deep plowing increased the yield from 25 to 100 per cent per acre. It has also increased the soil fertility where practiced and is a long step in the right direction for building a permanent system of agriculture wherever practiced.

Pack Your Own Apples

If every apple grower would be an apple grader and packer the consumer would get more apples for his money, and the grower more money for his apples, so says George O. Greene, horticulturist with the extension division of the Kansas Agricultural college. The apple reports tabulated by the Kansas Agricultural college for 1912 are reports with morals. The most important feature of the records is the one progressive apple growers are considering right now.

The figures say—mind you it isn't a mere expert that is talking this time—the figures say, that the commission man and shipper must go out of the packing business. It costs the packer 52 cents a bushel, besides the loss in culls, to pick, pack and sell the apples to the retailer. Apple growers in Missouri and Kansas who sold their fruit on the trees received, on the average, 24 cents a bushel, 42 cents on the table, 77 cents in barrels and $1.06 in boxes. See the difference? Small wonder the experts think growers can afford to be packers!

The overhead charges on a barrel of apples amount to $1.57. Twenty-one cents of this might go to the grower if he thinks it pays to pack. A retailer thinks that amount on a barrel a good profit, when he is dealing in large quantities.

Grand Detour
No Man Automatic Power Lift
Engine Gang Plows

Our Plows "Made Good" at Fremont

The tremendous amount of favorable interest created by Grand Detour plows at the recent Demonstration held at Fremont, Nebraska, furnishes positive proof of their superior work. It shows that the people know a good thing when they see it.

Thousands of Farmers Indorse the Good Work

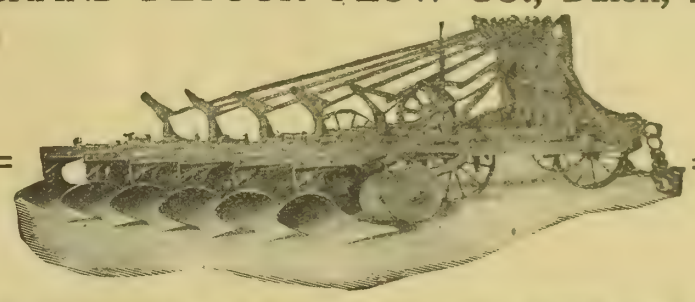
The perfect work, the ease of operation, the time and labor-saving features met with the indorsement of everyone who saw our plows in action. This general approval merely goes to show that Grand Detour Plows are "right," that the best of brains, experience, material and workmanship are put into them. They are the perfected result of 77 years of plow-building.

World's Largest and Best Tractor Companies Praise Them

The foremost tractor companies in the world show a preference for the Grand Detour plow to be used in connection with their engines. This fact alone is sufficient indorsement of their perfection. We will gladly mail you literature and full particulars free upon request. Drop us a line today.

Manufactured under a license granted by the owners of the patents covering "Power Lift" Plows.

GRAND DETOUR PLOW CO., Dixon, Ill.

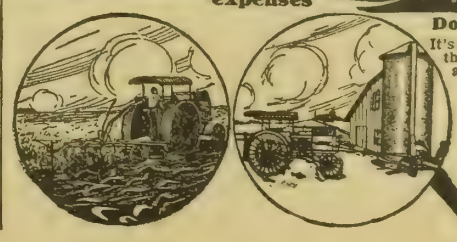


This Cheap Farm Power Cuts the Expense-Increases Profits-Reduces Work.

HEIDER TRACTOR

Write for free catalog and find out how The Heider Tractor is made. How easy it works. How cheap to run. Why it's giving satisfaction and increasing profits on hundreds of farms and why you should have one **to reduce your high cost of farming** and to solve your hired help problem.

Heider Tractor Can Be Operated With Kerosene, Gasolene or Motor Spirits



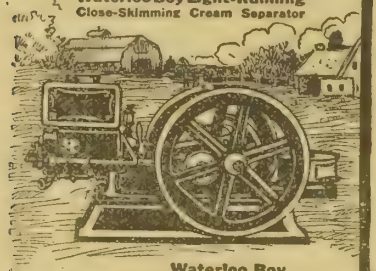
Does the Work of 8 Horses and Costs Less

It's a real one man tractor. Weighs 5,000 pounds. It takes the place of eight horses and one extra man. Will do any kind of field or belt work at the lowest possible cost. **Has a 4-cylinder heavy duty motor.** The Heider Tractor is the pioneer light tractor. Sells at a price which every farmer can afford. Don't spend money on experiments. Let us prove that the Heider is the best. Write today.

Heider Manufacturing Co.
220 Main St., Carroll, Iowa.

Make your Farm Pay Better

Waterloo Boy Light-Running Close-Skimming Cream Separator



Waterloo Boy Kerosene-Gasoline Engine

Waterloo Boy Easy-Working Milking Machine

The Waterloo Boy Small Farm Tractors, Kerosene-Gasoline Engines, Cream Separators and Milking Machines are the Standard of the world because of their quality and reasonable price.

Any one of these machines will increase the production of your farm at a big saving in labor.

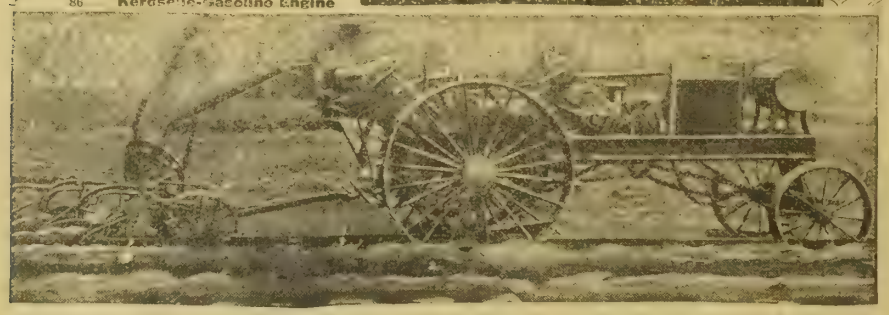
OUR SMALL FARM TRACTOR IS A WONDER. It turns short and will go anywhere you can work with a team. Plows conveniently raised or lowered from the seat.

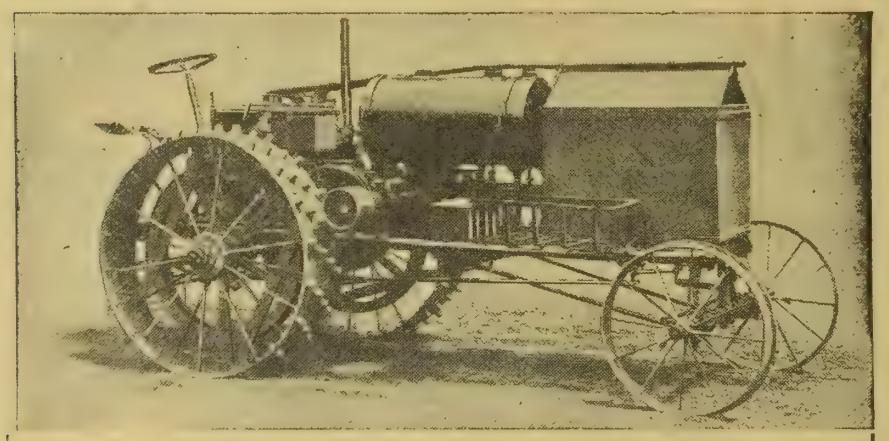
Our Prices are Right

This tractor was the most popular at the Fremont demonstration. Guaranteed for five years.

Write today for Catalog of machine you are interested in, and let us tell you all about the machine you want.

Waterloo Gasoline Engine Co.
185 W. 3rd Ave., Waterloo, Iowa.





THE LIGHT, POWERFUL, EVER-READY

DENNING PUG TRACTOR

For Plowing, Disking, Harrowing, Seeding, Mowing, Harvesting, Hauling and Belt Work.

24-H. P. on belt arranged for two 14-inch plows.

Roller bearing transmission and belt shaft.

The light weight does not pack the soil, but lightens operating expenses and maintenance.

30-H. P. on belt arranged for three 14-inch plows.

Cut gears enclosed in dust-proof cases and run in oil.

The most durable and economical, the most convenient to do farm work with. Write for catalog and prices.

The Denning Motor Implement Co., Dept. T, Cedar Rapids, Iowa.

Tractor Photos

We have more than 100 negatives of tractors which were made at the 1914 Tractor Show at Fremont, Nebraska.

Photo prints of panoramic pictures will be mailed upon receipt of $1.50

The Bee Publishing Company
Photo Dept., Omaha, Neb.

Selecting the Breeding Ewes

THERE is no feature of live stock industry that demands more care in laying the foundation for profit than that of starting the flock of ewes. In selecting the ewes for the breeding flock confine your selections to the 1 or 2-year-olds. Under no circumstances permit yourself to be persuaded to take old ewes. The old experienced sheep handler is the only person who can take this class of sheep profitably and safely. The young ewes have all their years of breeding before them and you get this advantage; besides, you have a vigorous lot of sheep that will thrive, grow and develop right from the start, with good care and plenty of feed.

In buying be cautious; don't get in a hurry; get the best to be had. Buy yearlings past or 2-year-olds that are strong and well grown. It never pays to be easy and take something not up in the desirable class just because it would save a little time and trouble to look a little further.

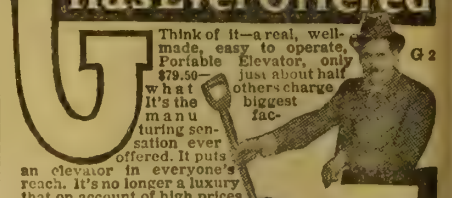
It pays to be critical in the purchase of your breeding foundation. It is not so much the difference between the extra good ewe and the medium ewe in fleece, but the offspring comes in for its share of inherited quality each year. It pays to buy quality in your purchases of breeding stock, because you get a start that has taken years to produce, and if you take inferior animals you are behind just as many years as it has taken to produce this better grade of sheep.

Set your ambition high in improvement and strive to acquire rapid advancement. Be careful in all purchases of sires to get better than the preceding one. This is one of the sure means of success, otherwise you may deteriorate in place of advance in quality. Strive for uniformity in flock; aim to get your breeding ewes to look alike—the same size, same style of fleece, same covering of head and legs, and in all respects carry a strong family appearance. This is a good feature in breeding and adds more to the value of a breeding flock than any single quality that can be introduced.

The breeding ewes should be put on good pasture in September, especially if they have raised lambs this season. It is especially important to have your ewe flock in fine, thrifty condition before the breeding season. Do not be afraid of getting the ewes too fat; this is where many sheep handlers fail in the breeding requirements. A thin, run-down, suckled-down flock of ewes do not breed uniformly, and many are liable to miss, while the ewes that have had care and feed and are in good flesh are not only sure breeders, but are much more prolific, many producing twins. There is nothing better than a field of rape handy to let the ewes on a few hours each day during the breeding season. If more good, succulent feed was provided for the breeding flock there would be less complaint of barren ewes and a low per cent of increase.

The breeding season commences in this latitude about October 1 and continues up to December. The period of gestation with the ewe is 152 days, and for ordinary flock increase the lambs should not come before April 1. Unless very well provided with good sheds and plenty of feed, May is soon enough. With small flocks and where lambs are being raised for the mutton market or for pure breeding purposes, then the ewes are often bred to drop their lambs in March and February.

Greatest Bargain GALLOWAY Has Ever Offered



Think of it—a real, well-made, easy to operate, Portable Elevator, only $79.50—what It's the manufacturing sensation ever offered. It puts an elevator in everyone's reach. It's no longer a luxury that on account of high prices only a few could afford. Farmers who have seen it wonder how I can make it so good and sell it so cheap. Let me tell you why.

$79.50

The facts are—I am building just 4,000; no more. Going like hot cakes now—get your reservation in. My price to you on one is based on that quantity, or the same on one as if you'd take the whole 4,000. You buy direct from factory and pay for actual cost of labor, material and only one small manufacturing profit.

$79.50 Lowest price ever made; a price that every farmer can afford.

THROW AWAY YOUR SCOOP!

It's a back-breaker, an instrument of torture. My Portable Elevator saves time—20 minutes to an hour on every load cribbed, which gives you that extra time in the cornfield and thereby pays for machine first year and makes you money. Adds years to your life.

Guaranteed As Good As Any Better Than Most

The Galloway Portable Elevator is no experiment; it's tried and tested—guaranteed—backed by a $25,000 bond. Sold on 30 to 60 days' trial with the understanding that if it's not all we claim, if it fails to work as good as any you ever saw or tried at any price, I will take it back and pay the freight both ways.

Better still. I have 5 selling plans—cash or credit—which makes it still easier for you to own an elevator. Don't buy any make or kind until you first get my proposition. Write today for illustrated circular and full particulars about the elevator that's creating a sensation everywhere. Address

WM. GALLOWAY, President,
WM. GALLOWAY COMPANY
268 Galloway Sta. Waterloo, Iowa

We Pay Postage **Hurry Your Order**

25¢ Yes, only 25c But don't delay your order and miss this remarkable bargain. Others ask 50c for its equal. Made of good quality cotton voile. Closes invisibly in front under an exquisitely embroidered panel finished in scalloped edge. Yoke effect made of elaborate floral design embroidery. Front of waist handsomely designed with fillet lace and clusters of combination tucks. Sizes 32 to 44. Be sure to state size. Order by No. 23AB. We pay postage Special price only 25c

Send for Bargain Book

of wearing apparel in newest styles. Mailed free. Write for it. SEND SURE TODAY. Satisfaction guaranteed or money back.

W. & H. WALKER 261 Herr's Island Ave. PITTSBURGH, PA.

STOCKMEN—ATTENTION

We have thousands of acres Mouse River Loo lands for sale large or small tracts $25 to $30 pe acre, $2 per acre down, balance 20 annual pay ments. Unlimited supply hay, pasture and pur water. Good markets, churches, schools. Come an see the fine alfalfa, corn and cattle. Fare refunde purchasers. Write for special R. R. rates and boo let. Northern Trading Co., Owners, Towner, N. I

Reviews of Agricultural Books

The author of "How to Grow 100 Bushels of Corn on Worn Soils" has published another book called "The Business of Farming." In this volume he discusses the privileges and problems of every phase of farm life.

"The Business of Farming," by William C. Smith of Indiana. 292 pages, 24 full page illustrations. Published by Stewart & Kidd Company, Cincinnati, O. Price $1.25. By mail, $1.35.

* * *

Many inquiries have been received recently as to books on farm accounts. We take pleasure in advising our readers that a new farm account book has been published. It is rather an elaborate book in the way of binding and in its scope, covering not only the transactions of the farm from day to day, but containing space or an annual inventory. It is very simple, however, in its method and explanations. Anyone with even an elementary knowledge of arithmetic could keep this record and know at the end of each year the exact state of his affairs. The volume contains space for two years' accounts.

"Farm Records and Accounts." by Boss & Peck. Published by Webb Publishing Company, St. Paul, Minn. Price $2.

* * *

A treatise on the horse from an economic standpoint has been written by Carl W. Gay, a veterinarian connected with the University of Pennsylvania and the Pennsylvania Live Stock Sanitary board. Dr. Gay believes the horse, in this country, is bred along less businesslike lines than any other class of live stock. In this book he makes a number of valuable suggestions as to breeding and care. Several chapters are devoted to stabling, handling and equipment, in which information is given of a character not often found in books on horse breeding.

"Productive Horse Husbandry," by Carl W. Gay. 331 pages, 173 illustrations. Published by J. B. Lippincott & Co., Philadelphia. Price $1.50.

* * *

In "Productive Orcharding" Fred C. Sears discusses fruit production very fully. Particular attention is given to the apple industry, though peaches, plums, cherries and pears are each given several chapters. The author states in his preface that he has tried out all the theories advanced and discarded those that he found wouldn't work.

"Productive Orcharding," by Fred C. Sears. 315 pages, 157 illustrations. Published by J. B. Lippincott & Co., Philadelphia. Price $1.50.

* * *

For the beginner with hogs, the prospective hog raiser, or the man who is starting in this business in a new country, George E. Day's "Productive Swine Husbandry" is an interesting book. This volume is largely devoted to the differences in the various breeds of swine. In treating of these differences the author has tried to be absolutely impartial, showing favoritism toward no particular breed. Being a Canadian, he gives a good deal of space to breeds not often seen by western and corn belt farmers. The results of experiments in breeding and feeding from all over the country are put into plain, every-day English for the benefit of the practical hog man.

"Productive Swine Husbandry," by George E. Day. 330 pages, 75 illustrations. Published by J. B. Lippincott & Co., Philadelphia. Price $1.50.

* * *

The conveniences of electric light and power were for a long time the exclusive privileges of city dwellers. Electric plants are now being made at a comparatively low cost, and there are many farms in the east and some in the west that have electricity for lighting house and barns, running the milking machine, the separator, the sewing machine and the flatiron, as well as for performing innumerable other duties for which attachments may be had. N. H. Schneider has written a little book called "Electric Lights for the Farm," in which he describes the various makes of electric plants on the market and gives directions for their management and for the wiring of buildings. He states in his preface that no knowledge is needed to operate such a plant outside of that contained in this book and the directions of the manufacturers.

"Electric Light on the Farm," by N. H. Schneider. 189 pages. 65 illustrations. Published by Spon & Chamberlain, 123 Liberty street, New York. Price $1.

Tires at Before-War Prices

Goodyear Prices

It is Folly Today to Pay More.

30 x 3	Plain	Tread	$11.70
30 x 3½	"	"	15.75
34 x 4	"	"	24.35
36 x 4½	"	"	35.00
37 x 5	"	"	41.95

There exists now a new, compelling reason for buying Goodyear tires. It results from War conditions.

These leading tires—built of extra-fine rubber, in the same way as always—are selling today at June prices.

You will find today a very wide difference between most tire prices and Goodyears.

Due to Quick Action

Early in August—when war began—the world's rubber markets seemed closed to us. Rubber prices doubled almost over night.

Men could see no way to pay for rubber abroad, and no way to bring it in. We, like others—in that panic—were forced to higher prices. But we have since gone back to prices we charged before the war, and this is how we did it:

We had men in London and Singapore when the war broke out. The larger part of the world's rubber supply comes through there. We cabled them to buy up the pick of the rubber. They bought—before the advance—1,500,000 pounds of the finest rubber there.

Nearly all this is now on the way to us. And it means practically all of the extra-grade rubber obtainable abroad.

Today we have our own men in Colombo, Singapore and Para. Those are the world's chief sources of rubber. So we are pretty well assured of a constant supply, and our pick of the best that's produced.

We were first on the ground. We were quickest in action. As a result, we shall soon have in storage an almost record supply of this extra grade of rubber.

And we paid about June prices.

Now Inferior Grades Cost Double

About the only crude rubber available now for many makers is inferior. In ordinary times, the best tire makers refuse it. Much of it had been rejected. But that "off rubber" now sells for much more than we paid for the best.

The results are these:

Tire prices in general are far in advance of Goodyears. And many tire makers, short of supplies, will be forced to use second-grade rubber.

Be Careful Now

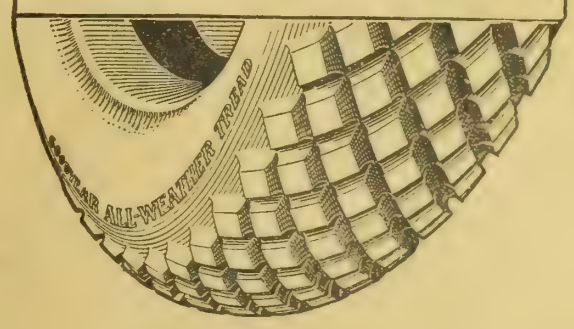
In Goodyears we pledge you the same-grade tire as always. And that grade won for Goodyears the top place in Tiredom—the largest sale in the world.

And, for the time being, our prices are the same as before the war. We shall try to keep them there.

We accept no excessive orders, but dealers will be kept supplied. And we charge them, until further notice, only ante-bellum prices.

That means that Goodyears—the best tires built—are selling way below other tires.

GOODYEAR
AKRON, OHIO
No-Rim-Cut Tires
With All-Weather Treads or Smooth



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We teach you how to drive and repair automobiles. We specialize in electric starting and lighting. Practical work given in machine shop, fitting you for a good paying job in six weeks.

LINCOLN AUTO SCHOOL,
2352 "O" St., Lincoln, Nebr.

Special Offer
Write today for free illustrated catalog showing HOW we teach you.

TIMOTHY SEED

The choicest selections from Iowa fields, carefully recleaned. Bought and sold under the microscope. We protect you from weeds Prices are low this year. Ask for samples and quotations. Large illustrated catalogue of Farm and Garden Seeds free upon request. Write today
IOWA SEED CO. Dept 51 DES MOINES, IA

The modern chicken doctor

treats the flock rather than the individual bird. He knows that most of the troubles are flock troubles, though not apparent in all at the one time. He knows that most sickness of Chicks, Chickens or Pigeons comes from infected food and drink, or defective housing. His favorite prescription is Germozone.

Germozone is generally used for flock treatment, though individually where necessary. Thousands give it twice a week regularly, a little in the drinking water. It is a great bowel regulator as well as a germ destroyer and, with chickens as with humans, the bowels largely gauge the health.

Germozone is especially desirable for use during changeable fall weather, warding off illness, which, if permitted a foothold, may drag along all winter, if not immediately fatal.

For Roup, Canker, Swelled head, Sore throat, Sour crop, Loss of feathers, Chicken pox, Bowel complaint, Cholera, Worms, Gapes, etc., Germozone carries a full guarantee with every package.

Germozone is a valuable remedy for all domestic stock

4 oz. bottle (trial size) $ .25 — 32 oz. bottle (for steady users) $1.00
12 oz. " (standard size) .50 — Gallon " (for large flocks) 3.00

Tablet form 50c per package, post paid. Liquid form sold by most druggists or poultry supply dealers or delivered (in $1.00 and $3.00 sizes) prepaid to any express office in U. S. Sample and Booklets Free on Request.

GEO. H. LEE CO. Omaha, Nebraska

DUROC-JERSEY HOGS

I HAVE THE GOODS

Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

MR. DUROC BREEDER

Are you on the market for a herd boar? If so, write me just what you want. I have them sired by Lucy's Select, Proud Wonder Jr. and other top boars of the breed. **L. J. KUZEL, CLARKSON, NEB.**

HERD BOARS FOR SALE

Will sell my herd boar Crimson Wonder 10th, also several fall boars sired by him and a few by Colonel Tippy. Here are some real herd heading propositions and I am pricing them worth the money.
See Me at State Fair. **S. M. HINKLE, Genoa, Neb.**

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.
GEO. W. SCHWAB, Clay Center, Neb.

BIG SMOOTH DUROCS

Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.
HENRY KOEHLMOOS, Pilger, Neb.

CEDAR'S DUROCS

The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.
P. P. CEDAR, GENOA, NEB.

DUROC HERD BOARS

Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd headers I have them. They are out of prize-winning sires and dams. **Clarence Wallace, Wisner, Neb.**

POLAND-CHINA HOGS

McCULLOUGH'S BIG POLANDS

We have a splendid lot of Poland-China spring boars for sale. Sired by Smooth Big Bone, Columbus Again and Expansion Again. These boars have been grown right. They are big and smooth with lots of bone. For particulars write **O. J. McCULLOUGH, CLARKS, NEB.**

HOLSTEIN CATTLE

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.
DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

AYRSHIRES

LOVELAND FARM AYRSHIRES

The largest herd of Ayrshire cattle in the west. Several choice young bulls for sale, sired by Garlands Success. Can also spare a few females.
LOVELAND FARM, R. F. D. No. 1, Station B, Omaha, Nebraska

PERCHERON HORSES

To get a really valuable sire it is a big saving for you to buy at this time of year a growthy young stud from my big bunch registered Percherons 1, 2, 3 and 4 years old. They have uncommonly large bone and in pasture condition are developing to immense weights like their imported sires and dams. Farm raised and farm priced. [illegible] east of Omaha.
FRED CHANDLER, Route 7, CHARITON, IOWA.

Review of Live Stock Market

By A. C. Davenport

FOLLOWING the route outlined for it in these columns a week ago, the cattle market at all points has shown more or less weakness during the last few days. Right at this point it might be well to explain that in speaking of the cattle market we mean the market on the kind of cattle that makes up the great big bulk of the receipts at all points, namely grass fed stock, both natives and rangers, and the medium grades of cornfeds or so-called warmed-up cattle. These cattle have all shown weakness, the recent decline amounting to around 25c. The most of these cattle are 50@75c lower than the high time at the beginning of August, taking the average at all markets, some kinds showing more and some less. A feature of the trade has been the active demand for canners at firm prices, due possibly to an anticipated foreign call for canned beef.

When it comes to the good to choice or prime cornfed beeves the situation is entirely different. Such cattle, owing to the extremely small supply, have been strong all the month and are the highest that they have been in two years. But that is not all—supplies in the country are so limited that the trade generally expects to see prime cornfeds continue strong for some little time to come, regardless of the fluctuation of prices on grassers. However, they cut such a small figure in the total receipts of cattle as to be relatively of little importance, and may be entirely ignored when it comes to a consideration of the general market.

The decline has been only natural and no more than was to be expected. At the opening of the range season a month or so ago it was felt that the record breaking prices then prevailing could not be maintained as the season advanced and the movement of western cattle became larger. Still the decline has not been excessive and the market is reasonably satisfactory from a seller's standpoint.

It remains to be seen whether prices have yet touched bottom. The future of the market depends upon so many contingencies that it is hardly possible even to venture a guess. The agitation against high priced beef continues to be felt in reduced consuming demand, while there is great uncertainty as to the probable size of the receipts during September. A falling off in receipts might bring about a temporary advance and it would not be surprising if that were to happen before this can appear in print. Still no one is looking for any great or permanent improvement in the near future.

Hogs Show Little Change

Hogs have shown little change during the last week, but are 50@75c higher than they were at the beginning of August, and 75c@1.00 higher than they were at the low point touched during the first week of the month. Receipts at the six big markets have been very liberal, running considerably ahead of last year, but behind two years ago. The market has been in a good healthy condition and has moved along smoothly without the development of any especially new or interesting features.

The future of the market is still completely shrouded in mystery, but as the season advances there are some things that are beginning to stand out a little more clearly. For example, it looks now as if the receipts would prove quite sizeable during September and October, which under normal conditions would mean a lower market before the opening of the winter packing season, November 1 If a large foreign demand should arise in the meantime the natural course of the market might be disturbed to such an extent as to prevent the usual fall break in prices. This is where the uncertainty comes in. There is very little doing at present in the way of exporting meats, and no one can say when there will be. It might come suddenly and it may not come at all.

Another thing that hog men are getting their minds made up to is the probability of a large hog run for the last of the year and the beginning of the new year. So confident are many operators of this that they are willing to predict that hogs will be selling below $7.00 before the year 1915 is very old if a war demand does not interfere to change the natural course of the market. It will be interesting to watch the outcome of all these ifs and ands of the trade.

Lambs Flood Market

It was noted a week ago that the lamb market might possibly ease off a little, but it was not anticipated that it would take such a slump as it has. The flood gates were opened up and receipts poured in a steady stream, submerging the market completely. Packers were given the first opportunity that they have had in weeks to cut values down and they did their work well. Values at present writing are around 75c lower than they were a week ago. Even after the decline the best lambs are very nearly as high as they were at the extreme high point in September of last year, and that was the highest September in the history of the trade. Looking at it from that point of view the market is by no means bad. On the contrary, it must be accepted as fairly satisfactory, even from a seller's standpoint.

A feature of the break in fat sheep and lambs is the fact that feeders did not decline to any very appreciable extent. The country was such a good buyer of feeder lambs that the better grades at least remained practically steady. This has brought prices for feeders and kill-

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RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.
W. P. SCHWAB, Clay Center, Nebraska.

HAMPSHIRE HOGS

HAMPSHIRE BOAR

A splendid lot of Hampshire spring boars for sale; sired by DeKalb's King 100, a son of the famous Major. They are big, smooth, growthy fellows, and are priced worth the money.
WILLIAM PAMP, Benson, Neb.

FISHER'S HAMPSHIRES

25 fall boars and 25 spring boars for sale. Sired by Winside Star, Fisher's King 5th, Tatro's Messenger and Paulsen's Choice. Prices reasonable.
ROY FISHER, Winside, Neb.

DUROC-JERSEY HOGS

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

POLAND-CHINA HOGS

IMMUNE POLAND-CHINAS

A choice lot of Poland-China spring males for sale. Sired by Blue Valley Oak. They are the big kind, with quality. Everything immune. Prices reasonable. JOHN NAIMAN, Alexandria, Neb.

BERKSHIRE HOGS

BERKSHIRE HOGS

60 spring pigs by Longfellow's Premier, Autocrat and others. They have plenty of size, stretch and bone. Prices reasonable.
GEO. PORTER, STANTON, NEB.

rs entirely too close together, and it ould seem as if feeders must come down r killers go up again. As a matter of ourse, the immediate future of the mar- et must depend very largely upon the eceipts. The demand is already good nd a falling off in arrivals might be the gnal for a stronger market.

Sweepstakes at Nebraska Fair

The Nebraska Improved Live Stock reeders' association will offer lavender bbons for the animals winning sweep- akes in the various classes at the com- g Nebraska state fair. One ribbon will e presented to the champion male and ne to the champion female of each breed, ne animals in each case to be owned ithin the state of Nebraska. There will e ribbons for the sweepstakes animals f every breed for which the state fair rovides classes. Besides ribbons for ure breds, there will be ribbons for the hampion mule, jack, draft gelding, sad- le horse and fat steer. The officers of his association feel that they can in o way further the interests of better ve stock in the state than by co-operat- g with the state fair in this manner.

Breeders' Notes

Duroc Herd Headers

In this issue of the Twentieth Century armer we are starting an advertisement r S. M. Hinkle of Genoa, Neb., who is fering Duroc-Jersey herd boars for sale. ne of the boars Mr. Hinkle is offering is rimson Wonder 10th, a boar that has ever been defeated in the show ring. his boar has not only made good in the ow ring, but he has also made good as breeder. He is a line bred Crimson onder boar, being sired by Crimson onder 4th, by Belle's Crimson Wonder, d his dam was sired by Uneeda Crimson onder. Mr. Hinkle is not selling this ar for any fault whatever, but simply ecause he cannot use him advantageously his herd any longer on account of hav- g so much of his get. Besides this ar Mr. Hinkle also has three fall boars red by him and three by Colonel Tippy. ny one of these is good enough to go to any pure-bred herd. If you are in e market for something in this line we ould advise you to write him at once for rther particulars, or if you are going to at the Nebraska state fair, make it a int to call on him and you will be able get an idea of what to expect from hat he has on exhibition there. When riting him kindly mention the Twentieth entury Farmer.

Fisher's Hampshires

Those of our readers who are interested Hampshire hogs will do well to get into mmunication with Roy Fisher of Win- de, Neb. Mr. Fisher has one of the rgest and best herds of Hampshire gs in the west. As proof of this fact e have but to call attention to the con- stent winnings he has made at the ading shows in the country during the st few years. He has about twenty-five ad of fall boars and the same number spring boars to offer for sale at this me. They are big, smooth, growthy, ell-balanced, strong-boned individuals, st the kind to go out and do valuable rvice. The fall boars are sired by Win- de's Star, Fisher's King 5th and others. he spring pigs are sired mostly by atro's Messenger and Paulson's Choice. et in touch with Mr. Fisher at once if ou want anything in this line. There is strong demand for this popular breed of gs, and the probabilities are that Mr. isher will not be long in disposing of hat he has to offer. In writing him ndly mention the Twentieth Century armer.

Kane's Duroc-Jerseys

D. W. Kane of Wisner, Neb., has a umber of Duroc Jersey spring males at he is offering for sale at this time. hese pigs are a very choice, growthy t and are in a condition to go out and good service for the man who buys em. They are sired mostly by Wonder's hief, a splendid breeding son of the reat show and breeding boar B. & G.'s onder. Besides this boar, he has a tter by the sensational boar last year, olden Model 31st. These pigs are out a dam by Golden Model 15th. This ow was the top sow in the Herman oelle sale last winter. Other good lit- rs are by Wonder's Colonel, Golden odel's Hope and Chief Invincible. Get touch with Mr. Kane for further in- rmation regarding what he has to offer. indly mention the Twentieth Century armer when writing.

Boesinger's Durocs

We called on Dave Boesinger, the well nown breeder of Duroc Jerseys, of Cort- nd, Neb., last week, and found him with splendid line up of Durocs on hand. He as about 200 head of spring pigs this ar and, taking them as a whole, they e about as uniformly good a lot as it s been our pleasure to see for some ne. Mr. Boesinger has always been a reful buyer of the very best breeding ock, and he has not let a few dollars and in the way when he saw an animal that he wanted. He has been breeding for size and bone for some time, and that he has succeeded in accomplishing what he has set out to do is highly evident when one carefully observes his crop of spring pigs this year. About two-thirds of these are sired by Widle's Wonder, a son of Crimson Wonder 4th. This boar was the first prize junior yearling boar at the Nebraska state fair and is sure proving himself to be a great breeder. The larger part of the balance of the pigs are sired by Lincoln Lad by Lincoln Wonder and out of the dam, Clay Belle, by that grand old sire, Higgins' Model. Other outside litters are by Crimson of Crimson Wonder, Foss' Golden Model, Uneeda Crimson Wonder, Long Gano and others. Mr. Boesinger will hold a fall sale on October 22 and a bred sow sale on January 29. Keep his herd in mind and get your name on his mailing list for catalogue.

LANDS—Arkansas

LITTLE RIVER VALLEY LANDS—Rich and cheap, on railroad. Sessions Co., Winthrop, Ark.

FREE GOVERNMENT LAND—NEAR 500,000 acres in Arkansas open to entry; Guide Book, with lists, laws, etc., 25c; township map of state 25c additional. L. E. Moore, Little Rock, Ark.

Idaho

200 FARMS in THE FAMOUS PARK region and Red River Valley district, Otter Tail and Wilkin counties. Level or rolling prairie land. Timber land Any size farm you want from $30 to $80 per acre. Easy terms. Otter Tail county has never had a crop failure; 500,000 acres of corn last year, making from 30 to 70 bushels per acre. Natural clover and alfalfa country. Write for free booklet and lists. Park Region Land and Loan Co., Fergus Falls, Minn.

Minnesota

BETTER THAN HOMESTEADS—Before leasing a farm for next season write us for information regarding our "half earnings" plan, and get a farm home of your own. Flax crop on first breaking will make you a lot of money the first year. We have about 1,000 quarter sections to select from, part under cultivation. No cash payment required. Address Hackney Land Credit Co., Hackney Bldg., St. Paul, Minn.

Missouri

FARM IN THE OZARKS—200 ACRES, ten miles from Willow Springs, Mo.; 70 acres in cultivation, 80 acres fenced; plenty of water; best free range in Missouri; 5-room house, barn and outbuildings; near school and church. For further particulars address E. L. Murphy, Mainard, Mo.

Nebraska

FARM NEAR OMAHA — 160 ACRES within five miles of Omaha street car line. Good improvements. No better soil in Douglas county. Has 30 acres in alfalfa, produces five tons per acre sold last season at $14 per ton. Close to alfalfa mill. Farm will rent for $1,200 per year. Must be sold to settle partnership. Price, $112.50 per acre. Address T. E. Stevens. 712 Omaha Nat'l Bank Bldg., Omaha, Neb .

FOR SALE—ONE OF THE BEST farms, with fine improvements, at a very low price; in Boyd county, Nebraska. Address Meyer Brandvig, Spencer, Neb.

North Dakota

RICH, BLACK, RED RIVER VALLEY farms at local prices. We grow corn, clover and alfalfa successfully. Write for Blue Book. William McRoberts, Casselton, N. D.

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This Serviceable Bib Apron. Where have you ever seen such a remarkable bargain? You would expect to pay 25c for an apron of equal quality. We show it here to give you an idea of the smashing values offered in our Big Bargain Book. Write for it today—now.

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Send 10c for one of these bib aprons at our risk. Your money back if not perfectly satisfied. Made of good quality blue and white checked gingham — very durable and launders like new. Neatly bound around the edges with white cord. Has a double-stitched waist band. Bib extends around the neck. Has neat patch pocket in front. Color:—blue and white check only. Order by No. 25AB. We pay postage. Each, only 10c

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LANDS—North Dakota

RED RIVER VALLEY LANDS HAVE very superior merit. They will grow wheat, oats, rye, barley and the root crops better than Iowa or Nebraska lands, and the quality will also be better. The crops of the various grasses grown on these lands are wonderful. Potatoes will produce 200 bushels and upward, and they bring highest prices in the market. Corn for silage is a great sucess. No pests, water fine, country most healthful. We own and offer for sale on easy terms 100 farms at about one-fourth what you would pay where you are. This is a well settled country and has every convenience known to a farming community. If you really want to make money farming this is a royal opportunity. Let me send you an illustrated booklet; it will give you facts you can rely upon and in an interesting way. No one can see this country and not be highly pleased with it. F. W. McLean, General Manager, Red River Valley Land Co., Fargo, N. D.

NORTH DAKOTA LANDS, DIRECT to purchaser; crop conditions in North Dakota were never finer than now and land prices are going up. To obtain settlers along our 1,200 miles of track here we have obtained listings of several hundred thousand acres of choice lands, ready to farm, and will sell these at cost. Prices will never be so low again. Roads, schools, churches, railroads, all established. Very low excursion rates Mondays and Tuesdays. Come and see lands yourself, or write for full particulars. J. S. Murphy, Immigration Agent, Soo Line Railway, Minneapolis, Minn.

Texas

FOR SALE—321-ACRE BOTTOM FARM Crops: Cotton, corn and hay. Owner, Grover Bosse, Alleyton, Tex.

Wisconsin

OFFICIAL BULLETINS CONCERNing soil, climate and crops of Wisconsin mailed free to those addressing Wisconsin State Board of Immigration, Capitol 1000, Madison, Wis.

UPPER WISCONSIN — BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

BEAUTIFUL LAKE FRONT DAIRY Farm! Rich clay loam soil, gently sloping to south; 4½ miles from railroad town in prosperous Polk county, Wisconsin, which has 37 creameries and cheese factories; over 50 acres in field and tame meadow, balance heavy hardwood timbered pasture, with excellent blue grass and clover; 8-room house, with stone cellar; in nice grove overlooking lake; remodled barn, with room for 20 head; concrete floor; granary, hog house, chicken house, etc.; all buildings newly painted. A snap! 74½ acres only $4,500; $1,500 cash down. Baker, F 67, St. Croix Falls, Wis.

Wyoming

WELCH, THE GOLDEN PRAIRIE Land Man—I am located at Burns, Wyo., in the heart of the Golden Prairie district. I can sell you wild lands, improved farms or stock ranches at bargain prices. Write me for particulars. Jay E. Welch, Box H, Burns, Wyo.

GOVERNMENT LAND—GET 320 acres. We stock your land, buy your crop. Some means required. Particulars free. Wyoming Settlement, Janet Wyo.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87. Lincoln, Neb.

FARMS WANTED—WE HAVE DIrect buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

YOUNG HOLLANDER WISHES TO buy good farm or land. Address Y 171, Twentieth Century Farmer.

FARMS WANTED FOR CASH BUYers, and farm bargains for sale. Write me if you want to buy or sell. Terms, free. Established 1881. Frank P. Cleveland, Real Estate Expert, 1315 Adams Express Bldg., Chicago, Ill.

Miscellaneous Lands

BIG FARM LIST FREE, WITH PHOtos; farms in many states, stock and tools included. Farmers' bargains. Buy direct from owners; their address free. National Farm Exchange, San Francisco.

TYPEWRITERS

TYPEWRITERS AT PRICES ANYone can afford. Send us $17 for Smith Premier, $19.50 for Remington, $23.50 for Oliver. Offer good September only. Don't miss it. Central Typewriter Exchange, Omaha, largest stock in the west.

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FOR YOUR FORD CAR—SUPPLIES direct to you. We save you the dealer's profit. Free catalogue. Write and save money. Gasolette and Fordezers. You need both. Ask us. The Ford Supply Co., 2129 Farnam, Omaha, Neb.

70 USED CARS—WE CARRY THE largest stock of used automobiles ever offered to the public. We are exclusive used-car dealers, which enables us to offer astonishing bargains. We can save you at least 50 per cent on any car you wish to buy. All of our cars are thoroughly overhauled in our own shop that we may know the exact condition of the mechanism. Write for our Bulletin No. 5, prices and large list of satisfied customers. Industrial Garage Company, 20th and Harney, Omaha, Neb.

WE DO EXPERT TIRE REPAIRING. All work guaranteed. Simplex Vulcanizer Co., Omaha.

DOGS

PEDIGREED SCOTCH COLLIES, grown and pups. Clarence Allen, Dawson, Neb.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer. Omaha, Neb.

THOUSANDS GOVERNMENT POSItions open to men and women over 18; $65 to $150 month. Farmers have excellent chance. Write immediately for list of open positions. Franklin Institute, Dept. K 94, Rochester, N. Y.

YOUNG MAN, WOULD YOU ACCEPT and wear a fine tailor-made suit just for showing it to your friends? Or a Slip-on raincoat free? Could you use $5 a day for a little spare time? Perhaps we can offer you a steady job? Write at once and get beautiful samples, styles and this wonderful offer. Banner Tailoring Co., Dept. 873, Chicago.

SALESMEN—EARN $2,000 TO $4,000 A year. New combination, 12 tools in one. Sells at sight to contractors, farmers, teamsters, fence builders, threshers, miners; weighs 24 pounds, lifts 3 tons; stretches wire, pulls posts, hoists, etc. Chance for men who want honest money-making proposition. Harrah Manufacturing Co., Box M, Bloomfield, Ind.

YOUNG MEN AND WOMEN LIVING in the country to represent us. Household necessity; something new; experience not necessary; work all or part time. Write McCann Mfg. Co., Omaha, Neb.

GOVERNMENT FARMERS WANTED —Examination October 14; good salary. Write Ozment, 39-F, St. Louis, Mo.

POULTRY—Miscellaneous

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

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FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned; are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

I HAVE 10 HAMPSHIRE SOWS BRED to Lieut. Allen 11485 and 10 gilts by same, bred to a son on Repeater 2d, all to farrow about April 10. All are fine hogs, weighing from 200 to 600 pounds each. Price on car here 15 cents per pound. Shipments also made from St. Paul, Grand Island and Cairo. H. P. Berck, Dannebrog, Neb.

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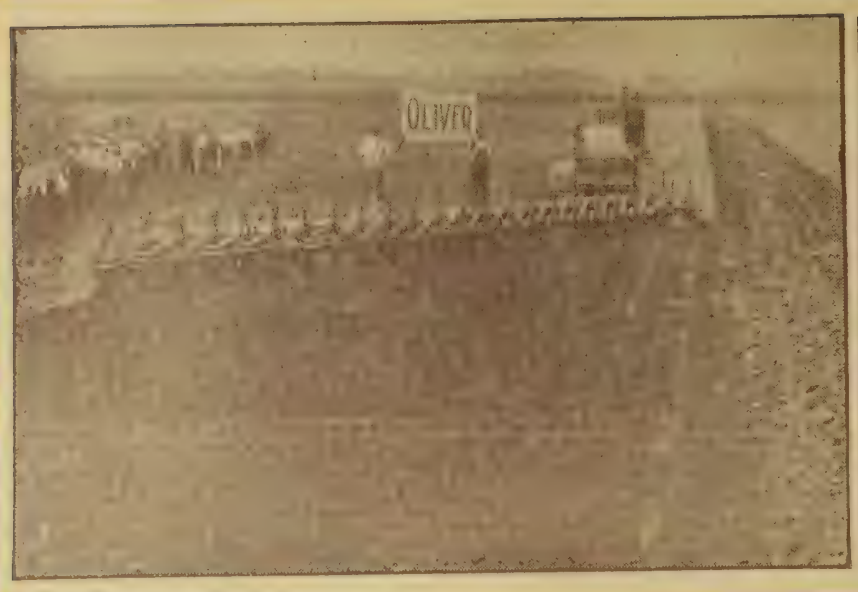
MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

HONEY FOR SALE—NEW 1914 EXtracted (strained) honey, gathered by our own bees, guaranteed pure, of finest quality and delicious flavor, only $9 a case of two 5-gallon cans—120 pounds net of honey—7½ cents a pound f. o. b. our shipping point. Safe delivery and satisfaction guaranteed. The Rocky Mountain Bee Co., Forsyth, Mont.

FIR LUMBER—RED CEDAR SHINgles—Quality stocks—direct from mill—great saving. Write Lansdown, Everett, Wash.

PEARS—YOU WANT THEM AGAIN this fall. Save your jars, and write Lancaster Pear Co., Rockford, Neb.



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World's Records

The Caterpillar has won gold medals all over the world. We will gladly give you a list of them. It will convince you that this is the world's greatest tractor. There were no prizes at Fremont, so the Caterpillar broke some world's records to prove its superiority. These are the records it broke:

¶ 1—Largest moldboard plow pulled by a single engine —24 15-inch plows, cutting 28 feet wide, 7 to 8 inches deep in dry, hard gumbo.

¶ 2—Greatest drawbar horsepower—estimated at 115.8.

¶ 3—Highest drawbar pull in proportion to weight, probably the highest ever developed by any engine, anywhere.

¶ Twenty-four Oliver bases were pulled several miles, on four days, in different fields—enough plowing to make a real test. Previous record for one engine, 18 similar plows.

¶ Three well-known plow experts not connected with the Holt Manufacturing Company estimated the draft of this plow in gumbo at 900 lbs. per bottom, average, and 1,100 to 1,300 lbs. in the hardest places. At two miles per hour this figures 115.8 drawbar horsepower—just an estimate, of course. Discount it all you please and the Caterpillar still stands as the most powerful tractor ever built.

¶ Twenty-four plows, at 900 lbs. per base, make 21,600 lbs. of drawbar pull on the average. Shipping weight of this tractor, 26,630 lbs. Working weight, possibly 27,000 lbs. Eighty percent of the tractor's total weight represented in effective pull. Round wheel tractors' drawbar pull ranges only from 20 to 40 per cent. The horse's drawbar pull is only 10 per cent for all-day work. Discount this estimate for the Caterpillar if you like—you still must admit the breaking of all world's records for turning motor power into pull.

¶ This Caterpillar had only the same size track as our standard 60-40-h. p. engine. It was a supreme test of the Caterpillar principle. It proved beyond all question that the Caterpillar track saves power. No matter what traction work you have, the Caterpillar is the cheapest way in the end.

The Caterpillar Tractor Does It.

We said so last month. The Caterpillar made good at Fremont. It was always ready to demonstrate there, and will always be just as ready for work on your farm, anywhere.

You missed a big show if you were not there, and the Caterpillars were probably the most sensational part of it, from the handy Baby (30-20 h. p.) to the biggest "bug" we ever built (130-100 h. p.) "The slickest thing on the grounds" was what they said about the Baby. "A powerful puller", they called the standard 60-40 h. p. Caterpillar. And after they had **seen** the biggest Caterpillar break the world's plowing record they still said, "There ain't no such animal," for there never had been a tractor before that could pull as much and keep going.

CATERPILLAR

Reg. U.S. Pat. Off.

If you missed it, ask us where you can see Caterpillars at work. They'll not be at the state fairs. You'll find them working on successful farms, profitable contract jobs, and dozens of places where round-wheel tractors haven't made good.

Why is the Caterpillar such a puller? Because it always gets a foothold. Its track doesn't slip—doesn't mire down—bury itself. No round wheel built can pass as much power back to the drawbar as this Caterpillar track. Read the next column—about the world's record. The track alone makes this record possible. No matter how big the motor, no round-wheel engine could put forth a pulling force equal to four-fifths its weight.

Any Caterpillar will pull as much in proportion. It will last for years and work more days a year than any other tractor. It is a wonderful machine. You ought to write today, and get our bulletin AF117.

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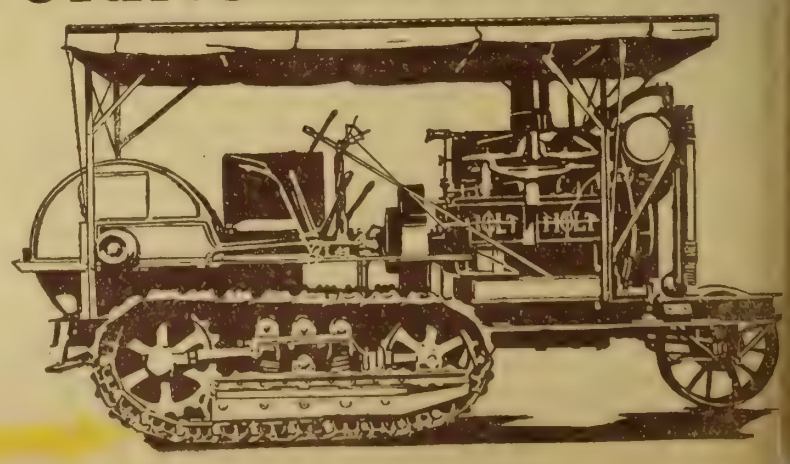

It's This Track That Does It

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A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, September 12, 1914 | Number 718

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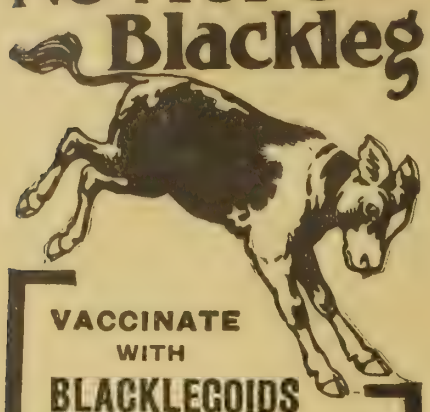

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Prevent Hog Cholera

HOG cholera time is approaching. We hope that there will be much less cholera this year than there has been in the past, but to insure a lessening of this plague from year to year there are certain precautions that must be observed by every hog owner, veterinarian and dealer. If you have not read our series of articles recently published in the Twentieth Century Farmer on "Hog Cholera, Its Prevention and Treatment," send us 5 cents to cover cost of handling and mailing and we will gladly send you a copy of these articles, which are now issued in pamphlet form. Following are the different articles in the series:

What Cholera Has Done and What We Must Do.

Co-operation is Absolutely Necessary, and to Get This Politics Must Be Eliminated.

Organizing the Hog Owners and Instructing Them in Sanitary and Other Control Measures.

Some Things that Hog Raiser Himself May Do to Prevent Infection and Spread of Disease.

Sanitary and Other Measures That Should Be Taken When There is Cholera in the Neighborhood.

County Demonstrators and Special Veterinarians Employed by State May Offer Valuable Aid.

How Are We to Know Whether Serum is Potent and Virus Virulent?

Methods of Manufacturing Serum and Virus and Plan for Storing Serum.

Should Farmers Be Allowed to Administer Serum and Virus?

Methods of Treatment and Period of Immunity and Cost of Immunizing.

Does Treatment of Sows During Pregnancy Produce Abortion?

Synopsis of Preceding Articles and Precautions Advisable in Dealing with Cholera.

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Ardent Suitor—Well, it isn't much of a fortune, but it will look large beside those tiny feet.

She Bought It

"I like this pattern well enough," said the customer who had dropped in to look at some ginghams, "but I am afraid the colors will run."

"Run, ma'am!" indignantly answered the salesman. "Red, white and blue? They never run!"

Whereupon the woman with the flag pinned upon the lapel of her jacket rose patriotically to the occasion and bought forty-five yards.

Condolence

Mrs. Hen was in tears. One of her little ones had been sacrificed to make a repast for a visiting clergyman.

"Cheer up, madam," said the rooster, comfortingly. "You should rejoice that your son is entering the ministry. He was poorly qualified for a lay member, anyhow."

Value of Candor

"Gentlemen, I can't lie about the horse; he is blind in one eye," said the auctioneer.

The horse was soon knocked down to a citizen, who had been greatly struck by the auctioneer's honesty, and after paying for the horse he said:

"You were honest enough to tell that this animal is blind in one eye. Is there any other defect?"

"Yes, sir; there is. He is also blind in the other eye," was the prompt reply.

Prattle of the Youngsters

Hard to Tell

Little Bertie had just been stung by a nettle. "Mother," he asked, 'if a bee settled on a nettle, would the bee sting the nettle or would the nettle sting the bee?"

Explained

Dickie, staying on his uncle's farm for the first time in his life, saw a young retriever pup in the yard whirling round and round chasing his tail.

"Oh, uncle," he cried, "what kind of a dog is that?"

"That's a watchdog, sonny."

"Oh, I see," said the little fellow. "Then I suppose he's winding himself up!"

Noah Identified

"Why do you sign your name Norah?" asked a teacher of one of the Chinese boys in his class. "Don't you know that Norah is a girl's name?"

"Oh, no," was the reply. "Norah is the name of the famous American who built the ark."—Youth's Companion.

Tried to Obey

She was a little girl and very polite. It was the first time she had been on a visit alone, and she had been carefully instructed how to behave.

"If they ask you to dine with them," papa had said, "you must say, 'No, thank you, I have already dined.'

It turned out just as papa had anticipated.

"Come along, Marjorie," said her little friend's father, "you must have a bite with us."

"No, thank you," said the little girl with dignity; "I have already bitten."

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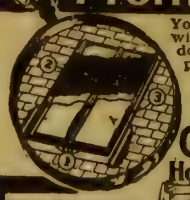

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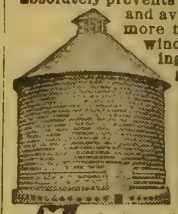

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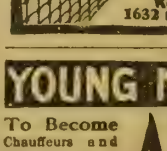

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The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Management and Practical Value of Silos

VII—Three Dairy Farmers Consider Silage Better Than Pasture for Milk Production

DAIRYMEN throughout the country are rapidly recognizing the value of the silo, both for the cutting down of the cost of feed and increasing the flow of milk from their cows.

Messrs. M. H. Thompkins & son, living about two miles east of Hastings, Neb., are strong advocates of the use of the silo, having had six years' experience in feeding silage. Corn has always been used as the crop with which the silo has been filled, except one year when some cane was used. The cane did not properly mature, consequently did not make the feed it should. Messrs. Thompkins now use corn entirely for the silage, knowing they can depend on it as a reliable crop.

No difference is made in planting the crop on this farm for use in the silo than for the regular crop. The corn is cut when going from the milk into the dough, their silage being used entirely in the feeding of milk cows. Generally speaking, we believe that the corn left to a mature stage would be more advantageous for feeding fattening cattle.

These men have their own cutter and power, having used the same machine for six years. An average of eighty cows in milk is kept on this farm, and practically no extra help is required in filling the silo. The slow method of filling is used, requiring from two to three weeks. They use for hauling the low truck wagons with a rack 8x16 feet, each man loading his own load. The corn is cut as fine as possible. One year the mistake was made of cutting the corn too long and not as good silage was obtained. They say that it is very important to keep the knives in the cutter sharp. Two men are used in the silo when filling. They have never used any tamper with which to pack the silage when filling, but believe it would be beneficial. Water has never been used at the time of filling, but say it should undoubtedly be used if the fodder is a little bit dry.

They No Longer Pasture

Messrs. Thompkins do not like to use any of the silage for from thirty days to six weeks after filling to get the best results. They have had more experience in the feeding of silage than have most farmers. The value of silage as a feed was so thoroughly demonstrated to them after giving it a trial that they discontinued entirely the use of the pasture. The entire bunch of cattle on this farm is kept on a dry lot and fed silage twice a day. In addition to the silage alfalfa hay is fed and malt is used to take the place of grain.

Messrs. Thompkins say they would not attempt to carry on the dairy business in their locality and depend upon pasture for summer feed and alfalfa and fodder in the winter. Dry weather in the summer time, cutting down the pastures, does not at all bother these men, for they know their flow of milk will be the same, since by feeding silage cows are kept in practically an even flow at all seasons of the year.

On this farm are about sixty-five acres of alfalfa, from which, in 1913, about 100 tons were harvested. They had about thirty feet of silage in their silo and told us they would have plenty of feed and some to spare to run their cattle until the silo should again be filled this fall.

Answering the question as to what per cent more cattle can be kept on a farm if the farmer has sufficient silo capacity by which he may store sufficient silage to be sure of having feed enough to last through the summer should the pastures dry up, they say that 100 per cent more can easily be kept. These men do not find the feeding of silage at all inconvenient, as they have an elevator in the silo for taking out the silage and feed bunks handily arranged in which the cattle are fed.

T. J. Current, the well known breeder of Duroc-Jersey hogs, living at Hildreth, Neb., also maintains a small dairy herd of Holstein cows, selling his milk in the town of Hildreth. Mr. Current has only a small place, raising no corn whatever. He has been using a silo for three or four years, and would not under any circumstance attempt to carry on his dairy business without one. Mr. Current buys all the corn with which to fill his silo, getting it from his neighbors, and pays for it on the basis of the estimate number of bushels per acre in the field at a price per bushel agreed upon.

In 1912 Mr. Current paid $144 for the corn with which to fill his silo, and all the items of expense connected with the filling of the silo holding eighty tons makes the cost per ton for the silage in the silo $1.66. In 1913 the cost of filling the silo was about $98, but in this filling of the silo there was but very little corn on the fodder, due to drouth conditions in that part of the state. In 1912, when Mr. Current began feeding silage, he was feeding four tons of alfalfa hay per month to his twelve cows. He commenced feeding silage at the rate of thirty pounds per day to each cow, or five and one-half tons per month to the twelve cows; this silage, costing $1.75 per ton, taking the place of three tons of alfalfa hay at $11 per ton. Mr. Current told us that after beginning to feed the silage he fed but one ton of alfalfa hay per month to these cows. The cows gained in the flow of milk after the feeding of the silage was begun. Mr. Current tries to get the corn when it is just beginning to dent; the silo is filled in one day; generally a small amount of water is put in at the time of filling by putting a hose into the blower. He believes in waiting about six weeks after the silo is filled before beginning to feed the silage.

Better Than Wheat Pasture

Cameron J. Furry, living just across the river from Franklin, Neb., has had a silo for three years and says that after having used it once he never would try to get along without one. The silo on this place is 16x33 feet and was built at a cost of $115, exclusive of the labor. It has always been filled with corn, cutting it from the regular feed planting. Mr. Furry wants the corn at a stage just a little after it begins to dent, when the shucks are about one-fourth dry. Three farmers in the neighborhood own the cutter in partnership, which cost $225. They hire other help, which costs them from $13 to $14 per day. Low truck wagons with racks are used, each man loading his own load. Two men are in the silo during the filling and a distributor is used. Mr. Furry tries to cut the corn at a stage that the adding of water at filling time will not be necessary for proer fermentation.

In 1912 Mr. Furry p.. into this silo twenty-two acres of corn estimated to be worth $462, figuring the corn at the market price per bushel at the time of filling. It cost $50 for labor, and including this it makes the 140 tons of silage cost $3.64 per ton. In 1913 the corn was

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Iowa Holds Another Successful State Fair

Short Account of Some of the Notable Features of This Year's Great Exhibition

THE Iowa State fair has again scored a record-breaking exhibition and display of all that contributes toward making a great agricultural and live stock show. Iowa is distinctly at the top in state fair and live stock exhibitions. Its resources within itself are a factor that cannot be easily overcome by any division of the United States. Iowa is great in its herds of pure-bred horses, cattle and hogs. It is not only great in numbers, but it has immense capital employed in the operation of producing the best that human ingenuity, skill and breeding intelligence can suggest.

Iowa's State fair has become a national exhibition, where large numbers of the high-class show animals of America congregate. Owners of the champions and grand champions of the live stock shows of the country believe that nowhere can they be afforded greater honors than in occupying a place in the show ring of the Iowa State fair.

It is not in any spirit of placing one of our great live stock shows above another that we say that noted expert authorities on live stock and live stock shows have gone on record as pronouncing this the greatest live stock show in horses and cattle that has ever been held in the United States. When this has been established the way is clear to make it world-wide, since the International at Chicago has been freely pronounced by the best of expert judges of Europe to surpass any held in that far-famed land of pure-breds.

Increase in Live Stock Exhibits

This was not a two-breed exhibition of live stock. All breeds of every kind of stock—horses, cattle, hogs and sheep—were fully represented, and the very closest competition prevailed throughout the classifications in each show. The comparison with last year shows a remarkable increase, which indicates the position this fair holds in the estimation of exhibitors. In 1913 there were shown 993 horses, this year 1,142; cattle in 1913, 945; this year, 1,188; hogs in 1913, 1,000; this year, 2,500; sheep in 1913, 750; this year, 800. These figures indicate the growing popularity of the Iowa State fair among the high-class outside breeders, who are anxious to get into the tide of exhibition excellence.

Approach to Women's Building—Noté the Wide, Cool Porches

Iowa is fortunate in having the natural layout in ground suitable for every feature of exhibition. It has been taken up by competent engineering talent and planned into a most beautiful and fitting design for all departments. The classification or division of exhibits has made it an easy matter for the fair visitor to find anything he desires to see with the shortest possible expense of time. It is a fair grounds planned and builded upon a business basis, yet with natural fitness that charms the visitor with its beauty.

The machinery display was a very large increase over former years and exceeded the prepared exhibition space by more than twenty acres of out-of-door room. In the thousands of machines on display it was asserted that there was not a single one but had some improvement over last year. This department was thronged with visitors and buyers, and the machinery dealer has good prospects for a big trade for next season.

The agricultural and horticultural divisions at this fair are strong features. They are not planned solely for show and magnitude of exhibit, but based upon the educational advantage that these exhibits may contribute to the visitor who is seeking information. The county and farm displays are under supervision of the county agent, who in this case is J. W. Coverdale, state agent of this work in the state of Iowa, an appointee of the federal Department of Agriculture. No exhibit can go into these displays that does not in all respects conform to the published requirements laid down by the superintendent.

All articles of farm production must be accompanied by a full description of how they were produced, when planted, kind of soil grown in, preparation of the ground, cultivation, etc., so that with each article any visitor at the fair may inspect and study a full account of its production, thus making the farm products show in reality an educational study and a benefit to the student of crop work or seeker for information.

It has been established that merely a feast for the eye is not a consolation to the soul; that the fair exhibit, if it is to serve its best purpose, must teach the lessons of advantage by information to be given out to those who are interested inquirers. Blank forms are provided for the grower or producer to fill in, showing every feature of work in production. These are ready with the exhibit for inspection at all times. Large premiums are offered for these displays, based upon a pro rata division, according to the score of the exhibit. This promises to be a successful method of exhibition and is meeting with great favor by agricultural experts from all parts of the country.

The fruit show was, in all respects, the best ever put up in the state. Apples, pears, peaches, plums and grapes were of excellent quality. Unfortunately, however, the fruit crop of Iowa is very short, due to a failure in blooming which has not been satisfactorily accounted for. Insect damage has also been a contributing factor in lowering the yield.

Part of Iowa's Attractive Fruit Display

Women's and Children's Building

No finer accommodations for women and children are provided anywhere than the new building at the Iowa fair. Cool, airy, quiet rest rooms; clean, sanitary arrangements, splendid playgrounds and nursery for the little ones, where they are much better cared for than being dragged about among the exhibits; model rural school room, excellent art exhibit, quarters for the traveling library commission,

health exhibit, occupying much floor and wall space. These are only some of the departments housed in this beautiful building.

The health exhibit is one of the seven belonging to the State university and constantly in use throughout the state. It presents warnings against flies, patent medicines and unsanitary practices in a clear, comprehensive manner. One of the most striking things in this department is the bell that tolls every two and one-half minutes, each toll representing one death from tuberculosis, most of these deaths being preventable. The graphic manner in which the process of securing testimonials by fraudulent patent medicine concerns is pictured is another impressive feature of this exhibit.

The baby health contest is housed in ideal quarters in the Women's building. The interested audiences are accommodated in the auditorium, from which they view the examinations going on in the glass-walled room, where the babies are undisturbed by the outside noises, which are deadened by the walls. The light is good, the ventilation cared for, arrangements being made by which the air is kept pure, but no drafts admitted. There is even a fireplace, which was of service in keeping the temperature right during some of the cool days of the week. Mrs. Mary T. Watts, with her corps of assistants, managed the baby contest with a smoothness acquired by a number of years' experience and facilitated by the spacious and well arranged quarters prepared for this important department.

Swine Department

In numbers the hog show was not up to the average, although more hogs were in the pens than last year. At least two factors were in a measure responsible for the decrease in the usual attendance. All hogs shown at this fair are required to be vaccinated. Some breeders won't vaccinate, consequently cannot show. In many places cholera last fall and winter was very prevalent and without doubt many showmen did not have the pigs to show on this account.

Poland-China Hogs

The Poland-China show was, in at least one respect, different from all previous Iowa state fairs. It was a big type show. The hot blood was not there. The ribbons were tied by C. A. Marker of Tolona, Ill., who gave good general satisfaction.

The aged boars in this division were certainly very attractive. It never before has been our privilege to see such size and quality. They were big, still smooth, with fine backs and with practically perfect feet. The Fred Seivers hog, Smooth Big Bone, was placed first. This hog had plenty of quality, was smooth and had a fine masculine appearance. Extra Long, owned by C. W. Crees of Coon Rapids, Ia., won the red ribbon. This hog was deep, long and smooth, with fine finish. D. C. Lonergan of Florence, Neb., drove out the third prize boar in this class, showing Big Ursus by Big Mischief, dam by Big Victor. The Lonergan entry, like the other two, was massive, deep and strong. Many hog men have been saying they wanted size with quality, which we believe very essential. These qualities were certainly brought out in this class.

The first prize senior yearling shown by Shivers & Son, Knoxville, Ia., and the best junior yearling, owned by W. E. Willey of Steele City, Neb., were both animals of superior merit. In the final test the Shivers boar was made grand champion.

In all the Poland-China sow classes good animals were driven out, the grand champion ribbon going to D. C. Lonergan of Florence, Neb., on his great junior yearling entry, Big Type Girl.

This show has demonstrated the fact that a hog carrying scale and quality can be produced. The Poland-China men have been working along this line and are meeting with good success.

Duroc-Jersey Hogs

There were something over 600 animals in the Duroc-Jersey show. Generally speaking, we do not think the quality shown in this class was up to the standard. Barring the under 6 months pig class, the first prize winners were good individuals and would make a creditable show in any ring. We looked this show over carefully and wondered why the show generally was not up to the standard. Duroc breeders must awaken to the fact that they must maintain the necessary qualities of good feet and good backs if they expect to keep their favorite breed in the position it is at the present and has been for some time past. Many animals in this class show good size, but are seriously lacking in these two essentials.

Ribbons in this were tied by A. J. Lovejoy of Roscoe, Ill. Generally speaking, his decisions were favorably received. In some cases

(CONTINUED ON PAGE FOURTEEN.)

Winners in Their Classes Ready for the Finals

Brood Sows for Next Year's Crop of Pigs

IT WILL soon be time for the hog growers to look for brood sows for next year's crop of pigs. To a considerable extent will the quality of the next pig crop depend upon the selection of these sows. As expressed in former writings in this paper, we believe that too many of our hog growers depend, to too great an extent, upon gilts. We feel sure that in nearly every case better results would be obtained if more mature sows were used in breeding operations. If you now have on your farm a sow that produced and brought to weaning time a good litter of growthy pigs, why discard her for an untried gilt?

Many things are to be taken into consideration in the selection of a brood sow, prolificacy being probably one of most importance. You cannot wean a litter of six or seven pigs if they are not farrowed. Care should be taken in the selection of these sows to know something of their past history relating to this important qualification. Sometimes in selecting these sows this information is not possible to have, but those keeping pure-breds can by examining the pedigree and records know exactly from what sized litter the sow you have in mind came and can by a little time expended know the size of the litters for several generations back.

Disposition is something of very great importance in the brood sow. The nervous, irritable, cranky sow very seldom weans as large a litter as does the gentle, quiet sow for the reason that after farrowing the pigs are stepped on and killed. It is often necessary at farrowing time for the owner to go into the pen with the sows, and it is equally as necessary that, when this attention is required, the sow should remain quiet.

In selecting mature sows from your own herd you know whether or not the one selected is gentle and quiet. These qualities are very largely bred into the animals.

It is of very great importance that you use for breeding purposes animals that are easy feeders and good sucklers. Sows in many lines of breeding show very poor feeding and milking qualities. The sow that can produce six pigs or more and bring them through to weaning time in good condition is much more valuable to you than the one that will produce that number of pigs and, on account of poor milking qualities, bring them to weaning time in poor condition. By all means avoid poor sucklers and hard feeders.

Some of the little points which many hog growers ridicule are of importance. For instance, brood sows should by all means have good eyesight, and this eyesight should not be impaired by big palmleaf ears. The sow with the poor eye, or the very heavy ear obstructing the eyesight, kills a great many little pigs by stepping on them, simply because she cannot see them. A good mother should always be able to hear well. The sow that is deaf is very much handicapped in raising litters.

Don't select a short, broad, well-meated sow for your brood sow. Get the one with good length, deep sides, rather thin in the neck and a nose not too short and broad. Look for one with good width between the eyes. The sow narrow between the eyes has very little brains. Don't purchase the swayback sow; a low back indicates weakness in general.

Good feet and short pasterns are desirable, as in this day of pastures sows should be able to travel easily over the fields, especially during pregnancy.

One of the important qualities of a good brood sow is a good udder with two good rows of teats. A good brood sow should have six well developed teats on each side of the udder and never less than five. We often find sows capable of raising fine, large litters, which would be absolutely impossible if they did not have sufficient teats. Do not overlook this.

After selecting these sows give them good, wholesome food that they may be gradually gaining from now until breeding season. Plenty of exercise is absolutely necessary.

In future issues of this paper we will take up the question of breeding.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

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To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
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Advertising Rates

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The cold fall rains are harder on the colts probably than the winter storms. Get them in the barn or shed during these rains. A little time spent in doing this is money in your pocket.

Have you a good, substantial well curb and platform at your well? Cement or brick, or both, make absolutely good curbs and solid platforms. It is easier to do this work now than in the winter.

Just as soon as corn husking is over you will want to turn in the stock. It is a good time now to get all the fences around the fields in good repair. Don't wait until the day you want to turn the stock in to do this work.

Ralph Emerson, pioneer and philanthropist, died at his home in Rockford, Ill., last month. He was well known throughout the west as the founder of the Emerson-Brantingham company, which is the outgrowth of a small industry started by him many years ago.

Look over the males you are offering for sale, and if any of them don't come up to standard have the good business judgment and the nerve to send them to the market instead of the breeding pen. Your own business and the breeding business in general will be benefited by closer culling.

If every piece of machinery is not under the shed it should be put there before the fall and winter storms begin. Probably some of it would be benefited by the use of some paint. It doesn't take long to put it into good order and saves time and money in the long run, as well as the annoyance of breakage at busy times.

Farming Cut-Over Land

The agricultural lands of this country are too valuable as producing investments for crop growing to be left encumbered with timber, except possibly where untillable lands are developing commercial timber for lumber purposes. There are often a few acres of rough, untillable lands on an otherwise good farm that can be profitably employed in grove and growing timber. Timber lands are not necessarily idle and worthless. It is often the case that groves of timber are thinned out so that the land not occupied in tree growth produces a good crop of pasture and thus yields a little revenue each year for the farm.

The forest, grove or timber lot on most farms is idle, except for the timber or fire wood produced. Lands are getting too valuable to be thus employed. It behooves every land owner to put not only every acre of tillable land to its best use, but every rod of land will soon be required to render an account of its yearly production. The removing of the tree introduces one of the greatest difficulties in connection with farming—the getting rid of the stumps and the preparation of the wood lot or the forest land for cultivation. This has been a great hindrance to many farmers in the profitable utilization of such cut-over or stump lands. The lack of available implements or machines cheaply and profitably to remove the stumps and at once make the former timber acreage tillable and ready for any kind of crop has been the difficulty.

The stump puller is one of the most serviceable pieces of machinery now in use on the timber farm lands and the cheapest in this line of work. A good stump puller can be had according to its power ability at from $50 to $150, and lasts a lifetime, or it may be made to lift and clean all the stump acreage in a farming community at so small an expense that its service cannot be turned aside, even by the farmer who has only an acre of stump land to clear for cultivation purposes.

To Get Good Pig Crop

The hog grower who has not as yet selected his boar for next year should not put this important matter off too long. We feel sure too many of our farmers do not get the new pig on the farm soon enough. Many of them wait until the time they went to begin breeding to select this pig; then the selection is nothing but buying the first pig they find.

The sows to be used should be carefully looked over, defects noted and care taken in selecting the boar to get one that will, as largely as possible, remedy these defects. Don't forget that the same defect in the sow and boar will likely be very much intensified in the pigs. If your sows are not particularly strong in the back, don't buy a boar with a weak back, or if your sows are inclined generally to be a little off in feet, don't under any circumstances buy a weak-footed boar.

Get the new pig early and let him become used to his new surroundings. Don't keep him in a small, dirty pen; let him have the run of a good pasture; feed him a mixed ration and don't overfeed him. Don't try to load him with fat and don't get the idea into your head that he should be thin. Care in feeding must be taken that he will be always on his feed. Watch him closely during the breeding season and, if possible, keep him in at least as good flesh as when the breeding season began. Close attention to many of these little details will be of material assistance in getting a good pig crop next year.

Many Uses of Barrels

How often we see barrels thrown around and rotting away, when they had as well be turned to good use—real and profitable use!

Sink a barrel in the ground to keep the swill in and you will not have to feed the hogs any ice-cold swill during the winter. But put it where the children will not get into it, and keep a good, tight lid on it.

By sawing a barrel in two one can make two good vessels in which to water the stock. Half a barrel also may be filled with good soil and some vining flower planted in it, which will form a neat ornament for the lawn.

Barrels may be laid on the side, a slight depression being made in the ground to keep them from rolling, and made into fine coops for the chicks. Throw in enough dry dirt to raise the "floor" on which the chickens roost to a level (or a little above) the ground outside to prevent the rain soaking in. Bore air-holes in the sides and rear end and arrange a screen frame to put over the front part to keep the chicks in and the vermin out; clean out the droppings occasionally and renew the dirt floor.

Another good use to which we have put a barrel is to smoke meat in it. Bore several holes in the bottom of a barrel (or arrange small hooks to hang the meat on). Invert the barrel over a good sized basin full of chips, cobs, etc., and set them a-fire; leave a small opening at one side of the barrel for a draft and keep the flames smothered down till they will not set the barrel on fire. Watch the meat closely, as this is a quick method of smoking. When through, wrap each piece of meat in cheesecloth and hang away.

One summer, years ago, we had no good place in which to keep our milk and butter. Taking a large barrel, we sank it into the ground to within four or five inches of the top. Dirt and sand then were packed around the sides and water poured on them. A six-inch frame of boards then was set around the top of the barrel and it was filled with dirt. To cover all this we arranged a lid with hinges. Inside the barrel we would set milk, cream and butter, having them in pails or broad dishes, and on top of these vessels we would place fruit, vegetables and other eatables which one so often has to throw away when they have no place to keep them from one meal to another. Small shelves and hooks could be arranged on the inside of such a place and a considerable quantity of different articles kept therein. The sand surrounding the barrel should be dampened occasionally to keep it cool. It should be aired out once a week.

Small Farm Economies

The evidences of thrift on the farm are found in the system of saving and the economy practiced in cutting down waste about the farm operations as often as in its great crops and expensive methods of growing and handling them. There are many big farming propositions carried on at a loss to the owner or operator. It is an easy thing to buy lots of costly farm equipage and employ lots of farm help to operate it, but it is quite a different thing to conduct such farm enterprises profitably.

It is an interesting sight to ride through a farming district and view the various farm prosperities at this season of the year, when the harvest is mainly finished, the small grains and hay crops stacked and otherwise finished up for the feeding season; old stacks raked down, topped out and made practically new and rain-proof; strawstacks nicely built and prepared for the winter, everything presenting the appearance of neatness and thrift. Or we may see the reverse, the old last year's left-over haystacks representing only heaps of discolored, shrunken feed, fit only for the manure pile, a waste, a loss that indicates carelessness, lack of thrift and economy in saving what has been produced and which has a feed value if looked after at the proper time.

The value of feed must be in the mind of the manager of the farm. Hay is worth a certain price in the market. The hay on the farm is worth just as much, minus the expense of putting it in the market. Or it may be worth even more if fed on the farm. At all events, everything in the way of crops on the farm has a commercial value, and anything that contributes to waste on the farm results in just that much loss to the farm account. It pays to save everything that the farm produces and turn it to some account on the farm or in the markets. It is the saving and economical management of the farm that gives the farm character, and this is shown in the system of doing things and needs no sighboards posted for the observer. The practical, well trained eye of the farmer can read the lesson that each farm is teaching by its object lessons.

Autumn Pasture

One of the greatest sources of agricultural advantage that can be attributed to the September rains is their influence on the autumn and fall pasture growth. There is no crop on the farm so highly appreciated by the live stock owner as the fall pasture. From this he renews his efforts and hope of bringing his short summer pastured animals up to a good condition of flesh for carrying them through the winter safely and cheaply, or in having them in an acceptable condition for the buyer.

The fall pasture is one of the best feeds produced on the farm and comes at a period that transfers the farm animals from grass to the prepared winter feed. The gradual change from grass to winter feed—hays, fodder, etc.—is the demand, and a big autumn grass crop is the best money-maker the farm produces.

Horses for Army Service

The American range-bred horse has established a reputation for superiority in army service. This was thrust upon him first during the Spanish-American war in Cuba, when the horse supply for cavalry service was so reduced through the high standard of measurement specifications that a smaller sized horse was the only recourse in order to keep the ranks full of available mounts.

The western range horse was then urged as the best available material, notwithstanding his size was against him, and a modification of size specifications would be necessary in order to make this class of horses pass muster by Uncle Sam's army horse department. The first introduction of the range horse into cavalry service convinced the riders and all persons with whom they came in contact that they were not only equal to the larger farm-bred horse, but so far superior that there was scarcely a comparison in endurance and adaptability to the hard life of army service. The reputation of the range horse spread until the world-famed saddle horse became distinctly that type produced on the plains of the eastern Rocky mountain country of the United States.

The South African war was the next opportunity offered for a test of these horses in army service, and again they fully established their great power of endurance. One of these tenacious, iron-constitutioned horses was estimated as equal to three or four of any other kind in the matter of service.

That there will be a demand for the American-bred range horse for cavalry service in the European conflict is quite certain, in the opinion of horse dealers and handlers of the big horse markets of the country. The American mule is also beginning to elevate his ears and his familiar bray is heard all over the state of Missouri, in anticipation of a business trip to the old country. The mule is an indispensable part of present-day war equipage, and no war can be successfully carried on without his assistance.

Next Year's Pig Crop

It will soon be time to lay the foundation for our next year's pig crop. Breeding time will soon be here. At that time the sows should be gradually gaining in flesh and in the best of health. If you expect to get a good crop of pigs next spring you must have your herd in the best of condition.

Your arrangements should be complete. Years of experience in this business have convinced us that one of the best investments we ever made was a substantial yard in which we had a covered pen. In this covered pen we had a breeding crate handily arranged. We find in traveling over the country a good many farmers and breeders who do not use a breeding crate. We are satisfied this is a mistake. The first breeding crate we used was one made from an old crate, a little crude, but it answered the purpose. Later we bought a very satisfactory one, and after using it one season felt that it was an absolute necessity.

Some farmers say, "This is all right for the breeder or the fellow who breeds but a few sows, but I breed from 75 to 100 sows, and it's too much trouble." Just recently we visited a hog establishment where about 500 sows are bred each fall. The owner and manager of this place showed us an up-to-date breeding crate and pen arrangement. They said that under no circumstances would they try to breed their sows any other way. It saves many injuries, broken hoofs and broken limbs. This, if it happens to the male, may mean a very serious loss. We don't care whether you make a breeding crate yourself or buy one. But we do say you are making a mistake to do without one.

Sugar

Mr. Ultimate Consumer, who has been shocked at the rise in the price of sugar as a result of the war, is advised by so good an authority as Charles A. Spreckels, president of the Federal Sugar Refining company, that "the worst is yet to come." In other words, Mr. Spreckels says: "If the war continues—and I'm afraid it is going to be a long-drawn-out affair—there is no telling where prices may go."

The American sugar market went up, so he explains, immediately because England, needing some 175,000 tons monthly, began competing with our refiners for the Cuban product, its main source of supply being cut off. The advance was accentuated by alert American buyers rushing in and purchasing granulated sugar far in excess of usual amounts.

So much for the present situation, but the future is even more portentious. Warring European countries produce about 8,000,000 tons of beet sugar yearly, or, as Mr. Spreckels says, approximately 45 per cent of the world's supply. It is too much to expect that all of the present European beet crop—yet in the field—will be harvested and made into sugar. On the contrary, if the invading troops do not destroy it the lack of labor to gather the beet crop and work it in the factory would prevent.

This picture means a continued high range of prices and curtailed consumption of sugar. It also impresses the necessity of developing a sugar industry of our own capable of supplying all American needs.

Shocked Fodder

There is no disputing the fact that it pays to cut and shock a large acreage of the corn. This assertion is based upon the feeding value of the fodder when cut and cured in the shock. Stock of all kinds, especially grown cattle, will consume practically all of the shocked fodder, and where they have a pasture to range over and an occasional feed of hay, will winter in good shape. The younger cattle, calves and short yearlings will not do so well, but need more fine feed and grain in order to winter profitably.

The corn binder is an indispensible machine on the farm where cut fodder is to be made of greatest feed value. The husking from the shock is sometimes done by the use of the shredder in preparing the fodder for feed, but quite frequently the shocked corn is husked as hauled from the field for feeding. The corn is cribbed and reserved for sale or feeding and the fodder and small ears given direct to the cattle as hauled.

The use of the feed cutter in making a finer and more palatable condition of feed from the cornstalks is one of the practices in vogue among some cattle owners. In this the power cutter is generally in use. The silo has to a great extent superceded the shocked fodder, yet many farmers find that, when the silos are full, the shocked fodder is the next best and next cheapest way of disposing of this feature of feed supply, as the standing stalks are estimated almost an entire waste.

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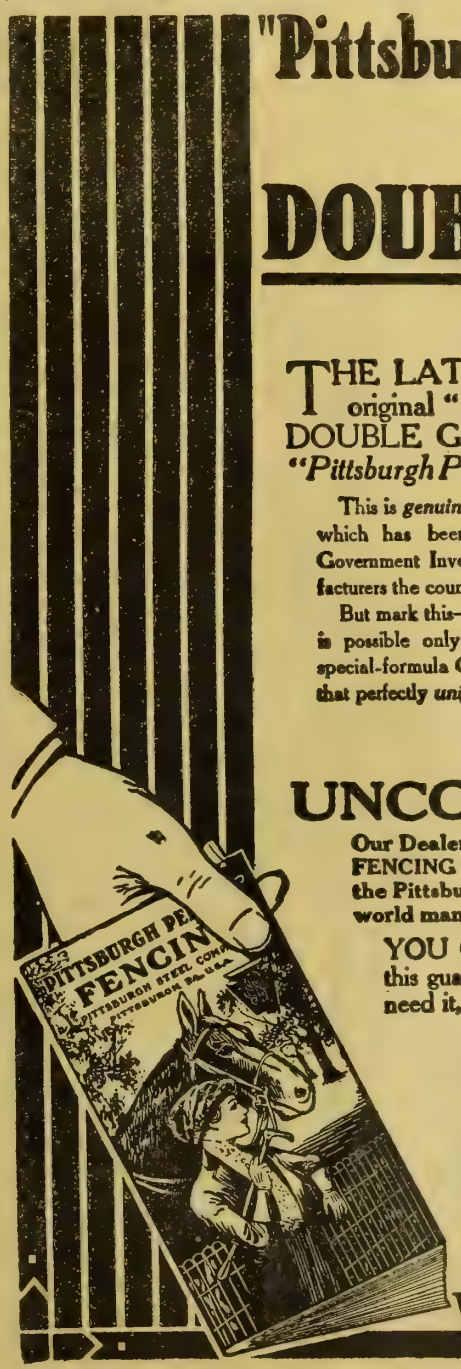

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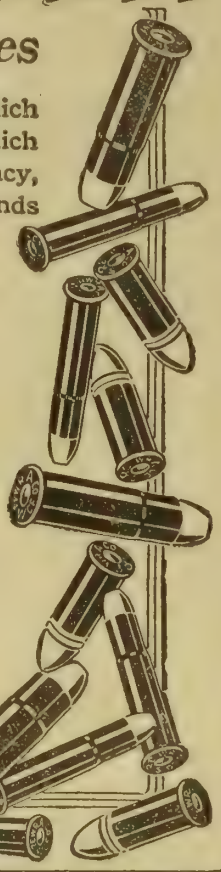

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

AT THIS time of year one must spare every bit of green stuff that it is possible to spare to the poultry of all kinds. The other day I saw a lot of hens picking at the dry grass, when just across in the garden grew a patch of green corn for roasting ears, and a lot of cabbage that had failed to head up. The roasting ears were pulled from the stalks and eaten by the family, and the green blades, along with all that wealth of green cabbage leaves, were simply left to turn yellow and dry up, when everyone who keeps poultry ought to know how they relish green corn blades and juicy cabbage leaves and need just such green stuff in egg-making. Don't waste one bit of green stuff.

* * *

This time of year there are many hens that are not paying for their keep, or soon will be past paying for it, the hens that you must get rid of soon to give room to the pullets to be kept over. Don't put it off too long. The price is good now and a cent or two more later on is not going to pay you for the feed they consume, and the room they take from the pullets, that should right now be getting used to their permanent winter quarters. Fowls, of course, will be very high from this on because of a country-wide scarcity this year. Why they are scarcer this year than common men who gather up poultry and eggs cannot say, unless it may be because the big price paid for hens last winter and spring induced farmers to cut down their flocks to nearly nothing. When you can get from $1.40 to $1.50 for an eight or ten-pound hen right at your own farm gate, the temptation certainly is great to sell off too close, but don't do that another year, for just so sure as you made a little extra at that end of the selling you lost twice as much at this end in loss of egg and young chicken sales. So, while you sell off to make room for pullets of this year be sure you keep back plenty of your last year's hens and early maturing pullets of this year, and try to do your share toward helping get a bumper crop of eggs and young chickens on the market next year.

* * *

This fall there will be, on most farms, many nice pullets that you may not want to carry over. If you have a good breed there is little use for you to put these on the market just at market price. If you let your neighbors on the rural routes know it, if this rule holds good in your neighborhood as it does in most others, you are not going to keep those pullets long, for many farmer women want new blood in pullets nearly every fall and will put a dozen well selected pullets in their flocks. It isn't best to keep all of your own breed of hens year after year, for not only do these hens kept so constantly on one farm inherit certain habits, but they inherit certain organic diseases from the mothers of same blood kept for generations, such as a tendency to ovarian troubles and apoplexy. This makes it a good idea to put in some fresh blood once in a while on the female side, though not so often, if you do not care to, as on the male side. In selling the young and immature pullets one can make something by selling them at a moderate advance over the present market price, because in these you must make good selection and sell no culls. But where the pullets are mature and close to laying, from $1 to $1.50 is none too much to ask. You could get it by advertising if your neighbors demurred at paying it.

* * *

It is a mistake for a farmer to keep more than one breed. The farmer and his wife have too much to do to study the requirements and keeping apart of several, or even two, breeds.

* * *

To get typical exhibition Barred Rocks breed a standard-colored male with females too dark for exhibition birds. The males of this mating will be the standard color desired. To get the standard color in the hen, breed a standard color hen with a rooster too light for exhibition. The females of this breeding will give you the true standard. Breed a standard colored male with a standard colored hen and you may not get one good exhibition bird. See?

* * *

Of the white egg breeds the Minorca lays the largest egg; of the brown egg breeds the Brahmas, both light and dark, lay the largest egg.

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I Used to Kill Birds

I used to kill birds in my boyhood,
Bluebirds and robins and wrens;
I hunted them up in the mountains,
I hunted them down in the glens;
I never thought it was sinful—
I did it only for fun—
And I had rare sport in the forest
With the poor little birds and my gun.

But one beautiful day in the springtime
I spied a brown bird in a tree,
Merrily swinging and chirping,
As happy as bird could be;
And, raising my gun in a twinkling,
I fired, and my aim was too true;
For a moment the little thing fluttered,
Then off to the bushes it flew.

I followed it quickly and softly,
And there to my sorrow I found.
Right close to its nest full of young ones
The little bird dead on the ground.
Poor birdies, for food they were calling,
But now they could never be fed,
For the kind mother-bird who had loved them
Was lying there bleeding and dead.

I picked up the bird in my anguish,
I stroked the wee motherly thing,
That could never more feed its dear young ones,
Nor dart through the air on swift wing.
And I made a firm vow at that moment,
When my heart with much sorrow was stirred,
That never again in my lifetime
Would I shoot a poor innocent bird.
—Ohio Arbor Day Manual.

The Editor's Corner

Our young authors and poets must be so busy getting started into school that they have no time to write. There has not been a time since last year at the beginning of school when so few stories and poems were sent in. We just want to remind you that at such a time, when everyone is too busy to write and there are not nearly as many sending in stories and verses, there is an unusually good chance for getting prizes and honorable mentions. There is not so much competition to meet as when dozens of young people are sending in stories and going about thinking up rhymes for verses in the picture contests.

And, speaking of being busy, most of us are no doubt glad that vacation, no matter how enjoyable, is over once more and we can go back to school. Of course, we are even more glad in the spring, when school is over and we can lay our books away. If we had to go to school all the time we would get pretty tired of it, but, on the other hand, if we had vacation all the time we would get tired of that, too. That is one reason children are happier than grown people. They have to have a change whether they think they want it or not, and many grown people are not wise enough to realize how much better off they would be if they took one.

As soon as school is well started and the long evenings begin, think over some of the events of the last summer and write them up, or tell us anything of interest that happened in school. All these things make good stories if told well. Sometimes we get a story about some quite ordinary occurrence that is better than another story of something unusual just because it is so well told. We do not mind having stories two or three pages long if they are good ones, but in trying to make them short some of you leave out all the details.

HOME EDITOR.

(Prize Story.)

My Outing

By Sidney Kirkpatrick, Aged 13, Siloam Springs, Ark.

On Thursday, August 20, a friend of mine and I went to the river to fish and stay all night. It looked rainy, so he wrapped up a wagon sheet and carried it along with him. I had my gun, and my pockets were full of fishing tackle, so he made his little brother carry a quilt, and he put some eggs in a sack, and his little brother had to carry them also.

Well, we got started and went to the railroad bridge and followed down the river for about a mile and three-quarters. Just before we got to our camping place the little brother fell down and broke some of the eggs, so we didn't have any too much grub, but we started a fire after we had got up some wood and had dinner. We had a fine place to camp, up under a bluff.

We caught four fish before 8 o'clock and fixed our wagon sheet down on the ground and went to sleep. The next morning we caught two more fish and ate them for breakfast. And about 9 o'clock we started home.

(Honorable Mention.)

A Trip to the Mountains

By Mary McKown, Aged 13, Seneca, Neb.

One evening father and my uncle said they were going to the mountains to get a load of logs. Mamma asked father if she and we children might go with them. Papa said he did not care. We were so happy we knew not what to do. So next morning, bright and early, mother, father, uncle, my three brothers and I all started with two teams of mules that belonged to my uncle. We had to go about seventeen miles. We started about 8 o'clock and got there a little after noon.

We children ran around looking at the trees and gulches, and we came to a place where an old spring used to be. We played there for awhile and then went back to the place where the grown folks were and had dinner.

We had to have some water to drink, so my brother and I started for the sawmill three miles farther down in the mountains. We got there all right, got our water and went back. Papa and uncle had the logs loaded, so we went home. It was very near sundown when we got home and I was so tired that I went to sleep.

A Picnic

By Imogene Crosby, Aged 11, Nutt, N. M.

One time when we were staying in El Paso I went to a picnic. There were seven children and one woman. We got to Washington Park about 9 o'clock and, as there were slides, swings and see-saws, we did not lose much time in getting to them. We watched the animals and after dinner fed all our scraps to two swans. Then we went and had three rides apiece on the merry-go-round. As it was the first time sister and I had ever been on one we enjoyed it very much.

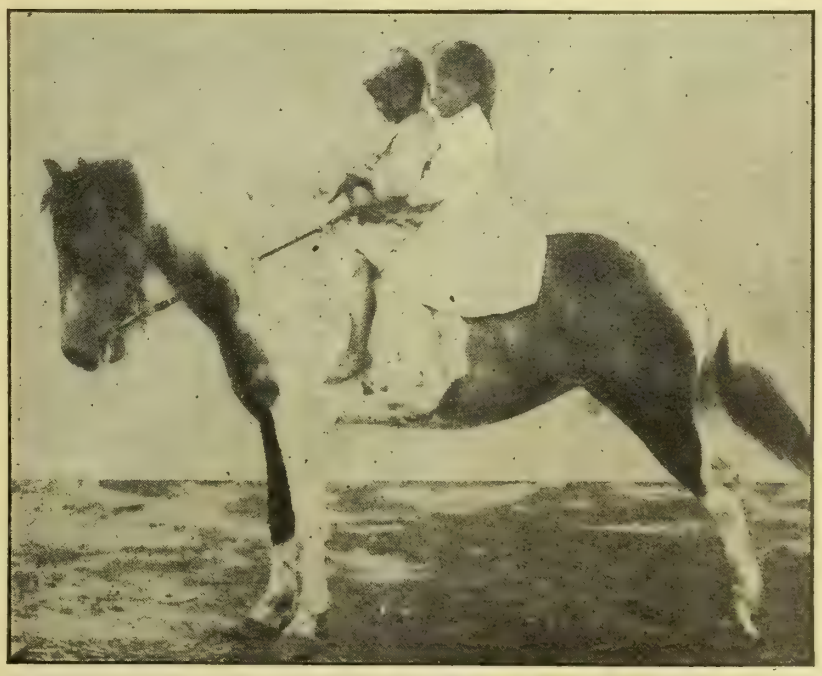
We went home at about 4 o'clock and found that we were to leave on a 6:30 train, and we got home at 8 o'clock the next morning.

Our Bird Club

By Elaine Titus, Aged 8, Tekamah, Neb.

As I have read so many bird stories in this department I thought I would write about our bird club we had at school last spring. We called it the S. P. B. society, which meant Society for Protecting Birds. We had little pins with the letters "S. P. B." on them. We had leaders and chose up sides. We worked for points. If we put feed on 100 posts we got 100 stars; if we put a bird house in a tree it counted two stars, and seeing diferent kinds of birds counted a star. In this way we learned to know lots of new birds. My brother caught a field mouse in one of his bird houses. Our side won, and they had to give us a picnic dinner.

The New Pony



Father just brought him home from the State fair, and the children are a little bit afraid of him, but they will soon learn that Don is always very careful of them and wouldn't hurt them for anything.

FOOD FACTS

What An M. D. Learned

A prominent Georgia physician went through a food experience which he makes public:

'It was my own experience that first led me to advocate Grape-Nuts food, and I also know, from having prescribed it to convalescents and other weak patients, that the food is a wonderful rebuilder and restorer of nerve and brain tissue, as well as muscle. It improves the digestion and sick patients gain very rapidly, just as I did in strength and weight.

"I was in such a low state that I had to give up my work entirely and went to the mountains of this state, but two months there did not improve me; in fact, I was not quite as well as when I left home.

"My food did not sustain me and it became plain that I must change. Then I began to use Grape-Nuts food and in two weeks I could walk a mile without fatigue, and in five weeks returned to my home and practice, taking up hard work again. Since that time I have felt as well and strong as I ever did in my life.

"As a physician who seeks to help all sufferers, I consider it a duty to make these facts public." Name given by Postum Co., Battle Creek, Mich.

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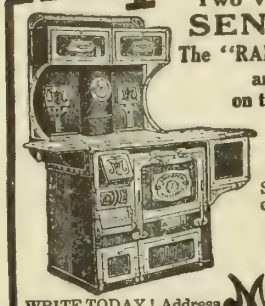

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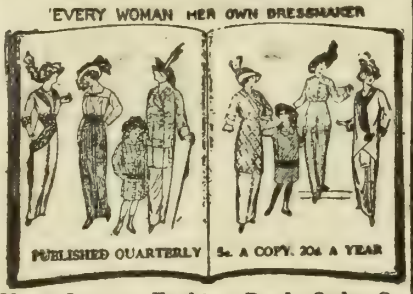

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The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Styles for Home Dressmaker

6330—Girls' Dress. Linen, gingham or seersucker can be used to make this dress. The dress closes at the front and is made with short sleeves and a low neck. The pattern 6330 is cut in sizes 2, 4, 6, 8, 10 and 12 years. Age 8 years requires 2⅝ yards of 36-inch material and 2¼ yards of ribbon for the belt.

6296—Ladies' Shirtwaist. Linen, madras or china silk can be used to make this shirtwaist. The waist closes at the front and can be made with either the long or short sleeves. The pattern 6296 is cut in sizes 34 to 42 inches bust measure. Medium size requires 2¼ yards of 36-inch material.

6853—Children's Dress. Two materials are used in making this dress. The dress closes at the front and can be made with either the long or short sleeves. The skirt is cut in one piece. The pattern 6853 is cut in sizes 2, 4 and 6 years. Age 4 years requires 1⅜ yards of 36-inch figured goods and ⅝-yard of 36-inch plain goods.

6864—Ladies' Apron. Gingham, linen or calico can be used to make this apron. The apron fastens with straps over the shoulders. The pattern provides for a dust cap. The pattern 6864 is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 4⅛ yards of 36-inch material and ⅝-yard of 27-inch contrasting goods.

6848—Ladies' Skirt. This skirt can be cut in either two or three gores and has an attached two-piece lower section. The high or regulation waistline can be used. Linen or serge can be used to make the skirt. The pattern 6848 is cut in sizes 22 to 32 inches waist measure. Medium size requires for the three-gored skirt 2¾ yards of 44-inch material.

6841—Ladies' Negligee. This design can be used as a negligee or a kimono. It is made with the body and sleeve sections in one. The collar can be used or not, as preferred. The pattern 6841 is cut in sizes 34 to 44 inches bust measure. Medium size requires 6¾ yards of 44-inch material and 4⅞ yards of ribbon for ruching and a belt.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Of Interest to Our Women Readers

The World Beautiful

It doesn't cost money, as many suppose,
To have a good time on the earth;
The best of its pleasures are free unto those
Who know how to value their worth.

The sweetest of music the birds to us sing.
The loveliest flowers grow wild;
The finest of drinks gushes out of the spring—
All free to man, woman and child.

No money can purchase, no artist can paint
Such pictures as Nature supplies
Forever, all over, to sinner and saint,
Who use to advantage their eyes.

To bask in the sunshine, to breathe the pure air,
Honest toil, the enjoyment of health,
Sweet slumber refreshing—these pleasures we share,
Without our portion of wealth.

Communion with friends that are tried, true and strong;
To love and be loved for love's sake—
In fact, all that makes life happy and long
Is free to whoever will take.

—Selected.

Our Home Chat

We have been for the last few weeks trying to secure some good, practical recipes that will be of value to the woman who wants to set a table that will not only satisfy the hunger of her family, but appeal to their appetites. The difficulty is to secure recipes that have been tested and found good, and at the same time those that are what we really want to eat. It is a fearful and wonderful thing to observe how the cake and candy recipes outnumber those for substantial articles. We will hereafter publish one absolutely reliable and practical recipe each week for the benefit of our readers. We will always be glad to receive directions for making any dish that is a favorite with the families of any of our circle, and this recipe will be tested before publishing that we may be sure there are no errors made in copying.

* * *

Has the new school teacher come? Then why not go and see her now without waiting until Patrons' day at the end of the school year? You are likely to find that she is a very good and lovable young woman and anxious to do her very best by your children, but she is apt to be young and inexperienced and will appreciate your friendship and perhaps want to ask your advice. If she does not ask your advice, of course it is not wise to force it upon her, but if you show yourself friendly she may appeal to you when she finds herself in a dilemma, and you may be able to be of service not only to her, but to the whole community. It is discouraging to the young teacher to enter a community where none of the parents take the slightest notice of her except to criticise.

* * *

A woman who lives in an old house tells us that she has reduced her work almost half by the use of a kitchen cabinet. She has saved herself actually miles of travel from the old, dark pantry to the lighted table when cooking. These cabinets are great inventions, especially for the housewife who has a poorly arranged kitchen.

* * *

One of the many peculiar customs among the Hindus is that the women who have lost their husbands are not allowed to use the front door of the house. In our country there was a

time when the front door and the front room were so seldom used one might have thought all the women widows, but we are fast learning that what is too good for every-day use is not worth having.

HOME EDITOR.

The Rural Nurse

The urgent need of the trained nurse to assist in the care of the sick on the farm has appealed to the farmer and his family in no uncertain way. The hospitals of the city are crowded with patients from the rural districts, many of whom by the aid of the skilled nurse could be nursed back to health on the farm, and at much less expense and with a great deal more comfort and satisfaction to the family.

In some states there are rural organizations for the purpose of providing a trained nurse when her services are needed and demanded. She is secured in some instances through the National Red Cross society and her official position is that of assistant to the county superintendent of public schools. She is provided with a certificate of qualification from the federal rural organization service, or may be authorized by any other authority competent to issue trained nurse certificates.

The organization of such a rural association may be placed in the hands of a local county committee, consisting of the superintendent of schools, the county board of health and such local physicians as may be deemed necessary to carry into effect a strict system of sanitation and health among the people of the county or community where such association exists. The influence that such a trained nurse system would have on the health of the farming communities can scarcely be estimated.

Why should not such a system of health protection be in operation in every community throughout the farming and country districts of all states? It is only a matter of time when the people will see the need of better health provisions and establish the means of protection.

Nebraska. G. W. H.

Where Knowledge May Be Found

When the woman in the home would accquaint herself with the latest departure in household appliances, dress and the new devices which are being put on the market for her use, she should turn to the advertising pages of a reliable magazine, one which guarantees its advertisers and their advertisements. In this way she may, with little trouble, keep up with the times, so to speak.

There has lately been advertised through the magazines the new tailless shirt. The tail of the shirt has been converted into drawers, thus rendering it impossible for the shirt to pull up out of the trousers, and at the same time saving the heat and expense of drawers over the tail of a shirt. Now, a mother may use this idea in making up her little boy's shirts. Without doubt it would save the mother much worry and the lad much trouble.

A peanut butter manufacturer is publishing along with his attractive advertisement a very economical recipe for fudge, which any child can make in a few moments' time; a mother can thus assure her children pure, wholesome candy, and they can make it themselves. In that manner the children learn to handle the kitchen utensils, and will have an agreeable pastime as well. It requires only five minutes to cook this fudge.

For the child who has a desire for scrapbooks there are pretty pictures everywhere for them to cut out and paste in their books, but often the very nicest ones may be found heading an advertisement. I know one woman who, after the child has cut out and pasted in the book pictures from various advertisements, then helps it to compose a four-line verse about the picture and print it below the chosen picture. She tells me that among the best subjects for this are the pictures of children which are being used so extensively by the advertisers.

Another mother, whose growing son was anxious for a kodak, purchased a small one of moderate price. Now the lad is not only paying back the price of the kodak, but is having more fun with it than many of the other kodak owners because he finishes his own pictures. He finds a ready sale for the finished pictures and can afford to sell them cheap. There was no home dealer carrying this camera. She ordered from an advertisement.

A new way to have a shower bath solved the shower bath problem for another mother. Her children enjoyed the shower bath, but so much of her time was taken up seeing that their hair was properly dried so there would be no danger of taking cold that she could allow them to take few baths. Someone invented a shower bath which works from the side instead of overhead, and advertised to sell it very reasonably. The mother purchased one on ten days' trial and is much pleased with it. Now the children do not need to wet their hair, and yet have a shower bath as good as any child can desire. And the best part is that they need no assistance from mother at these times.

And these are only a few of the many ways in which a mother may

(CONTINUED ON PAGE SEVENTEEN.)

Our Weekly Recipe

RAISIN BREAD—Soak one yeast cake in one and one-half cups of potato water; mix in enough flour to make a stiff batter; beat five minutes; let stand over night. In the morning scald two cups of sweet milk, into which put one tablespoonful of salt and three tablespoonfuls of sugar. When the milk is lukewarm mix with the yeast; add enough flour to make a stiff batter, then beat about ten minutes and let rise. When sufficiently raised add two cups of seeded raisins, mix; add more flour until the dough is smooth; let rise; make into loaves and bake one hour. When baked wet the top of the loaves with sugar and hot water to prevent the crust becoming hard.

All the world's best music is no farther from you than the Victrola

The world's best music, superbly rendered by the world's greatest artists—Caruso, Melba, Tetrazzini, Paderewski, Kubelik, Mischa Elman, Sousa, Pryor, Victor Herbert, Harry Lauder, Christie MacDonald, and Blanche Ring are a few of the famous artists intimately associated with the Victrola.

Its exquisite renditions are a source of cheerfulness and inspiration alike in the homes of wealth and prominence, in the homes of discriminating music lovers, in the homes of thousands upon thousands who can hear the best music in no other way

Your home will be brighter under the charm of the Victrola's beautiful music, and it will be a constant delight to every member of your family.

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Always use Victor Machines with Victor Records and Victor Needles—*the combination*. There is no other way to get the unequaled Victor tone.

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Victrola XVI, $200
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All VICTOR VICTROLAS and Victor Records are sold by us for cash or, if you wish, on easy payment plan. Write us today for handsomely illustrated catalogue of records and full information.

Mickel's Nebraska Cycle Co., 15th and Harney, Omaha, Nebraska

Antofagasta and New Transcontinental Route

By Frank G. Carpenter

ANTOFAGASTA, Chile—I have just had a mighty slide from the roof of the world to the level of the sea. I have come from the top of the Andes, in Bolivia, to the Pacific ocean, in Chile, and am now writing in Antofagasta, the chief port of the most desert parts of the world. This town lies half way down the great South American desert. It is 2,400 miles from Panama, and two days and more from Valparaiso, the New York of Chile. It belongs to Chile, and it forms its chief gateway to Bolivia and the mighty treasure vaults of the Andes.. It is also the gateway to the nitrate fields and to other wonders of this arid part of the world. Through it flows most of the borax used by mankind, and out of it come vast quantities of copper and tin.

Within a few miles of Antofagasta is Chuquicamata, where the Guggenheim syndicate has some of the largest deposits of low-grade copper on earth. They can be worked at a profit and will soon be supplying the greater part of the copper from the South American continent. Further north, at Uyani, are tin mines, and down the same road comes the tin of Potosi and Oruro. Indeed, a river of minerals is already flowing through the port and the outlook is that the stream will increase with the development of the enormous deposits of the interior. Antofagasta is also the beginning of the new Transandine road that is to cross the continent by way of Uyuni, Tupiza and the Argentine system. Only about a hundred miles of this railroad remains to be built, and when it is completed travelers can go forth from here to Buenos Ayres in three or four days.

Like Our Frontier Towns

The Antofagasta of the present shows the hope of the future. It grows like the thistles on the mountain farms of Virginia, and today looks more like an American town of our arid southwest than anything I have yet seen in South America. The houses are mostly of wood, roofed with galvanized iron. The streets are wide and many of them unpaved. The population reminds one of our frontier. The characteristic sights of the Andes have disappeared. There are no blanketed Indians and no llamas. Wagons, carts and cabs have taken their places. The town is cosmopolitan. You hear every language spoken as you move through the streets, and are jostled by British and Germans, Austrians and French. There is also a large proportion of Chileans. The people are whites, and the red and mixed races seem to be confined to the Andes.

The harbor of Antofagasta is poor, but it is filled with shipping and the wharves are piled high with goods. There are stacks of Oregon pine, piles of bags of American flour and cords of steel rails and structural steel brought in by our steel trust. The place is the busiest of all the ports between Valparaiso and Panama, and now that the canal is completed it will send north the nitrate, borax, copper, tin and other minerals now pouring into it from the regions behind.

At One of the Stations We Saw a Great Drove of Llamas

From Mule Team to Locomotive

I came to Antofagasta from La Paz. My route was the one that I took fifteen years ago, when I rode three days across the plateau on the top of the wagon that carried the Bolivian mails. This was from La Paz to Oruro, a railway station about 600 miles from where I now am. We pelted the mules' ears with stones and kept them on the gallop from daylight to dark. It was cold and we almost froze at the rude inns of the highlands. From Oruro to the sea I came on the train.

My journey this year was all the way in a comfortable car, and the trip to Antofagasta took only two days. Our train had Bolivian millionaires, English, Austrian and American commercial travelers, miners of a half dozen different nationalities, and a number of tourists. We stopped for six hours at Oruro and there got sleeping compartments for the rest of the journey. We had dining cars on the trains and we traveled in comparative ease.

At the same time the fares were much cheaper. Our sleeping berths cost us $3 a night, and the first-class passenger fare was about $24 with a charge for our baggage of about 2 cents per pound. I have a number of trunks and my extra baggage cost half as much as the fare. The price for meals on the diner was $1.50 gold, with an extra charge for mineral water, which was about twice what the same water would cost in the United States.

Semi-Arid Bolivian Plateau

The first part of this trip was over the high plateau of Bolivia. This is a semi-desert country about 500 miles long and of varying width. Its only vegetation is half-starved grass and dry bushes, but it feeds thousands of sheep, alpacas and llamas, and we had animal life in sight almost all of the way down to Oruro. Now and then we passed a village of Indians and always there were the scattered huts of the Aymaras spotting the plain. The latter were round in shape and many of them had roofs made of mud bricks, symmetrically joined. A single family often had several of these round huts and in addition corrals for its stock.

At one of the stations where we stopped to get our dining car we saw a great drove of llamas. They had brought fuel to the railway for shipment to La Paz and were about to start back with merchandise for their return trip to a town in the hills. The fuel was what I might call Bolivian cord wood. It consisted of the limbs of stunted evergreens, each as big around as your finger. They had been grubbed from the mountains and packed up in bundles about three feet square and two feet in thickness.

Further down the road we saw great piles of peat-moss, another fuel that grows in the Andes. The moss is of a woody resinous nature, and when lighted gives out a great heat. It grows on the top of the ground in disks ranging in size from the diameter of a tin wash basin to that of a tube.

Coal is High-Priced

All along the railroad we could see also the piles of English or Australian coal used by the engines. This is in the shape of briquettes, laid up in regular order. At Uyuni, where the new road for the Argentine is to join the La Paz-Antofagasta line, I saw thousands of these bricks. They were corded up, as it were, and around the edges of the pile I noticed that a white band had been painted. I asked the reason, and was told that it was to prevent the Indians from stealing the coal. Such fuel in the high Andes is worth $50 a ton.

Our ride over the Bolivian plateau was through a country as smooth as a floor. The Plateau is covered with stones. It is supposed to have been at one time a vast inland sea, and sea shells are often found upon it. Prof. Agassiz said that the water level of the ancient Andean sea was 300 or 400 feet higher than the present level of the plateau. If so, it has all disappeared, as today the only large bodies of water found there are in the lakes Titicaca and Poopo. The latter is a brackish lake joined to Lake Titicaca by the River Desaguadero. It is only about one-third as large as Lake Titicaca. Lake Poopo is the home of many wild fowl and the region about it is filled with birds of many kinds, including wild ducks and flamingoes. The lake has no visible outlet, but the waters from Titicaca are always flowing into it and there must be some underground channel that carries the surplus away.

Oruro is a Dreary Town

Oruro is thirty-six hours from Antofagasta. It is a thriving mining town, situated 12,500 feet above the sea in the heart of the Bolivian desert. It has about 20,000 people, and it does a great trade with the tin mining regions in the interior. Its population rises and falls as tin goes up and down. The town has a government palace, a theater, a public library and a mineral museum. It has many business houses and some very respectable stores. The streets are paved with cobbles, and a rickety carriage carried me at a cost of $5 from one end of the town to the other. It has a plaza upon which the public buildings face, but altogether it is exceedingly dreary.

Leaving there I took the narrow gauge railroad down to the sea. The track has now a width of only thirty inches, but it is to be widened to a gauge of forty inches, which is the standard gauge for this part of the world. The main line starts at Antofagasta and crosses a pass of over 13,000 feet at a distance of 223 miles from the coast. It then descends to a level of more than 12,000 feet, which it keeps practically all the way north to Oruro.

Lakes Crusted with Borax

The trip from Oruro to the sea is over one of the most picturesque routes of the Andes. The most of the way is bleak and desertlike, but one sees several smoking volcanoes and also great salt lakes with green islands apparently floating upon them. After crossing the Chilean boundary we came to the great borax lakes. These are owned by the borax trust, and they supply the greater part of that mineral for the whole of the world. There are, in fact, only three or four places on earth where borax is found in large quantities. The most important is these lakes. Next in size are some mines on the plateau of Tibet in Asia and last are the deposits found in Death Valley, California. The Chilean lakes seem to be covered with snow, and the snow is the borax that rises to the surface and forms a blanket or crust on the water so firm that men can walk on it. It looks like ice, and you feel like stopping the train for a skate. In some places the crust has been broken up

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into floating cakes and in others it is being taken out to be refined and shipped to the markets. Some of the borax is as clean as the whitest of spun silk; other pieces are dirty and look like snow that has lain for some time. On the shores of the lake are galvanized iron-roofed refineries, in which the stuff is prepared for the market. We were over an hour going by the largest of the lakes. It is right near the railroad. It is twenty-four miles long and the greatest reservoir of borax in the world. Indeed, it is the chief source of the world's borax supply.

St. Peter and St. Paul

"Shortly after leaving this lake we came to the highest pass on the railroad. This pass crosses the coast range at about half a mile below the highest altitude of the road from Lima to Cerro de Pasco, and 1,500 feet less in height than that of the Peruvian Southern on its way to Lake Titicaca. Nevertheless, the height is 13,000 feet above the sea, and we found it bitterly cold at the crossing. The mountains on each side were dusted with snow, and beyond them were several great peaks covered with glaciers. On the way we passd the two mighty volcanoes of San Pedro and San Paulo, or, as we should call them in English, St. Peter and St. Paul. St. Peter is now active, and from it goes up a constant column of smoke, while along its sides runs a great bed of lava that looks as fresh as though it had not long since come from the crater. This lava is broken into millions of fragments. It extends for several miles along the slope of the mountains in plain view of the railroad.

St. Peter is one of the most symmetrical of the world's great mountains. It is as beautifully shaped as Fujiyama in Japan, Mount Cook in New Zealand, or Mount Moyon in Luzon. The mountain rises directly up from the plain. The plain is level, with only here and there a few pebbles or bowlders in sight. It is perfectly smooth except for these mighty windrows of lava, containing hundreds upon hundreds of millions of tons. The rock looks as though it had been broken into pieces by the hammers of giants and piled up by some intelligent force. It is a wonderful sight.

Andes Form Geological Garden

I have seen all of the great mountain ranges that wall the western side of this continent. The Andes are said to be the last of the great mountain masses shoved up out of the sea; and of all the highlands they are in many respects the most wonderful. From Panama to Patagonia they form a mighty geological garden such as can be seen in no other part of the world. The combinations of desert and rocks and sky give scenic effects beyond description. Parts of the Andes are more desert-like than the wilds of Arabia or the Sahara. They show you how the earth was made, and the terrible throes involved in its making. At times you seem to be traveling upon the very bedrock of the world, and again as though old mother earth, in her original nakedness of bare rock, were laid out before you upon the dissecting table. The walls of broken lava of which I have been writing are perhaps 300 feet high. The stones are dark red and they are piled up in regular masses, forming altogether a whole an hundred times the volume of our excavations at Panama. In other places the volcanoes have vomited sand. Again they have thrown out deposits of rock the size of a walnut, and still again mighty bowlders of a semi-metallic nature.

All about these volcanoes of St. Peter and St. Paul the scenery is magnificent, and right between them is a low crater as symmetrically shaped as though cut out by a sculptor. This is of a dark red color.

Water from Roof of Continent

Close to the volcanoes are the reservoirs that give Antofagasta its water supply. The water comes from the roof of the continent, and the pipes, carrying it down are 193 miles long. The reservoirs are at an altitude higher than the top of Pike's peak. The place is known as the Siloli spring. It has a flow of about 5,000 tons of water per day, the most of which goes to the towns on the ocean in pipes that are eleven inches in diameter.

After leaving Bolivia, the whole way down to the seacoast is through the desert. The only green spots are the railway stations watered by the pipe-line from the reservoils above. The most important town is Uyuni. It has about 5,000 inhabitants, and it is the point where the branch road, now building to connect with the Argentine system, begins. Uyuni has also other roads to the great tin and copper mines nearby, the ore being shipped from there over the main line to the sea.

Mines of Silver, Tin and Copper

Some of the tin and silver still comes in on the backs of llamas, and that even from Potosi, which is 125 miles away. The llamas come in troops of 100 or more, and take fifteen days on the journey. A railway to that part is almost completed. A private railway connects Uyuni with the mining town of Pulacayo, which has 8,000 inhabitants. This is the center for the Huanchaca silver mines, now owned by a French-Chilean company. The Huanchaca mines are said to have given to the world near 5,000 tons of silver within the last twenty-five years, and they are still yielding enormously. The company uses electricity, getting its force from the Yura river, which has fall enough to develop 3,000 horsepower. The mines have twelve miles of tunnels, and they employ several thousand workmen.

Going up from Uyuni down to the coast, we stopped at Ollague, where a branch line runs off to the Collahuasi copper mines, said to be among the richest in South America. This branch line reaches a height of 15,809 feet; and that of Potosi, north of Uyuni, reaches an altitude of 15,814 feet. Both of these roads are higher than any other railroads of South America except the Morococha branch of the Central Railroad of Peru, from where I tobogganed down the Andes on a handcar. That line has an altitude of 15,865 feet, exceeding the Potosi line by more than fifty feet. I understand that the line from Uyuni to the Argentine will cross a pass of 16,000 feet. If so, it will be the highest railroad of the world.

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Management of Silos

(CONTINUED FROM PAGE THREE)

very light in this neighborhood, making only five or six bushels per acre, and the cost, including the labor, was $300, or $2.13 per ton. In 1912, during the summer, when Mr. Furry was feeding the silage the price of alfalfa hay was $8.50 per ton, and in 1913 the alfalfa was worth $9 per ton.

Mr. Furry's experience in feeding silage has been that it will reduce the cost of roughage fully one-half when fed in connection with alfalfa hay. On April last Mr. Furry turned his milk cows on good wheat pasture. For a few days after they were turned on this pasture the flow of milk increased, but after that rapidly began to decrease and at the end of thirty days was practically reduced one-half. It was but a short time after the cows were turned on the wheat pasture when they quit eating silage entirely, although it was offered them, that they began to decrease in their flow of milk. Mr. Furry has tried different things in feeding dairy cattle, but has found nothing in his opinion so valuable and cheap as silage. He insists that if dairymen want to get the maximum net returns from their enterprise they must use a silo.

Mrs. Mary McDonald, who is 90 years old and lives on a farm near South Bend, Ind., recently had 200 of her chickens stolen. Instead of calling for the police she attended to the sleuth work herself. On the road in front of her house she found the tracks of a crooked wagon wheel and a horse's shoe broken in an odd manner. After following the trail for nearly ten miles she overtook four men with her fowls in a wagon. The thieves were arrested and the chickens returned.

Last year nearly 100,000 boys in eleven southern states each raised one acre of corn. In the same states more than 33,000 girls each raised and canned one-fourth-acre of tomatoes. This is a big showing for the work of the government in encouraging and organizing corn growing and tomato canning clubs through the south.

It is estimated that there are 37,000 electric vehicles in use in this country, of which 25,000 are pleasure cars. Chicago holds the city record, with 2,850 vehicles.

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Iowa State Fair

(CONTINUED FROM PAGE FIVE.)

he had a hard job, as is usually the case in these large shows. In some of the pig classes Mr. Lovejoy made serious objection to some animals shown. Some questions asked the showmen in this class could not help but convey the idea that the judge thought the ages were not as represented. In this connection we wish to call attention to this matter to showmen of all breeds. We have often seen pigs driven out in the under year and under 6 months classes that appear to

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BLACK'S GRAND CHAMPION SOW.

the experienced man to be out of their class. This is something that doesn't pay.

Waltemeyer Bros. of Melbourne, Ia., were winners of the blue ribbon in the aged boar class on their boar Grand Model. This boar was of true Duroc type, having the splendid back, and was of good length, smooth and mellow. Second prize went to John Thompson of Lake City, Ia., on his 3-year-old boar. This boar showed splendid finish and depth and, considering the fact that he was a strong competitor in this class last year, he made a very creditable showing. Waltemeyer of Melbourne, won in the senior yearling class over I. E. Stieckelman of Clarinda, Stieckelman's boar lacking in length, action and scale of coming up to the Waltemeyer entry.

W. H. and A. D. Vandmeter of Williamsville, Ill., were successful in getting the blue ribbon on their junior yearling. Waltemeyer won first on their good brood sow Golden Queen 35th. This sow was sired by Golden Model 2d, dam by High Model. Later in the show this sow was made grand champion by a popular decision. Waltemeyer Bros. were winners of both junior and senior champion boars, grand champion going to Grand Model.

Chester White Hogs

The Chester White show was considerably larger in numbers than in some years past. Many creditable animals were driven into the ring, showing a material advancement in quality in this breed of hogs over what they were several years ago. We demand one thing, and that is in looking at any hog we always want to see a good foot and a good back. We do not think that the Chester White breed in general is up to the high standard of some other breeds in these two important respects. Chester White breeders in their breeding operations should pay more attention to good feet and good backs and more size of bone. They have an animal with good feeding qualities and very prolific.

The first prize aged boar shown by W. T. Barr won senior and grand champion. In the sow class Raymond E. Brown of Dunlap, Ia., was winner in the aged class; R. F. Fantz won in the senior yearlings, W. T. Barr in the junior yearlings and M. F. Black of Scribner, Neb., in the under year. The Black sow was made senior and grand champion. The making of this sow grand champion was by a popular decision, although it is considerably out of the ordinary, for an under year sow is seldom winner of the purple ribbon. Mr. Black showed but four pigs, a boar and three sows under year. This was a litter of exceptional quality, winning first on the boar and three sows under year, open, bred by exhibitor.

Hampshire Hogs

The Hampshires were out in force and made a very creditable showing. Wilson Rowe tied the ribbons in his usual efficient manner. The aged boar winner was Charles E. Bunn. This boar was afterward made grand champion of the show. The purple ribbon on this class was awarded to Roy E. Fischer of Winside, Neb. Noticeable improvement is being made each year by breeders of this breed of hogs. The shortening of the pasturns and a general strengthening of the feet as they begin to obtain a little more size and larger bone under these animals will be a material improvement.

Berkshires and Yorkshires

N. H. Gentry of Sedalia, Mo., tied the ribbons in the Berkshire class. The Sutton farm was winner in the aged boar class, afterward being awarded the purple ribbon on this animal. The Iowana farm were strong competitors in all classes. Berkshires are one of our earliest breeds; at the same time they have not in our

GOLDEN QUEEN 35TH.

opinion made the advancement they should in having good feet and short pasturns. Also, in addition to size of bone, the general run of animals in this breed would materially waste their selling qualities to the average corn belt farmer.

Three herds of Yorkshires were entered, as were some Tamworths. These two breeds are always light shows at the Iowa State fair, the average farmer in this part of the country preferring to raise more of the lard breeds in preference to the bacon type, due to the fact that corn is the main feed on which they have to depend and corn is not a good feed on which to raise bacon animals.

Cattle Department

That Iowa will come to the rescue and supply the beef needed by the warring nations can be but little disputed if one may judge by the magnitude of the exhibit of pure-bred cattle at Des Moines. It was without any question superior to any previous display seen there, and many who have followed show circuits for years counted it a record-breaker for the territory west of the Mississippi. The scarcity of cattle at the large markets of the country has awakened the small farmer to the realization that he must begin to produce calves which are to consume surplus grain and roughage. The breeder of registered beef cattle is aware of this and he is coming forward to the big shows with the idea of attracting the fair visitors' attention to sale stock. Fortunately, the week was quite cool and the heavily laden show beasts seemed to come through in nice shape. No deaths at the fair grounds were reported, although one of the Angus exhibitors lost a 2-year-old bull in transit, for which he had paid $2,005 last winter.

Beef cattle must be fitted to make a creditable showing, yet breeders would prefer to keep their animals in moderate flesh. Perhaps this may be possible at some time in the future. When one goes to the shows and sees beef cows weighing upwards of a ton in show shape, with their calves at foot weighing possibly forty or fifty pounds when several weeks old, he cannot help but wonder if the high-fitting has not proven detrimental.

WALTEMEYER'S CHAMPION BOAR.

Several years ago the Hereford people endeavored to pass a rule prohibiting the exhibition of cows over 4 years old. This would doubtless aid the producing record of many showyard heifers.

Shorthorns

Leslie Smith of Minnesota, a breeder herdsman and showman of many years' experience, tackled the difficult task of ribbon awarding in this breed. There were a total of 258 head, representing thirty-one different herds. Last year there were nineteen exhibitors with a total of 160 entries. Consequently, the show was larger this year by 50 per cent than last year. There were ten aged bulls. While the top was good, there were several individuals at the tail end of the string which were scarcely of county fair caliber. Reece of Nebraska headed the list with Whitehall Rosedale. This bull is perhaps the largest show bull of the breed in America today. He weighs 2,675 pounds and carries his fleshing quite evenly for an animal of such scale. He is typical of the English type and his scale would prove of much benefit to him in a British show ring. He was later made senior champion. Harding's Village Denmark was rated second. He is a bull of some 2,300 pounds and showed rather gaunt in the ring. This condition caused him to look a trifle rough. Some judges would disagree on the placing of this pair. At St. Joe the week before the Harding bull was placed above the Reece bull.

In the senior yearlings Saunders of Iowa headed the list with his sensational

LONERGAN'S CHAMPION SOW.

1913 calf, Cumberland's Type. This youngster weighed 1,300 pounds at Des Moines in 1913 when but a trifle over 11 months old. In January at the Denver show he weighed 1,500 and now he registers an even 1,800. For a calf of his size and bone he carries above the average quality. His skin is still pliable and mellow, while his covering of flesh is smooth and thick, although it might possibly be a bit firmer. He was later made junior and grand champion.

The senior bull calves formed a sight worth seeing. Had they been put up at public auction after the show the entire lot could easily have made a $500 average and still sold in a conservative manner. The bull Uppermill Lord was a growthy calf of good width and in the pink of condition. He looked well at the head. Miller of Missouri came second with Choice Cumberland, a dark roan shown thin. He looked a trifle narrow from either end, but put up a great appearance from the side.

There were an even twenty in the junior calves, headed again by one from the Uppermill farm, with Anoka farms of

NOTICE!

A. J. Johnston, the owner of the big Springdale 8,000-acre ranch near Springfield, Missouri, will put on the market the last of this month, 700 head of three and four-year-old steers. This is said to be the finest bunch of steers in that part of the state. These cattle can be seen on Mr. Johnston's 8,000-acre ranch near Springfield, Mo. Address A. J. Johnston, Woodruff Bldg., Springfield, Mo.

FISHERS' YATES' CHOICE.

Wisconsin an easy second on Augusta Sultan.

Female classes were scarcely so strong as the males. The aged cow, Mildred of Oakland, a 4-year-old of show yard fame as a calf and yearling, was selected to wear the blue. In the 2-yaer-olds Harding headed the list, with Lancaster Duchess 7th. She is showing in the highest bloom and was later placed as senior

REECE'S WHITEHALL ROSEDALE.

and grand champion. Of the fourteen senior yearling Kilgoure Proud Rose was chosen over Burge's Silver Mysie. There were twenty junior yearlings, headed by Kilgoure's Fair Acres Nell. This heifer was later given the junior honors. From a big class of senior calves Saunders' representatives were chosen for first and second. This was perhaps as closely contested as any of the female groups. Twenty-three junior calves were headed by Herr Bros.' Cumberland Lass, a dark heifer of ample scale, beautiful lines and a thick, even covering of flesh. Second to her stood Trueby Allen from the Nebraska herd of Rapp Bros. She was good enough to head her class at St. Joe and would not have looked out of place at the head here, the judge admitting them to be a very close pair.

Herefords

Although there were 199 Herefords as against 168 in 1913, there was not the outstanding show of this breed such as was made by the Shorthorns. Herefords seem to be content with making their big splurge at the Kansas City Royal. While the Des Moines rings were reasonably

HARDING'S LANCASTER DUCHESS 7TH.

large and the quality at the top end of each class was exceedingly good, yet the show was only a trifle above what it has been in other years. Phil Lee of Texas did the awarding, and although several former decisions were reversed, he gave very good satisfaction and held consistently to his smooth, wide-backed type, with ample scale and ruggedness. In the aged bulls Harris' Prince Perfection by Perfection went to the top, with Curtis' Don Perfect second. Imported Farmer, a bull that won the blue consistently last year as a 2-year-old, was left in the fifth place. In the 2-year-old class appeared one of the best Hereford bulls in the country at this time. This is Repeater 7th by Repeater and owned by Harris of Missouri. He is growthy, of true type, deep flank, heavy quarters, and covering all is a deep, firm layer of meat. There is scarcely an uneven spot anywhere on this bull's back. He was later made senior and grand champion. Tow of Iowa won with Disturber Jr. in the junior yearling class and later received the junior championship on him. The Davis herd of Mississippi won consistently in the younger classes. Honors were quite well divided between Harris, Curtice, McCray and Tow.

Among the females were some very praiseworthy individuals. McCray won in the aged class on Nora Fairfax, while Harris caught the red on Defender's Lassie 2d. In the 2-year-olds the judge found his senior and grand champion, Miss Repeater, by the same sire, as the grand champion bull. Tow won the junior championship on Disturber's Lassie 2d, a very smooth senior calf, possessed of much Hereford character and refinement.

Aberdeen Angus

There was a somewhat smaller show of the black doddies than in 1913. About 100 head of high class individuals formed the exhibit. Several prominent breeders failed to bring out their show herds. With the exception of the Caldwell herd from Missouri it was purely an Iowa show. The McHenry string, as usual, made a very strong showing.

Galloways and Polled Durhams

Charles Escher of Iowa pinned the ribbons on these two breeds. Classes were small, there being small displays of each Quality was good in most cases. Some of the Polled Durhams were shown without fitting and hence were handicapped in the ring.

Red Polls

There were five herds of this dual purpose breed. Elliot Davis of Lincoln, Neb., made allotments in a careful and acceptable manner. The 2-year-old Larabee bull, Teddy's Charmer by Teddy's Best of the Hanssler herd, looked worthy of the purple. Many breeders consider him one of the best young prospects in the country at the present time. Hill of South Dakota won in the senior bull calves with Martin, a deep-bodied youngster of much promise. A splendid group of aged cows was led before the judge. They looked like dual purpose for fair, with large, well-placed udders with tortuous veins leading forward to the expansive milk wells so characteristic of the breed. They were cows with wide backs, and doubtless their calves in the fattening pen would produce profitable beef.

Dairy Cattle

That dairying is a valuable adjunct to the farmer of the middle west was well exemplified at the Des Moines show Farmers from every corner of the state stood by and watched carefully as the dairy cattle were being placed. Breeders reported much inquiry for young stock throughout the week. Many who have of recent years made a success of dairying have received their first impetus to enter the business from seeing the stock of the various breeds at the state fair. Guernseys seem to be the popular cow in many

HARRIS' PRINCE PERFECTION.

regions. There were more of these at Des Moines than of any of the dairy breeds. Some 125 head were led before the judge. George P. Grout of Minnesota. Marsh of Iowa made a great showing and caught most of the blues and purples. His imported bull, Hayes Cherub 2d, an undefeated champion of 1913, was again awarded grand championship honors. Several exhibitors were there with herds from Wisconsin, while the balance were Iowans.

The Holsteins made an average show. W. J. Gillett of Wisconsin pinned the ribbons. The Genoa Indian school of Nebraska made several important winnings. Iowana Farms of Iowa captured the bulk of the big awards. Holsteins are undergoing a boom at this time and there seems to be a scarcly sufficient number of them to meet the demand from the western districts embarking in better milk stock.

Jerseys were judged by Hugh Van Pelt, as were the Brown Swiss. These two breeds were present in about equal numbers. Specimens of each breed when seen near each other certainly form a contrast. Although of about the same color, they are extremes otherwise. The Jerseys possess the fine bone and skin, meek little head and light horn of much quality, whereas the Swiss are of extremely heavy

Howard E. Coffin's Crowning Six

The new HUDSON Six-40 holds first place today because Howard E. Coffin designed it.

He is final authority on motor car engineering. For many years he has led the most important advances. Most men today will concede his supremacy.

This car is his masterpiece. He has worked for four years on it, with 47 other HUDSON engineers. And this latest Six-40 is their final conception of the ideal new-day Six.

The Typical Car

The HUDSON Six-40 is simply the climax of an almost universal trend. It shows the goal which the ablest designers are aiming at today.

HUDSON Six-40 $1,550 This Year f.o.b. Detroit

Most cars are being built lighter. But the HUDSON Six-40 is the first car of similar passenger and road capacity to reach 2,890 pounds.

All seek lower operative cost. But here — by a new-type motor — we have accomplished economy before unknown. In body beauty we have simply excelled along the lines in vogue. So also in equipment, comfort and convenience. We have added unique attractions.

And HUDSON efficiency has distanced others in the trend toward lower prices. This $1,550 is a record price on a quality car of this size.

The End of Excess

This HUDSON Six-40 marks the end of over-tax—of excess in weight, in price or operative cost. Such excess means crudity. It means wrong materials, or lack of skill, or low efficiency. Such things have no place in modern engineering.

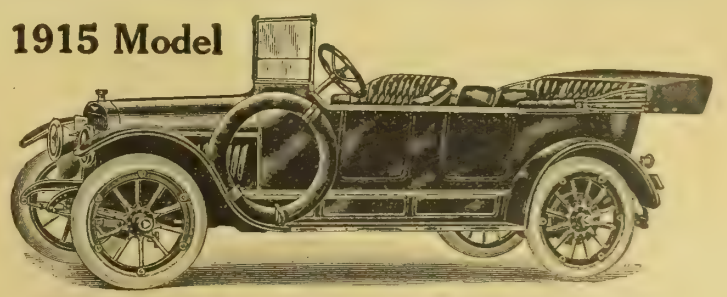
Men have come to Sixes to get continuous power. Now they are coming to lightness, to fuel economy, to artistic lines and perfect equipment. And they are demanding lower prices.

In the HUDSON Six-40 these requirements are met as in no other car of today. They are met in a car built by Howard E. Coffin, which means the latest word in a quality car.

These are the reasons why you should see this car. Its perfection will amaze you. No car in this class, in the history of motoring, has ever met such a welcome.

Hudson dealers and service stations are everywhere. New catalog on request.

1915 Model



This Phaeton body with room for six, $1,550 f. o. b. Detroit.

A perfect streamline body.
Disappearing tonneau seats.
Invisible hinges—hand-buffed leather upholstery.
Gasoline tank in dash. Tires carried ahead of front door.
"One-Man" top with quick-adjusting curtains attached.
Dimming searchlights.
Simplified starting, lighting and ignition system.
Wiring in metal conduits.
Locked ignition and lights.
New speedometer drive.
Automatic spark advance.
New-method carburetion.
Five styles of body.

HUDSON MOTOR CAR COMPANY, 8216 Jefferson Avenue, DETROIT, MICH.

bone and big joints. The head is coarse and the horn large. They should prove of value in western districts where severities and hardships are quite frequent. The Jerseys were an even lot at Des Moines. Most of them were of the finer, so-called "Island" type. The judge picked for the qualified individual of strong milking indications. The champion cow was an extreme of the milking type. She carried no surplus fat at any point of her body. Her large udder and winding veins would prove her to be a milk factory of high development.

Horse Department

All previous records as to number of horses shown were broken. Prophets had predicted a light show because of the absence of the importers, as well as a general depression in horse values during the last year. As proof that the small breeder was very much in evidence we noted that there were 171 exhibitors with horses in the barns. This was certainly commendable.

Superintendent Curtiss inaugurated a new plan of judging this year. A small program was printed, giving the day and the hour that each class would be judged. In this way all interested knew exactly when each class would be in the ring. Some of the larger classes took more time than was allotted them. However, by working until 1 o'clock each day the judges were able to get through the scheduled classes. The plan is certainly praiseworthy, as many of the visitors desire to see certain parts of the judging, but cannot afford to give all their time to this feature. By the aid of the detailed program they can plan their route in advance and thereby see all they wish to.

The judging, for the most part, was quite satisfactory. The one-judge plan was used entirely in the open classes. This method doubtless saves considerable time, although with two judges officiating serious mistakes should be out of the question. Judging horses of any kind is complicated work, to say the least. With the wide difference of opinion that exists as regards type it is hard for a judge to satisfy all the exhibitors and onlookers, even though he do consistent work.

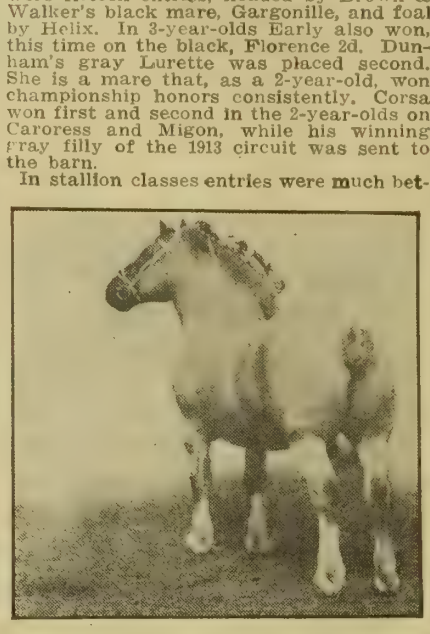
Percherons

The French drafts made a highly creditable showing, in spite of the fact that imported horses were practically negligible, owing to the outbreak of war just as the large importers were ready to assemble their purchases ready for shipment. Iowa breeders should profit by the present condition of affairs. Evidently they are expecting to, for they certainly had their colts out in large numbers at Des Moines. The American breeds made a highly creditable showing, besides what few imported horses were on hand, and were able to win consistently. This is surely proof that drafters can be developed in the United States to as great a degree as they are abroad, if we will but feed and care for them.

The Percheron judge, Ralph Drennan of Canada, was taken sick Saturday evening after judging the mare classes and Alexander Gilbraith was chosen to complete the awarding in stallion and group classes. Several placements were made in the mare classes with which the ringside failed to agree. In the aged class Early's 2,200-pound gray, Hermine, justly headed the string of eleven matrons. She moved well and stood on clean limbs, with considerable bone and quality. She was later made champion.

In the brood mare and foal class there were fifteen entries, headed by Brown & Walker's black mare, Gargonille, and foal by Helix. In 3-year-olds Early also won, this time on the black, Florence 2d. Dunham's gray Lurette was placed second. She is a mare that, as a 2-year-old, won championship honors consistently. Corsa won first and second in the 2-year-olds on Caroress and Migon, while his winning gray filly of the 1913 circuit was sent to the barn.

In stallion classes entries were much better than last year. There were seventeen led out in the aged class, against seven in 1913. Champlin & Ruppel of Iowa won first on the very blocky 2,200-pound horse Kronprinz. He showed a bit like a Belgian in the head and neck and lacked the true Percheron type of the Dunham colt, Kapon, which stood second. However, his scale and massiveness placed him up. Singmaster won third on Imperial Jalap. This horse won several prizes in France before importation. He was shown thin and looked a trifle cut in the flank, although his underpinning was of the best.



CROWNOVER'S FARCEUR.

SHIRE STALLION, COWLEY TRIUMPH.

In 3-year-olds Dunham won on an outstanding gray named Lycee. He was later made champion, with the growthy yearling futurity winner of Singmaster as reserve. A black of ample quality, but a shade light below the knees, won second in the 3-year-old class.

There were twenty-six 2-year-olds led out, and they were a good, even string, with home-bred colts far in the majority. Trueman headed the string with the toppy gray, Mazagram. He showed well at the move and was indeed a likeable horse from almost any angle. A trifle more straightness in the hind legs would have improved matters, although he carried ample support below the hock. The Singmaster colt, Malais, won the blue, while another gray Trueman colt of similar build to the first one was placed third. A colt by Jalap won in the foal class. He was young and looked a trifle leggy. However, he showed an abundance of quality and was of very sturdy build.

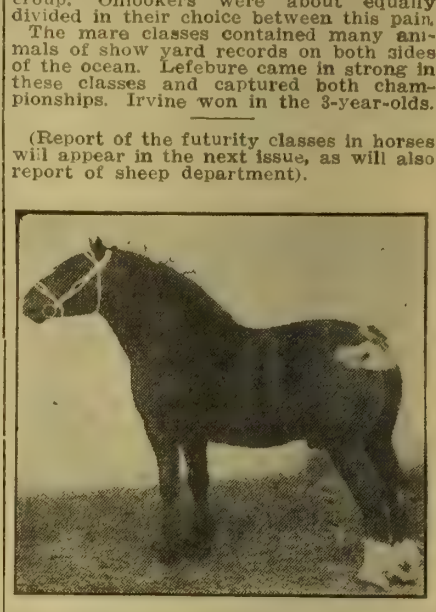
Belgians

The draft horse of Belgium is probably stronger today in the United States than in his native land. Importers at Des Moines who were just back from Europe reported the vast German army camped in the heart of the Belgian horse-breeding district and daily slaughtering large numbers of these splendid horses for their food. Probably some day the Belgian government will have to send to the corn belt for horses with which to re-stock its farms. Be that as it may, there were nearly as many Belgians at the Iowa State fair as there were Percherons. Quality was good, even in the home-bred colts, and the breed, as usual, won many friends from the ringside.

In the aged stallions Crownover won the blue on Farceur, the red roan champion of 1913, as a 3-year-old, both at Iowa and the International. He is a horse of 2,300 pounds weight and carried the quality of a Clydesdale. His hocks are the correct pattern and his beautiful cannons and ankles speak well for his endurance. The purple ribbon was justly given him when the champion class was out. There were fifteen led out in the aged class and sixteen in the 3-year-olds. The top horse was shown by Champlin of Iowa and is reputed to have been the highest-priced colt to leave Belgium this year. Eggert's colt stood second. It was scarcely so clean-cut in the head and neck, but a trifle shapelier through the body and croup. Onlookers were about equally divided in their choice between this pair.

The mare classes contained many animals of show yard records on both sides of the ocean. Lefebure came in strong in these classes and captured both championships. Irvine won in the 3-year-olds.

(Report of the futurity classes in horses will appear in the next issue, as will also report of sheep department).



PERCHERON STALLION KRONPRINZ

Where Peas Beat Corn in Fattening

We have shown the readers of the Twentieth Century Farmer cuts of wheat and oats as they grow in the above Valley. This week we show you a crop that can not be raised successfully in the middle west owing to the hot sun. In the San Luis Valley Peas grow to perfection (See Government reports on peas in the San Luis Valley and their value for feed.)

Some farmers who have always raised corn for fattening stock think nothing can take its place. But according to the reports of the Colorado Experimental Farm, peas contain one-third more fattening value than corn. This has been confirmed by the great herds of sheep that are fattened annually in the San Luis Valley, and the train loads of hogs that are shipped out all pea fed.

People who have been raised in Northern Europe or Eastern Canada know something of the value of peas for fattening stock. They will tell you they are equal to corn. Your Commission Man at the Stock Yards will tell you that pea fattened hogs command a premium in the market.

The great advantage of peas over corn is the fact that you can raise 160 acres of peas with the work you would give 40 acres of corn. They are often drilled into stubble ground, in fact that is the usual way. They are watered twice and the hogs and sheep gather the crop through the fall and winter by consuming the crop in the field. The dry open winters allow this to be done without waste.

San Luis Valley, Colorado, Excels in Soil Wealth

We are going to show you that the San Luis Valley excels in all staple products of the soil that produces wealth among the farmers, except corn, and we can prove to you that peas is a far more profitable crop than corn.

We sell this land from $50 to $60 per acre; a small payment down, balance easy annual payments. Water all paid.

We guarantee that if the purchaser will put the land in cultivation, mostly in alfalfa, that should he be dissatisfied from any cause we will re-purchase the land at $15 per acre advance over what he paid. $2,400 per quarter section.

This offer must assure you that the land is priced right and that we expect the purchaser to succeed.

Can you buy land of any one else with this guarantee. If not, write us at once for further particulars.

San Luis Valley Irrigated Land Co., 712 Omaha Nat'l Bank Bldg., Omaha, - Nebraska

PEAS AS THEY GROW IN THE SAN LUIS VALLEY, COLORADO.

Peas Contain One-Third More Fattening Values Than Corn. Thousands of Acres Are Raised Here. Hogs and Sheep Harvest the Crop in The Field.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Treatment for Ringbone

E. L. C., Nebraska: I have a horse that started a ringbone last spring and now it is so painful as to make her very lame. I used some medicine, but it was not effective. Could you advise anything to be done for her?

Answer—Any treatment for ringbone aims to grow the two bones together, between which the diseased condition consists. This means that for at least seven weeks during treatment the animal should be confined in a box stall so small as to get as little movement as possible, in order that the bones may unite. Treatment during fly time is not very satisfactory on account of the continued stamping. Treatment consists of firing, followed by a blister every two weeks, or the use of a good blister. Would advise having this fired by a competent veterinarian as soon as the flies are gone.

Red Lumps in Udder

E. L. B., Nebraska: I have a Guernsey cow 8 years old. Was fresh November 22 and had a badly caked udder when fresh, but she got all right until two or three months ago, when one of her teats became badly stopped up and small, red lumps came from it. They are about half the size of a pea and look like a seed wart, and the teats seem to bleed a little when the lumps come out. Would like to know what can be done for the teat.

Answer—Would suggest injecting every other day a pint of warm water into which has been dissolved a half teaspoonful of boracic acid. This should be left in the udder two or three hours and then milked out. A teat tuber on the end of a fountain syringe can be used for making the injection.

Requirements for Orchard Tractor

G. J., New Mexico: As a subscriber to your weekly journal the writer begs to publish the following:

In reference to tractors and their different types, I have a young orchard in the suburbs of a town in New Mexico and have searched in vain for a proper tractor, but would be obliged to get the opinion of other orchardists and manufacturers of tractors of a tractor to be constructed and used exclusively in orchards.

The proposed requirements for an orchard tractor are, first, light size, low built, not exceeding 8 H. P., two-cycle solar oil-burning gas engine built as simple and foolproof as possible.

Second, to turn within a circle of eight feet except the tools, said tools to be swung behind automatically when turning.

Third—Gang tools (two or three plows), according to depth of plowing and capacity of engine; discs, cultivator, harrow, etc., attached to be adjusted in successive steps to reach from center of tractor (between front and rear wheels) up to fourteen and one-half feet out on one side only, so that between full crown trees standing thirty feet apart the tractor travels in the center of the row, but the tools must reach out underneath close to the tree stem.

Fourth—The tools to be moved sidewise within the range of fourteen and one-half feet from the seat of the operator, so that when discing, for instance, the tractor traveling in the center of a thirty-foot row between full crown trees, the discs in four-foot width travel close to the tree stems first, and after a double turn the operator moves the disc from his seat toward the center four feet, and doing this three times the one end of the disc works underneath the tractor in the center of it, and thus in eight trips the space of thirty feet is disced, the tractor traveling always in the same center between the trees, or, if the discs were set double for that purpose, there would be eight ditches for irrigation equally spaced in four trips.

Fifth—Detachable airpump for spraying the trees.

Sixth—Axis for belt or chain to drive other tools in house and barn.

Seventh—A set of extra rubber tire wheels, also seat box, higher speed or the easy moving of the engine on another spring wagon to make a quick trip to town, or on a heavy truck wagon to haul heavy loads.

Under these conditions the tractor with its attachments should eliminate and replace horse power entirely and thereby give better, quicker, stronger and cheaper service, save the time of tending the horses, as well as the labor, interest and capital for land to raise the feed crops.

As conditions are at present there are about from twelve to eighteen different tools necessary for an up-to-date orchard; heavy wagons, light wagons, spraying engines, with pump on an extra wagon; extra tools again to seed, raise and harvest the feeding crops, resulting in waste of labor and capital everywhere.

According to the evolution of tractor manufacturing for agricultural purposes the adaptability for orchard use seems to have been neglected.

The manufacturers may claim the requirements as here explained cannot be bound into machinery or a practical tractor, but I have studied the question as a practical, all around machinist and inventor in different fields and offer the foregoing as being feasible.

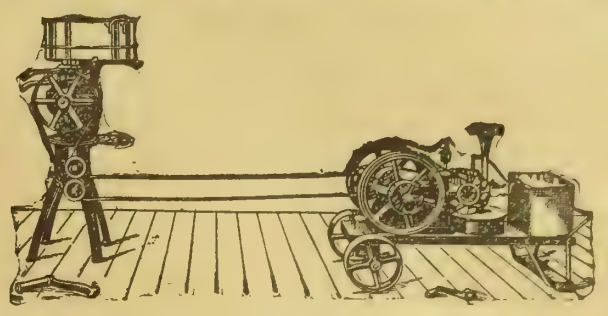
Where Knowledge May Be Found

(CONTINUED FROM PAGE ELEVEN.)

find ideas among the advertising pages of her favorite magazine. By a few moments spent each week looking through the pages where advertisements reign supreme she will be able to reduce much of her worry and labor which children in the home are almost sure to make to some extent, even while they are our greatest blessings.

ALTHEA WALKER.

International Harvester Cream Separators



THERE is money enough in the one advantage of the saving in cream and butter fat, to pay for a cream separator the first year. This is specially true if you buy a close skimming, durable International Harvester cream separator—Lily, Bluebell, Primrose or Dairymaid—which leaves less than a drop of cream in each gallon of milk.

These separators have all the points which make cream separators good. They have the balanced bowl, the self-adjusting neck bearing, the tool steel spindles, the bronze bushings, the spiral gears, the low supply can, the high skim milk spout, and the open, sanitary base, without which no separator can be satisfactory.

Some dealer near you handles I H C separators. If you do not know, write us and we will tell you who he is. We will also send you our cream separator catalogue which tells you why it pays so well to buy an I H C separator.

The I H C Line

GRAIN AND HAY MACHINES
Binders, Reapers
Headers, Mowers
Rakes, Stackers
Hay Loaders
Hay Presses
CORN MACHINES
Planters, Pickers
Binders, Cultivators
Ensilage Cutters
Shellers, Shredders
TILLAGE
Peg, Spring-Tooth, and Disk Harrows
Cultivators
GENERAL LINE
Oil and Gas Engines
Oil Tractors
Manure Spreaders
Cream Separators
Farm Wagons
Motor Trucks
Threshers
Grain Drills
Feed Grinders
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International Harvester Company of America
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CHICAGO USA
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A $30,000 INCOME

is what Springdale ranch has been bringing me yearly. In skillful hands it should yield $40,000. I am obliged to sell this notable property for I am overloaded. To appreciate my offer you should notice its location—only 26 miles from Springfield, Mo., a great railroad center of 60,000 people; 14 miles from the $3,000,000 Power Site Dam of 40,000 horse

SEEING SPRINGDALE RANCH.

power, which supplies light and power to Springfield, Joplin and all towns within a radius of 150 miles. Zinc and lead mines on all sides and borings show same to be there as well. Lands about this ranch sell for $50 per acre and it will carry a loan of $60,000. A railroad station within a mile. This 8,080 acres comprises a tract of land five miles long by two and a half wide, fenced and cross fenced with wire, six sets of buildings, fifty-six springs and live pasture nine to ten months of the year. I am feeding now on it $75,000 worth of cattle. The land will grow any crop of grain, grass, fruit or vegetables that will grow in Missouri. You will know this ranch is cheap at $30 to $35 per acre, but to effect a quick sale I offer it at $15 per acre, half cash and the balance long time at 4½%. You must see it to realize the value of my offer. I show it from Springfield in a day, an hour's ride out in an auto.

Here's a fortune for you in this one deal. Come and see and I will prove it to you. It's a matchless offer—that's sure. Write,

A. J. JOHNSTON, Owner
221 Woodruff Bldg. Springfield, Mo.

FORCED LAND SALE BY TRUSTEE

State of Colorado, } ss.
City and County of Denver. }

NOTICE

is hereby given that the CHICAGO TITLE & TRUST CO., as TRUSTEE, will sell at FORCED SALE in any size tract to suit purchaser, 54,000 acres irrigated lands, located within 8 to 45 miles of Denver, Colorado. Railway stations, schools anad roads on the tract. Well settled neighborhood. Adjoining farms this year producing both winter and spring wheat, yielding 40 to 60 bushels per acre, 4 tons alfalfa and other crops in proportion. Full paid up water rights included with each sale—abundant water. All lands shown free by auto from Denver. Low prices, ten years' time, 6% interest. FREE maps and circulars mailed on request.

Chicago Title & Trust Co.,
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Lumber, Posts, Cement, Barbed Wire, Nails. Pay after goods are inspected and found of proper grade.
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Office 208 W.O.W. Bld. Yards; 6th & Douglas

GOVERNMENT Positions are easy to get. My free booklet X78 tells how. Write today—NOW. EARL HOPKINS, Washington, D. C.

DUROC-JERSEY HOGS

IMMUNED DUROC BOARS.
35 head of Duroc Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.
F. E. MERRICK, Osceola, Neb.

HEKRDLE'S DUROC BOARS.
I have the best lot of spring boars for sale that I have ever produced. Sired by A. A.'s Model and Beauty's Wonder. A combination of the Crimson Wonder and Golden Model blood lines. Correspondence solicited. A. A. Hekrdle, Stanton, Neb.

IF YOU WANT WHAT YOU WANT when you want it, place an ad. in the Market Place of Twentieth Century Farmer.

Review of Live Stock Market

By A. C. Davenport

INTERESTING features have been almost entirely wanting in the cattle trade of the last week or more. Ruling high prices made packers very bearish and they have not failed to bear down on the market as often as conditions have been favorable. Liberal receipts of range cattle at some points and grass natives at other points afforded an opportunity for price smashing operations early in the week and there was a sharp decline all along the line. Later on in the week range cattle recovered the lost ground, but natives at eastern points have continued weak up to present writing.

It would look very much as if the market is suffering from an over-supply of common to medium grades of beef cattle. At the same time there is a great scarcity of strictly good to choice cornfed beef and prices on such cattle have ruled higher the last few days. A top of $10.90 was reached at Chicago and the wise men of the city by the lakes prophesy that the top has not yet been reached. That, however, means very little to the trade, as there are so few cattle of that kind in the country.

Not Buying Feeders

A year ago, when cattle of that class were selling around $9.00 or a little better on the basis of Chicago, feeders lost so much money that most of them resolved that they would never again do any long feeding. The result has been just as might have been expected—the markets of the country have been over-supplied with short-fed and half-fat cattle, while prime beeves have been exceedingly scarce.

There is a certain trade that demands the choicest beef regardless of the price, and it is this exclusive trade that is consuming the fancy top cattle. As a matter of course, it is a limited demand and if there were any great number of fancy cattle to be had the price would not hold where it is.

While record-breaking tops are always interesting to the general public and are exploited in the newspapers, they really cut very little figure with the stockman. He wants to know what the average, everyday kind of cattle, such as he and his neighbors have, are bringing. For his benefit it may be said that prices for the last month, taken on an average, have been very high as compared with all other months of all other years, and especially high for this season of the year. It has been a bull market and no mistake.

Taking into account the probable supply of stock for the remainder of the year, one would naturally be led to anticipate a good firm market right through to the end of 1914. It is not necessary to predict a higher market, as prices are already high. Low spots as often as receipts become large are to be expected. There is also a possibility in these times of uncertainty that something may develop to change the natural course of the market, but at present there is nothing of that kind in sight.

Hogs Forced Lower

Packers during the last few days have been executing a well planned turning movement along the right wing and have driven several wedges through the center of the lines of the allied sellers of hogs. The lines of the latter have been forced back until hogs at present writing are the lowest that they have been in a number of days. There can be no question but what packers will try to break the hog market before the opening of the winter packing season, the same as they have done almost every year since history began. However, it is still most too early for them to begin a movement in that direction. The month of September has closed with the hog market higher than it was at the beginning of the month more times than it has closed lower in the last twenty years. It is generally October before the packers really begin a determined assault on hog values. This is a year of uncertainties and surprises and it is possible that the war has already started. Packers have certainly acted very bearish during the last few days, but no one at present can tell what the future holds in store.

Good Demand for Sheep

The sheep market has not shown very much change of late. Prices broke a little some days and picked up others, with final results not much different from the previous week. As noted before, the buying demand has been good in spite of packers' complaints that the eastern mutton market has not always been to their liking.

A feature of the sheep trade is the splendid demand for feeder sheep and lambs. The country evidently feels that feeder lambs at present prices are cheap compared with feeder cattle prices and is going after them. Taking the month of August as a whole the market was in a most satisfactory condition. Prices on an average were the highest for that month in the history of the trade, and that, too, in the face of liberal receipts. Sheepmen at present are well satisfied with the condition of the trade and there is nothing in sight at present to change the air of hopefulness prevailing in the trade.

Returns From Corn Fodder

The farmer who has not as yet provided himself with a silo, but who has made fodder of a part, or the whole, of the corn crop, should look into the question of how best to feed this fodder to get the best net returns.

Every man who has ever tried feeding whole fodder knows that quite a large per cent of it is wasted. The manure from the whole fodder stalks is hard to handle in loading and spreading and does not decompose as readily as it does when cut.

The farmer who has a quantity of fodder on hand should look up the advisability of having it shredded or threshed; either method makes it much easier to feed and much more digestible. If it is shredded the corn is husked, and if threshed the corn is shelled. This valuable feed costs too much to not get the most out of it when feeding.

Sale Dates

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 15—Harry Tidrick, Winside, Neb.

Duroc-Jersey Hogs

October 2—F. B. Nelson, Lindsay, Neb.
October 17—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—Harry Tidrick, Winside, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
February 24—E. E. Johnson, Genoa, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Holstein-Friesian Cattle

October 19 and 20, 1914—H. C. Glissman, Station B, Omaha. Sale at South Omaha.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt, Neb.

WRITE TODAY For Pictures In Colors
And Full Description FREE

A Two-In-One Farm Money Saver

A corn crib or a fence! You can set up the Denning as a full sized corn crib in 10 minutes. When the crib is empty, use the material for making fences. Then use it for a crib again whenever you need it. You can do this with the

Denning Corn Crib

Self-Supporting — NOT like ordinary Wire Fencing with which Posts have to be used. Less Work! Less Expense!

The Denning comes in sections—each section 4 feet high—makes a crib 12 to 16 feet in diameter—8 feet high—1½ or 2 inches between slats. Best storage for fodder, either shredded or in full stalks. You feed the stuff right out of the crib.

Send for Illustrated Folder and Low Prices.

See how much less the Denning costs—how much handier it is than any other material.

THE DENNING MOTOR IMPLEMENT CO.
Dept. C 2 Cedar Rapids, Iowa

FREE
POWERFUL AIR RIFLE
Length 31⅞ inches. Working parts of the best grades of steel. Lever action, shooting barrel removable. Use shot or darts. The stock is finely polished walnut. Shoots small game. Powerful, accurate, durable. You can have this air rifle for distributing only 8 of our fast selling art pictures at 25 cents on our special offer. Everybody will take one.
IT COSTS YOU NOTHING to try, as we take back those you can't dispose of. Send no money, just your name and address. M. O. SEITZ, 4-D-81 CHICAGO.

One of the good Duroc-Jersey boars being offered for sale by S. M. Hinkle of Genoa, Neb. This boar is a state prize winner and is a genuine herd header.

Co-operative Creamery

If any proof was needed that the co-operative creamery system now in vogue in this country is a permanent institution, that proof can be seen, first, in the continued expansion of the territory in which they are operating, and, second, in the older creameries replacing their first buildings with ones of a superior character—buildings better calculated to perform their missions as creameries, and almost indestructible in their construction.

To those who are familiar with creamery promotion and creamery building in the early days the reasons for the cheap and poor character of construction are no secret. It was simply this kind of a creamery or none.

It can be truthfully said that the creamery, at the time of its introduction, was an institution of necessity. The farmers were not as rich as they are now. Wheat raising had been a failure; the farmers had not learned the breeding of corn, and, even if they had known about it, there was no market for it. There was really nothing that he was engaged in that was at all remunerative. He had to do something, so he took up dairying. It was a new and, so far as the average farmer was concerned, an untried field. Co-operation was not thought of, and the first creamery venture was regarded as an experiment, and the farmer was the most skeptical man of all who were interested in it. In spite of all drawbacks and obstacles the dairy business was found to be profitable. When the co-operative creamery system was introduced it found in many sections of the middle west cows a-plenty, but no farmers with a disposition to invest their money in co-operative creamery plants. The farmers had no faith in them, and they, like the first creamery, were necessary.

There had been co-operative cheese factories, and when the price of cheese went down to a price that would not warrant running a factory any longer the farmers undertook to co-operate and run it as a creamery.

This plan proved, in a way, successful, and from this start the co-operative creamery spread.

As we said before, the farmers were not as rich as they are today, and when it came to raising money to build a creamery those who were on the ground know it was an uphill job. Sometimes many months were consumed in raising the necessary amount of money, and more than one plant was abandoned for the reason that they could not raise the required amount. Even at the very best the money that was raised was never sufficient to complete the building, and all of these early creameries commenced operations with a debt on their plants.

It is not to be wondered at, then, that the early co-operative creameries were of cheap construction.

Today conditions are altogether different. The farmers the country over have faith in these institutions, and it is much less trouble to raise from $5,000 to $8,000 now than it was to raise $2,000 when the system was first introduced.

The co-operative creamery as an institution is an unqualified success. They are here to stay, and no power on earth can drive them out.—Chicago Dairy Produce.

Treating Fruit and Oats

In the orchard of L. Bridenthal of Wymore it was found by spraying that practically 92 per cent of the fruit picked was sound. The fruit on the trees left unsprayed was so poor that it was all destroyed. The owners thought it useless to determine the percentage of sound fruit. In other demonstration orchards in the state the last season the average of sound picked fruit on unsprayed trees was 10,54 per cent.

The treating of seed oats for the prevention of smut, started earlier in the season, showed a decided advantage in the treated fields over those which were not treated. On the farm of G. F. Eberspaecher of Milford, in a fourteen-acre field, one-half of which was sown to treated, the other to untreated, seed, the increase in yield in favor of the treated seed was twelve bushels per acre.—Extension Bulletin No. 27, Nebraska College of Agriculture.

LANDS—Arkansas

WHITE RIVER STOCK AND FRUIT farm, comprising 360 acres, Washington county, northwest Arkansas, on White river, five miles southeast of Springdale, on Frisco railroad; 50 acres bearing apples, 50 acres alfalfa and clover, 50 acres orchard grass and clover meadow, 120 acres corn, oats, etc., balance woods and tame pasture, all fenced into sixteen fields. Two good sets improvements, including largest barn in county; 8 springs, four wells; one mile to good inland town; 'phone and rural free delivery; good roads, high quality land; altitude 1,400 feet; good winter climate. Will sell farm or subdivide same, at $50 an acre. Libera terms, but no trade. W. R. Draper, Owner, 816 Reserve Bank Bldg., Kansas City, Mo.

LITTLE RIVER VALLEY LANDS—Rich and cheap, on railroad. Sessions Co., Winthrop, Ark.

Alabama

LAND GIVEN AWAY. SEND US names of parties renting that are able to purchase. We will deed you one acre of land for each and every one that buys. Here's your opportunity to own a home without paying a cent. Write The Marbury Lumber Co., Marbury, Ala.

California

SACRAMENTO VALLEY—GOOD land at low prices, on easy terms, is what we are offering in California. These lands are in a well improved section, with splendid railway service, and an irrigation system now serving them that is second to none in the state. Crops grown are alfalfa, grain and fruit; soil of the best; churches, schools, electric light and telephone service. Free trip to Panama-Pacific exposition to our purchasers this year. Deal direct with owners. Write for literature and all particulars. Excursion September 25. W. T. Smith Co., 1111 City National Bank, Omaha.

Idaho

200 FARMS in THE FAMOUS PARK region and Red River Valley district, Otter Tail and Wilkin counties. Level or rolling prairie land. Timber land Any size farm you want from $30 to $80 per acre. Easy terms. Otter Tail county has never had a crop failure; 500,000 acres of corn last year, making from 30 to 70 bushels per acre. Natural clover and alfalfa country. Write for free booklet and lists. Park Region Land and Loan Co., Fergus Falls, Minn.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Immuned Duroc Boars

We call attention this issue to the advertisement of F. E. Merrick, Osceola, Neb., who is offering Duroc-Jersey boars for sale. Mr. Merrick is one of our substantial breeders and has the reputation of producing hogs of about as much bone and size as the next one. He has been a most discriminating buyer of first class breeding stock and by giving particular attention to mating and feeding he has developed a herd that will take rank with any other in the country. He is offering a choice lot of spring boars for sale at this time. These boars are immune from disease and are an especially smooth, growthy lot. Drop Mr. Merrick a few lines if you are in the market for a boar, and he will tell you just what he has for sale. Furthermore, you can depend that they will be just as represented. Kindly mention the Twentieth Century Farmer when writing.

Duroc-Jersey Males

A. A. Hekrdle of Stanton, Neb., has the best lot of Duroc-Jersey spring boars to offer for sale that he has ever had at this time of the year. Mr. Hekrdle says that these boars are coming along in grand form and he will be in a position to furnish his old and new customers as well with just about anything they want. These pigs are sired by A. A.'s Model, a line bred Golden Model boar; and Beauty's Wonder by Proud Wonder by Wallace's Wonder. These pigs have not been pampered but have been grown and developed in a manner that is bound to insure their future usefulness as breeders. We will have more to say concerning this herd in an early issue. In the meantime, better get in touch with Mr. Hekrdle and find out just what he has to offer. He will treat you right and give you value received. Kindly mention the Twentieth Century Farmer when writing.

Twentieth Century Farmer reaches the homes of over 100,000 of the most representative farmers and live stock men in the country.

LANDS—North Dakota

NORTH DAKOTA LANDS, DIRECT to purchaser; crop conditions in North Dakota were never finer than now and land prices are going up. To obtain settlers along our 1,200 miles of track here we have obtained listings of several hundred thousand acres of choice lands, ready to farm, and will sell these at cost. Prices will never be so low again. Roads, schools, churches, railroads, all established. Very low excursion rates Mondays and Tuesdays. Come and see lands yourself, or write for full particulars. J. S. Murphy, Immigration Agent, Soo Line Railway, Minneapolis, Minn.

BIG CROPS AND WAR PRICES ARE putting us on the edge of an unprecedented boom in business, and particularly so in farm lands. Grain and stock are bound to be high for years to come. This will tend to raise the price of lands quickly. Our 100 improved farms were priced to sell now. You should buy before the rise. There are none better anywhere than those we offer in Pembina and Cavalier counties, North Dakota. Were they in Iowa or Nebraska they would readily bring from $150 to $200 per acre. We offer them to you at from $35 to $50 per acre, on easy terms. Mark you, our country is as well settled as where you are, and we have every convenience any farming community has, besides being closer to great primary markets. Water and drainage are fine and the country wonderfuly healthy. There is no better place to make money raising grain and feeding stock. Let me send you my booklet free. F. W. McLean, Gen. Mgr., Red River Valley Land Co., Fargo. N. D.

Nebraska

FARM NEAR OMAHA — 160 ACRES within five miles of Omaha street car line. Good improvements. No better soil in Douglas county. Has 30 acres in alfalfa, produces five tons per acre sold last season at $14 per ton. Close to alfalfa mill. Farm will rent for $1,200 per year. Must be sold to settle partnership. Price, $112.50 per acre. Address T. E. Stevens, 712 Omaha Nat'l Bank Bldg., Omaha, Neb .

Oregon

OREGON STATE PUBLICATIONS free; Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions—they will have painstaking answers. We have nothing to sell. Address Room 110, Portland Commercial Club, Portland, Ore.

Texas

FOR SALE—321-ACRE BOTTOM FARM Crops: Cotton, corn and hay. Owner, Grover Bosse, Alleyton, Tex.

Wisconsin

OFFICIAL BULLETINS CONCERNing soil, climate and crops of Wisconsin mailed free to those addressing Wisconsin State Board of Immigration, Capitol 1000, Madison, Wis.

UPPER WISCONSIN — BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

BEAUTIFUL LAKE FRONT DAIRY Farm! Rich clay loam soil, gently sloping to south; 4½ miles from railroad town in prosperous Polk county, Wisconsin, which has 37 creameries and cheese factories; over 50 acres in field and tame meadow, balance heavy hardwood timbered pasture, with excellent blue grass and clover; 8-room house, with stone cellar; in nice grove overlooking lake; remodled barn, with room for 20 head; concrete floor; granary, hog house, chicken house, etc.; all buildings newly painted. A snap! 74½ acres only $4,500; $1,500 cash down. Baker. F 67. St. Croix Falls, Wis.

Miscellaneous Lands

BIG FARM LIST FREE, WITH PHOtos; farms in many states, stock and tools included. Farmers' bargains. Buy direct from owners; their address free. National Farm Exchange, San Francisco.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87. Lincoln, Neb.

YOUNG HOLLANDER WISHES TO buy good farm or land. Y 179, Twentieth Century Farmer.

BUSINESS CHANCES

PARTNER WANTED TO GO INTO the cattle business; German preferred; 700 acres already under cultivation. Address Box 24, Omaha, Neb.

TYPEWRITERS

TYPEWRITERS AT PRICES ANYone can afford. Send us $17 for Smith Premier, $19.50 for Remington, $23.50 for Oliver. Offer good September only. Don't miss it. Central Typewriter Exchange, Omaha, largest stock in the west.

AUTOMOBILES

FOR YOUR FORD CAR—SUPPLIES direct to you. We save you the dealer's profit. Free catalogue. Write and save money. Gasolette and Fordezers. You need both. Ask us. The Ford Supply Co., 2129 Farnam, Omaha, Neb.

70 USED CARS—WE CARRY THE largest stock of used automobiles ever offered to the public. We are exclusive used-car dealers, which enables us to offer astonishing bargains. We can save you at least 50 per cent on any car you wish to buy. All of our cars are thoroughly overhauled in our own shop that we may know the exact condition of the mechanism. Write for our Bulletin No. 5, prices and large list of satisfied customers. Industrial Garage Company, 20th and Harney, Omaha, Neb.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer. Omaha, Neb.

MAKE $100 A SEASON IN SPARE time only and get all your own clothes free. Easy to get orders for men's suits with our beautiful samples and up-to-date styles. Write at once for free book of samples and styles, agents' inside costs and retail prices, full information and our big, new offer. It's a wonderful opportunity. Knickerbocker Tailoring Co., Dept. 161, Chicago.

WE WILL PAY YOU $120 TO DIStribute religious literature in your community. Sixty days' work; experience not required; man or woman; opportunity for promotion; spare time may be used. International Bible Press, 210 Winston Bldg., Philadelphia.

THOUSANDS GOVERNMENT POSItions open to men and women over 18; $65 to $150 month. Farmers have excellent chance. Write immediately for list of open positions. Franklin Institute, Dept. K 94, Rochester, N. Y.

GOVERNMENT FARMERS WANTED —Examination October 14; good salary. Write Ozment, 39-F, St. Louis, Mo.

QUALIFY FOR GOOD POSITION AT the Automobile School of Practical Experience. Write for free scholarship. Lincoln Motor School, 1025 N St., Lincoln, Neb.

POULTRY—Orpingtons

SELLING OUT WHITE ORPINGTONS. Fancy yearling hen and large young stock at quarter price—$1.50 and $2.00. A. L. Umpleby, Broken Bow, Neb.

Minorcas

FINE, BLACK MINORCAS, BUFF Orpingtons, old and young, for sale cheap. Frank A. Agnew, South Omaha, Neb.

Ducks and Geese

FISHEL WHITE RUNNER DUCKS. $1.00 each; $10 per dozen. Ida M. Oliver, Isabel, Kan.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTYthree pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned; are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

I HAVE 100 HEAD YEARLING steers for sale; also know of 8 or 10 loads of heavy feeders—Herefords, Angus and Shorthorns—that I will help buy for 50 cents per head commission. Write me your wants if in need of cattle. Harry I. Ball, Fairfield, Ia.

DOGS

FOX TERRIERS FOR SALE, ALL ages; excellent ratters. Mrs. A. M. Johnson, Clarks, Neb.

COLLIES—AIREDALES — TERRIERS. Send for list. W. R. Watson, Box 501, Oakland, Ia.

PATENTS

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., 808 F St., Washington, D. C. Established 1880.

MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

PEARS—YOU WANT THEM AGAIN this fall. Save your jars, and write Lancaster Pear Co., Rockford, Neb.

VIOLIN FOR SALE CHEAP. SENT on trial. Write Miss Bertha Mardiss, Route 5, Rosedale, Kan.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

You can find no way to invest your money and effort so profitably as in the selection and use of a pure-bred Holstein sire of good individuality. In a few years' time you can grade up a very poor herd to a profitable basis.

The Illinois State Experiment Station has been testing a herd where the average production has been increased $41.65 per cow in four years by the use of a pure-bred sire, and by testing the individual cows and disposing of the poor producers.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Secy., Box 179, Brattleboro, Vt.

JERSEY CATTLE

Registered Jersey Cattle for Sale

One bull, five cows 2 to 7 years old. Choice individuals, carrying the blood of Merry Maiden, Brown Bessie, Loretta D and (Imp.) Emanon.
Pictures sent.

H. H. HATCHER, Shenandoah, Iowa.

RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

W. F. SCHWAB, Clay Center, Nebraska.

HAMPSHIRE HOGS

HAMPSHIRE BOAR

A splendid lot of Hampshire spring boars for sale; sired by DeKalb's King 100, a son of the famous Major. They are big, smooth, growthy fellows, and are priced worth the money.
WILLIAM PAMP, Benson, Neb.

FISHER'S HAMPSHIRES

25 fall boars and 25 spring boars for sale. Sired by Winside Star, Fisher's King 5th, Tatro's Messenger and Paulsen's Choice. Prices reasonable.
ROY FISHER, Winside, Neb.

DUROC-JERSEY HOGS

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

BIG SMOOTH DUROCS

Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.
HENRY KOEHLMOOS, Pilger, Neb.

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.

GEO. W. SCHWAB, Clay Center, Neb.

CEDAR'S DUROCS

The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.

P. P. CEDAR, GENOA, NEB.

DUROC HERD BOARS

Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd headers I have them. They are out of prize-winning sires and dams. **Clarence Wallace, Wisner, Neb.**

FREE TEN-DAY TRY-ON

Ruthstein's Latest Triumph

SAVE $10 to $20 a year on shoe BILLS

ADJUSTABLE LEATHER TAPS

Make My "Steels" INDISPENSABLE

to Every Man and Boy for Every Purpose.

"Steels" mean All-day comfort to Every Man or Boy. Can be worn from sun-up to sun-down.

"Steels" do not absorb barnyard or stable filth and odors. Easy to wear--Easy to clean.

"Steels" protect the Man or Boy who can't pick his steps--make him tireless and sure-footed.

"Steels" keep the feet dry and comfortable in all weathers--Protect the Health the year 'round.

"Steels" with Adjustable Leather Taps can be worn at all times and places. They do not sweat the feet.

Health, Comfort and Economy Demand that You Wear "Steels" The Lightest—and Only Absolutely Waterproof—Workshoe

The World's Greatest Workshoe

Twelve years of untiring effort and the expenditure of a Fortune have enabled me to produce a workshoe that surpasses all others for Comfort, Lightness, Protection, Practicability, Service and Economy—Absolutely Waterproof under all conditions—in all seasons—from season to season—for town or country.

It cost more than a half a million in cash to bring My "Steels" to their present perfection and make this offer and announcement to you today. I recently spent one hundred thousand dollars to improve my "Steels"—make them more comfortable—improving every part of the shoe—and to increase my capacity to meet the tremendously increased demand. My latest TRIUMPH Adjustable Leather Taps—make my "Steels" the Only Practical, General Purpose Workshoe.

Saved Millions for Workers

My "Steels" have saved to workers more than twenty million in shoe expense alone, and many Millions more in doctor and drug bills—in loss of time from sickness or bad weather—because no man nor boy need fear to wear my "Steels" in the roughest storm—summer or winter—rain, snow, sleet, slush or mud.

Now, My "Steels" will save countless Millions more for the men and boys who see this advertisement—who will wear my "Steels."

My Steels—Best Health Insurance

Here is the only all-the-year-around workshoe ever invented. The shoe for every season—Cool in Summer—Warm in Winter—Dry and Shapely—always. They never Harden nor Waterlog, Scald the feet, Warp, Twist, or Leak.

My "Steels" absolutely protect the wearer from Rheumatism, Lumbago, Sciatica, Coughs, Sore Throat and other "wet-foot troubles."

My "Steels" are Foot-form-fitting—always keep their original shape. The Steel Sole is a Natural Arch Support. Nothing to Rub nor Chafe. Sure prevention and relief for Corns, Bunions, Callouses, Chillblains, and all Foot Discomforts.

My "Steels" are altogether the Best Investment you can make, Best for your Health—Best for your Comfort—Best for your Pocket-Book.

Leather-Tapped "Steels"—My Masterpiece

The Adjustable Taps of my New Model "Steels" are of firm, solid, special Process Leather, firmly attached to the wonderful sole of thin, wear-resisting, springy steel that has made my "Steels" the World's Greatest Workshoe.

Leather Taps Instantly Replaced

Then, when worn, the Leather Taps are Instantly Removed—Instantly Replaced by anyone—at home. The cost of New Taps is small—but 40c, for a full set of better-wearing, more solid leather than is ever put into the best all leather workshoes. They last three times as long as any other taps.

The Ideal General Service Workshoe

Here—At Last—is the Ideal Shoe for every Man or Boy. Not alone for the Farmer—not alone for the Dairy, Stock or Creamery Man—the Fruit or Vegetable Grower—but for Everyone who Works or Plays—Indoors or out—in City, Town, Village or Hamlet—Forest or Field or Range or Road or Pavement—on Mountain or Plain—in Factory or Mine—for Mechanic, Laborer, Soldier, Shopman, Sportsman—for every man who Does Things—for Every Worker.

My "Steels" stand Alone—Supreme—The Greatest and Best General Service Workshoe the World has ever seen.

"Steels" in All Sizes for Men and Boys

"Steels" run in same sizes as ordinary leather shoes and rubber boots—and in all heights. Sizes for Men 5 to 12. 6, 9, 12 or 16 inches high—for Boys, Sizes 1 to 4, 6 or 9 inches high.

You Must Try My "Steels"

You cannot begin to realize the True Value of my "Steels"—you cannot know the height of Shoe Comfort, Economy and Protection—until you try and wear my "Steels."

You know, and I know, that the day of the Leather Workshoe is passing—that you must find something better—more Comfortable—more Lasting—more Economical—that leather workshoes are getting lower in quality and higher in price every year—that cheap workshoes are cheaply made—that even the most expensive will not last one full season.

My "Steels" are higher in grade and lower in price than any other workshoe—three to five times better value for less money.

This Book FREE

Let me send this book to you by mail, postpaid. Read it and learn more of this great shoe with the sole of steel—the shoe with the light, springy, airy "step"—the shoe that rests your foot naturally and comfortably—always holding its perfect shape—never a "run-down" heel, broken arch, warped sole, worn toe, twisted uppers, or cracks or leaks. Before you think of buying a pair of workshoes, get this great book of shoe facts and learn about this wonderful, foot saving sole of seamless steel. Do not think of turning this page until you have sent for this free book.

Try "Steels" Ten Days at My Risk

I have spent a Fortune to MAKE GOOD every claim and every statement made for my "Steels." You cannot prove their worth to you unless you try my "Steels." You cannot profit by my years of effort if you lay aside this paper before writing to me.

I do not ask you to take my word nor the unstinted praise of the Million wearers of my "Steels." I'm Asking you to TAKE YOUR OWN JUDGMENT—the evidence of your own Senses.

Just TRY my "Steels"—just send the Coupon or a postal—ask for my FREE BOOK—ask for FREE DEMONSTRATION — FREE TEN-DAY TRY-ON--in your own home—on YOUR OWN FEET.

Don't lay this paper aside until you have done what I ask—for your own good—for the sake of your health and general prosperity. You already know my reputation—ask any Banker—any Express Company or the Publisher of this Paper—they'll tell you I am absolutely reliable.

Send Postal or This Coupon.

N. M. RUTHSTEIN, The Steel Shoe Man,
Dept. 56, Racine, Wis.

Dear Sir:—Please send me, postpaid, your free book "The Sole of Steel" and full particulars of your Free Ten-Day Try-On Offer without cost, risk or obligation to me.

Name.....

Street or R. F. D. No.....

Town..... State.....

N. M. RUTHSTEIN STEEL SHOE MAN
Dept. 56, Racine, Wis.

U. S. Factory, . . Racine, Wis.
Canadian Factory, . . Toronto, Ont.
British Factory, Northampton, England

ALSO manufactuer of the "World Famous Scientific Shoes" FOR DRESS AND GENERAL SERVICE.

I HAVE THE GOODS

Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

MR. DUROC BREEDER

Are you on the market for a herd boar? If so, write me just what you want. I have them sired by Lucy's Select, Proud Wonder Jr. and other top boars of the breed.
L. J. KUZEL, CLARKSON, NEB.

HERD BOARS FOR SALE

Will sell my herd boar Crimson Wonder 10th, also several fall boars sired by him and a few by Colonel Tippy. Here are some real herd heading propositions and I am pricing them worth the money.
See Me at State Fair.
S. M. HINKLE, Genoa, Neb.

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

BERKSHIRE HOGS

BERKSHIRE HOGS

60 spring pigs by Longfellow's Premier, Autocrat and others. They have plenty of size, stretch and bone. Prices reasonable.

GEO. PORTER, STANTON, NEB.

POLAND-CHINA HOGS

IMMUNE POLAND-CHINAS

A choice lot of Poland-China spring males for sale. Sired by Blue Valley Oak. They are the big kind, with quality. Everything immune. Prices reasonable JOHN NAIMAN, Alexandria, Neb.

HOLSTEIN CATTLE

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.
DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

AYRSHIRES

LOVELAND FARM AYRSHIRES

for sale, sired by Garlands Success. Can also spare a few females
The largest herd of Ayrshire cattle in the west. Several choice young bulls
LOVELAND FARM, R. F. D. No. 1, Station B, Omaha, Nebraska

PERCHERON HORSES

To get a really valuable sire it is a big saving for you to buy at this time of year a growthy young stud from my big bunch registered Percherons 1, 2, 3 and 4 years old. They have uncommonly large bone and in pasture condition are developing to immense weights like their imported sires and dams. Farm raised and farm priced. Just east of Omaha.
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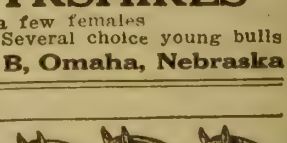

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TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, September 19, 1914 | Number 719

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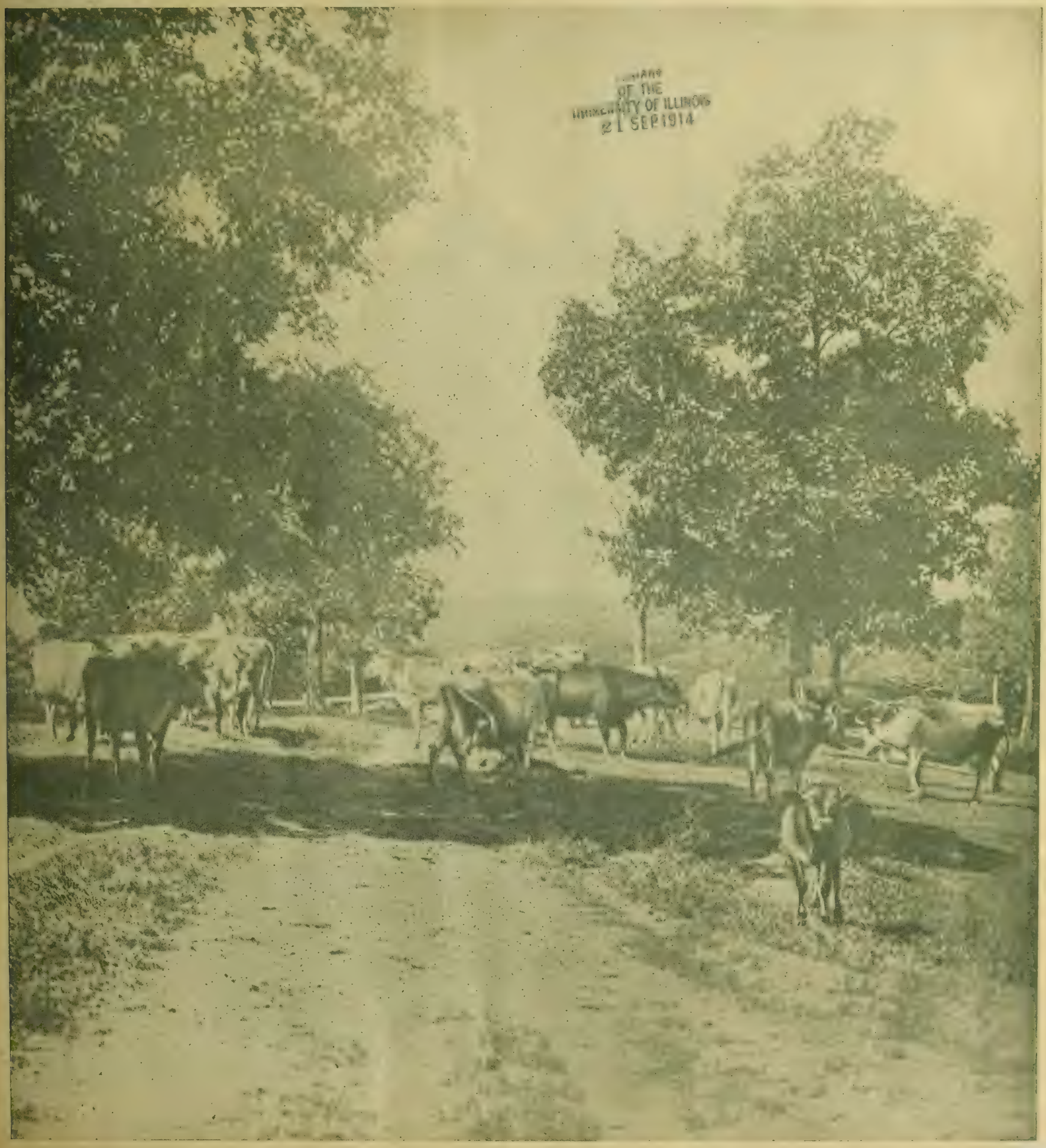

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The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Points in Regard to Protection by Paint

Outlay in Building Material May Be Lessened by Proper Application of Paint

FARMERS are compelled to pay considerably more attention to the matter of building material than they did several years ago. Lumber is steadily but surely advancing in price, and it is but a question of time when our farm buildings will be largely built of some other material than lumber. Building material costs at least 40 per cent more than it did ten years ago. The supply of timber is being rapidly diminished.

A very large per cent of the farm buildings are now constructed of lumber. Many of them are being well taken care of and many of them are not. Too many of our building owners do not pay enough attention to the protection of their present buildings by the use of paint. It is a common sight in traveling through the city and through the country to see buildings that show signs of never having been painted or that were painted some ten or twelve years ago. These buildings received one, or perhaps two, coats of paint, and since that time have stood all the knocks of the weather without this necessary attention.

Many building owners regard the matter of paint as an expense, but the truth of the matter is it is an asset. In all our calculations we must differentiate between an outlay of money for an expense or an investment. Too often in many lines is the outlay of money necessary for something that will do us a real good—when it is called an expense. The outlay of money necessary to paint the buildings on any place is not great, and is much less if painting is done regularly and with good material.

Investigate Different Brands

In using paint the quality of material is something which should be taken into consideration. There are many kinds and brands of paint, selling for as many different prices. The owner of the building should make such investigation as is necessary about the different brands of paint before making his purchase, and should by all means buy a good paint, although it may cost him a great deal more than an inferior article that may be priced to him.

The time the painting is done has considerable to do with its wearing qualities; consequently the value of the job. Under no circumstance should the building be painted when it is wet or damp; the boards should be perfectly dry. Just now is a good time of year to paint the buildings. Many farmers are not badly rushed with other labor and can do this work themselves, thereby saving the hiring of high-priced mechanics to do this work. The lumber is generally well dried at this season of the year and in condition to absorb the paint readily.

Some paints, when used over damp surfaces, do not crack or peel, but are so porous that moisture passes through them. Such paint is not fit to paint with, for it stands to reason that if it allows moisture to pass through it from the lumber it will also allow moisture to pass through it to the lumber; consequently it fails to do the work it should do.

Many farmers in having their buildings painted give the job to some experienced painter for so much money, he to furnish all material and labor. It is all right to make this kind of deal provided you know the kind and quality of paint he will use. It stands every man in hand to be careful of the quality of paint used. He is paying out this money for a purpose and should not fail to accomplish the desired results by getting a poor kind of material.

Paint for Protection

The storms of winter have a bad effect on unpainted or poorly painted buildings. Too many amateur painters are careless in the stirring and mixing of the paints before using them. Paint should be thoroughly mixed with oil before starting to apply. If it is not thoroughly mixed the proper covering and protection will not be had. True, it takes a little longer to do this, but it is time well spent.

Many buildings are painted which have been sadly neglected; consequently the surface is rough and the pores open. In such cases it is well to mix with the first coat a little additional linseed oil and spirits of turpentine. Care must be taken, however, to have both the turpentine and oil pure and not use some worthless duplicate which is often offered for sale.

The first coat should be well brushed out in order that the best results may be obtained, as it is a foundation for the succeeding coat, or coats. Much better results can be obtained by giving two additional coats and brushing them out well than by giving one heavy coat.

Too many dollars are thrown away all the time by not making the necessary investment in paint to preserve the material in the building. Without doubt many buildings that have become unfit for use would still be in practically first-class condition if a sufficient amount of paint had always protected the pores from the weather. We know farmers who make a practice of giving all of their buildings a good coating of paint every two years. On these farms you will always find things in good condition. The buildings look neat and clean, the stock is well taken care of and implements always in the shed.

We cannot too strongly urge the making of the necessary investment to keep the farm buildings well painted. It is a good time to begin now and keep it up in the future years.

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Men's Opinions of Men

Impossible is a word only to be found in the dictionary of fools.—Napoleon.

The man with a cheerful disposition doubles his power.—Newell Dwight Hillis.

Every man feels instinctively that all the fine sentiments in the world weigh less than one fine action.—Lowell.

Many a man who is wise in weeding his fields has no sense in cultivating his own heart. —Country Gentleman.

A man makes no noise over a good deed, but passes on to another as a vine to bear grapes again in season.—Marcus Aurelius.

It is not work that kills men; it is worry. Work is healthy. You can hardly put more upon a man than he can bear. Worry is rust upon the blade.—Henry Ward Beecher.

We should be as generous with a man as we are with a picture, which we always give the benefit of the best possible light.—Ralph W. Emerson.

Another Successful Fair Held in Nebraska

If Fairs Are Milestones, the 1914 Show Indicates Much Progress Made in This State

NEBRASKA had a good fair this year, in spite of the heavy rains that threatened to drown the live stock exhibitors, National Guards and others who were encamped on the grounds. Fortunately for the spectators at the fair, the rain fell at night, and the days were exceptionally pleasant. The grounds were remarkably free from mud and, with the exception of one day, the races were not interfered with, though the track was heavy enough to prevent any records from being broken.

It was evident that the visitors enjoyed the fair to an unusual extent and appreciated the freedom from heat and dust. Some were no doubt kept away by fear of getting caught in a storm, but there were enough to fill the grounds and buildings comfortably and make a good showing at the gates. The attendance for the week was, in round numbers, 135,000. This was 7,000 in excess of last year and only 31,000 behind 1912, the banner year. Nebraskans are to be congratulated on their loyalty to their fair in spite of bad weather.

Those who have visted the Nebraska fair year after year had a pleasant surprise when they saw the new agricultural and horticultural building. This is one of the largest and best planned buildings on any western fair ground. It is skylighted, making it possible to park the center. A central fountain is surrounded by a green lawn laid out with artistically planned flower beds. Gravel paths through this lawn and around it lead to the tables spread with fruits, and the agricultural exhibits are arranged at the sides. The horticultural exhibit was a large one and an indisputable proof that Nebraska is an apple state. The improvement in quality and quantity in this department in the last few years shows the result of organization among the growers.

While the agricultural exhibits are interesting, they are not as educational as they might be made. They are all county exhibits and are more expressive of the skill of some particular farmer working under exceptional circumstances than of the resources of the county as related to the average farmer. The individual exhibit plan as seen in Iowa might be adopted by Nebraska to good advantage.

There is a wide balcony completely around the agricultural building. This is lined with benches, where one may rest and look down on the lawn and fountain below. One of the most pleasant features of this building is the delicious odor of fruit and grain that rises from these exhibits to the balcony. The balcony is utilized for the baby show and the educational exhibits. An unusual interest was shown in the handiwork of the school children, perhaps due to the fact that it was well displayed.

Better Babies

As usual, the Better Babies department was a center of attraction. Crowds surrounded the glass compartment in which it took place at all times when there was an examination in progress. Arthur Lloyd Van Gordon of Gresham, the champion baby, had the remarkable score of 100 per cent. There is so much space on the balcony of this building and the space given to the babies is so small in comparison with what might be utilized, that it is to be hoped that next year this popular and valuable department will be allowed to occupy the entire west end of the balcony, thus giving more room for the attendants to move about and allowing the spectators a better chance to observe what is going on. In other words, the arrangement is all right, only there ought to be more of it.

From an amusement standpoint the Nebraska fair was the best ever held. There was no midway. This has always been the most undesirable feature of the state fairs, and we are very glad to see that it is being generally done away with. Lincoln Beachey and his aeroplane were the center of interest in the amusement line. On the days when the clouds hung low he soared out of sight behind them, to reappear in an unexpected quarter. His loop-the-loop performance was a wonderful one, not to be described, and made the spectators hold their breaths.

Billeter's American-Bred Percherons, Yearling, Two-Year-Old and Sire

Rapp Bros.' First Prize Calf Herd

Nebraska University Exhiibts

The State university contributed largely to the success of the fair. Their exhibits in the various departments were worthy of close examination. One building was given up to them and was constantly filled with interesting visitors, who were most courteously entertained by the students and instructors in charge. Prof. Condra's moving picture show was well patronized and much interest was displayed in the films showing the development of various industries in the state.

It is to be hoped that by next fair time the implement dealers and the fair management will be able to come to some kind of amicable settlement of their difficulties. This was the only disappointment experienced by fair patrons. Many of them hastened to this part of the grounds, formerly so well filled with the newest models in farm machinery, only to find that there was very little on display this year. The heaviest losers by this lack of display we believe were the implement dealers themselves. We heard many remark that they always waited until fair time to decide on their purchases in this line for the coming year, and that they came to the fair expecting to be able to see these machines at work.

Live Stock Exhibits

The Live Stock show at the 1914 Nebraska State fair was probably more of a breeders' show than at any previous state fair for many years. The breeder and farmer who raised and produced the animals, in most of the breeds and classes, was there showing what he had been able to do along the lines of producing better live stock.

The horse show demonstrated that Nebraska farmers were producing a decidedly better class of horses than were being raised on Nebraska farms some years ago. While power for farm other than horses is to some extent being used by farmers generally, the right kind of horse is selling at very strong prices, and we are pleased to see farmers generally recognizing the fact that good animals can be produced from which good prices can be obtained.

The cattle show was one of the largest and best for several years, especially in the beef breeds. Herds of cattle were shown by exhibitors from the different states, but Nebraska breeders were strong competitors in nearly all classes.

The hog show, while not quite as large as in former years in numbers, probably exceeded in quality, taking all classes of all breeds into consideration, any former show held on the Nebraska State fair grounds.

The sheep barns were overflowed and room had to be found for the sheep in other departments. This, like the other departments of the live stock show, was a breeders' show.

One thing that impressed us was the general satisfaction given by the judges in all live stock departments. Little, if any, real kicking was made by exhibitors. We want to congratulate the management of this fair on their wise selection of judges in the different divisions of the live stock show. The importance of good, competent judges for live stock at these fairs is too often underestimated. The beginner in breeding any breed of live stock is desirous of starting right, and consequently looks at the individual and blood lines of the winners at shows. If careless or incompetent judges are passing on the awards, very often a beginner in breeding live stock starts wrong and does not succeed as he expects, and in a year or two he is out of the business, brand it as a fake. Too much importance cannot be placed on the selection of judges in these live stock shows.

In practically all classes of all breeds the one comment at the ringside was quality.

Horse Department

In keeping with the display of other live stock, the 1914 horse show must be credited up as one of the best yet seen upon the Lincoln grounds. Some breeds of drafters were represented by but few animals, but Percherons were there in large numbers and of superb quality. The seven inches of rain which fell during the week emphasized the need of new stables for horses. Had the week been dry, the roofs would have proven very satisfactory; as it was, there was considerable trouble caused by water dripping down on horses, decorations and feed. The night of the big rain a current of water some eight inches deep flowed through barns four and six. Judging in this department started Monday noon and continued until Thursday evening. As is customary, the classes were called just as they come in the premium

lists. This meant the judging of Percheron stallions and mares Monday afternoon and Tuesday. Many breeders were on hand to see this showing; however, there were others who arrived the middle of the week and found the drafters all judged.

Thursday afternoon was devoted to the judging of five gaited saddle horses, ponies in harness and ponies under saddle. The Coliseum was packed to the limit while this was going on and the event began to resemble one of the night horse shows, such as are put on by many eastern and southern fairs. The Shetland show this year contained many individuals of the highest merit, and they were shown to the very best possible advantage by trained showmen.

Percherons

As has always been the case at Nebraska, the Percherons composed the major portion of the draft horse show. Classes, especially of stallions, were large and, taken as a whole, the quality was very good. In 1913 the entire show was made by Nebraska importers and breeders, while this year it was quite largely a breeders' show, with most of the entries from Nebraska, augmented by several strong herds from Iowa and Kansas. Undoubtedly, the breeder of registered draft horses is about to have his inning in this country and Nebraska horsemen took advantage of the splendid opportunity afforded by the State fair to display their stock.

Each class of horses was grouped at the barns by Assistant Superintendent Daniels and then led to the Coliseum in a string. This not only attracted attention to the Coliseum, but also made it much easier to get the horses through the crowds as they went down. Fortunately, no accidents of any consequence occurred during the week, either to attendants or onlookers.

There were twelve aged stallions shown. Of this number several were sires which had gone by their show days, but nevertheless were good individuals. Fox's Carnot, Jeun, headed this class. He is scarcely as fresh as a year ago, at which time he was champion at both Iowa and Nebraska, although he is a closely coupled, clean-limbed horse of correct draft and Percheron pattern. Second to him stood a somewhat smaller horse from the Eggert stables. He is a black of exceptional quality and a very true mover. The Rhea horse, Samson, received the third prize. This is a thick-set black of extreme draftiness, but lacking a bit in style and ambition. The large McMillan entry, Agitator, stood fourth. Samson won first in the American-bred class, while Agitator was second. The thickest Bosquit horse owned by Lee Bros. stood next. He is a very drafty chap, but moves a litlte wide and was shown out of condition. A promising gray of considerable quality received the final ribbon.

Three-year-old stallions proved to be the sensation of the show. There were fourteen of these and they were good from the head to the foot of the class. It is doubtful if there ever was so uniformly good a class of stallions shown at Nebraska. Exhibitors of many years' experience, who have followed this fair since its inception, seemed to be unanimous in their praise of this splendid group of horses. The Rhea colt, Phoenix, was placed at the top of the string over Lee's blue-roan Rheinhardt. The former coupled up a trifle better in his back and stood straighter on his hind legs, although the roan colt proved to be the better mover by some margin. Eggert stood third with a drafty gray named Lezard. The toppy black Fully from the Rousselle stables stood next. He was as good of body as any horse in the class and put up a nice show when moving; however, he was scarcely as growthy as those above him.

There were fifteen 2-year-olds led out, and while they were not of as uniformly good quality as the 3-year-olds, still when it is remembered that they were all American-bred colts the class must be credited with being a good one. The tail end of the group fagged out just a trifle more than it should in a state fair ring. The MacMillan gray, Valyor, was acceded the blue. A black called Cononel from the Kelley stables stood second. This colt was shown thin and green. He is a diamond in the rough, and care and handling should make him an invincible 3-year-old. A gray belonging to Billier, of much ruggedness and drafty throughout, was rated third. He is built close to the ground and possesses considerable character about his head and neck. As compared with the colt above, he showed scarcely so strong a foreleg. Another black from the Kelley string landed fourth. He is a shade steep of croup, but stands on clean, well supported limbs.

Yearlings generally prove to be a good class at Lincoln. This time there were eight good, growthy colts in the line. Billiter pulled the top, with Rhea a close second. The latter colt might have headed the string but for being a trifle up on his back ankles at the time he was shown. He is a very heavy-boned colt; with a strong top and plenty of frame to make a shapely 2,200-pound horse at maturity. The Billiter entry was scarcely so smoothly turned and might have been a trifle deeper of flank, but his cleanness pulled him to the top. Lee won third on a black of quality, but scarcely the substance of the colts above, and he also secured fourth, this being on a close-knit gray of smooth build, but scarcely growthy enough.

Mare classes were not so strong as a year ago with the exception of the 2-year-olds. Of these there were fourteen. The big, black Burdine from the Kerr stables headed the list here. She was third in a strong class of yearlings in 1913. An extra well carried top, with beautifully joined neck and shoulders, plus a very feminine head, marks her description above. Her front limbs are placed squarely and her feet are of a shape and size which should remain sound for years. Behind she should be a bit straighter as you view her from the side, although she carries ample support just below the hock to brace the joint properly. MacMillan's Greylette, a filly lacking in breediness and style, but standing on four sound limbs placed under her body where they should be, was given the red ribbon. A chocolate gray of great action and quite acceptable stamp was placed second. She outmoved the mare above and carried more scale and bone, but a tendency for her back to be carried low detracted very much from hersymmetry. Kerr's little black Mascine, junior champion in the American-bred classes a year ago, was rated in fourth place. She is still as smooth and tidy as at that time, but appeared scarcely so growthy as the ones above her.

In championship classes competition was keen. The aged horse, however, was placed over the 3-year-old for senior honors. MacMillan's 2-year-old was junior champion. In the Percheron society specials Jeun was made grand champion of the show and 3-year-old Phoenix was declared winner of reserve honors.

In mare classes champions were somewhat easier to locate. The 2-year-old Burdine was given the junior and grand championship, while Kerr's aged mare Fransetta was senior and re-

(CONTINUED ON PAGE SIXTEEN.)

Cost of Doing Without Necessary Things

By L. H. Cobb

WHILE one should use care and judgment in expending money for tools, buildings, appliances or conveniences they need, there are many people who make their economies in these lines very expensive. When deciding the need of something that has appealed to you as desirable, take every phase of the subject under consideration except "good luck." Never get the idea that chance may protect you where you should protect yourself. It is an expensive economy to wait until after the horse is stolen to buy a lock for the barn.

I have in mind one farmer, and I have no doubt there are others, who realized there ought to be a double fence between his pasture and his neighbors, or some kind of fence that would not be dangerous when the horses insisted in fighting through it. Two horses being practically ruined by wire cuts did not suffice to convince him that luck would not protect him, and it was only after a valuable horse bled to death from a wound in the leg that the matter was attended to. His loss was many times the cost of the fence, and still the fence had to be built.

A man whose wife raised a good many chickens could never see the need of buying good material for coops. She was expected to make old barrels and boxes serve. She had a regular loss, from vermin and chill, of nearly half her flock of young stock from the time they were hatched until large enough to put in the hen house to roost. The profit on these, if grown to maturity, would have built her a splendid equipment, as would the money expended for feed for the dead chickens. This same thing goes on from year to year, and no arguments can convince him. His mother got along very well with boxes and barrels, so he thinks his wife ought to.

Another farmer who had a splendid herd of grade cattle, when range was good and the country new in Oklahoma, just after the opening, and when the wheat fields supplied good winter pasturage, never provided any winter feed except the wheat strawstacks. When the range ceased to be of value, most of the land being under cultivation, he still depended on his wheat straw and growing wheat fields. In one winter, when the wheat fields had not made much growth, he lost fifteen head of cows, and many more lost their calves. Feed could not be purchased, and before his cattle could get grass enough to eat they had become so weak they could hardly get up when down, and he had let them pasture the wheat crop so close that he failed to get half the average crop of the locality. He was certain there would not be two such seasons in succession, so the same thing was repeated the next year, and when his herd went on grass again it took them all summer to regain lost strength and they put on very little flesh.

This year he sowed millet, planted kafir and cane and secured a meadow to mow for hay. He also had a good stack of oats straw, so his cattle hal plenty of roughness, but they never again were pointed out by passers by as a good herd of grade Shorthorns. They were stunted and dwarfed and scraggy, and he had lost heart in them to such an extent that he sold them for very little more than the mortgage he placed on them to buy feed the years he raised none.

Thus it goes all along the line. Probably a bolt is missing from the harvester and it was not noticed until you had hitched to it, or it may have come out in using. It would take a couple of hours of your time or the hired man's to go to town. Time costs money now, and there is a chance that by wiring up you can carry it through, as the strain is not great on that particular part. Thus you argue yourself into staking your machine, or at least many times the amount of repairs now demanded, and a day or two of time from the harvest field waiting for the repairs, all on the chance that the weak part will not give way in the field and cause a general smash-up of the machine. Your horse runs a nail in its foot and you fully realize the danger of such a wound. You know you ought to have it attended to, but veterinary services come high and lots of horses have run nails in their feet and never been the worse for it, so you stake the value of your horse on the chance he will escape lockjaw, and probably lose him. We are all gamblers by nature, the instinct being born in us, and it is a strong man who can effectually master it.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
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Wasn't it Ben Franklin who said, "A penny saved is a penny earned"? Now comes along a wiser man even than Franklin. "A penny saved," he says, "may be a nickel lost. All depends upon how it was saved."

Some people evidently do not really want to have their advice taken. In one of the most shoddy looking and poorest printed "family" papers that is admitted to the mails, we read in an article in regard to care of the eyes, "Avoid poorly printed books with poor paper and poor type."

The men who have allowed alfalfa, clover, sugar beets and other crops to mature seed are either wise or fortunate. A good many of us are going to be surprised when we come to buy seeds for the coming year to find how hard they are to get and how high the prices are.

Unless the runts can be "brought out of the kinks" soon after they are noticeable in the herd, it is best to put them in a pen by themselves and crowd them a few weeks, selling them at the first opportunity, as they make too slow gains for the amount of feed consumed; and besides, these weak, scrubby fellows are the very first ones to contract any disease infesting the country.

Live stock raising is an important industry on the Pacific coast, and they are breeding some splendid specimens of pure-bred stock out there. Perhaps one thing that has given such an impetus to the raising of fine stock in this district may be found in the Pacific International Live Stock exposition, which is held in Portland December 7-12. They offer over $15,000 in cash premiums and yet make no entry charge for fees, stall room or admission.

Too Busy to Read

The man who thinks his time is too valuable to waste upon reading articles relating to his business is not the man who makes a success in life. "He is a familiar type," says Printers' Ink, "the fretful, fussy man who imagines that he is about the busiest fellow in town. He often dumps in the waste basket unwrapped copies of business or technical magazines that contain valuable articles bearing directly on his problems. He fondly believes that he is too busy practicing to bother with what others are preaching.

"The trouble with this type of man is that he has not learned that the real executive is the man who so plans his work as to leave a reasonable amount of time for reading and planning.

"There are shoals and breakers ahead and when the accumulation of new ideas cease, the man who declares he has no time to read is unconsciously advertising his small caliber, his slavery to detail, his arrested development."

This is as true of the farmer as it is of the merchant. One life is too short a time in which to make every experiment. Only by profiting by other people's failures and successes can we advance quickly. And the farm and trade papers are the mediums by which reports of these experiments are spread.

Does It Pay to Raise Corn?

Yes, it pays to raise corn from the general standpoint of the corn producer. It pays to raise corn as a feed crop to be fed out on the farm to the farm animals. Sometimes, but not always, it pays to raise corn to be fed out to the feed yard animals, bought in the stocker markets of the country, to be finished for the beef, pork and mutton supply. It does not, however, follow that the marketing of the corn crop through the feed yard always pays. There are many contingencies entering into the feeding of live stock for the fat market that influence for or against a profitable sale of the feed used in this way.

The feeding of live stock in the sense of fattening for their slaughter is more or less speculative. The fluctuations in prices of meat-producing animals are beyond the control of the producer and cannot be governed at all times; in fact, it is scarcely reasonable to suggest that the feeder can exert any influence over the market that will result in his increasing prices or holding prices up.

It pays also to raise corn for the elevator trade, for the commercial markets of the country. Of course, this takes the product off the farm, but not any more so than in oats, wheat, rye, barley and other grain or seed crops. The wheat is always sold off the farm, the straw left; the corn is sold and the stalks left, and yet in this act no one has accused the farmer of insanity, because he did not feed his wheat on the farm in place of selling it to the grain trade.

It is the diversified uses to which corn can be put that has popularized it as a farm crop. The farmer, when he plans to plant his corn acreage each spring, does not necessarily have to decide beforehand how he is going to market it. He knows that he has a safe, sure, merchantable crop when it is matured and in the crib. It is easily stored and may be carried over winter without any special danger of damage. It is a crop of many uses and demands. There is no other crop that equals it in this respect. In a commercial and manufacturing sense it is needed by the millions, the distillers, the manufacturers of food and feed products of every conceivable kind. The low grade and damaged grain is used for the manufacture of denatured alcohol. There is practically no loss in the commercial crop by lack of condition. Its greatest value, however, is to the breeder of cattle, where the fertility is kept on the farm and there is no chance of loss in the gamble of buying high-priced feeders and then selling the finished cattle at a low price.

Fall Feed Prospects

The discouraging features of dry summer weather very frequently wind up with the most flattering prospects for an abundance of fall pasture. This situation may be said to exist now over a very large area of the farming and grazing country of the west and middle west states. Good rains have fallen quite generally over this country, and the results are being reported of rapid grass growth everywhere. Hill and valley, meadow and pasture, are springing into new life, and carpets of green are developing at a rate never excelled by the month of May. The autumn shower has usually been a down-pour of rain, in many instances approaching destructive cloud bursts, but on the whole a blessing to the dry districts, where pastures had become short and insufficient for grazing.

The present outlook gives a picture of abundance of fall pasture that will be the means of cheapening winter feed for the farm and range stock; a condition that will add increased interest to the present desire to buy and own more cattle. The outlook for higher prices in beef cattle has created a country demand for last spring's calves that seems to have no limit. The bidding for a good grade of beef-bred calves for October delivery has attained $35 per head in Nebraska. The calf market may be said to be within the range of $25 to $35, with plenty of buyers from among the cattle raisers and cattle feeders who are willing to buy and hold or buy and feed.

The abundance of corn, silage, alfalfa and hay, supplemented by a big growth of fall pasture makes the calf a very tempting object for crop storage.

We saw a picture the other day showing a farm house in ruins. It had been the property of a Belgian farmer. One night he retired, the owner of several valuable horses, a fine herd of Holsteins, wide fields with ripening crops and a comfortable home. When morning dawned these had all been swept away. And there are thousands in Europe who have had the same experience.

Lord Bacon wrote, "Books do give forth directions too much at large unless they be bounded in by experience."

New Blood in Herds

The mixing of breeds, or what is more commonly termed cross-breeding, is not a safe or profitable venture. In the first place, it destroys the breed character of the animals produced. It would be impossible by breeding from this produce to get back to the quality of animals used as a starting point, no matter how hard the effort. You have started on the road for the production of scrubs.

Intensive breeding, free from close inbreeding, is responsible for the high standard of our pure bred animals. The mixing of breeds is claimed, by its advocates, to be an advantage, occasionally, invigorating and strengthening the constitutional properties in the animal. This may be the result, but the same results can be obtained within the blood lines of the breed aimed to be improved.

Cross-breeding is a sure source of destroying established family characteristics of breed that it has taken generations to create and bring up to a high degree of excellence. This destruction of type and sameness in the family of any special breed is a serious matter. The uniform herd has a convincing influence associated with it that is fascinating to the eye of the stock fancier; it sells animals when all else fails. Does this mixing of breeds prove of lasting advantage, or does it revert to injury in later results? It would be hard to find a practical breeder, a breeder of intelligence and recognized good judgment, who would endorse or recommend such a course to the owner of pure bred stock of any kind.

The purchase of a good sire of the same breed, if intelligently selected, will instill vigor and correct weaknesses, just as certainly as the introduction of a sire of different breed. If the breeders of stock who are failing in getting good results in their breeding operations, and who are thereby weakening their herds or flocks, would employ a skillful breeder to select sires for them, there would be no need of mixing breeds, and the talk of breeds running out and degenerating would soon be a thing of the past.

There are many swine raisers, sheep raisers and cattle raisers who have no fixed type or breed of animal in their mind. They are ready to buy a sire of one breed this year and turn him in with their herd; next year they will try another breed, and so on until they lose breed colors and characteristics and become dissatisfied with their entire stock. This class of stockmen are the promoters of the scrub, and so long as they persist in their practice of indiscriminate use of sires of various breeds, there will be scrub stock. Uniformity in a herd is a strong feature in values. It is an attractive feature to buyers, and the pleasing of a buyer's fancy is half the bargain in making a sale. Select the breed that most nearly suits your fancy, and when started stick to the breed and strive to improve it by careful selection of sires.

Belgium last year exported 28,000 horses. A large proportion of these came to the United States. There will be a big shortage this year to be made up.

First Hand Stock Production

What better advice can be given the farmer at this time than to lay in as liberal a supply of breeding stock as he has feed to carry over to next spring? Prices are going to advance along all lines of farm animals—horses, cattle, hogs and sheep. Prices for breeding stock must go higher and higher, until the female calf will pay better as a cow than to be sold as a calf for veal. This is the only logical solution to the query, "What can be done to stop the slaughter of the heifer calves that we may be able to increase the beef cattle population of the country?" As long as the calf offers the greatest money incentive to the producer the dealer will get the calf, and the herd-building industry will lag and be insufficient to satisfy the demands.

This principle holds good in all kinds of meat-producing animals. It is true in the increase of the flock. The choice young ewe lambs should always be set aside for future breeding purposes. This is the only way that improvement in quality can be attained. The breeding of stock is surely a money-making proposition at this time. New herds and flocks are being started and old ones replenished, and to an extent made new. This is a good time to cull out all undesirable animals and replace them with better ones. The owning and breeding of higher class animals each year is one of the means of money-making on the farm. It is conceded generally that good stock can be bred cheaper on the farm than bought and placed there. It is the natural way among farmers and land owners to produce and sell to the feeder, dealer, trader and consumer. Become a producer from the strict meaning of the term. Buy only what the farm needs, must have, but cannot successfully or profitably produce.

Substitutes for Pasture

The feeding season will soon be here on many farms; in fact, it scarcely ceases on some farms. The realization of the need of feeds has not been sufficiently brought to the attention of many farmers and stock raisers, so dependent are they on the grass, the pasture of the spring, the summer and the autumn seasons. As long as grass supplies the daily demand of the farm animals there is little concern or care as to the balanced ration or what the cow is to have for her next feed. From the kindness of Providence there is supplied in the pasture grasses about the best balanced ration that has been formulated, so far as discovered and introduced to the public. But this feed has its season of luxuriance of growth and supply, and substitutes must be introduced to take its place. What shall they be?

Dry cured feeds have from the beginning of time been regarded as the proper winter substitute for the succulent pastures. Cured grasses are the main feed for winter use, and when intelligently handled have no equal. There is a demand, however, for variety, even with the grasses in their green state, and this demand becomes greater with the animals as the cured grasses show damage and injury by neglect or improper methods of curing them for feed. The greener and nearer the grass conditions the hay can be cut and cured, the better it satisfies the animal appetite. The tendency is to get nearer and nearer the requirements of the animal, because this has been found most profitable. It is not so much what the animal can be forced to eat as what it can be fed to induce gain and profit. When all owners and feeders of farm animals get down to this practical proposition of feed supply there will then be crops grown and feed supplies put away for the winter use that will as nearly as may be take the place of the pasture grasses.

The silo must eventually come into such general use as to provide largely for this. It is one of the means of supplying a substitute for the herbage of the pasture. The use of vegetable crops of the various kinds which have keeping qualities that will justify their storage in root cellars or caves made for the purpose offers a solution in part to the better wintering of farm animals.

The winter shrinkage that is so generally found among the animals on most farms is the greatest source of loss in connection with farm operations. This loss alone amounts to millions of dollars annually to each state that is to any considerable extent engaged in the live stock business. It will pay to grow and harvest feed crops that will hold up the flesh and health conditions that the animals acquire while on grass.

We are in receipt of the annual souvenir edition of the Hereford Journal. This issue should be in the hands of every man who is interested in this breed. It contains a short history of the breed and gives much interesting information in regard to the leading Hereford breeders of the present day, as well as pictures of champions, past and present, and articles in regard to them.

Large crop losses are prophesied by the government next year from the white grub. This is the immature form of the May beetle or June bug. Where these insects have been numerous during the last two years farmers are urged to plow their fields in September or October and turn hogs, turkeys or chickens in onto the freshly plowed ground. This is especially important where potatoes or corn are to be planted.

Tire Attacks

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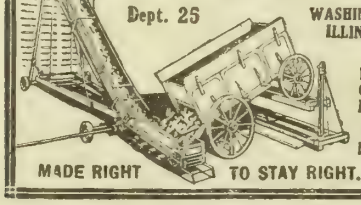

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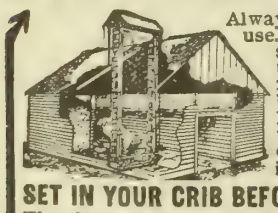

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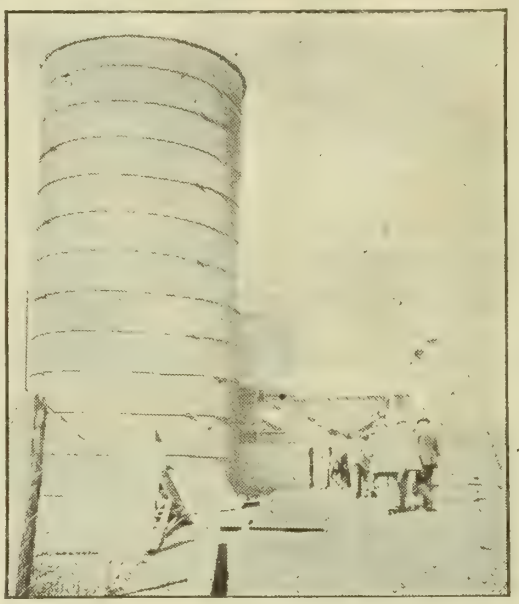
Silos in the Ranch Country

What Farmers Near Alliance Think of Them

A Pit Silo Under Construction by William Mundt

THE Commercial club of Alliance, Neb., realizing the value of the silo and the desirability of getting the farmers and ranchers in Box Butte county more familiar with this very useful part of the general farm equipment, planned and carried out on July 27 and 28 a very successful silo excursion demonstration.

Accompanying the farmers on this trip were Prof. W. C. Andreas of the Nebraska Agricultural college, F. W. Chase of Pawnee county, Nebraska, a farmer having had years of practical experience feeding silage; C. S. Hawk, farm demonstrator of Dawes county; J. B. Lampson, who is connected with the agricultural department of the Burlington system, and E. Z. Russell, associate editor of the Twentieth Century Farmer.



Silo and New Barn on the Schill Farm

The start was made from the Commercial club headquarters at 9 o'clock in the morning. Seventeen automobiles filled with farmers and a few business men made the first stop at L. J. Schill's. Mr. Schill but recently moved onto his present place. A silo was built the first year. A large barn is now being built adjoining the silo. Mr. Chase spoke here about the general use of silage, answering many questions asked by the interested farmers and ranchers.

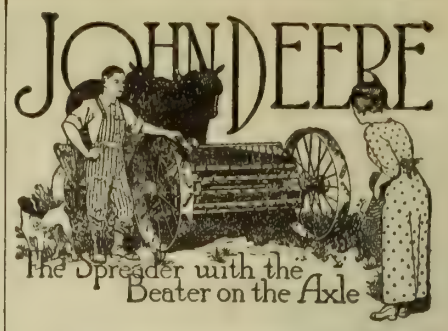
The next stop was at E. W. Grigg's farm. Mr. Grigg has a nice bunch of Holstein cows and is paying particular attention to dairying. Mr. Grigg is a renter, but to show what he thinks of a silo and silage as a feed we need but to say that he is at once going to rebuild his silo, which was recently blown down in a severe storm.

The silo received another boost at the home of Gottlieb Sidler northeast of town. Mr. Sidler said people laughed at him when he built his silo; told him silage is good only for cattle; that it would kill horses and told him he was foolish. However, he says that silage has proved even more than silo promoters had claimed. He says it is the best feed for cattle that he knows of; that his horses are alive and thriving on it; that calves eat a whole lot of it and that his chickens feed on it and lay the year round. He estimated the cost of filling his 100-ton silo at 65 cents per ton during an ordinary season and says he feeds about twenty pounds daily to horses and cattle.

A practical lesson in cow judging was given at the Frank Baur farm, Prof. Andreas showing the important points to be taken into consideration in selecting a dairy cow.

The next stop to many of us was the most important one of the day. Lunch at the home of E. D. Blair was enjoyed to the limit. Mr. Blair has a silo in wh'-h was some silage from filling in 1912. The quality was good. It was brought out here that

Part of the Autos in the Trip and Silo at F. Seidler's



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Omaha, Nebraska.
Over 100,000 farm families read it.

silage could be kept indefintely if properly put into the silo and taken care of as it should be.

We found William Mundt making a pit silo of considerable size, 20x 40. It will be cemented to the dirt when completed. This country is well adapted to the building of the pit silo. At this place Mr. Chase spoke of the practicability of the pit silo and explained some of its advantages, telling how to arrange for removing the silage from silos of this type.

At Fred Crawford's a pit silo 20x32 feet was examined. In constructing his silo Mr. Crawford put in a six-inch concrete wall down six feet, then for about fifteen feet the cement was plastered on the dirt, the balance of the wall being the soil itself. This silo has been in use two years and Mr. Crawford expressed himself as being more than pleased with his experience in feeding silage.

Mr. Lampson of the Burlington made an interesting talk here. He told of two pit silos, 18x40 feet, which the railroad company is constructing at a cost of $120 each, and stated that he knew of 100-ton silos being built for a total cost of $50.

W. J. Johnson is contemplating the erection of a bank or side-hill silo, the land adjoining his feed lots being such as to make the putting in of this kind of a silo practical. At Mr. Johnson's the party disbanded.

At every stop a short talk was made by some of the men of the party and interesting questions were answered and discussed.

These trips we believe very beneficial. The farmer having no practical knowledge of the silo or the value of silage as a feed finds out what he wants to know from the man who is using silage in his own locality and gets practical knowledge from men who have made the subject a study for years.

The Alliance Commercial club is to be congratulated for its push and energy in arranging and carrying out this trip. They are broad enough to see that the prosperity of the farmer must come before their prosperity is possible. Much credit for this successful trip is due to W. D. Fisher, the untiring secretary of the Commercial club. A recent letter from Mr. Fisher says that at least five silos are now being built as a result of the trip. On the second day the start was made from Hemmingford. Stops were made at the farms of C. E. Wiltsey, Barney Halbur, Emory Abley, W. M. Robinson, P. K. Christensen and Chris Hansen. There were not quite as many cars out the second day, but the members of the party were deeply interested in the silo question.

The territory covered in these two trips is not what is termed a good corn country. However, corn of good quality is raised, the stalks not being so large as is raised in the eastern part of the state. The corn raised here will certainly make the best of silage and we look for a very general use of the silo in Box Butte county within a short time.

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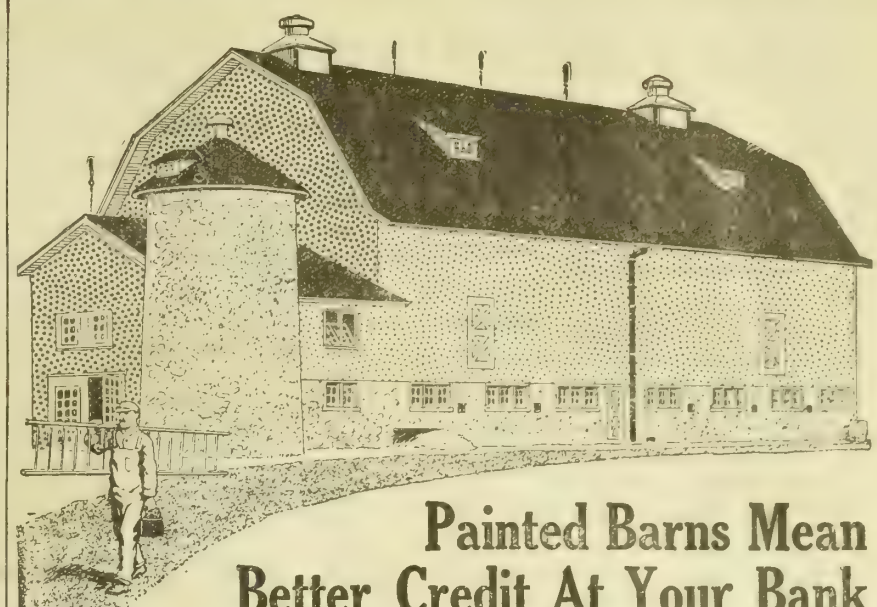
tt is estimated that there are 37,000 electric vehicles in use in this country, of which 25,000 are pleasure cars. Chicago holds the city record with 2,350 vehicles.



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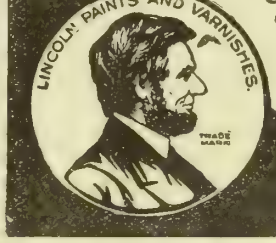

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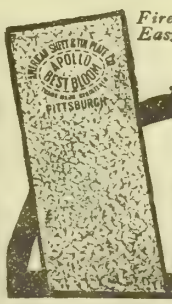

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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

The Boy Who Studies Botany

The boy who studies botany will find he has at need
Advantages to make his playmates envious, indeed;
No boy or girl should ever "call another names," of course.
But learning and a memory lend one's language crushing force.

The incident I have to tell contains, I fear, no moral
Unless the line above be one. Two playmates had a quarrel.
Young Wilfred studied botany—he wasn't very big;
The taller, Joe, I grieve to say, had called his friend a pig!

The boy whose aunt had coached him well in botany grew red.
"A pig! You say that I'm a pig?" indignantly he said.
His lofty glance lent meaning to the scathing words that follow:
"At all events, I'm not a gamopetalous corolla!"

The nonplussed Joe could only stare as Wilfred turned away—
His ready wit had left his foe without a word to say!
Observe! He was not "calling names," as only rude boys do,
What Wilfred said to Joseph was indisputably true.

The boy who studies botany will find it useful, very,
In just such an emergency, with such an adversary.

* * * * * * * * *

A minor difficulty, though, has just occurred to me—
Suppose the other fellow should be studying chemistry!
—Robert Emmet Ward in St. Nicholas.

What a Walking Stick Is

"My goodness!" exclaimed Rose, "what a horrible beast!"

"What is it?" asked Harry.

"I thought it was a little stick on that oak leaf, but when I picked it up it turned out to be alive."

"It was a devil's walking stick, then," said Harry, "for they look exactly like tiny twigs and they live in the trees, especially oak trees. Let's find it and take it to Uncle Jack."

"Find it yourself," said Rose, quite politely, "I don't like its looks or its name."

"It won't hurt you," said Harry, "and I want to add it to my collection of specimens, for it isn't a very common insect. Here it is, or another like it, anyhow."

The two children found Uncle Jack in the dairy barn, helping with the milking, but very willing to talk as he worked.

"You are right as to its name, Harry," he said, but that is not a very good specimen. Some of them are as much as three inches long and look exactly like little twigs, with legs for branches. Most of them are brown, like this one, but they are also gray and greenish, matching the color of the bark on which they live."

"They are hard to find," said Harry, "and there don't seem to be many of them."

"No, and it is a good thing there are not," said Uncle Jack, "for they eat the leaves of the trees, especially oaks, and if there were many they would soon have the trees bare of leaves. They are so protected by their shape and color that even the sharp-eyed birds often pass them by."

"Do they dig holes in the bark for their eggs?" asked Rose.

"No, they just drop them out of the trees onto the ground. They are laid in the autumn and lie hidden by the fallen leaves all winter. Each egg is shaped like a bean, only, of course, much smaller. It is black, with a white stripe down one side. At one end it has a hinged cover, like your mother's old silver smelling salts bottle, and when the little walking stick is ready to come out in the spring it opens this tiny door and just walks out."

"Really?" asked Harry, who sometimes found it hard to believe all the wonderful things their uncle told the children about the insects they found.

"Yes, truly," said Uncle Jack. "The young insects live among the grass and bushes at first, but as they grow older and larger they become ambitious and climb up into the high trees."

"Why are they called 'devil's' walking sticks?" asked Rose, "especially since they don't sting."

"That is just a favorite name for everything peculiar," said Uncle Jack, picking up a full bucket of frothy milk and starting toward the separator house. "The country is so full of natural curiosities named for that gentleman that you might think the American people especially admired him."

HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Prize Story.)

The Kildeer's Trick

By Mabel Ruhl, Aged 14, Douglas, Wyo.

One day while we were in the mountains I was walking down the road, just thinking, when my attention was attracted by two little birds that seemed to be in great distress. One of them seemed to have a broken wing and the other one was in such a state of excitement that it just flew toward me and then back to its fluttering mate. I followed them for about a fourth of a mile to see if I could catch the wounded one and help it any. I could tell by their cries that they were kildeers and by their plumage that the wounded one was the female. Not knowing the kildeer's trick, I was very much surprised that when we got out of the district of their nest both arose and flew away.

(Honorable Mention.)

Old Faithful

By Viola Caprez, Aged 12, Wal Kan.

About four years ago we were living on a farm about half a mil from a creek which ran through grove. Sometimes mamma an papa and my dog and I would g down to the creek and take a lunc and fish all day. One day pap went fishing in a boat. Abou 6 o'clock I saw a boat coming tha way, so started down to the cree with my dog and sat down on a roc and put my feet in the water.

Then the boat turned down strea and I started to get up, but the roc turned and I fell in the water an would have drowned, but that m dog jumped in and dragged me ou onto the bank and stood beside m barking. He did not want to leav me because I was senseless. A littl boy who had seen the whole scen ran and told my mother and sh came down and got me. Since tha time I have called my dog Ol Faithful.

Picture Contest No. 17

Write a verse of four lines about this picture. Each of the two children writing the best verses will receive a book as a prize. The verse must be original. In awarding the prizes consideration will be given to writing, neatness, construction of verse and the originality of the matter. Try to say something the others will not think of. Often the verses, while good, are all very much alike. Give your name, age and address. Verses should be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha. All verses must reach this office not later than October 17. Awards in Contest No. 16 will be announced in the next issue.

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To Become Chauffeurs and $75 to $150 per yourself for a pay- into business for best school. AUTO Experts. Mechanics get month Equip ing position or get yourself Largest. New building, big machine shops. All types of Autos Electric starting and lighting systems. Free catalogue.

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Special Offer

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LEARNING THINGS

We Are All in the Apprentice Clas

When a simple change of die brings back health and happiness th story is briefly told. lady o Springfield, Ill., says:

"After being afflicted for year with nervousness and heart trouble I received a shock four years ag that left me in such a condition tha my life was despaired of.

"I got no relief from doctors no from the numberless heart and nerv remedies I tried, because I didn' know that coffee was daily puttin me back more than the doctors coul put me ahead.

"Finally, at the suggestion of friend, I left off coffee and began th use of Postum, and against my ex pectations I gradually improved i health until for the last six or eigh months I have been entirely fre from nervousness and those terrible sinking, weakening spells of hear trouble.

"My troubles all came from th use of coffee, which I had drun from childhood, and yet they disap peared when I quit coffee and too up the use of Postum." Name given by Postum Co., Battle Creek, Mich

Many people marvel at the effect of leaving off coffee and drinkin Postum, but there is nothing marvel ous about it—only common sense.

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The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.

—sold by Grocers.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

THE success of poultry raising depends upon our ability to keep the birds thriving and free from disease. One of the most serious obstacles to profitable poultry keeping is the effect of disease in arresting the productive activity of the flock and in lessening the number you could raise if it were not for some disease of which you cannot understand the nature. As long as the flock remains healthy there are few or no questions raised by the poultry keeper. He understands all the needful details of his business, but when certain ailments creep into the flock he is at sea and nearly helpless, for in most cases he merely knows the flock is off, but the why and wherefore of the ailment putting the flock out of its normally healthy state is a puzzle to him.

Respiratory Diseases

The most common diseases are the diseases of the respiratory and digestive organs. The respiratory organs take on formidable diseases in the way of colds, simple or contagious; pneumonia and bronchitis. Congestions and inflammation of the lungs and air passages are quite common in flocks that are given damp houses and allowed to scratch in wet litter.

Simple and Malignant Catarrh

In the simple form of catarrh the bird gapes, sneezes and a watery discharge appears in the nostrils. There may appear a snoring sound in the throat at night, or in the worst cases the fowl may wheeze like one with asthma. The fowls may present a droopy appearance if the depression is deep. This form requires but little medicine. Stimulating food, a tonic and dry quarters will effect a cure. In the malignant form, designated roup by most poultrymen, the discharge from mouth and nostrils becomes thick and bad smelling, ulcers and cheesy deposit show in the throat and mouth, the eyes swell and may burst. Quarantine and antiseptic treatment to mouth, throat and eyes and keeping up the strength with a tonic treatment are the main helps in this.

Bronchitis and Pneumonia

Bronchitis is a severe inflammation of the trachea and bronchial tubes. While there might be a discharge from the nostrils, as in simple catarrh, yet, as a rule, the inflammation confines itself to the windpipe and bronchia. The bird soon becomes listless, and here we have the real wheezing and whistling sound in the throat, and great difficulty in getting a full breath. Warm, dry quarters must be provided and the bird fed a soft mash food. Steaming the throat with boiling hop water at frequent intervals, with ten drops of turpentine internally in a large tablespoonful of castor oil, quite often cuts the attack short. Pneumonia in fowls is usually preceded by inflammation of the lungs induced by severe changes of weather to which the fowl is exposed. A difficulty in breathing, great thirst, drooping feathers, extreme lassitude and quick death are the usual symptoms and their speedy end. Place the bird in a warm, quiet room. Steaming the throat with burning tar, or turpentine burned on hot lids, with quinine, two or three grains a day, and forcing linseed tea down the throat, are recommended as best remedies.

Digestive Diseases

The following diseases belong to the list of digestive troubles in fowls—catarrhal stomatitis, pip, inflammation of the mouth or catarrhal stomatitis, inflammation of the intestines, croupous angina and diphtheria—this last being considered in a bird as due to some digestive trouble as its first cause. The digestive diseases are mainly due to errors in feeding, or eating poisoned or moldy foods.

Pip is simply any one of the forms of mouth inflammation. In these troubles the mouth and tongue seem literally to dry up and thicken. The system of the bird must be toned up with any good fowl tonic, and plenty of soft, nourishing food given it. The mouth may be moistened with glycerine until the thick membrane loosens and comes off.

Thrush, canker and chickenpox bear a close resemblance in many cases. Tonic treatment, good food and washing the mouth with boric acid, thirty grains of the acid dissolved in two ounces of water. This must be applied frequently.

Croupous angina is caused first from an inflamed condition of the trachea and crop. White sores appear on the inflamed surface, the bird seems to be suffering from croup, the heart fails and it dies instantly. It is caused by eating bad food or drinking filthy water. Inflamed crop is found in fowls that have eaten of poisonous foods, dead rats or other putrid animal stuff; picking at painted boards or any corrosive stuff such as quicklime, or something too heavily salted.

Poultry Notes

If you have earth floors in your poultry house, after scraping off the top layer douse the ground thick with some disinfectant before putting on the new layer of fresh dirt or gravel.

Poultry droppings make rich ground; many a poultry keeper has made his garden plot too rich with this form of fertilizer and been forced to haul a poor grade of earth to mix with the garden soil and bring it away from its over-fertility.

After the heavy-laying duck is through laying you find that she is nearly all bone, the fat having gone into the eggs. She must gather on more fat before she can take another round at laying. If well fattened before winter, even some of the breeds that as a rule only lay in the spring may lay a while in the fall. Ducks brought on a new place in the spring often refuse to lay at all that first season through. This argues for buying breeding ducks in the fall.

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These roomy, comfortable overalls are of strongest New England denim, double-stitched throughout.

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"Private" brands (of wholesaler or dealer) cover up goods **too inferior** for the manufacturer to acknowledge under **his own** brand.

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Clean Clipper Knives bear our brand, our tag and factory brand of the Ulster Knife Co., makers of Fine Cutlery for 38 years.

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12 ounces of Germozone prevention

is worth a hundred pounds of any cure, especially in case of Chickens or Pigeons, where it is easy to treat the flock, but "some task" to doctor each individual.

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As a remedial agent, Germozone is always a good first choice in cases of Roup, Colds, Bowel complaint, Cholera, White diarrhoea, Canker, Distemper, Sore throat, mouth and eyes, Chicken pox, Eruptions, Burns, Swellings, Sprains, Sores, Cuts, Wounds, Loss of hair or feathers, etc.

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4 oz. bottle (trial) 25c.
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32 oz. bottle (farm size) $1.00.
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Sold by most Druggists and Poultry Supply Dealers

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When writing to advertisers kindly mention this magazine.

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THE ALICE--Of soft, silky Corded Crepe. The low neck is encircled with a soft white crepe frill, scalloped in silk to match blouse. Drop shoulder arm hole. This is but one of thousands of Charles William wonderful values. Lavendar, light blue or white. Sizes 32 to 44. State color and size.
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These special offers show how it is possible, at the Charles William Stores, to get your clothes, the very latest New York styles, *now* while you want them, at prices lower than ordinary end-of-the-season retail reduction.

By selling direct to you from the largest market in the world on a Low-Profit, big-volume-of sales policy, these prices are possible. For example—

$2 Shepherd's Check Dress $1

THE METROPOLITAN—Smart-looking dress of black and white Shepherd Check Serge. New kimono sleeves. Skirt is made with a rounded peplum. The square neck vest of all-over lace is outlined with graduated revers of the check, ending with two black silk tassels. Roll collar of crisp, white Organdie. Peplum, cuffs and revers are edged with black soutache braid. Invisible side closing. In black and white check only. Sizes 23 to 46 inches bust. Also Misses 14, 16, 18 years. Give size. No. 2431A1610.
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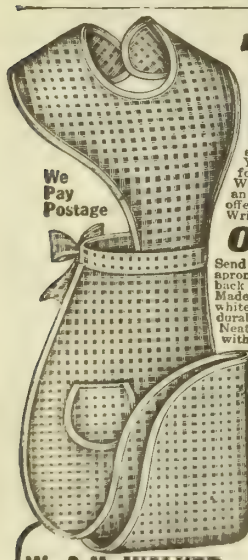

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Twentieth Century Farmer
Omaha, Neb.

WHEN COMMUNICATING WITH Advertisers on this page, kindly mention Twentieth Century Farmer, thereby favoring both advertiser and publisher.

Styles for Home Dressmaker

6842—Girls' Dress. Two materials are used in making this dress. The dress closes at the back and can be made with the long or short sleeves. The two-gored skirt has a long tunic. The pattern No. 6842 is cut in sizes 8 to 14 years. Age 8 years requires 1⅜ yards of 44-inch plain goods and 1½ yards of 36-inch plaid goods.

6818—Ladies' Waist. Cut in the new style, this waist has body and sleeves in one, a group of small tucks on each shoulder, extending to the neck edge and giving a yoke effect. A handsome Gladstone collar trims the open neck and a surplice closing is used in front. The pattern, No. 6818, is cut in sizes 34 to 44 inches bust measure. Medium size requires 1½ yards of 44-inch material, with ¾-yard of 24-inch contrasting fabric to trim.

6861—Girls' Dress. A neat frock for school or home wear, with long-waisted blouse and drop shoulder, side front closing and a puff sleeve with a deep cuff. The neck is slightly open, trimmed with a sailor collar and provided with a detachable shield with straight collar. The skirt has three gores and closes at the left side of the front. The pattern, No. 6861, is cut in sizes 6 to 14 years. Medium size requires 1¾ yards of 44-inch material, with ⅝-yard of 27-inch silk for collar and sash.

6865—Ladies' Apron. This apron is just the thing for the busy housewife, as it covers the entire dress. It closes at the back and is made with short sleeves and a V-shaped neck. The pattern, No. 6865, is cut in sizes 34 to 44 inches bust measure. Medium size requires 3½ yards of 36-inch material and 2⅝ yards of banding.

6852—Ladies' Skirt. A tailored model which may serve as part of a suit or for wear with separate waists and a loose wrap or coat. It has three gores, with the material laid in a box pleat at the top of the back and closing in broken outline in front. It may have raised or regulation waistline. The pattern, No. 6852, is cut in sizes 22 to 32 inches waist measure. Medium size requires 2⅝ yards of 44-inch material.

6859—Ladies' Dress. This dress closes at the front and can be made with either the long or short sleeves. The skirt is cut in three gores and can be made with either the high or regulation waistline. The pattern, No. 6859, is cut in sizes 34 to 44 inches bust measure. Medium size requires 2¾ yards of 54-inch material and ½-yard of 27-inch contrasting goods.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Of Interest to Our Women Readers

When School Begins

The house is still as still can be.
Except the ticking loud and clear
Of the old clock; it startles me
That quiet reigns about me here!
The cat seems peaceful; not afraid;
She sleeps beneath the kitchen stool;
And by these signs all doubt is laid—
Our little Willie's gone to school!

There's no one tumbling down the stair,
There's no one making such a noise
That I at times must e'en declare
He is the noisiest of boys.
There's no one in the jam or cake,
Or "hooking" pie that's scarcely cool.
My faith in this no words can shake—
Our little Willie's gone to school.

Yes, all the jam and cake and pie
Are there, I know, upon the shelves;
I look at them, and softly sigh—
They seem so lonesome by themselves!
There's less of noise about the place,
There's more of peace and order's rule;
But, oh, I miss a chubby face
Since Willie's gone to school!

—Selected.

Reading Matter for Children

When the long evenings begin—evenings when the family is shut into the house by the cold fall rains and the winter snows, as will soon be the case, the children find it very hard to keep still and not annoy their elders. They have been used to an active, out-of-door life, and the change to the confining walls of home and school is irksome to them.

They may manage to keep their bodies still, but their minds will be busy until they are quieted in sleep. Upon the mother falls the task of directing this mental activity, and too often it is neglected. The children are allowed to quarrel among themselves, with no restraint except an occasional, "Children, do stop making so much noise!" from an impatient elder, or they are allowed to read anything they can find, including patent medicine ads in the almanacs and the unwholesome literature that is often passed about clandestinely from child to child in school and elsewhere.

It is not hard to superintend the child's reading and evening amusements and make him so contented and happy at home that he does not annoy the grown people nor care to get away and run off to town as soon as he thinks himself old enough. Most children like to read, and an ocasional book and a subscription to a good young people's magazine will be the means of passing many happy hours, not only without injury to the child, but with positive benefit.

For the boy who is apt to devour what the English call the "penny dreadful" there are books of travel and stories of heroism that are just as exciting as the adventures of "Daredevil Dick," and much more wholesome. For the girl whose taste runs to sentimental, silly love stories there are good, healthy-minded tales of girl life written by women who understand girls and know how to make their stories satisfactorily sentimental without being harmful and silly.

This question of reading is an important one and should be more carefully looked after than it often is. "I'd buy a book for the children now and then if I only knew what to buy," say many mothers. Tell us your difficulties in this line if you cannot choose books and magazines for the boy and girl. Tell us what

style of books the children like and what their ages are and we can get you this advice from competent librarians and others experienced in choosing books for children of all ages. We are glad to do this for you upon request, as we believe that upon a wise choice of reading in early youth depends to a very large degree the character of the man or woman.

* * *

It is time to begin thinking of making arrangements for that neighborhood club that will enliven the winter evenings and make life worth living for the whole community. Mrs. Leonard gives us, in this issue, a charming picture of a club in western Nebraska, which might be imitated to advantage in other sections. You will notice in reading it that the teacher is made one of the members. When you get a good teacher there is no better way of keeping her.

HOME EDITOR.

Our Literary Society

Pleasant Valley was great on picnic dinners and programs. When they plowed the preacher's corn in the spring the ladies also gathered in the evening with their ice cream and cake, and they had a picnic and a program. They always had their mid-summer picnic and program, their harvest home picnic and program and various other occasions sandwiched in between were made the pretext for a program and a picnic.

This time it was the Literary society. All winter they had met at the school house on every alternate Friday evening, and now that the last meeting of the season was at hand it stands to reason that there should be an extra fine picnic and program to mark the occasion. An all-day meeting if you please—with a gorgeous dinner and a "do yourself proud" program. And everybody was invited—special invitations sent to the outlying ranches and friends too far away to really belong. That was another distinguishing trait of Pleasant Valley—they were overflowing with hospitality—come one, come all, and we will do you good. It was a hospitality and good will that fairly radiated from one and all—great and small.

The day happened to be windy, one of those windy days that occur nowhere but in western Nebraska, but the crowd gathered from near and from far. They came in big wagons, in buggies, in carriages, horseback and in autos—till the school house was full. Great baskets and boxes and tubs of lunch were brought in and the neighbors greeted each other and exchanged items of news of common interest. The babies were unwrapped and compared and admired and passed around among the big girls. And, dear me, there were so many of them—and the sweetest, prettiest babies that ever were seen. It was a sight to have delighted the heart of Theodore Roosevelt or any other great man. The platform at one end of the room was by common consent given over to them and to the two or three grandmas who were present, while the mothers busied themselves setting out the dinner on two long tables made of planks which Pleasant Valley keeps on hand as a permanent institution for such occasions.

And such a dinner, and so many jokes and so much good cheer. The wind blew harder and harder; outbuildings whirled merrily away over the prairie, the windows rattled and some dust drifted in through the cracks—but, dear me, the crowd didn't mind it a bit. Why, they had come, some of them ten, twelve, fifteen miles on purpose to have a good time, and they wouldn't be so foolish as to let anything cheat them out of it now—and so laughter and merriment and good cheer reigned supreme.

The great platters of chicken, the plates of lovely bread and butter, the pies and cakes and pickles and salads were passed and re-passed—there was much friendly raillery—till at last everyone was filled up to the brim, and still there was an abundant supply to be gathered up and put away before the main business of the afternoon—the program—could be taken up. Finally everything was ready—the tables had been removed, the seats put in place, the chairman and the pretty girl secretary took their places and the meeting was called to order.

Some of the babies had gone to sleep—and were covered up here and there in soft little beds made of shawls and wraps, whence they were rescued when their naps were finished and pulled out all rosy and dewy and warm, sweeter than ever. The next older ones found the front edge of the platform a convenient seat, where, with feet dangling, they made a row facing the audience, and a bright wriggling little row it was, too. Nobody minded a little disorder, though, any more than the wind—and everybody did what was right in his own sight. The program was excellent. There were songs and recitations and papers and tableaux.

(CONTINUED ON PAGE FIFTEEN.)

Our Weekly Recipe

GRAHAM GEMS—Sift together one cup graham flour, one cup wheat flour, half teaspoonful salt and two teaspoonsful of baking powder; add one heaping tablespoonful of sugar. In a mixing bowl beat one egg, add one cup milk. Mix in the dry ingredients; add two teaspoonsful of melted butter; beat thoroughly, pour into greased gem pans and bake about twenty minutes. More sugar may be used than is here called for if the family like the gems rather sweet.

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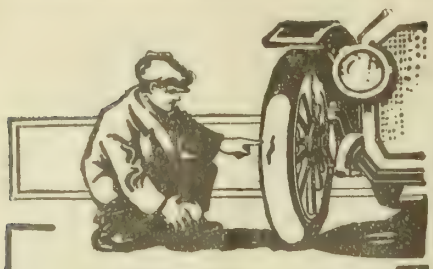

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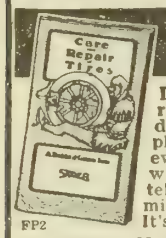

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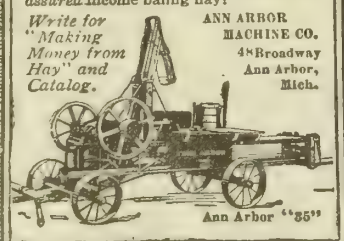

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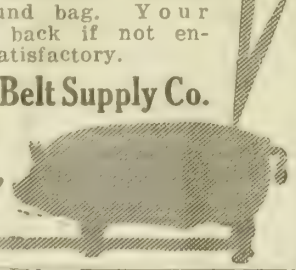

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Scenes In the Nitrate Desert

By Frank G. Carpenter

ANTOFAGASTA, Chile.—During the last two weeks I have been traveling through one of the richest lands of the world, a land that turns out more dollars than the valleys of the Nile, the Euphrates or the Ganges, and one whose workable area makes the $200-an-acre corn fields of Illinois look like 30 cents. This land is as barren as the Sahara. It has not a plant, a tree, a blade of grass, nor any green thing. It is land where one often has to go a hundred miles for a drink and one upon which the rains never fall. It is land made up of rocks, stone and sand, and of salty particles that reflect the rays of the tropical sun inflaming the eyes. It is the great nitrate fields that run through the desert and up and down this west coast from below Antofagasta to the Peruvian boundary.

For a generation and more these nitrate fields have made Chile richer than any other South American country, and today they bring to its annual revenues an amount equal to $40 for every family in the republic. Since 1889 the total revenue from nitrate export duties has been over $400,000,000 in gold, and if the present rate of production continues during the next twenty-five years the amount will be three-quarters of a billion more. Today the nitrate fields are paying from 60 to 80 per cent of all the government expenses, and, in addition, are yielding fortunes to those who exploit them.

Chief Nitrate Point

Antofagasta, where this letter is written, is one of the chief nitrate ports. It is 2,400 miles from the Panama canal, and it will soon have a procession of nitrate ships sailing northward to the United States and Europe. Today the vessels are still going around by the Strait of Magellan, and the distance thus saved will be thousands of miles. The bulk of the nitrate exports are now controlled by an American syndicate, known as the Nitrate Agencies, Limited. This company exports in the neighborhood of 1,000,000,000 pounds of nitrate a year and controls about one-fourth of the product. Its ships are always loading at the nitrate ports and starting out for the United States, Europe or far-off Japan. The syndicate has considerable British capital, but it is under American managers and its methods are entirely American. The controlling influence and largest owners are W. R. Grace & Co. of New York and London, a firm that has its nitrate deposits and factories scattered throughout the desert from here to Peru.

But first let me tell you something about nitrate of soda. It is one of the richest fertilizers on earth and it has doubled the crop of many an American farm. It is used largely in Germany, where it is employed in raising sugar beets, and in the United States, which is now buying more than 1,200,000,000 pounds of it every year. We take about one-fifth of the product, and now that the canal is completed shall probably take more. Among the other large consumers in Europe are Great Britain, France, Holland and Belgium. It is largely used in the Hawaiian Islands and also in little Japan, the latter country now importing about 5,000,000 pounds every month.

Looks Like Salt

Nitrate of soda when taken out of the ground and purified looks just like white salt. It is made up of small crystals or grains, and it is in this shape that it is shipped to the markets. It is put up in bags of 200 pounds each, and is carried from the ports out to the steamers in lighters.

The nitrate beds begin at some distance below Antofagasta and they run northward to beyond the port of Iquique, a distance of 400 or 500 miles. It is claimed that there is some nitrate in Peru, but so far the percentage has been so low that the deposits are not worth the working.

The nitrate beds are found right out in the desert. They lie at an altitude of several thousand feet above the sea, on the western slope of a range of low hills that run along the coast. They are from twenty to 160 miles back from the coast and the belt in which they lie is seldom more than ten miles in width. It is therefore not hard to get the stuff to the seaboard and the most of the haul is down hill.

The bed of nitrate is not regularly and evenly distributed throughout. Much of it is in pockets. There is one salt field in the province of Tarapaca that covers an area of more than 160 square miles, but there are others where the beds of good nitrate are confined to a few hundred acres, and the purity of the ore varies greatly.

Near to the Surface

As a general thing the nitrate is clean to the surface. It crops out here and there, and it seldom extends for more than twenty feet below the surface of the desert.

As to whence these great fields of nitrate come, there are many different theories. One is that this part of Chile was once the bed of an inland sea, and that the nitrate came from the decaying of the nitrogenous seaweed. Another theory is that the ammonia which arose from the vast beds of guano in the islands of the west coast was carried by the winds to the mainland, where it condensed and united with the other chemicals of the soil to form the deposits. A third supposition is that the nitrates came from certain electrical discharges of the Andes which combined with the air so as to make nitric acid, the acid being deposited in these beds in the form of nitrate of soda.

Come from Lagoon

None of these theories is satisfactory, and yet the scientists have little better to offer. Dr. Walter S. Tower of the Chicago university says they have come from a great lagoon which was formed in this region by the rising of the land in such a way that it formed the home of a world of bird life. The lagoon was shallow and the birds waded through it and fed on its shores. Their droppings formed guano, and as evaporation went on this combined with other chemicals in the water and soil and the result was nitrate of soda. At any rate, the nitrates have been preserved by the dryness of the desert, which has no moisture to leach them out of the soil.

I wish I could take you out into the country and show you how these great deposits of valuable fertilizer are taken out of the earth. Where the mining is done the land looks as though it had been plowed up by giants. The earth lies in mammoth clods of all shapes and sizes, and beyond are nothing but bleak and bare sand. There is no sign of vegetation nor life of any kind. All is sand and salt rock. The rock is of different colors, in some places white and in others yellow, gray, lemon colored or green. The nitrate lies in beds or strata at some distance under the surface; and the method of getting it out is to bore a round hole a foot in diameter through the layers of sand and rock above it and blow it out with blasting powder. The powder is made on the spot, and that out of nitrate similar to that which it is to blow up. The only things required in addition are charcoal and sulphur. The explosion breaks up the earth for a radius of forty feet around the charge, and the charges are put in in rows so that the mining can be done in trenches. After the rock has been broken, it is dug up with picks and crowbars. It is broken up into lumps of such size that they can be loaded upon the cars, and be taken to the factories where it is further reduced by machinery made for the purpose.

Seldom Found Pure

Nitrate is seldom found pure in nature. As it lies in the desert it is mixed with other rock, and the best of the deposits contain only from 40 to 60 per cent of pure nitrate of soda. If the ore contains more than 20 per cent it is called caliche, and if less than that it is costra. The costra lies on the top, and the caliche is usually found underneath. Before the stuff can be used it must be refined and all the earth and rock taken out. The

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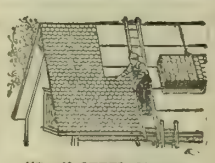

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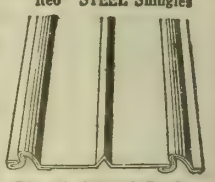

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laws require that the salts exported must be 95 per cent or more pure. It is such salts that form the nitrate of soda of commerce.

There have been but few changes in the methods of nitrate reduction since I visited this region, now more than fifteen years ago. There are many more officinas, as the nitrate factories are called, and the output has been quadrupled; but the methods of working are just about the same. The average officina is a collection of great buildings with tall smokestacks rising above them. It has thousands of dollars' worth of costly machinery, vast tanks for boiling the nitrate rock and crushers like those of a smelter that break the rock to pieces. It has settling vats, in which the liquor containing the pure nitrate of soda is left, until it has dropped its burden of valuable salts, and also arrangements for bagging the salts and shipping them down to the seacoast over the railroad.

Some of the largest plants of this kind cost millions of pesos and some of them employ hundreds of men. Some have an output of a half million pounds of nitrate per day, and there is one which markets in a good season as much as 200,000,000 pounds per annum.

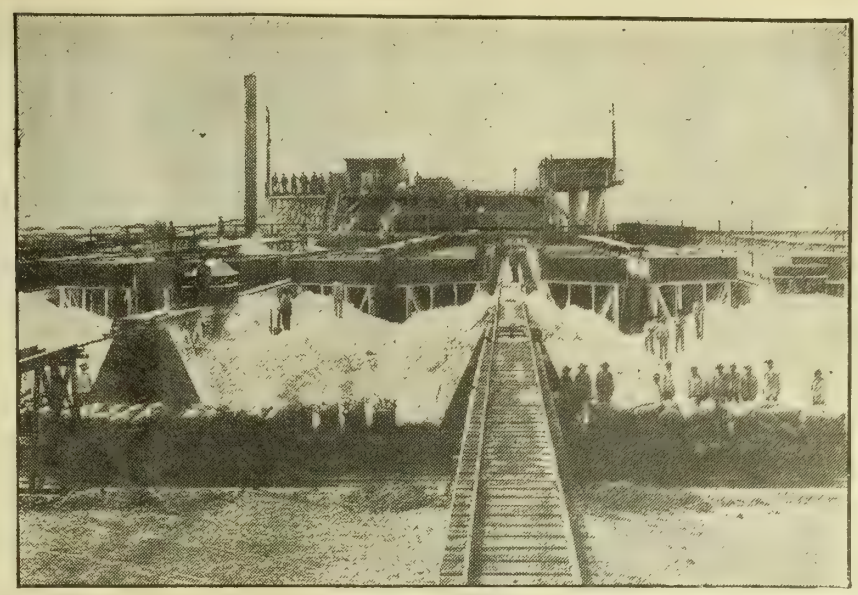
Done Scientifically

The work of the big nitrate factory is scientifically done. The rock is crushed just so fine and boiled just so much and no more. The boiling tanks are usually situated in a building high above the ground. Each is big enough to form a bathtub for an elephant. It is equipped with coils of steam pipe that keep the temperature of the fluid within at just the desired point. The caliche, or nitrate ore, is carried up an inclined railway and dumped into the tank. Then the water containing a certain portion of nitrate of soda in solution is allowed to flow from tank to tank, so as to act to the best advantage on the salts within. Experiments have shown just how much water and how much salts should be used, and everything is done by the rules that experience and science have proved best for the reduction. It takes three or four hours of boiling to make the liquid of the required density, and when it is run off it looks for all the world like a pale maple molasses or thick lemon syrup. It now goes into the crystallizing tanks, where it lies for ten or fifteen days. During this time the soda all drops to the bottom and the tank is half full of what looks like pure white sugar or salt. The mother liquor, which floats on top, is now drawn off and returned to the boiling tank to be used over again, and the salt is shoveled out upon drying floors, where it remains until the moisture has all disappeared. It is now fitted for export and is bagged up and taken on the cars down to the seacoast.

Future of Nitrate

In my talks with the nitrate experts of Chile I have learned much as to the present extent of the fields and their future. The Antofagasta manager of the Nitrate Agencies, limited, estimates that there is enough salt in sight to run the world for eighty years more at the present rate of consumption, and there are others who say that the nitrate fields will last for more than a century. There are three privinces whose deposits are estimated at more than 500,000,000,000 pounds. Others of the estimates are lower, some claiming that there are now left only about 200,000,000,000 pounds. These estimates do not take into account the new fields which are sure to be found nor the possibilities of working over the dumps about the officinas, which will contain a large percentage of nitrates.

Indeed, one of the great opportunities for the inventors of the future lies right here in these arid deserts of Chile. The caliche as it is brought from the mines seldom averages more than 25 per cent of nitrate of soda, and by the present methods of reduction fully 6 per cent is left in the refuse. That means that 40 per cent of the nitrate contents are still in these great dumps surrounding the officinas, and that if this can be saved it will add to the world 40 per cent of all the nitrate so far taken out of the earth. Such a product would be worth hundreds of millions of dollars. These fields have been mined since 1830, and in 1880, at the time of the Peruvian war, they were already taking out millions of pounds every year. In 1890 the output was more than 1,000,000 tons, and in 1911 the exports were more than 2,500,000 tons, and the value of the output was something like $100,000,000. This work has been going on steadily at the present rate for more than a generation, and in a less degree for a generation and more before that. All this time only 60 per cent of the product has been saved. The other 40 per cent still lies in the dumps, and in this rainless country there it will continue to lie until the "open sesame" of some inventor's brain unlocks the robber cave of nitrate and thus enriches himself and the world.



A Great Nitrate Factory

And still the most careful study is taken to get out the nitrate at the lowest possible cost, and to save every cent in product and labor. Said one of the great officina managers to me:

"Our profits are a question of small savings. The difference of a cent in the cost of the reduction of each 100 pounds would mean a profit of at least $1,200 a month. We have to watch everything, and especially the matter of labor. Our workmen have to come from the outside, and their wages are very high for this part of the world. The present average is about $2 per day, although boys are paid less than $1. There are altogether about 40,000 hands employed in the reduction of nitrate and some of the larger works have from 800 to 1,000 apiece. We have to provide houses for the men, and also heat, light and water, although the cost of these are deducted from their wages."

The water for the nitrate works comes in pipes for a long distance over the desert and all kinds of food must be imported. Every company has its own store, and it pays its wages in blanks instead of money.

(Copyright, 1914, by Frank G. Carpenter.)

Our Literary Society

(CONTINUED FROM PAGE THIRTEEN.

The pretty teacher put on a big apron and had a dialogue with her big girls. The big boys blacked up and gave a minstrel performance that brought down the house. A dear little brown-haired woman was called on for some music. She gave her baby over to her next neighbor, and with a little pat of warning and admonition to the two little mischievous boys, who also belonged to her, went to the little mail order house organ—and it was real music she coaxed out of it. And, looking at her, I saw not the brave little woman of the prairies, and the stiff, toil-marked hands, but a dear litle girl with brown braids "practicing" in the cool parlor "back home," patiently counting out her exercises while the great trees cast their shadows outside. A far cry, perhaps you think, from that to the pioneer life here, but of such is our kingdom made.

At last the program was finished and the preparations for going home made. The wind had mercifully somewhat abated; vehicles, one after another, were drawn up to the door, filled up and followed by many merry messages and goodbyes, each family started, this way or that, toward home. And we all felt as did the big boy who rushed into the house when he got home, saying, "Oh, mother, we did have the best time."

ELIZABETH LEONARD.

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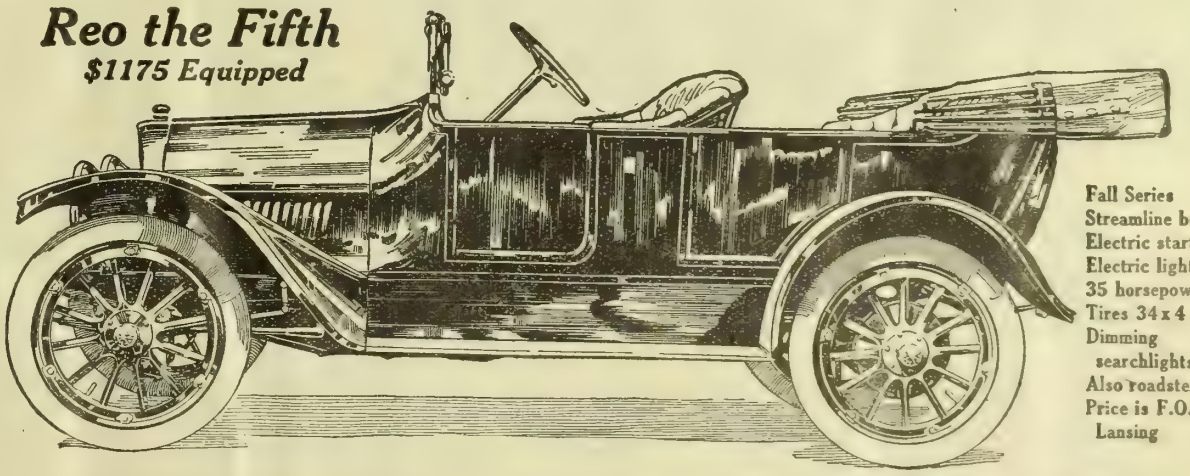

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Successful State Fair Held in Nebraska

(CONTINUED FROM PAGE FIVE.)

serve champion. Mina, winner in the yearling class, was made champion mare bred by exhibitor. She also belongs to Kerr, and had she been possessed of more scale might well have been grand champion of the show.

Belgians

This was the lightest show of the breed in several years, due to the almost entire absence of importers with their fresh stocks from abroad. Eggert of Iowa had entries in nearly all classes and captured most of the blues. There were five 3-year-old stallions, and they formed the strongest class of the show. The bay, Combaltant De Graty, from the Eggert string, proved an acceptable winner. He carries an extreme amount of quality,

Kerr's Champion Percheron Mare

coupled with ample bone and ruggedness to give a well balanced drafter. His ankles are, if anything, a shade too long, which is indeed a fault seldom experienced in Belgians. He was rated second last week at Des Moines in a class of twenty colts, most of which were of foreign birth. Rousselle stood second with a shapely hay of considerable quality and splendid action.

Other classes contained from one to three entries, and for the most part quality was good. The 3-year-old was awarded the championship ribbon.

Shetland Ponies

Each year the quality of the Shetland ponies at Lincoln is improving and within a few years there will be a show which should prove creditable to any fair. The ponies were this year placed in the old educational building and there were sufficient of them to fill it to its entire capacity. Thousands of children, both big and little, visited this exhibit during the week. Several colts but 2 weeks old were penned up near the door and attracted the attention of everybody. W. J. Thompson of Dorchester, Neb., exhibited over fifty head, including in the string many prize winners from eastern fairs. Stewart & Welty of Iowa were present with a string of show ponies and equipment such as only professional showmen can handle. While the Thompson ponies lacked the fitting and training which the Iowa ponies had, yet they made a highly creditable showing. The championship of the show went to the Iowa aged mare. She is a black of very sweet type, with worlds of quality and action, and for straightness of going is hard to excel. The senior champion stallion was from the same herd. He is a brown black of extremely high action, with a trifle too much width behind as he goes. Junior champion went to Thompson on the weanling foal of Mildred Snowball, the $300 mare purchased several years ago in Illinois. The hitched classes formed the major portion of the program at the Thursday afternoon show in the Coliseum. The Iowa ponies were equipped with nicer harnesses and outfits; however, they did not show up in the team hitches as did the Nebraska ponies, and as a result Thompson won on Prince and Polo, the dark-headed white team which has won now for three successive years at the fair. Likewise, the Nebraska team caught the blue in the four-in-hand. Some splendid driving was done by the Thompson driver and his six-pony team.

Miscellaneous

The show of light horses was about as usual. Aside from a class of nine aged stallions, there were not many animals of extra merit. Dr. Kelley of Lincoln won female championship on a 2-year-old brown filly. Jardine of Ashland caught the stallion honors on his black Morgan horse, winner in the aged string. Several animals were led in which would have scarcely done justice to a county fair, let alone a state fair.

There was quite a showing of .acks. Jardine of Ashland captured most of the firsts and champions. A 13-months'-old

Rhea Bros.' Champion Stallion

colt was awarded the purple. He might carry a little more bone, but for head, ear, body and back one could ask for but little improvement.

Several teams of good mules were on exhibition. Dr. Anderson of Seward pulled down chief honors on his 3,500-pound team of mare mules, which has won constantly wherever shown.

There were quite a few grade drafters in the barns. Most of these were shown at the halter and then returned in the hitched classes. Peter Johnson of Hickman and George Clark of Raymond fought for most of the honors here. All entries in the horse department were judged by H. J. Gramlich.

Cattle Department

The cattle show was a show of much quality. Never were so few common animals seen in the cattle barns as upon this occasion. Entries were somewhat larger than a year ago, but most improvement must be ascribed to betterment of individuals. Cattle were here from as far south as Mississippi and Oklahoma, east as far as Wisconsin and west to Colorado. An official count made by Superintendent Danielson disclosed 449 head of show cattle in the barns as compared to approximately 400 at the last fair. Special premiums in the steer department offered by the Union Stock Yards company of South Omaha proved to be sufficient inducement to draw out a good showing of fat bullocks. In all there were some twenty-five of these, and they were a uniformly good lot indeed. The beef cattle show was pretty largely one of Herefords, Shorthorns and Angus, there being but one herd of Galloways and but one full herd of Polled Durhams on the grounds.

Shorthorns

Nine exhibitors, eight of whom had full herds, made the display in the reds, whites and roans. Oklahoma,, Missouri Iowa and Nebraska had herds in the exhibition. James Tomson of Wakarusa, Kan., pinned the ribbons and seemed to give universal satisfaction in his adjudications. Reese of Nebraska received the blue and senior championship on Whitehall Rosedale, the 2,700-pound bull which won similar honors at Des Moines the week preceeding. This bull has been fitted for three seasons as an aged bull and comes back as smooth and even as the last show he made in the 2-year-old class. This is especially praiseworthy because of his immense scale, which is generally closely associated with a tendency to roughness. Bellows caught the junior championship on their light roan senior calf, Parkdale Baron. He is wonderfully smooth and for true Shorthorn character is scarcely criticisable. Ringside opinion seemed to differ as to which of these two bulls should have the championship. The judge gave the ribbon to the calf and substantiated doing so by the youngster's promise and lines. Generally judges will not take the chance of a calf developing when they have a mature animal to compare with.

In the female classes quality was of the best throughout. There never were evener classes of cows and heifers shown at Lincoln than these. It seemed as though there was but little difference in the individuals at either end of the string to the casual observer. Senior champion went to the white 2-year-old Lookabaugh heifer, Isabella. Mildred of Oakland, the winner in the aged class, was put below this heifer at this point. For junior championship the race was close, Kane of Nebraska finally winning out on his junior yearling, Dale Lady, a roan of much breadth and thickness, coupled with beautiful side and top lines and a short, broad head of much refinement. Rapp Bros. came in strong in the calf classes with the get of Village Pride. Isabella was later declared the champion beef cow on the grounds, any breed or age.

Herefords

The White Faces were represented by eight herds, coming from Missouri Kansas, Iowa, Nebraska and Mississippi. The Davis herd from Mississippi is making the northern circuit this fall and sweeping quite a good many ribbons with it as it goes. Hugh Robinson of Wisconsin officiated and succeeded in pulling out the animals which best suited the majority in most cases. Repeater 7th, the grand champion at Iowa, duplicated the honor here and was later made champion beef bull over all breeds, an honor which was won by his sire at the Lincoln fair some three years ago. This 2-year-old is today one of the best of the breed in the country, and if he breeds as he looks, should prove an invaluable sire in any herd. Thompson Bros. of Nebraska won the junior championship on their senior calf, Band Lad 11th, a youngster of much promise. Thompson started to show Herefords some three years back and has since learned much of the game and is now able to compete with the best herds in the country.

Miss Repeater 11th, the winner in the 2-year-old class, was the senior and grand champion. She was later reserve to Lookabaugh's white heifer in the interbreed contest, which was held Thursday afternoon. This heifer is showing in the pink of condition. Her thick, even covering over back and ribs is one of the kind which can scarcely be overlooked. Davis secured the junior championship on Vernet Princess 23d, his winner in the junior calf class.

Like the Shorthorn show, the Herefords displayed uniformly good quality. It was surely a show which would be a credit to

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any state fair. Winners here are good enough to carry to purple later on at bigger shows than this. Greene of Genoa, Neb., came in for several important ribbons and gave outside exhibitors a close run.

Aberdeen-Angus

These were judged by Prof. R. K. Bliss of Ames, Ia. Two Nebraska herds, three from Iowa and one from Oklahoma, comprised the offering. They put up a tasty little show. Escher of Iowa received the grand champion bull ribbon on his aged entry, Prince Felzer. The competition to head classes seemed to lie between the Escher and McHenry herds in most classes. Miller of Iowa came in strong in several female classes, capturing senior and grand championship on his aged cow, Barbara Woodson. In the get of sire class McHenry led with the get of Glenfoil Thickset 2d, a bull whose progeny is rapidly coming to the front in show ring circles. Harrison & Harrison of Nebraska showed a full herd and captured many ribbons.

Fat Steers

Up till this year the steer show has been a secondary affair. The splendid purses hung up for this department by the South Omaha Stock Yards people proved sufficient this time, however, to draw forth a splendid array of fat bullocks. The

Bellow's Parkdale Baron.

three regular beef judges acted in committee to pick the champion steer irrespective of breed, and after considerable discussion succeeded in agreeing upon the Hereford steer, Bright Boy, owned by William Andrews of Iowa. Most fairs offer some prizes for fat stock, although none but the winter fat stock shows seem to get real good steer shows. In all there were twenty-five steers in the show, and they were a deserving lot. Many of these same steers will be carried forward with a view of showing them at the Chicago International in December.

Dairy Cattle

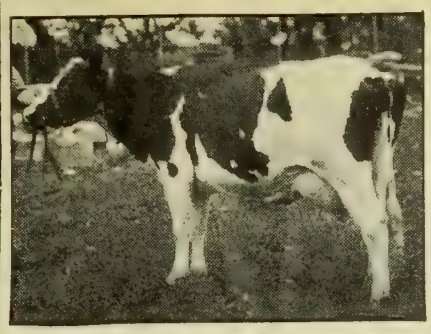
The show was light this year with the exception of Jerseys, of which there were three full herds. A single herd of Guernseys was entered. Ordinarily Lincoln has a strong Holstein show; however, this year there were but two herds on display. Badger and Frost succeeded in capturing most of the firsts and all of the champions. Prof. Frandson of the university did the judging in this department.

The Hog Show

The hog show this year was not quite as large in numbers as last year, but the quality was there. Taking into consideration all classes of the various breeds shown, the hog show at the Nebraska State fair this year was probably one of the best, if not the best, ever brought out. In practically every class in every breed the competition was close, and considerable time was necessarily taken by the judges on tieing the ribbons on the different animals.

The weather, while not at all good for attendance, was ideal for the hogs. The judging was all over Tuesday evening, giving the breeders the rest of the week in which in which to do business and visit the other departments of the fair. One of the results of this early finishing of the awarding of the premiums was the substantial sales made by practically all exhibitors. A large number of hogs changed hands at this show, and at prices very satisfactory to the seller.

There were on exhibition a total of 1,520 hogs, divided as follows: Duroc-Jerseys, 641; Poland-Chinas, 327; Hampshires, 191; Chester Whites, 243; Berkshires, 191; Mule-



Badger & Frost's Best Ferndale

foots, 69, the total on exhibition being forty-one less than last year.

Duroc-Jerseys

This show brought out some of the best animals ever exhibited on the Nebraska State fair grounds. We believe more quality was shown in the different classes in this breeding than were ever shown before at this state fair. We have in former years seen some classes in which possibly stronger competition was had than this year, but taking all classes into consideration, it was one of the strongest ever shown, and when this can be said about the show of this breed at the Nebraska State fair it practically means that it was the best show ever held, for Nebraska is recognized the country over as probably being the strongest red hog show held anywhere.

The aged boar classes brought out some splendid individuals, the judge finally giving the blue ribbon to Putman & Sons entry, Echo's Crimson Wonder. Briggs & Sons' splendid hog Illustrator, 2d, was given the red ribbon. Schuerman, third, on Colonel Crimson, and Burke was given fourth place on his big, smooth hog, Burke's Good Enough. It was a splendid showing of big hogs carrying lots of quality.

Wernimont won the blue ribbon in the senior yearling class on Crimson Chief, Cedar & Hodge getting second on B. V. Boy, Stickelman got the third prize ribbon on his Echo's Crimson Wonder.

Junior yearling class, as usual brought out some splendid individuals, Wallace finally landing the blue ribbon on his large, smooth Golden Wonder.

On the under-year class Widle & Son won first on a good, strong, growthy pig sired by Critic B. Wallace won second, third and fourth on pigs sired by Golden Model 4th. Especially good animals as compared with other years were driven out in this class.

The Junior pig class brought out a splendid array of well proportioned, well footed pigs. The blue ribbon was finally handed to Widle & Son on their strong, well proportioned pig, sired by Critic B.

For senior champion Echo's Crimson Wonder won. Widle & Son won the junior championship on their under-year pig, grand champion going to the Putman hog.

In sow classes strong competition was brought out all the way through. Wallace won the blue ribbon in the aged sow class on his big, smooth brood sow, Bessie Wonder, Widle & Son being placed second on a splendid Duroc type sow, Ruby Blossom.

In the senior yearling class Van Patten & Son were awarded the blue ribbon on Crimson Duchess 2d, and the red ribbon on Crimson Duchess, 1st.

In the junior yearling class Van Patten & Son were again given the blue ribbon on their entry, Miss Wonder, Cedar being placed second on Cedar's Critic.

In the under-year class, Wallace won first, second and sixth on pigs sired by Golden Model 4th.

In the under-six pigs Johnson was successful in carrying off the blue ribbon. Bessie Wonder was given the senior champion ribbon and the Wallace under-year sow the junior champion. Grand champion went to Bessie Wonder.

Poland-Chinas

This breed, as usual, was strong in quality, showing that Nebraska breeders of this breed of hogs are keeping right up with the procession and showing animals of the type popular in this breed, the big ones carrying plenty of quality.

The aged boar class brought out some splendid individuals, the blue ribbon

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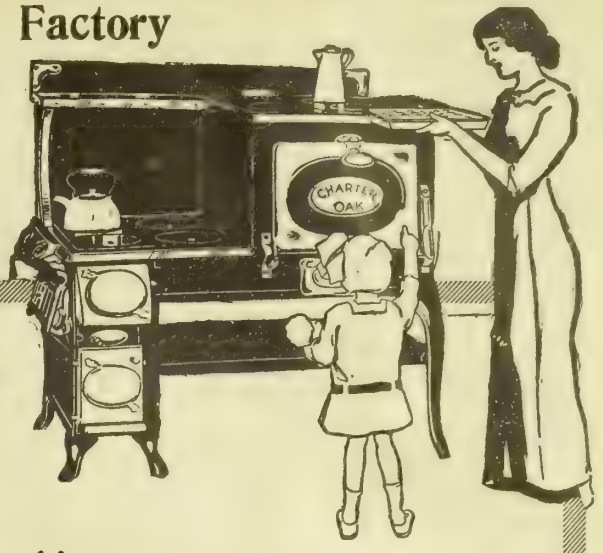

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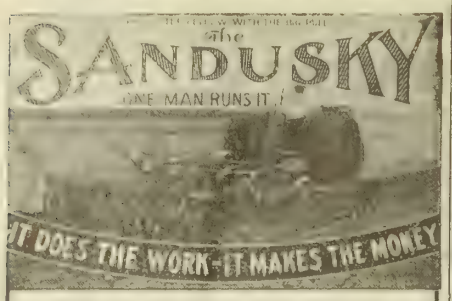

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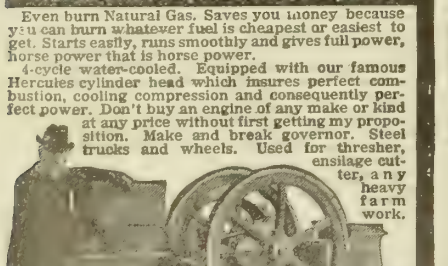

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finally going to Lonergan on his big, smooth hog, Big Ursus. Furgeson's Big Tim was placed second in this class, Reed carrying away the white ribbon on Expansion Sure.

In the senior yearling class McCurdy was awarded the ribbon on Maple Grove Orange.

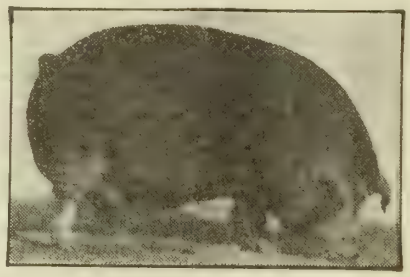
The junior yearlings were good and strong. The Willey & Dawson entry, Superba, winning the blue ribbon. Meese was given second on Big Monarch.

In the under-year boars Willey won first and Meese second and in the junior pigs Meese was awarded first, second and third.

The showing in the pig classes in this breed, as well as the older boars, was strong, the pigs being smooth, with lots of quality and growthy.

The senior champion was awarded to Lonergan on Big Ursus, junior champion going to Meese on his under-six pig, Big Ursus winning grand champion.

For some years the aged sow class of the Poland-China breed has not brought out as many entries as is shown in other



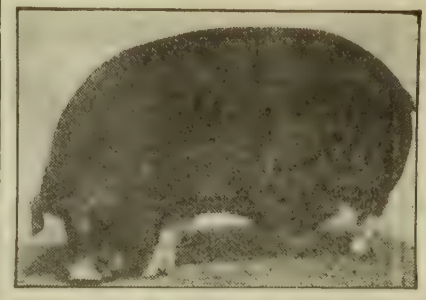
Wallace's Sow, Bessie Wonder

breeds of the hog division. Why this is we do not know.

Beall & Jackson were awarded first on their big sow, Black Beauty, the red ribbon going to Meese on Lady B., and McCullough winning third on Mammoth Queen.

In senior yearlings Beall & Jackson were winners of the blue ribbon on Queen of Wonders, Willey getting second on Big Queen Ann and third prize going to Ridgley on Exception Quality.

In the junior yearling class, Miss Orphan Wonder, 1st, shown by Meese, was successful in winning the blue ribbon. Lonergan's Big Type Girl being placed second, and third and fourth going



Lonergan's Big Ursus

to Willey on Big Lady A and Big Lady B.

In under-six pigs McGath's entry was placed first. Meese winning second.

Beal & Jackson's sow, Queen of Wonders, was made senior and grand champion, junior champion going to Meese on Miss Lady M, 3d.

Chester Whites

Judging from numbers shown on the fair grounds, this breed of hogs is rapidly gaining in favor with Nebraska farmers, a much larger and better showing being made this year than in previous years.

From the Chester White standpoint many creditable animals were shown in all classes, competition in many of them being very strong, requiring close attention of the judge. Charles Slepicka was awarded senior and grand champion on his senior yearling boar, Plain View Wonder, junior champion going to R. E. Brown on his under-year pig. The senior and grand champion sow was C. A.'s Beauty, the junior yearling shown by Slepicka. Junior champion went to Maurice E. Black of Scribner, Neb., on his under-year prize winner.

Hampshires

The showing of this breed was strong as compared to former years. It was noticeable that improvement each year is being made in the quality of the animals shown. Stronger feet and stronger backs were most noticeable. In numbers it was the largest show ever pulled off at this state fair, and we believe as much can be said from a quality standpoint.

In the aged boar class Downing won first on his boar, Look Me Over, 2d, Jones winning the blue ribbon in the senior yearling on Litchfield's Lady.

In the junior yearling class the blue ribbon was given to Tatro on his well turned Tatro's Model, Sydow getting second on Conrad Lad 1st.

In the under-year-pigs Fisher won first and second, third going to Sydow.

In the junior pig class Tatro won first on a pig sired by his prize winning junior yearling. Tatro's Model was afterward made senior and grand champion, junior champion going to Tatro's under-six pig.

Paulsen won first in the aged sow class on his brood sow, Nebraska Queen.

Fisher won first, second and third in the senior yearling class and junior yearling class, Paulsen was winner of first and third, second going to Fisher.

In senior pigs, Bratt was winner of the first prize, second and third going to Fisher.

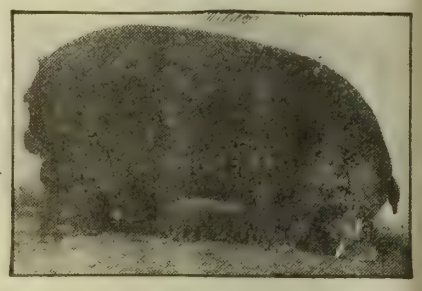
In junior pigs Downing won first and second on a pair of very growthy March pigs.

The Fisher sow was afterward made senior and grand champion, the junior ribbon going to Bratt's under-year pig.

The $75 trophy given by the Hampshire Advocate, given for the best pair of pigs shown by a Nebraska breeder, was won by Tatro on the get of Tatro's Model. For the four best pigs bred and exhibited by a Nebraska breeder Mason won a very handsome trophy.

Berkshires

The Berkshire show has never been large at the Nebraska state fair, but at



Putman's Echo Crimson Wonder

the same time a great many creditable animals have passed before the judge. This year there were three herds competing for prizes, ribbons being very evenly distributed in the different herds.

In the windup senior and grand champion boar was given to the Sutton farms of Lawrence, Kan., on their aged boar, junior champion boar going to J. P. Scherzinger. In this class the award was made a little out of the ordinary, when junior champion was made grand champion, showing this animal to be one of very extraordinary quality.

The judging in the hog division was very commendable. W. P. Snyder of North Platte tied the ribbons on the Duroc-Jerseys and mulefoots and Sam McKelvie, Fairfield, Neb., officiating in the Chester White and Berkshire classes. Thomas Shattuck of Hastings, Neb., placed the Poland-Chinas and O. S. West, Pauline, Ia., the Hampshires.

Prevent Hog Cholera

HOG cholera time is approaching. We hope that there will be much less cholera this year than there has been in the past, but to insure a lessening of this plague from year to year there are certain precautions that must be observed by every hog owner, veterinarian and dealer. If you have not read our series of articles recently published in the Twentieth Century Farmer on "Hog Cholera, Its Prevention and Treatment," send us 5 cents to cover cost of handling and mailing and we will gladly send you a copy of these articles, which are now issued in pamphlet form. Following are the different articles in the series:

What Cholera Has Done and What We Must Do.

Co-operation is Absolutely Necessary, and to Get This Politics Must Be Eliminated.

Organizing the Hog Owners and Instructing Them in Sanitary and Other Control Measures.

Some Things that Hog Raiser Himself May Do to Prevent Infection and Spread of Disease.

Sanitary and Other Measures That Should Be Taken When There is Cholera in the Neighborhood.

County Demonstrators and Special Veterinarians Employed by State May Offer Valuable Aid.

How Are We to Know Whether Serum is Potent and Virus Virulent?

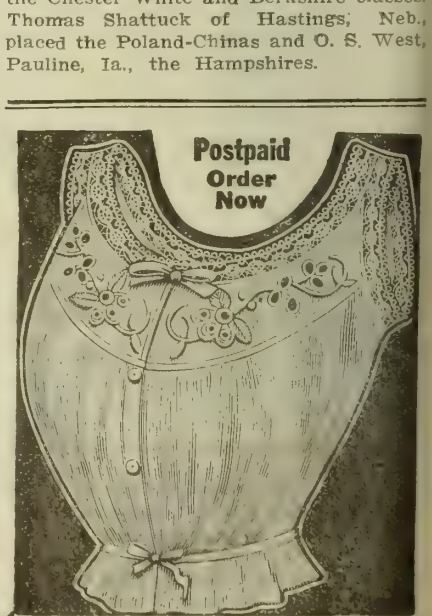
Methods of Manufacturing Serum and Virus and Plan for Storing Serum.

Should Farmers Be Allowed to Administer Serum and Virus?

Methods of Treatment and Period of Immunity and Cost of Immunizing.

Does Treatment of Sows During Pregnancy Produce Abortion?

Synopsis of Preceding Articles and Precautions Advisable in Dealing with Cholera.



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W. & H. WALKER 161 Herr's Island Ave. PITTSBURGH, PA.

Scenes in Colorado

These photographs were shown in our "Homeseekers' Number" of August 22. We supposed them to be Wyoming scenes and so marked them, but we are now informed that both pictures were taken in Colorado.

Crops Raised in Colorado Under "Dry Farming" Methods

Elevators Break the Sky Line in What Was Once Arid Territory

Spring Calves Apt to Be Neglected

It is claimed by most farmers that spring is the natural season for everything to bring forth their young, and, rightly fed and cared for, animals born at this time might prove most satisfactory and profitable in general.

However, there are many circumstances and conditions peculiar to this season which often bring about unsatisfactory results with calves. In many cases the cows are run down in flesh after coming through the winter, so that their unborn calves have been partly starved and considerably stunted.

Again, not one farmer in a thousand ever takes into consideration the fact that the sire of their calves is run down by too much breeding during the rush season when cows come in heat, which also has a most deteriorating influence on the size and vitality of his offspring. This is particularly true of the farmer operating only a small-sized dairy, keeping no bull in connection, but taking his cows to some other dairyman who does.

Another point that often makes for unsatisfactory results with spring calves is the fact that the rush season for field work comes on at practically the same time as the calves, and the latter thus often are neglected or slighted, especially where skim milk is fed, some calves being cheated by the others, little or no grain being given and digestive troubles being brought on because of sour pails for feeding, milk at an improper temperature, etc.

Some claim that the calves all coming at practically the same time enables the farmer to tend to many as well as he would with only a few, and, while this is true, the full advantage of this point is not taken by any appreciable number of farmers. With a little systematizing of feeding and caring for the calves this plan would work well, but it takes careful planning, the same as with any other work. Of course, grass is plentiful and forms the ideal feed for spring calves, but the presence of intense heat and the torturing flies more than counterbalance the good effect of the pasturage as against the succulent rations which may be supplied in connection with winter calf raising.

Now that silos are coming into more or less general use, the man who has provided himself with one of these necessary farm equipments, can to a considerable extent have a ration, which may be fed to the calves in the winter time, which will largely take the place of grass.

Some Advantages with Fall Calves

By having the calves dropped in the fall, the farmer usually has more spare time to devote to them, and they are apt to be given a better chance.

He also can handle the dairy products with more care, and, with the cool weather in connection, his profits will be higher, dairy products usually being a better price at this season because of the scarcity of them.

Fall calves are very apt to be more vigorous and healty than spring calves, as the cows have just passed through the grazing season, and usually are in prime condition for developing their offspring; while the absence of flies, and the cool, invigorating weather combine to promote rapid, healthy growth.

Some offer the objection to fall calves that they are harder to take through the winter than spring calves, but with good, warm quarters, proper care and ample feed, the fall calves will come through the following spring in as good or better condition than the spring calves. Notice the very slight difference in size between the spring calf and the fall calf, the next spring after their first winter, and you will see this point clearly.

Have Calves Come at All Seasons

A compromise on this question by having the cows drop their calves at practically all seasons of the year, will prove most satisfactory, especially with the dairy farmer owning a herd of only moderate size.

Then, the farm household will be well supplied with milk, cream and butter the year round (something not always so with either spring or fall calving), and the profits from the dairy herd will be coming in every week—a much better plan than having them drop in at intervals, with a portion of the year being without any.

M. COVERDELL.

Keep Up the Milk-Flow!

With many jobs of important farm work pressing at this particular season and with many pastures failing, there is sure to be a great falling off in the flow of milk.

In frequent cases we must add to these detrimental influences those of a lack of pure, fresh water and carelessness in protecting the cows from the torturing swarms of flies.

Fly repellant is cheap and effective in removing one of these aggravating and damaging causes for a decrease in the flow of milk, a light spraying with it night and morning so saturating the cows' skins that the flies scarcely approach them.

While the water supply cannot be provided for so easily, there are very few farms on which a better system of watering the dairy cows could not be put into practice. There is absolutely no excuse for any farmer allowing his cows to sip their supply of water from cow tracks and stagnant pools of water. If he cannot provide more sanitary and wholesome water for them than this he ought to be compelled to drop dairying—and he would be if the matter was properly looked into. Milk is too largely composed of water for us to allow the cows to drink anything but the purest. It may be somewhat warm, but it must be pure and wholesome.

The question of feed is, of course, a most serious one at this particular season, as the farmer dislikes to begin feeding the supply of roughage he has been depending on taking his herd through the winter. However, we must consider the ultimate result, and not merely present profits, in meeting this problem. If we could merely allow the cows to fall off in flesh and milk production at this time, then whip up on the feed again when winter sets in, and the cows would respond with their usual, normal flow of milk, the situation would not appear so discouraging, but if the animals fail now it will take an enormous amount of feed to bring them back to even a normal milk flow when winter feeding begins, and one may not be able to do it at all.

Of course, where it is possible, one should avoid feeding anything that is actually stored for the winter. All sweet corn from which the ears have been pulled and used should be cut and tossed over to the cows. Point-rows of corn, or those running so near the fence that the stock are apt to reach over after them and break down the fence should be used the same way. The grinding of a little grain for the cows may appear somewhat extravagant at this time, but really is an economical plan in the end.

M. COVERDELL.

Futurity Classes at Iowa

Several years ago the Daily Live Stock World of Chicago conceived the idea of starting some yearling draft colt futurity classes at Des Moines. The scheme has proven a success and each year much interest is centered in this display. The original object was to encourage the American breeder to grow out his draft colts and thereby endeavor to attain the size attained by the foreign horsemen in his foals. The principle is certainly to be commended and it has already worked marvels in strengthening yearling classes.

Breeders must enter their colts as weanlings and pay quite a large fee at that time. The prizes are liberal. Not only the entrance fees are used for this, but funds given by the various registry associations and live stock papers are likewise distributed.

The Percheron futurities have proven the best patronized. This year there were twenty stallions and eighteen fillies. The total stakes amounted to $1,475, besides $56 offered in the regular class by the fair association. In the stallion class Singmaster won on a beautiful gray weighing 1,800 pounds. His age was given as seventeen months, and he looked to be the making of a tremendous draft horse. Short-coupled on top, with an extra body, powerfully muscled hindquarters and, best of all, a set of clean limbs carrying ample bone and well placed under the body. Second stood Dudie, owned by Tice, also of Iowa. He was a black of nearly as much scale as the first colt and standing a trifle higher from the ground. His

P & O

Traction Engine Plows at Fremont

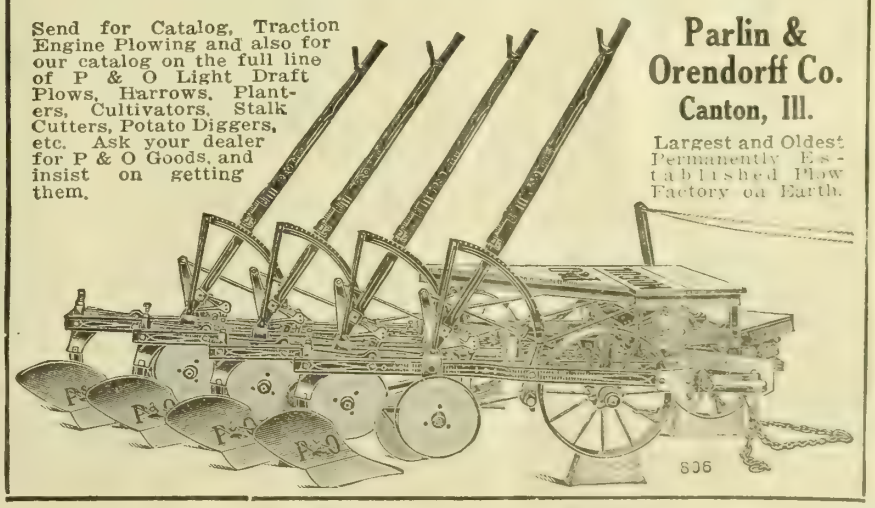
The recent Fremont Plowing Demonstration was a success—there is no doubt about it. The fact that about 35,000 people attended these exhibitions is proof of the interest that was aroused and it indicates a coming wonderful increase in the sales of traction plowing outfits.

We are proud of the work accomplished at Fremont with the P. & O. MOGUL POWER LIFT ENGINE GANG PLOWS. While the work was not officially judged or scored, and there are no official records in existence, and while all the manufacturers whose plows were in the field are privileged to make any claims they wish, we believe we are well within the bounds of truth in saying that the P. & O. Moguls were the pace-makers at Fremont.

For smooth, even, uniform work, uninterrupted by constant tinkering with the plows, the P. & O. Moguls lead the field. And we will let the people who attended be both judge and jury. Not only that, but it was evident to all that the P. & O. Moguls are built up on correct principles, are symmetrical in appearance, strong where strength is needed, and that they possessed that "tone" so difficult to describe but so necessary in a plow of this class.

Our confidence in these plows is fully indicated in our oft-repeated slogan, "Every one of them is backed by an unqualified guarantee."

Send for Catalog, Traction Engine Plowing and also for our catalog on the full line of P & O Light Draft Plows, Harrows, Planters, Cultivators, Stalk Cutters, Potato Diggers, etc. Ask your dealer for P & O Goods, and insist on getting them.



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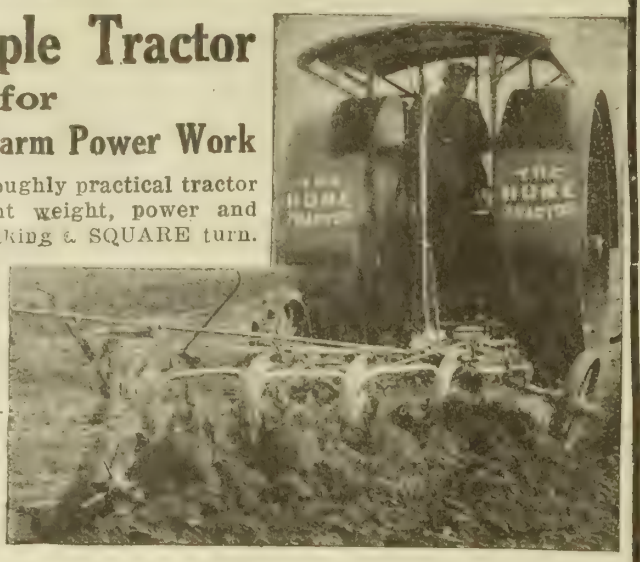

The First thoroughly practical tractor —combining light weight, power and economy, and making a SQUARE turn.

This efficient tractor was designed for general purposes on the average farm It is the only tractor that turns absolutely square, no matter what condition the ground is in.

The Real Sensation at the Fremont Demonstration Was

The Hume Tractor
It Meets the General Demand

This remarkable low priced tractor will burn any kind of fuel. Positively guaranteed to burn kerosene as successfully as gasoline. Consumes only two gallons of kerosene to the acre. Cheaper and better than horses for any farm work. "The Hume" is the last word in a Gas Tractor.

Unequaled For Plowing and Harvesting, as it will easily pull all machinery needed for general farm work. Use it for road work, plowing, harvesting, discing, harrowing. Useful the entire year.

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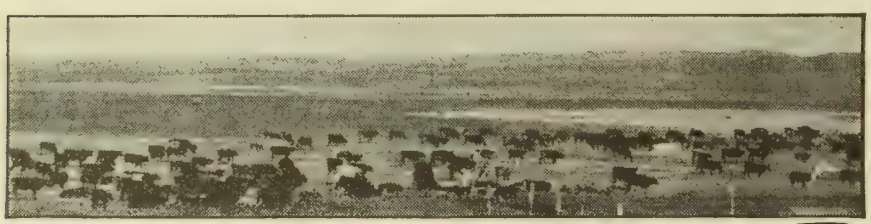

Buy my 700 3 and 4-year-old steers and make a fortune. Buy my Springdale ranch and make another.

I have so much property I am obliged to sacrifice some of it, so I have decided to give some one with part of the money an unheard of bargain.

Springdale is no ordinary ranch. It's probably the finest one in the state of Missouri. It's not away out in the wilderness far away from transportation and other evidences of civilization. The station of Chadwick on the Frisco line is within a mile of it. The county seat is near and Springfeld, a city of 60,000 is within an hour's ride by auto. The great 40,000 horsepower dam that supplies all the towns within 150 miles of it with light and power is only 14 miles away and its wires run right by Springdale ranch, so cheap light and power are available. Borings indicate that there is plenty of zinc and lead under it, besides there are and have been some big producers in the vicinity. Farms hereabout have been sold for $50 per acre. The ranch is really worth from $30 to $35 per acre. It has produced a yearly income of $30,000 per year and better management would yield a $40,000 income. I offer Springdale ranch for $15 per acre, one-half cash and the balance on long time at 4½%. Go where you will, you will not have anywhere near such an offer. If for any reason this ranch don't suit you, I have other ranches, timber tracts and farms from 40 acres up that I will sell at special bargains for quick sale and first money. I own and control more land than anybody here, so I can suit anyone. For other information write

This paper will tell you I am reliable.

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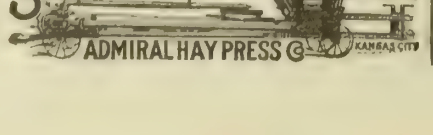

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back might have been carried a little higher. Third stood the Helix colt, Helion, owned by Brown & Walker of Iowa. He carried an immense amount of quality, but scarcely the scale and draftiness of the two above him.

In fillies Corsa of Illinois won first and second on Carnante and Folito, both by the celebrated Carnot. They were a grand pair of large, stretchy fillies, with lots of quality and plenty of style when on the move. Some of the ringside would have reversed the pair, as the winner of the blue showed a trifle fuller in her right hock the day of the show. Baker of Iowa won third on his Fier-a-bras filly, Neva.

In Clydesdale futurity classes there were thirteen stallions and eleven fillies. In the former the two judges, Leslie Smith and Donald Campbell, failed to agree on their first and second prize colts, and Prof. Kennedy was called in to settle the matter. This put the Soderburg colt, Hope Prince, at the top. He showed more quality and moved better than the somewhat larger McLay colt, King's Emblem. Hixon took third on a growthy colt of scarcely as much quality as the two above.

In the filly class Hixon of Iowa won first on Palmerston's Favorite, a bay of exceptional quality. She carried the feet, ankles and legs so much sought by the Scotchman abroad, and coupled with this was sufficient size to insure her maturing into a draft horse. Second and third were won by Barron Bros. of South Dakota on fillies of very similar build and quality to the first prize winner, although scracely so growthy.

In Belgians there were only eight stallions and six fillies. This was rather strange, inasmuch as the open classes of Belgians contained practically as many entries as did those of the Percherons. Irvine of Iowa won on the roan colt, Irvindale Jean, over the quality sorrel, Prince Imperial of McDermott. This latter colt crossed his front legs quite pronouncedly in moving, while the roan colt moved very true. It was close between this pair. However, the roan balanced the quality of the sorrel and the action turned the balance. In fillies a bay from the Hopper farm of Iowa caught the blue.

The Shire futurity contained eleven stallions and thirteen mares. Trueman won the stallion prize on a bay, the equal of which has seldom been grown in this country. He stood on very clean limbs of ample bone and was very evenly balanced. The gray colt from McCrey's stable caught the red. He was a flashy mover, but had scarcely the middle or quality of the first colt. Another colt from McCrey's stable stood third. McCrey won first on his filly, Royal Sylvia by Royal Gray. Kiddoo of Illinois won second and third.

Sheep and Poultry

The sheep division was not quite up to the average of former years. The mutton breeds are always the leading feature at this fair. The fine wool classes were not uniformly a creditabie exhibit. There were more low conditioned fine wool sheep exhibited that are often seen in public exhibitions. Just why sheep breeders are anxious to take advantage of themselves and their flocks by bringing thin-fleshed, out-of-fix sheep to a sheep show is hard to explain. Little, runty, starved lambs and sheep of all ages that have not seen grain, shed or care of any kind should be excluded from competition and refused a place on the fair grounds. They are bad advertising for the owner, the fair and the sheep industry. One misguided exhibitor attempted to misrepresent his sheep by giving them a coating of oil and lamp black and so disfigured them that they were doomed to ridicule and disgrace. Such a sheep breeder deserves all the humiliation that such an unskilled attempted deception may bring on him.

The poultry department holds its reputation of being one of the largest and best displays in the country. There were about 2,500 fowls exhibited and their quality has never been better. Every known breed, utility and fancy, was on exhibition.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Champion Duroc Sale

One of the most important Duroc Jersey sales to be held in the west this year, is that of W. M. Putman & Son and Lamb Brothers of Tecumseh, Neb. This sale will be held on October 1, and will contain more genuine herd heading material than has been seen at any one sale for some time. The most important attraction in this sale, of course, is the grand champion boar at Nebraska this year, Echo's Crimson Wonder. Echo's Crimson Wonder was the undisputed winner in one of the strongest shows ever held at the Nebraska state fair. He is a boar of unusual excellence and a sire of proven worth. It is very seldom that breeders have the opportunity of purchasing at public auction a champion boar, combining such qualities as are to be found in Echo's Crimson Wonder. However, he is only one of the many attractions, among which are the following: Successor, a tried boar of great excellence, sired by Advancer First, and out of almost a full sister to Model Queen, champion sow in 1910; Put's Royal, a splendid senior yearling by Put's Top Colonel and out of a Lincoln Wonder dam; another senior yearling, Wonder Colonel, also by Put's Top Colonel and out of Chief's Maid 2d, she out of Chief's Maid, champion sow at Iowa; Wolfcreek Chief by Chief Select and out of one of the best sows ever owned by Will Reed, a senior yearling boar and a good one, with lots of breeders. There are five December and January boars, sired by Grand Model, the champion boar at Iowa this year. Other extra choice spring boars are by Wonder Colonel, Chief Select, I Am Golden Model 2d, Successor, Bayne's Critic, Golden Gano and Watt's Model Again. In this connection we want to say that we consider Watt's Model Again to be one of the very best young boars that we have seen for a long time. He is a typy fellow with a good strong back and well sprung ribs, exceptional bone and feet, and altogether a boar of unusual character. There are five sows in the sale bred to this splendid young boar, and five will be sold with breeding privilege. Here is something else that certainly ought to appeal to any breeder in America. There are three fall sows and three early spring gilts, sired by Grand Model, the grand champion boar at Iowa this year and bred to Echo's Crimson Wonder, tho grand champion boar at Nebraska this year. Guess you will have to go some if you beat that. Altogether, this offering is a great one and well worthy of the attention of any breeder in the country. Get in touch with Lamb Brothers or Messrs. Putman & Son, and have them send you catalogue. Make arrangements to be present on sale day, and if you cannot do so, pick out what you want and send your bids to G. E. Hall of this paper, and they will receive careful attention.

Hensley's Duroc Boars

With this issue of the Twentieth Century Farmer we are starting an advertisement for J. E. Hensley of Central City, Neb., who is offering Duroc Jersey boars for sale. Mr. Hensley has a most excellent herd. The pigs he is offering at this time are all right in every way. They represent such sires as Golden Model 36th by Golden Model 31st, B. & R's. Wonder by Belle's Crimson Wonder, Bayne's Critic, Golden Model, Colonel Chief and Golden Model 4th. One of the Golden Model litters is out of Wonder's Lucy, fourth prize sow at Nebraska last year and a daughter of Wallace's Wonder. Mr. Hensley bought this sow at the sale of Clarence Wallace at Wisner last winter, and at the state fair of Nebraska last week, on the last year's litter of this sow. Mr. Wallace won first on boar and three sows under one year bred by exhibitor and also the silver cup given by the Economy Stock Powder company of Shenandoah, Ia., for the best produce of any one sow. There are several boars in the litter Mr. Hensley has to offer, and they certainly ought to be readily picked up by anyone wanting something in this line. We would suggest that our readers get in touch with him at an early date for further information, mentioning the Twentieth Century Farmer.

Forbes Offers Boars

J. N. Forbes, the well known breeder of Duroc Jersey hogs at Plainview, Neb., is offering a choice lot of spring males for sale at this time that should receive the consideration of prospective boar buyers. Mr. Forbes has been in the breeding business for a number of years and has succeeded in establishing a herd that will take rank among the good one of the state. His pigs this year are sired by Crimson Wonder Select, Sweet Rose's Wonder, Crimson Wonder 10th, Crimson Agitator, J. I's Wonder by Sioux Wonder and others. These boars have simply been grown along in good form and are not overloaded with flesh, but are in a condition to go out and do good service for the purchaser. We trust that our readers will write Mr. Forbes if they are in the market for a boar, as we feel that he will treat them right and give them value received. Kindly mention the Twentieth Century Farmer when writing.

Immune Duroc Males

Our old friend, E. R. Danielson of Osceola, Neb., has a corking good lot of Duroc Jersey spring males to sell at this time. One thing about these boars that should appeal to the average breeder is the fact that they have been treated with the double treatment and in consequence are immune from disease. Parties wanting a boar need not expect to find these hogs in extra high flesh, but they are in good breeding condition and as a consequence will be of more value than if they had been overcrowded. They are sired by Colonel Dan by Queen's Colonel; a son of Golden Hero, he by Golden Model; Queen's Wonder Again, I Am a Crimson and others. These boars are being priced to sell, and we would advise our readers to get busy if they want something immune and something that has individuality as well as the best of blood lines. Kindly mention the Twentieth Century Farmer when writing.

Review of Live Stock Market

By A. C. Davenport

CATTLE runs at the big market centers have been larger during the week just closed as compared with the previous week, but still very much short of corresponding periods for recent years. The run for the year to date continues light, there being a falling off of 750,000 head as compared with last year, taking only the six largest markets into account. Such figures speak louder than words and are a bull argument that will not down. To be sure a shortage in receipts at the beginning of the year would have little or no real effect upon prices now being paid, but with current receipts continuing small the effect is bullish in the extreme. This makes it easy to account for the high prices that have been paid all the season and are still being paid.

Cattle of all kinds are really so high that it is hardly reasonable to anticipate further permanent advances, as it would seem as if the ability to pay on the part of consumers must be near the limit. When prices on any commodity reach such a high point it is more natural to anticipate a break, and that very thing would come quickly if receipts were to increase materially and continue large for any length of time. It must be confessed, however, that there does not appear to be any likelihood of that happening in the near future. Temporary increases in receipts are to be expected; in fact, a little spurt is looked for within the next few days and may have taken place before this can appear in print, and prices may break a little. Still no one looks for large receipts to continue long enough to place cattle on a permanently lower basis. As a rule, cattle men are looking for a see-saw market, up one week and down the next, without any great change in either direction.

Prime Cornfeds Up

It was noted a week ago that, by reason of their scarcity, prime corn-fed cattle which were already at the top for the year might go still higher. They went up according to schedule, as high as $11.00 being paid for fancy or prime cornfeds at Chicago. If they go any higher it will be because some buyer is more than ordinarily hungry for fancy beef, and packers can be depended upon to hold the lid down if such a thing is possible. The medium grades of cornfeds, that is cattle ranging from fair to pretty decent or even good, are suffering some in competition with the cheaper grassers, and it is a struggle for them to hold their own.

Hog Prices Forced Down

It was noted a week ago that hog packers were extremely bearish and that it looked very much as if they had started a campaign to break down the market. Whether such was really the case or not was somewhat in doubt, as such a movement does not generally start as early as the first week in September. The continuation of the same bear tactics throughout the week just closed makes it quite apparent that packers regard this as an opportune time, and that they have really inaugurated their price-breaking campaign a month earlier than usual. During the last few days the bears have made serious inroads upon the market and have forced prices to the lowest point touched since the first week in August.

How much lower packers will be able to force the market remains to be seen, as also the question whether they will be able to keep it down until the opening of the winter packing season November 1. The receipts, which are still running behind a year ago, with no good prospect of their showing much increase before November, are against the bears. As an offset to that is the fact that the consuming demand is not heavy enough to make packers particularly anxious as to future supplies, and aside from the fresh meat trade they can get along very comfortably for some little time without buying very freely of current receipts of

DUROC-JERSEY HOGS

Grand Champion Duroc Sale
AT
Tecumseh, Neb., Oct. 1,'14
25 Boars 15 Sows

Attractions: Echo's Crimson Wonder, champion boar at Nebraska, 1914. Successor by Advance No. 1. Puts' Royal and Wonder Col., two great yearling boars by Puts' Top Col., Wolf Creek Chief by Chief Select. Fine December and January boars by Grand Model, champion boar at Iowa, 1914. Also five sows sired by this boar and bred to Echo's Crimson Wonder, champion boar at Nebraska. Five sows bred to Watt's Model Again, one of the best young boars in the west. Also five sold with breeding privilege. This will be one of the greatest opportunities of the season to get a genuine herd header of champion blood lines. No sale this year will contain more real herd boar material. Write for catalog at once to

Auct., Col. N. G. KRASHEL, Fieldman, G. E. HALL.
W. M. PUTMAN & SON or LAMB BROS., Tecumseh, Neb.

I HAVE THE GOODS

Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

IMMUNED DUROC BOARS.

I am offering an exceptionally strong lot of Duroc Jersey boars for sale, largely of Crimson Wonder and Golden Model breeding. They are the best lot I have ever offered and are being priced worth the money.
E. R. DANIELSON, Osceola, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

MR. DUROC BREEDER

Are you on the market for a herd boar? If so, write me just what you want. I have them sired by Lucy's Select, Proud Wonder Jr. and other top boars of the breed. **L. J. KUZEL, CLARKSON, NEB.**

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.
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35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st. Prince Munice, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

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I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
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Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.
HENRY KOEHLMOOS, Pilger, Neb.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

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20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.
GEO. W. SCHWAB, Clay Center, Neb.

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The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.
P. P. CEDAR, GENOA, NEB.

DUROC HERD BOARS

Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd headers I have them. They are out of prize-winning sires and dams. **Clarence Wallace, Wisner, Neb.**

HEKRDLE'S DUROC BOARS.

I have the best lot of spring boars for sale that I have ever produced. Sired by A. A.'s Model and Beauty's Wonder. A combination of the Crimson Wonder and Golden Model blood lines. Correspondence solicited. A. A. Hekrdle, Stanton, Neb.

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25 fall boars and 25 spring boars for sale. Sired by Winside Star, Fisher's King 5th, Tatro's Messenger and Paulsen's Choice. Prices reasonable.
ROY FISHER, Winside, Neb.

hogs. Everyone familiar with the hog market has a great deal of respect for the big club as wielded by the packers when they really start out to smash prices. If they have already started, as now seems probable, there is really nothing in sight to prevent them from having their own way unless it might be some sudden change in the situation growing out of the European war.

Sheep Market Satisfactory

Sheepmen are feeling very much better than a week ago. Lambs, which broke sharply during the latter part of August, have been coming back. Two powerful influences have been at work to bring about this gratifying change, lighter receipts and a splendid consuming demand for the product. Receipts for September thus far have fallen considerably behind the corresponding periods of one and two years ago. At the present rate of decrease it will not be long until the magnificent increase made in receipts at the six markets during the early part of the year will be all wiped out. While this is going on packers are buying so freely that range lambs have sold this week higher than ever before for the month of September.

Sheepmen feel that, while the market may react sharply on large receipts, prices are going to run high throughout the remainder of the season as compared with previous years. They are basing this opinon on a belief that while receipts will be liberal and at times large, the supply will not be burdensome on an average, taking each month as a whole. One thing is certain, sheepmen will be well pleased if prices can be held somewhere near where they now are.

Sale Dates

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
February 15—Harry Tidrick, Winside, Neb.

Duroc-Jersey Hogs

October 2—F. B. Nelson, Lindsay, Neb.
October 17—Henry Stuthman, Pilger, Neb.
October 6—F. A. Lemmerman, Creston, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 14—A. R. Barnes, Petersburg, Neb.
October 31—Robert Leisey, Wisner, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—Harry Tidrick, Winside, Neb.
February 16—F. A. Lemmerman, Creston, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 22—S. M. Hinkle, Genoa, Neb.
February 23—P. P. Cedar, Genoa, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Holstein-Friesian Cattle

October 19 and 20, 1914—H. C. Glissman, Station B, Omaha. Sale at South Omaha.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt.

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FARM NEAR OMAHA — 160 ACRES within five miles of Omaha street car line. Good improvements. No better soil in Douglas county. Has 30 acres in alfalfa, produces five tons per acre sold last season at $14 per ton. Close to alfalfa mill. Farm will rent for $1,200 per year. Must be sold to settle partnership. Price, $112.50 per acre. Address T. E. Stevens, 712 Omaha Nat'l Bank Bldg., Omaha, Neb.

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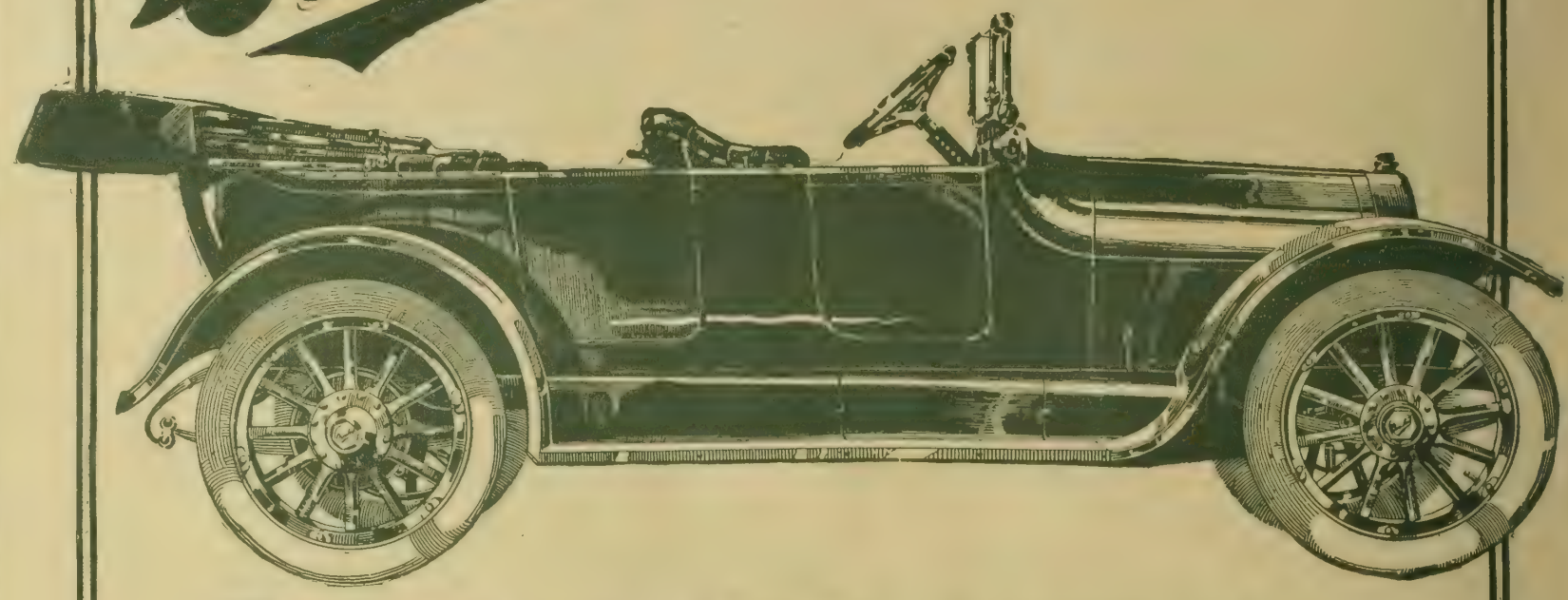

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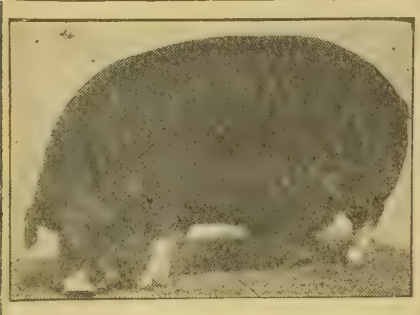

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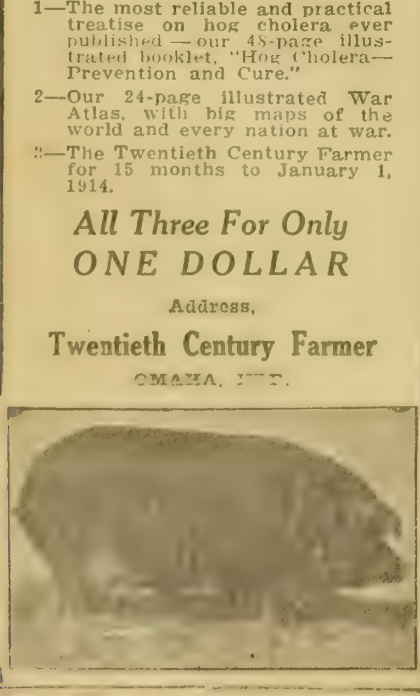


Prattle of the Youngsters

Bought Off

"Come, now, Johnnie, say your speech for the gentleman, and I'll give you a penny."

"Really, mother," replied Johnnie, "I should like to oblige you, but—the gentleman has already given me a dollar to keep quiet!"—Atlanta Constitution.

It All Depends

"Come, sir," said the teacher to the boy at the foot of his class, "how do you pronounce s-t-i-n-g-y?"

The boy at the foot scratched his head.

"Well," he answered thoughtfully, "it depends on whether the word is applied to a human being or to a bee."—Woman's Home Companion.

Same Here

Little Jack was visiting a ranch and was out at the barn one morning watching his uncle feed the horses hay. It troubled him to see them given only dry hay and oats. Finally he said in a tone of sympathy:

"Never mind, old horsies, we have to eat breakfast food ourselves."

Jumped at Conclusions

The second grade teacher was a young, timid girl. Among her new class was Tommy, who, for naughty deeds, had been many times spanked by his first grade teacher.

"Send him to me any time you want him spanked," said the latter, "I can manage him."

One morning about a week later Tommy appeared at the first grade teacher's door. She dropped her work, seized him by the arm, dragged him to the dressing room, turned him over her knee and did her duty. When she had finished she said:

"Well, Tommy, what have you to say?"

"Please, Miss, my teacher wants the scissors."—National Monthly.

Not on Exhibition.

"Tell me, dear, is it because you think me very pretty that you look at me all the time?"

"Oh, no; it isn't that; but papa says you are a two-faced woman, and so I am looking for your other face."

Her Method

Mother—Sometimes there are rude boys in Sunday school who giggle and smile at little girls, and sometimes little girls smile back at them, but I hope my little girl does not behave like that.

Small Daughter — No, indeed, mamma; I always put out my tongue at 'em.

Distant Relation

Merrill, aged 3, is devoted to his father and mother; he loves to have his evening romp with "daddy," but when in trouble he is inconsolable unless "mother, darling," is near. Once he was ill with fever. Mother, darling, watched by his bedside anxiously, while daddy sat near ready to assist in making his boy comfortable in any way he could. As his mother bent over to turn his pillow Merrill looked up at her fondly and said: "Mother, I'm your boy."

"Yes, dear, and daddy's," soothed his mother's voice.

"No," he objected weakly. "I'm just your boy." But, looking across at his father, who sat gazing out of the window, he added, "But I'm daddy's cousin."

Bright and Breezy

Not Incubators

City Boarder—I suppose you hatch all these chickens yourself?

Farmer—No; we've got hens here for that purpose.—Judge.

Peculiar People

"So you are taking summer boarders this year?"

"Yep; we didn't have to, but my wife loves to hear 'em talk that city dialect."—Judge.

Heavy Drinkers

Hubby (with newspaper)—Listen to this, wifey: "For every missionary sent abroad last year Christian America sent 1,495 gallons of liquor."

Wifey—Goodness! Who'd ever think missionaries were such drinkers?

Exercising Patience

Two men borrowed a horse and carriage to take them to a distant pond on a fishing trip. Arrived at the pond, the men, by the exercise of great patience, although neither knew a harness from a whiffletree, managed to get the harness off the horse, after which they tied him to a tree with a halter.

The fishing over, the men set to work reharnessing the horse. They found that they could manage everything but the bridle; they simply couldn't get the bit into the horse's mouth, for he wouldn't open it. Finally one of them said, after every ruse had failed: "Well, partner, there's nothing to it but to wait."

"Wait for what?" asked his friend.

"Why, for the confounded animal yawn."

Knew Her Failing

The farmer was walking comfortably and happily along the lane leading to his own homestead, when suddenly out sprang a strange dog. He yelled for assistance, and his cry was heard by his wife. But, alas! when she came upon him the dog had already fastened his teeth in her loved one's calf. Quickly she picked up a stone and was just about to hurl it, when the husband realized the new and terrible danger he was now exposed to, but with presence of mind he called to her:

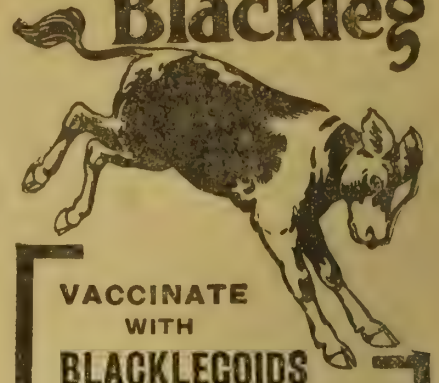
"Mary, Mary! Don't throw the stone at the dog; throw it at me."

A Swat Indirect

Mandy—What foh yo been goin' to de postoffice so reg'lar? Are yo correspondin' wif some other female?

Rastus—Nope; but since ah been a-readin' in de papers 'bout dese 'conscience funds' ah kind of thought ah might possibly git a lettah from dat ministah what married us."—Life.

No More Blackleg



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TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

European War and the American Farmer

Should We Abandon Rotation of Crops and Live Stock Production for One Year's Big Profit on Grain?

THE European war has brought out many ideas and new plans in practically all lines of business. Without doubt the general plan for conducting some lines of business has been almost entirely changed to meet a condition brought about by the war, or to prepare for some condition which looks probable.

We have received numerous letters from different parties asking us to advise farmers to do certain things or to raise certain crops that they may be in position to reap the harvest sure to come in the way of a very material increase in the price of such articles.

Below we quote in full a letter along this line. This letter was written by a man connected with one of the large implement houses of the country, who is closely watching conditions:

Advocates Wheat Production

"In the present European crisis the North American farmer with wheat to sell looms up as one of the biggest and most important factors in the struggle. Germany, France, England, Austria, Russia and other countries involved must depend upon him, both to feed their vast armies in the field and the folks remaining at home.

"In times of peace Europe produces winter wheat almost entirely, and normally this winter wheat acreage is all seeded between September and early October, so that little, if any, acreage will be planted this fall. Moreover, much of the acreage in Poland and the Posen district adapted to wheat raising is not available because it is now occupied by the vast armies of the contending nations.

"As the war progresses the demand for wheat for home consumption and for export is bound to show a tremendous increase. The price will probably soar to $1.50, or even $2, a bushel. No other crop our farmers can raise will return anywhere near the profits to be obtained from wheat for the next year or two. And even though the war is brought to a speedy close, it is safe to say that none of the wheat-raising countries of Europe will be in shape to produce any amount of acreage for a year at least.

"Thus, while the terrible European tragedy is being enacted, our farmers must be awakened to their opportunities, responsibilities and duties resulting from the conflict. Our extensive knowledge of conditions, here and abroad, leads us to conclude that North American farmers ought to put every available acre into wheat.

"This applies most forcibly to the corn belt farmer. Please urge him, not only in one editorial, but in a series of editorials, to materially reduce his corn and oats acreage, especially the latter, and sow a much bigger acreage to wheat than ever before. Wheat at $1 or more per bushel will easily net him a greater profit than corn or oats at prevailing prices. And not only will this splendid profit result, but a world-wide bread famine will probably be averted. Incidentally, all businesses should show a decided improvement and afford employment, at excellent wages, to scores of worthy men now out of work."

Contrary to Our Policy

The advice to the farmers given in this letter is not in accord with the settled editorial policy of the Twentieth Century Farmer, yet we believe it should be carefully read and the plan set forth thoroughly studied.

This paper has steadfastly urged farmers to adopt a plan of crop rotation, mixed with live stock raising. There is a law of nature that must be followed in crop-growing, and that is that rotation is absolutely necessary to successful crop-growing. The nutriment taken from the soil in the production of the grain crop must in some manner be returned to it or reduced yield per acre is sure to follow.

Our correspondent asks us to urge our readers to raise every bushel of wheat possible, stating that they will probably get for this crop from $1.50 to $2 per bushel. We believe next year's wheat crop will bring a good price, but who knows when the war will end or what the results will be?

If wheat is worth from $1.50 to $2 per bushel, is it not reasonable to suppose that prices for corn, oats, hogs and cattle will be proportionately high? If the price of flour soars, is it not reasonable to conclude that the people of this and other countries will use, to some extent at least, corn and oat products for food?

The one-crop or one-idea farmer is sure to run up against the rocks sooner or later. If our farmers pin their whole faith to a wheat crop next year they must necessarily, to some extent, reduce their holdings of live stock and in turn reduce the production power of their soil, which must result in a decreased yield in some future crop.

Loss of Breeding Stock Serious

The farmers of a considerable portion of the corn belt have suffered losses running into millions of dollars in the last two or three years because they did not raise feed with which to maintain and fatten their hogs and cattle, compelling them to sell thousands of valuable breeding animals which should have been kept on the farm. This direct loss by no means covered the total loss, for it will take years of time to get the necessary number of good breeding animals back on these farms again.

Wheat is not largely used as a food for farm animals, therefore, if our farmers abandoned corn and grass-raising for wheat, wouldn't they very largely be compelled to sell their live stock just as much as if they had a failure in a crop? On the other hand, is it a safe business proposition to bank on any one crop for the season's income?

The wheat crop, like many other crops, is subject to conditions which may cause it to be a partial, or even an entire, failure. This has been fully demonstrated in times past. Chinch bugs, the Hessian fly, bad winter conditions (in the winter wheat districts), drouths, etc., are all very important factors in the raising of a good wheat crop.

Wouldn't the corn belt farmer be more sure of an income if he would continue to keep up his regular crop rotation, raising corn, wheat, oats and grass; keeping the usual number of hogs, cattle and horses?

Improve Our Live Stock

The present war has stopped the business of importing horses from the old country, and we are firmly of the belief that in the end it will be a great benefit to the horse business of the United States. The American farmer can raise just as good a horse as the French or Bel-

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Retired Farmers and Why They Retire

Experiences of Middle Aged Men Who Have Left the Farm, as Told by Themselves

FOR the purpose of answering some questions concerning the reasons why farmers retire from their farms and whether they are contented after such retirement, we commissioned Mrs. George A. Loveland last spring to make inquiries among a number of retired farmers. In the issue of September 5 we published the stories of two of these men as told to Mrs. Loveland. In this issue we are publishing the stories of two more.

There is no moral to these stories; they are merely histories of corn belt farmers, and each one is probably representative of the experiences and conditions of hundreds of others. We believe that in reading them, however, some of us may find answers to a few of our perplexities.

A Ten-Acre Retreat

One afternoon in the early summer last year I was driving home from an expedition in the country. About a mile from the city limits I passed the Harris' pleasant home. We had often stopped there to get apples, or peaches, or cherries, or just to visit with good Mr. and Mrs. Harris.

Mrs. Harris was out on the porch and waved to me energetically. I was going on, when she called, "Oh, do stop and talk," and as she approached the buggy she explained, "I'm so lonesome. I'm all alone. You know Wayne's gone—Wayne, my baby; he's married!" and the dear motherly soul cried a little over her bereavement. "When I was on the farm, and had my five children and my work, I didn't have time to be lonesome, but now I don't know what I'm going to do. Can't you come out and sit awhile? And David and Grace," speaking to my two children, "I've got some apples for you. I've kept them since last fall in the cellar house; they're fine yet, though this is June; Winesaps, they are. And maybe you'd like some bread and butter, with sugar on it." They did, and she spread fat slices for them and brought out a big bowl of apples.

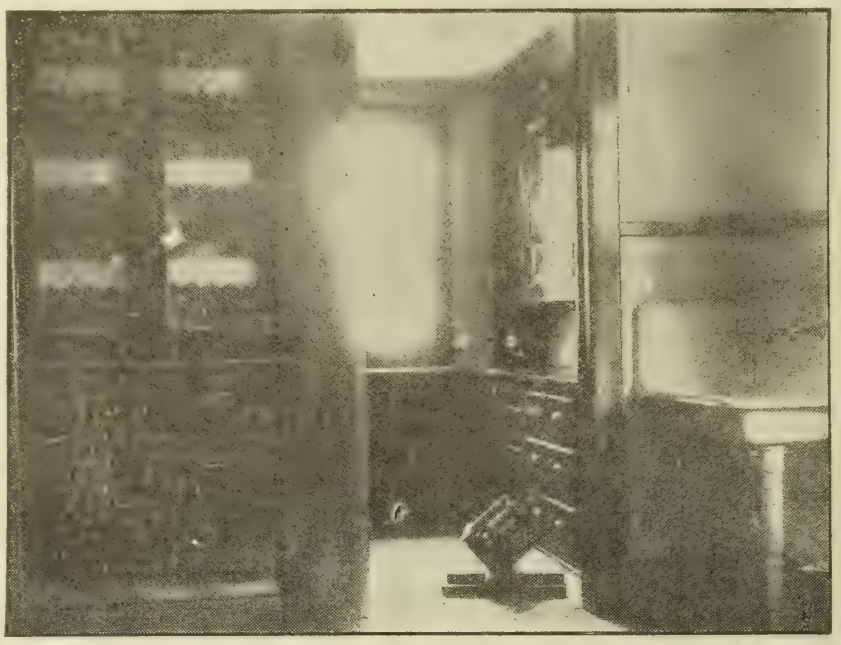
After a little Mr. Harris came home; he had walked from the car line, about half a mile away, for he kept no horse. He liked to go "up town" almost every day, and he and a few of his old cronies would stand around and talk. He could come and go as he pleased and seemed thoroughly to enjoy his leisure. The Harris' had ten acres, mostly in bearing fruit trees, and a new two-story house, with furnace, bath room, sink, hardwood floors and many conveniences. The location was most beautiful, looking out over the Antelope valley to the south and west, and upon Mr. Bryan's sightly home at Fairview a short distance to the southeast. "Mr. Bryan stopped and visited with us most half an hour when he was home this spring," said the old lady proudly. "He's just as neighborly and friendly as if he wasn't secretary of state; just one of us farmers."

Cozy Cottage to Which Mr. and Mrs. Harris Retired

Peterson Home, Showing Lawn, Cement Walks, Trees and Fences

"But you're not really farmers now," I said.

"No," Mr. Harris said, "this business of getting hired help drove me from the farm. They're so almighty independent; if you don't humor them just so they'll up and leave you right in the middle of things. Now, I'm where I don't have to depend upon anybody but myself. Mamma likes her cow, and I take care of that, and that's about all I do. I suppose I ought to put in a lot of time taking care of this orchard and marketing the fruit, but, Lord! I wouldn't peddle it around and be bothered with it for any amount of money. I let old man Hinchy, you know him, peculiar old hermit chap who lives over there, gather up the fruit and sell it, and if folks like you want to come out here and get a little of it you're welcome to it."



Corner of Peterson Kitchen—On the Floor is Churn Made by Their Twelve-Year-Old Son. It is a Molasses Pail Set in Frame and Mounted on Pivot.

Mrs. Harris bemoaned the fact that she had such quantities of fruit left over—quarts and quarts of canned cherries, peaches, pears, preserves, gallons of fruit butters and jams, dozens of glasses of jelly, pickles and the like, and no one to eat it up.

"I told her she must have been preparing for a famine the way she was putting things up," Mr. Harris said, "but the famine didn't come."

"Did you sell your farm when you moved here?" I asked.

"Oh, no; I rent my farms out; I have three farms up in Beaver valley, 500 acres in all; five windmills to take care of and about $200 taxes to pay. I rent for one-third grain rent, one-half of the alfalfa. We haven't had very good corn crops lately, but the wheat has been fine and the alfalfa fair. The first year after we came here I got $1,800 from the farms. No, I don't want to sell my farms. If you get them into money the first thing you know you run through it and you haven't anything. Besides, farm values are increasing right along; however, I find it a good plan to keep away from the farms. I see too much that needs to be done; it worries me."

Retiring on the Farm

Never have I seen the face of nature in Nebraska look lovelier than it did that June morning; almost everything as far as eye could see was a luscious and vivid green; great fields of winter wheat rolled in the breeze like waves on a vast ocean. The alfalfa was in full bloom and seemed a perfect crop. Surely our Nebraskans should love the purple on the alfalfa as loyal Scots love the "purple of the heather." Here and there it was being cut; in other places loaded into stacks by the stackers, or into the barn lofts by pulleys and ropes. I saw but few fields of corn, but in them the fresh, green shoots grew sturdily through the velvety black soil. Inside the fence was a smooth, green sward under blooming catalpa trees. A man was out in the garden cultivating potatoes and I asked him if he had any objection to our picnicing in his yard.

"Sure, you can picnic wherever you want to," he responded cordially. "Just make yourselves at home. Wouldn't you rather eat in the house; you're perfectly welcome to."

We declined the invitation, preferring to eat our lunch out of doors,

but after dinner we went to the house, where we talked with Mr. and Mrs. Peterson, and they told us of their early history and how they had retired on their own farm, a happier plan perhaps than retirement to the city would have proved.

Hardships of Pioneering

In 1865, at the age of 6 years, Emanuel Peterson came with his parents from Sweden to this country. It took three months to cross the Atlantic in the slow sailing vessel, though that seemed quick to some relatives who had come over somewhat earlier and were eight months on the way.

At the age of 32, by hard work and thrift, Mr. Peterson found himself the owner of a good eighty in Iowa, but opportunity beckoned him further west, and he traded his eighty for a half section in Lancaster county, Nebraska. That was in 1891, and the land he bought was valued at $20 an acre; now farmers around claim their land to be worth $100 an acre, but Mr. Peterson is more conservative, and says, "I'll take $90; it's worth that at least."

"Of course," he explained, "my eighty didn't pay for all of it. I assumed a large debt, but I paid it all off long ago. When I got the land there were no improvements on it; it was fenced, however, but only a part of it was broken. I kept eighty acres in pasture, so always had forty or fifty head of cattle. I sold them when I thought the market was good, but I never bought steers to feed as some did. Horses were cheap, though, and it paid better to buy than to raise them. But when horses got too dear I began raising them again. I raised corn mostly, and wheat and oats—we didn't go to alfalfa so much then."

"How long have you been on this place?" we asked.

"It will be eight years this coming fall since I bought this 160. I paid $4,100 down and gave a 6 per cent mortgage for $6,000; that was paid off four years later. There was an old house on the place. Now I consider this farm, with its present improvements, worth $150 an acre."

"You farm this quarter and rent out the half section, I suppose?"

"No, I've about quit active farming. I commenced renting part of my land four years ago. Now I rent it all but a little around the house. My married son is on the old place; he runs the whole half section, though, of course, he has to hire help. He pays me one-third grain rent, and the men who rent this land pay two-fifths. I have plenty of room to store the grain, so if I don't think the market is favorable I hold on to it; otherwise I sell my share right away."

"Well, I think you are sensible to take things easy now, and enjoy life before you were all broken down."

"Perhaps I wasn't sensible soon enough. I've worked awfully hard all my life, and I seem to be getting thinner and thinner every year, but I don't have to keep any help now, and that's a relief."

Help Was Hard to Keep

A neighbor of Mr. Peterson's told us later that it had always been hard for Mr. Peterson to keep help, because he was such a rustler himself and was apt to be "impatient" with his men if they didn't keep up with him. The son, however, was a worker like his father, and before he married had been a great help. The Petersons have a married daughter also, and two boys at home, one 9 and the other 12—fine, open-faced, clear-eyed, healthy lads.

"I keep only three cows now," Mr. Peterson went on, "though we used to have a good many and sell milk. My wife makes butter now and sells what we don't need ourselves. I have reserved twenty acres for corn, and the garden and orchard here around the house—three or four acres—and the pasture. I keep a pair of horses and, of course, we have chickens."

"Have you got the automobile fever yet?" we asked.

Governor's Proclamation

Seed Corn Selection Week

IN VIEW of the fact that our successful farmers and experiment stations find that early selection of seed corn is advisable, it seems, in a matter of such great economic importance, that a time should be set aside for its early selection.

The following reasons for early selection are apparent:

First—Early selected seed is less liable to be injured by freezing.

Second—Seed selected in the field enables the farmer to obtain ears from plants of the proper type and from plants growing under normal conditions.

Third—From various reports received, the present crop has ripened early and seed may be safely selected at the end of the month. It appears essential, however, that such corn once selected should be stored immediately in as dry a place as possible.

A special reason why our farmers should select their own seed will appear from data of the Nebraska experiment station showing that native seed produced 6.2 bushels more per acre than excellent seed brought in from other districts.

With these facts in mind, I designate the week beginning September 28 as Seed Corn Selection Week, and urge its general observance as the proper time for this important task.

Given under my hand and the Great Seal of the State of Nebraska this, the 23d day of September, 1914.

JOHN H. MOOREHEAD,
Governor.

"No, not very hard. There are lots of other things I would rather put my money into."

All this time we had been sitting on a neat, green-painted bench of Mr. Peterson's own manufacture around an ash tree in the front yard.

"Won't you come in now and see the house?" Mr. Peterson said.

Conveniences of the Family

We accepted the invitation eagerly and Mrs. Peterson, with her youngest grandchild in her arms, came around with us—the baby's mother had to keep an appointment with the dentist in Lincoln in the afternoon and had brought her three little boys over for "grandma" to keep while she was gone. Mrs. Peterson is a young looking grandma with her wholesome, jolly, unlined face. They took us about from room to room, upstairs and down, proudly showing us this and that improvement and convenience. Our admiration was not feigned, for it seemed quite ideal; in fact, as we told them, they had all the comforts and luxuries one usually expects to find only in the city, with the advantages and joys of life in the country.

"What did such a house as this cost you?" we inquired.

"Well, it is hard to tell exactly," Mr. Peterson answered, "but between $4,000 and $5,000. I drew my own plans and was my own contractor. I hired the labor by the day; the carpenters came from Denton, two of them had motorcycles; I bought the material and did all the hauling, and I haven't counted my own labor in. The men at the planing mill helped me plan the stairs and doors and so on. Of course, the electric light plant and the hot water heat were installed by the men who sold them. It is just about a year since the house was finished and we haven't got it furnished yet as we would like, but that'll come by degrees."

The main part of the house is 30x34, with a projection 9x20 on the back. The floors and woodwork all over downstairs, even in the kitchen and back hall, were in white oak; upstairs the finish is hard pine. Downstairs there is the large living room on the southwest, dining room on the southeast and the bedroom and kitchen, besides the large hall, the front part of which contains a handsome stairway, and the back part is a sort of entry fitted with a lavatory and rows of hooks. The kitchen has a sink, with hot and cold water, built-in cupboards, linoleum on the floor, an immense range boiler and well-planned pantry adjoining. There is plenty of light and good cross ventilation.

Any Farmer Can Have Them

Upstairs there are four good sized bedrooms, each with a generous closet fitted with shelves, drawers, hooks, hat cupboards, etc. In the hall is a complete linen closet and in the southeast room a built-in bookcase or cupboard. The bathroom is as big as a small city bedroom and contains the most improved fixtures. There are nickel-plated electric light fixtures on either side of the mirror-doored medicine cabinet, and another larger light in the ceiling, which is turned on by means of a switch. All through the house there are handsome electric light fixtures and innumerable switches. In the hall there are three different places to turn on the lights. In convenient locations are the dust and clothes chutes emptying into the basement.

But it was the basement itself that I found particularly interesting. The floors are all cemented and there are four separate rooms divided by brick or cement walls.

"Here is where I do all my rough work," said Mrs. Peterson as we stepped down into the laundry. This was a clean, light room with a cement stairway leading outdoors, a drain in the center of the floor, a sink with hot and cold water, a faucet from which to draw the soft rainwater for washing, a laundry stove, a washing machine and a modern churn.

In the next room, separated by a locked door to prevent danger to the children, was the electric light plant. This consisted of a small engine which burns either gasoline or kerosene—Mr. Peterson uses kerosene, as it is cheaper—a dynamo and the storage batteries. This plant, including wiring and fixtures, all installed, came to $375, but the cost of operating is very little. On the opposite side of the room is the pressure tank, which is kept filled by the windmill, though the little engine could do the pumping if for any reason the windmill was out of commission.

Comfort and Neatness

South of the laundry was the furnace room, containing a hot water boiler of the most approved pattern, and ample coal bins. Mr. Peterson said that they had had no difficulty keeping warm and cozy last winter, and with all the radiators throughout the house, I should think this might well be true in the severest weather. Beyond this room, and entirely closed off by a brick wall and thick door, was the fruit and vegetable cellar, light and cool and spotlessly clean.

Outside as well as inside everything was neat and orderly, in the very pink of condition. The yard around the house, with its thick, weedless lawn, flowers, trees and shrubs, was enclosed by a trim, white-painted fence; the driveway from the road came up along this fence to the side of the house. There at the gate was a high post with a regular street light on top. Mr. Peterson turned the switch, and I could imagine how it would light up the driveway and dooryard at night. The great barn, big enough to hold fifty or sixty tons of hay, was also fully equipped with electric lights, there even being one high up in the ventilator at the top. Toward the back were well-built, well-lighted chicken houses, and a shed—part of the old house—contained cobs, lawn mower, garden tools, hose, the children's toys, and the like.

It was half past two before we started on again. We had a delightful visit with our friends three miles further south. Coming through that fertile and beautiful land in the golden evening sunlight made us realize with sincere thankfulness that Nebraska is indeed "God's country," and it is good to live in it.

Of Interest to Our Women Readers

Road to Laughtertown

Would ye learn the road to Laughtertown,
O yet who have lost the way?
Would ye have young heart, though your hair be gray?
Go learn from a little child each day.
Go serve his wants and play his play.
And catch the ring of his laughter gay,
And follow his dancing feet as they stray,
For he knows the road to Laughtertown.
O ye who have lost the way.
—Katherine D. Blake.

Our Home Chat

Is the European war a common topic of conversation in your home? No doubt it is, as everyone has something to say regarding it. It seems to us that the character of the conversation concerning this war heard by the American children will in a large measure determine the future of our country. The general sentiment of the people and the press of this country is fortunately against the senseless slaughter and the terrible destruction of food and other valuable property that is going on. You have a chance now to help along the cause of peace by teaching its beauties to the coming generation.

* * *

It is seldom that one secures a bargain. Merchants are not in business for the pleasure of the work, but to make a living. When they sell a thing very cheap it is because for some reason it is either unsaleable or will become so, or because it is not worth as much as it appears to be. It is better to buy of reliable firms and pay fair prices than to hunt bargains at "marked down" sales, where the excitement of the crowded store often influences you to buy something for which you have no real need.

* * *

There is a newspaper in Arkansas that is printing the New Testament as a serial. We imagine that the subscribers will pick up the paper to read the continued story and throw it down again in disgust, saying, "I've read that." We are used to being lectured from the pulpit and elsewhere for not reading the Bible as much as we should, and yet, on the whole, we are pretty familiar with its teachings and its stories.

* * *

One of the pleasantest tasks of the first cool evenings is the examining of the cloak and suit catalogues. Almost always mother or one of the girls, or all of them, want a new suit or coat, or furs, or something for winter, and picking it out of the catalogue, comparing and choosing samples and taking measurements is the greatest of fun. And, by the way, in taking measurements for a made-to-order garment, do it yourself, following carefully the directions given. One winter we knew of a whole community of women, most of whom sent to the same mail order house for made-to-order garments, and the only ones whose garments did not fit were those who got the dressmaker to take the measurements. We sometimes wonder if she did it on purpose.

HOME EDITOR.

Our Weekly Recipe

GREEN TOMATO RELISH—One peck green tomatoes, one dozen large cucumbers, two heads cabbage, two large onions, one ounce each black and white mustard seed, one cup grated horseradish, seven large red peppers, two ounces celery seed, one pint salt. Cut up tomatoes and cabbage and mix with salt; let stand four hours; drain (squeeze it). Add all other ingredients chopped. Take one gallon cider vinegar and two pounds of sugar. Put on stove and let come to a boil. Add the rest and heat thoroughly.

Our Boys and Girls

The greatest heritage that can be bequeathed to a boy or girl is to have been born on the farm and to have made the country their home until the age of maturity, and have learned their first lessons of life in nature's great storehouse of knowledge.

Have you ever lain down to rest under the shade of a tree, with a bunch of clover for a pillow, and listened to the "music in the air" in June time? The song of birds, the buzzing of bees, the murmer of the stream winding down through the meadow, the rustle of ripening grain, the crickets and Katydids singing in the grass, is there any music that can measure up to this? And free as the air we breathe. Do yon wonder why the tired workers of the city long to get away from the sight of tall buildings to the country, where they can look out over the broad expanse of field and wood and breathe the fresh morning air laden with sweet fragrance from orchard and meadow.

The country boy and girl often dream of a life in the city with all its varied attractions, its finely lighted streets, theaters, picture shows, apartment stores with fine show windows, throngs of people coming and going, its educational advantages, its great social activities, and in their discontent there is a longing to get away from the home roof, where "there is no place to go evenings." They have grown tired of the ceaseless grind and humdrum life on the farm. If they could know of the temptations and snares that

(CONTINUED ON PAGE TEN.)

Styles for Home Dressmaker

6868—Ladies' Dressing Sack. Any of the figured crepe materials can be used to make this dressing sack. The sack is made with the body and sleves in one and the pattern provides for a cap. The pattern 6868 is cut in sizes 34 to 44 inches bust measure. Medium size requires 3 yards of 36-inch figured goods, ¾-yard of 36-inch plain material.

6837—Ladies' Skirt. Two materials are used for making this skirt. The skirt is cut in two gores and is made with a yoke. The skirt also has a tunic and is made with a slightly raised waistline. The pattern 6837 is cut in sizes 22 to 32 inches waist measure. Medium size requires 1⅝ yards of 44-inch plain material and 2⅝ yards of 36-inch striped goods.

6809—Ladies' Waist. The upper ends of the sleeves of this blouse extend to the neck edge and form a small shaped shoulder yoke. To this are attached the gathered fronts and the plain back. The sleeves may be long or short. The pattern 6809 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2⅜ yards of 36-inch material and ¾-yard of 27-inch contrasting goods.

6833—Ladies' Apron. This apron is made with a bib, which protects the front of the waist. It fastens at each shoulder and also with string ties in the back. Linen or gingham can be used to make the apron. The pattern 6833 is cut in one size and requires 2⅛ yards of 36-inch material

6812—Child's Frock. This frock is in the new Dutch style, with plain blouse, high in the neck, with small, flat collar and with center front closing in duchess style. The skirt is cut in two pieces. The pattern 6812 is cut in sizes 2, 4 and 6 years. Medium size requires 1¾ yards of 36-inch material, with ⅜-yard of 27-inch contrasting goods.

6862—Children's Dress. This pretty little dress is made with the long-waisted effect and a side front closing. Long sleeves are used and they are set in the regulation armhole. The pattern 6862 is cut in sizes 2, 4 and 6 years. Age 4 years requires 2¼ yards of 36-inch material and ⅛-yard of 27-inch contrasting goods for the collar and cuffs.

6834—Ladies' Dress. Linen or serge can be used to make this dress, with the trimming of contrasting material. The dress can be made with either the long or short sleeve. The skirt is cut in four gores and can have either the high or regulation waistline. The pattern 6834 is cut in sizes 34 to 44 inches bust measure. Medium size requires 4¼ yards of 36-inch material and ⅞-yard of 27-inch contrasting goods.

All Patterns on This Page 10 Cents

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Schoolboys in Transit

When grandpa started out to school
Each morning long ago,
He tramped along the country road
With younger folk in tow;
A whistling in his simple glee,
He walked a mile or two or three.

Now daddy not so long ago,
When he was a little tike,
With auntie on the handlebars
Rode schoolward on a "bike";
A-spinning down the village street,
As gay a sight as you could meet.

When I am starting out to school,
Although it isn't far,
I'm bundled carefully and sent
In a whizzing motor-car;
The grandson of my grandpa, I
Think of my grandpa's days and sigh.

I see the past and then I see
The future just as plain.
When in his turn my boy shall sail,
To school by aeroplane.
Be it a-foot, a-wheel, a-wing.
To go to school seems quite the thing.
—Christian Herald.

The Editor's Corner

We wonder how many of you have gone to the State fair this year, or are going, for some of the state fairs have not yet been held. If you go, be sure you do not miss the Shetland pony show, for that is one of the nicest things at the fair. We were in the ring at a fair the other day when the Shetlands were being judged and made the acquaintance of a small boy who had a job we are sure any of you would like. His father was exhibiting a herd of ponies and he was holding the halter of a tiny 3-weeks-old colt while it awaited its turn. The colt was so small that a man who was there lifted it easily with one hand, and it was as playful as a kitten and kept kicking up its little heels and running about, but the boy was strong enough to hold it. Finally, however, the colt started off when the boy was not braced and pulled him over, dragging him through the sawdust in the arena for quite a distance before he could stop it. The boy laughed and all the people cheered for the tiny colt, and it got another cheer when it was awarded second in its class.

There was another boy at this fair that distinguished himself. It seems that one little chap on the grounds got lost and his anxious parents had the National Guards out hunting for him for half a day, but without success. Finally, one of the soldiers said to the young nephew of the general in charge, "Do you want to be my private detective?" Of course, the boy did, so he was furnished with a description of the lost child and set out in search of him. Within half an hour he had found the little boy and brought him back to headquarters, where he was returned to his mother, and the young detective found himself quite popular with the soldiers. HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Prize Story.)

A Visit to the Country

By Gala Mae Perry, Aged 12, Crandall, Tex.

I was visiting my grandparents in the country, and as I lived in the city the country was new to me. Grandpa had horses, mules, cows, pigs and fowls. I liked to see the boys milk the cows.

But, best of all, we went fishing while I was there. The boys hitched the mules to the wagon and grandma and I fixed a lunch, which consisted of chicken, pickles, cheese, bread and cakes. We went eleven and one-half miles from grandpa's. When we got there the mules were tired and thirsty, so the boys watered and fed them. Then we were ready for fishing. Grandma did not care to fish, but grandpa certainly did, as he is always ready for fun and sport, so we put our lines out and my line had been out about five minutes when my cork went under. I jerked my line out, and what do you think was on my line? Could you guess? It was a turtle. You should have seen my face! Grandpa and the boys laughed at me, but I was pleased with my luck. We soon had a mess of fish, but I want to let you know that I did not catch any.

(Honorable Mention.)

Our Cats

By Lavona Elwood, Aged 10, Exira, Ia.

When we came here there were no pets of any kind. We children wanted a pet to play with. One day when we were wondering what we should do we saw a mother cat and three kittens. They were not very tame, but we soon caught one of the kittens and fed and petted her until she would come when we called her. Then we tried to catch some of the others, but they were too wild and would not let us near them.

We named the cat we caught Puss. One day we could not find the mother and two of her kittens, but our kitten stayed here. In a few days the other cat came back alone and we never saw the two kittens again. We fed her and now she is not so afraid of us.

The mother and her one kitten are here now.

A Tramp

By Eva Schafer, Aged 14, Kennard, Neb.

One evening about four years ago my brother, two years older than I, was down at the barn. Papa was away and he was supposed to do the chores, but he thought there was a tramp in the buggy shed and came running to the house to tell mamma about it. Mamma said there was no tramp there, but he said there was, so mamma said she would go with him and see who it was.

So they went down and opened the door, and I was in there playing with the mowing machine. I had on papa's old hat and coat. We had lots of fun teasing my brother after that. Mamma told him the next time he heard something and thought it was a tramp he should go and look at it.

Awards in Picture Contest No. 16

There were not many answers to this contest, but what were received were very good ones. Sixty, the number this month, is the smallest number of verses ever sent in, although there were not many more last year at this time. We hope you will soon start to work at the stories and verses, as we miss them. Even those that do not get prizes, or even get printed, are greatly enjoyed by your editor, and the little notes and letters you send with them are of great interest. We wish it were possible to reply to all of tLem, but think of writing forty or fifty letters every week! There wouldn't be any time left to do all the other work. Remember that in awarding these prizes we give consideration to the meter, the spelling, grammar, writing and a number of other things. One excellent verse could not get a prize this time because it had such a bad gramatical error. Several others had what is known as "false rhymes," such as trying to make "Ann" rhyme with "lamb." One little girl said she and her sisters had written verses several times, but had never had them even printed. We are so sorry about this and would be glad to print them just to make these litlte girls happy, but, of course, that would crowd out better verses and be unfair to someone else.

(First Prize.)

Paul Alves, Jr., Aged 9, Fairmont, Neb.

Mary had a little lamb,
And Susie had one, too;
Susie's lamb could do each stunt
Which Mary's lamb could do.

(Second Prize.)

Margaret Blume, Aged 10, Emerson, Neb.

Mary and Alice were two pretty girls,
Who each had a lamb for a pet;
Mary's, called Snowball, had long, shaggy curls,
While Alice's was spotted with jet.

Arlo Kellogg, Aged 10, Ewing, Neb.

At this picture above
We have all had a peep;
You take out the girls
And I'll take out the sheep.

Frankie Schneider, Aged 11, Blanca, Colo.

Two little girls with lambkins dear
Are playing sweetly, do you hear?
Their lambkins won't run, don't you fear.
For they are trained to stand just here.

Louise Williams, Aged 14, Mt. Ayr, Ia.

The girls are coming from the barn,
And each has sometihng in her arm,
And they will let you take a peep
At their own darling little sheep.

Grace Lansworth, Aged 12, Agee, Neb.

Clara and Sarah each had a pet lamb;
One they called Jerry, the other one Sam;
When they had no work they played all day,
And when night came they fed them hay.

Permindia Blanche Cook, Aged 15, Gem, Neb.

Lord, care for these two little shepherds,
Who have taken their sheep from the fold;
If snowy and bad turns the weather,
They will bring them in out of the cold.

SICK DOCTOR

Proper Food Put Him Right

The food experience of a physician in his own case when worn and weak from sickness, and when needing nourishment the worst way, is valuable:

"An attack of grip, so severe it came near making an end of me, left my stomach in such condition I could not retain any ordinary food. I knew, of course, that I must have food nourishment or I could never recover.

"I began to take four teaspoonfuls of Grape-Nuts and cream three times a day and for two weeks this was almost my only food. It tasted so delicious that I enjoyed it immensely and my stomach handled it perfectly from the first mouthful. It was so nourishing I was quickly built back to normal health and strength.

"Grape-Nuts is of great value as food to sustain life during serious attacks in which the stomach is so deranged it cannot digest and assimilate other foods.

"I am convinced that were Grape-Nuts more widely used by physicians it would save many lives that are otherwise lost from lack of nourishment." Name given by Postum Co., Battle Creek, Mich.

The most perfect food in the world. Trial of Grape-Nuts and cream 10 days proves. "There's a Reason."

Look in pkgs. for the little book, "The Road to Wellville."

Ever read the above letter? A new one appears from time to time. They are genuine, true and full of human interest.

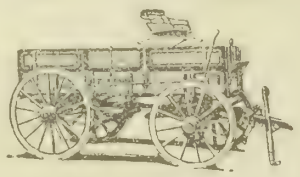
It Takes The Bain to Stand the Strain

WE built our first farm wagon over sixty years ago—and we built it from the farmer's point of view. He wanted a wagon that would endure the strains of rough, rutty roads. **And he got it!**

Today we are building The Bain Wagon from the same view-point--for better and longer service--to give greater wagon value. Toughest oak and hickory--carefully seasoned--go into every Bain. Axles and skeins are extra large. Gearing is heavily braced and ironed. The Bain is built for maximum strength -- yet there's no excessive weight. It is remarkably light of draft.

Ask your dealer to show you why The Bain is better. Ask him about the Bain Warranty which backs up Bain Wagon Quality. Or, write for Catalog.

THE BAIN WAGON CO.
201 Main St. KENOSHA, WIS.



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EARL HOPKINS, Washington, D. C.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

BE SURE to put in some charcoal for winter use in the poultry house. No other medicine is so useful in keeping the crop contents sweet and shutting off digestive troubles. If you burn wood, merely sift the wood ashes for the supply. Pound the charcoal in bits the size of a pea or bean and keep in clean boxes nailed to the inside wall of the scratching shed or poultry house.

* * *

One common form of preserving eggs for the late fall or early winter months is packing them in salt and placing the box or crock in a dry place. Place salt on the bottom; into this sink the eggs, small end down; cover with a layer of salt, next a layer of eggs until the vessel is full; cover the last layer of eggs with salt. There is no better way to keep a few dozen eggs for home use during November and December.

* * *

Some hens produce over 80 per cent fertile eggs; other hens in the same flock will never lay a fertile egg. The fertile hen may lay more eggs than the infertile hen; again, it may be the infertile hen that produces the larger number of eggs. Some hens will lay entirely through molting times, others of the same strain and breed take two months off laying. Some hens will lay all winter through in a cold house, others again will not lay unless the temperature of the house never goes below 40 degrees.

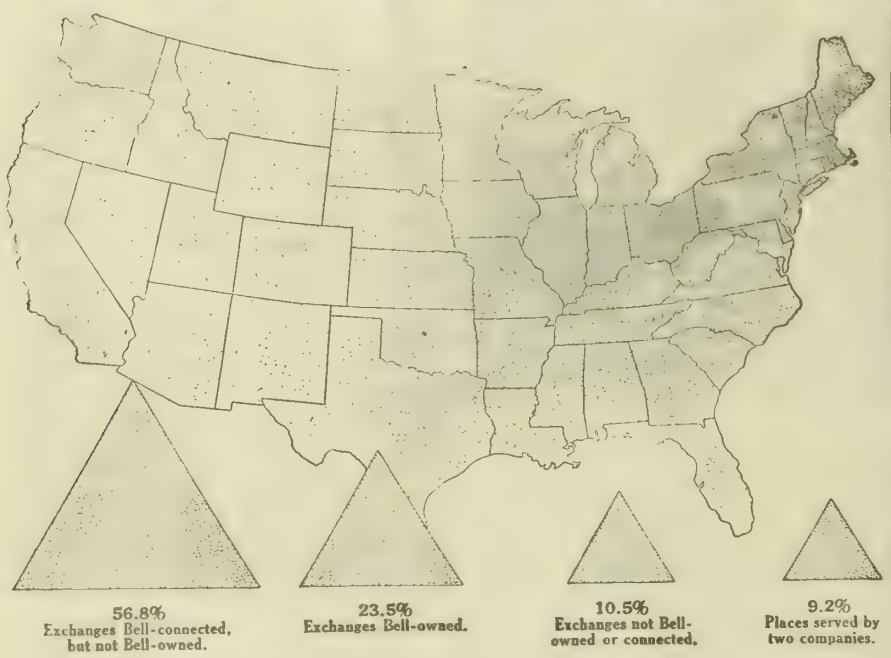
* * *

To some poultry keepers the arrangement of the roosts is a matter of no thought at all, when, in fact, it should be given much thought. Lame legs, sore feet and broken eggs in hens are mainly due in some flocks to high, unhandy and bad-shaped roosts. Even turkeys, jumping from high perches, are often lamed or show bumblefoot. This last is an extremely painful disease. Make all perches low, not over three feet high, and make upon the same level, for it is natural that every fowl is bound to crowd on the highest roost. The heavier the fowl the greater the danger of lighting heavily from a high roost. A favored roost is a succession of poles or rounded roosts, not so narrow that the claws can sink into the sole of the foot as the fowl clutches about the roost, placed above a tight dropping board about eighteen inches. This height will allow an easy scraping off of filth from the dropping board, which board must be made very tight, as mites delight to hide in cracks left in the dropping boards. The ends of the roosts must rest in nicks or be made movable in some manner. Pouring coal oil in the nicks in which the ends rest will keep down mites, or simply resting the roost end in wood ashes, but don't rely on lime, for mites will live healthy and thrive in loose lime. Long experience has shown us this.

* * *

As eggs are beginning very early this fall to go to near old-time top prices for winter time, it would be well for the farmer to begin paying early attention to his hens in the way of putting in green stuff for the flock. No flock of winter layers will do even average in producing winter eggs if green stuff and animal food is held out of its ration. Blood meal, kept by most poultry supply houses, is a cheap animal ration. Green rye, which is available usually until after the winter holidays, is an excellent green food to supply, and after this time alfalfa, where alfalfa is raised, and clover, also, are both in high favor with the winter laying biddy.

What the Telephone Map Shows



EVERY dot on the map marks a town where there is a telephone exchange, the same sized dot being used for a large city as for a small village. Some of these exchanges are owned by the Associated Bell companies and some by independent companies. Where joined together in one system they meet the needs of each community and, with their suburban lines, reach 70,000 places and over 8,000,000 subscribers.

The pyramids show that only a minority of the exchanges are Bell-owned, and that the greater majority of the exchanges are owned by independent companies and connected with the Bell System.

At comparatively few points are there two telephone companies, and there are comparatively few exchanges, chiefly rural, which do not have outside connections.

The recent agreement between the Attorney General of the United States and the Bell System will facilitate connections between all telephone subscribers regardless of who owns the exchanges.

Over 8,000 different telephone companies have already connected their exchanges to provide universal service for the whole country.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy *One System* *Universal Service*

Our Boys and Girls

(CONTINUED FROM PAGE EIGHT)

are leading the boys and girls astray in our cities they would gladly remain in the shelter of the home on the farm. Many of the boys and girls there need all they can earn, with the most rigid economy, even to live.

There is one great blessing that has come to many homes all over this wide land—the living room has taken the place of the old-fashioned "parlor," and now the children can have the best time ever in the evening, playing games or studying their lessons for tomorrow. Parents often overlook the rights of children, and while they live at home think that their board, clothes and education are sufficient.

I like the idea of the flower garden, where one can study plant life in connection with harmony of color. I can remember my first flower garden and the delight of watching it grow and blossom. Many years ago two little sisters were given a flower garden. In it they planted a golden willow twig. Twenty years later they were married under its wide, spreading branches; now it is sixty years since the little twig was planted in that dear home garden on the farm.

Music should form part of the pleasures of every home. It is not counted a luxury now, but a necessity in the home life. And it finds an echo in every soul and should be encouraged.

One of the best ways to make children contented on the farm is to give them something to raise all their own. Any father can spare a plot of ground and give it to the boy (or girl if she wants it) to cultivate after it is plowed and harrowed, where they can raise popcorn, cucumbers, melons, celery and potatoes—in fact, anything that they can sell for a small profit. Encourage them by buying some of their produce and assisting them in their efforts by words of approval. Make them to feel that they are a part of the home life and its surroundings; give them a chance to earn their own "pin money." The restless boy and girl wants something to do besides the work for father and mother.

Did you ever stop working long enough to think that most of the real things of life, the things worth having, took root in the soil of the old farm and were transplanted into the heart of the child? As I watch the boys, and girls, too, playing ball on a city lot or roller skating on the sidewalk, I have a feeling of pity for them. What do they know of tracking the rabbits in the first snow or finding where the squirrels have hid their winter store? The lake or sound is no comparison to "the old swimmin' hole." Every country boy has found it when he ran across the orchard, then down through the meadow land to the marsh,

Where the bullrushes grow'd and the cattails so tall,
And the sunshine and shadder fell over them all.

All this belongs to the boys in the country.

If mothers and fathers would make companions of their children and enter into their pleasures they would find themselves growing younger and be repaid by the love and confidence of the children, which is worth more than much gold.

SARAH WOOD CASHNER.
Washington.

The Longest Country on Earth

By Frank G. Carpenter

VALPARAISO, Chile—Valparaiso has plans out for improving its harbor; and now that the Panama canal is completed it will be able to take care of all the increased traffic that comes here from the opening of that great waterway. As it is now, it is one of the chief ports of the world. It is the New York of the west coast of South America, and does more business on the western Pacific than any other town except San Francisco. It is nearer the isthmus of Panama than our great port of California, and in the new direction of trade through the war in Europe it will be almost as full of American vessels.

You all know of Valparaiso, but I doubt if many of you realize just where it is. It is about as far south of our great canal as Boston is distant from Salt Lake City, and to equal its length you would have to add 700 miles to the distance between Boston and Panama. It is right in the central part of the coast of this long republic of Chile, and I should say at a guess about 1,300 or 1,400 miles from the Straits of Magellan. Valparaiso is the port nearest the capital of the republic, and also the chief commercial gateway to the great central valley which forms the chief agricultural region of the country. Chile has a foreign commerce of more than $250,000,000 per year, of which more than one-half is made up of imports, which until now have come largely from England, France and Germany. The bulk of this goes through Valparaiso. The town has 200,000 inhabitants and is growing fast. It has gained enormously since the earthquake of 1906, and, notwithstanding its losses of a similar kind in the past, its people go on building as though there would be no earthquakes in the future.

Valparaiso Has Had Bad Luck

Valparaiso has had many experiences in the field of bad luck. It was founded only fifty-one years after Columbus discovered America, and it had many adventures with pirates before the earthquake of 1730 destroyed the place and its fortifications. It was soon rebuilt and another earthquake came in 1822. Two decades after that it had a fire that burned up $1,000,000 worth of its property and a little later it had another fire at a cost of $5,000,000. Then it was bombarded by the Spaniards, who destroyed its property to the value of $10,000,000, and on top of the whole came the earthquake of eight years ago, which is said to have cost $120,000,000. At that time it is estimated that 3,000 persons were killed, and that at least 100,000 were rendered homeless. The whole of the city along the edge of the sea was laid low; and nevertheless it is that part of the town that is now covered with the best business blocks. Wide avenues have been laid out through it, and the city is larger and more handsome than ever. As it is, a great part of Valparaiso has been reclaimed from the sea by filling in earth and rock from the highlands. This was before the earthquake occurred, and it is made so by the recent improvements. Many of the new streets are now so high that one has to go down steps to get into the older buildings still standing.

Harbor Needs Improvements

The harbor of Valparaiso, as it is now, is not safe in certain weather. It needs breakwaters and other improvements. The large ships anchor some distance out from the shore, and goods and passengers are landed in boats. The scene coming into the harbor is beautiful. The city is built about a bay, of the shape of a half moon. The big warehouses and most important business blocks are on the edge of this bay, and back of it, rising almost straight up from the water, is an amphitheater of hills, covered with houses. These hills are so steep that the houses are built on terraces and the people go from level to level on cog railroads. These roads are much like elevators, save that they go up on the slant, instead of perpendicularly. There is one of them at every few blocks, and you can pick them out with your eyes as you come in on the steamer. At night the view from the ship is especially beautiful. The houses on the hills and on the walls of the amphitheater are ablaze with lights, and in addition are electric lights on the streets, making the whole look like a maze of great fireflies moving about over the black walls of the hills.

Busy Scenes in Port

The moment we came into the port our ship was boarded by fleteros or boatmen, who demanded to take ourselves and trunks to the shore. I had already been posted as to the prices and arranged with one at a cost of $25 in Chilean money to take me through the customs house and to the hotel. This is just about equals $5 American. A moment later my trunks had been lowered over the sides and I was moving in a boat through the busy harbor. We had to watch out for the launches, of which there were scores flying this way and that; we passed great barges of goods being towed to and fro and wound our way through many great sailing craft, some of which were loaded with lumber from California and Puget sound. We passed one Chilean man-of-war, went under the shadow of a dry dock containing a steamer and finally came to the wharf just opposite the Intendencia or governor's palace. It took but a short time to go through the customs and a little later we were driving through the city over streets paved with asphalt and lined with stores that would not have been out of place in New York or Boston.

The thing that most interested me at first sight was the street cars. These are of two stories, with a second tier of seats on the roof. There is an iron stairway at the back end of the car that leads to the second story, and one can ride through the town as though on an elevated railway. There is no roof to this story, and it forms the best place for a view of the city. Besides the fares are cheaper on top than in the closed car below. I paid only 1 cent of our money per trip. The rates below are only 2 cents,

Here's a Happy Hunch—

Post Toasties

and cream

for breakfast, lunch or supper.

Choice white Indian Corn, rolled into thin flakes, and toasted to a rich golden brown — delicious!

This food comes in sealed packages, always fresh, crisp and sweet; and ready to serve at a moment's notice.

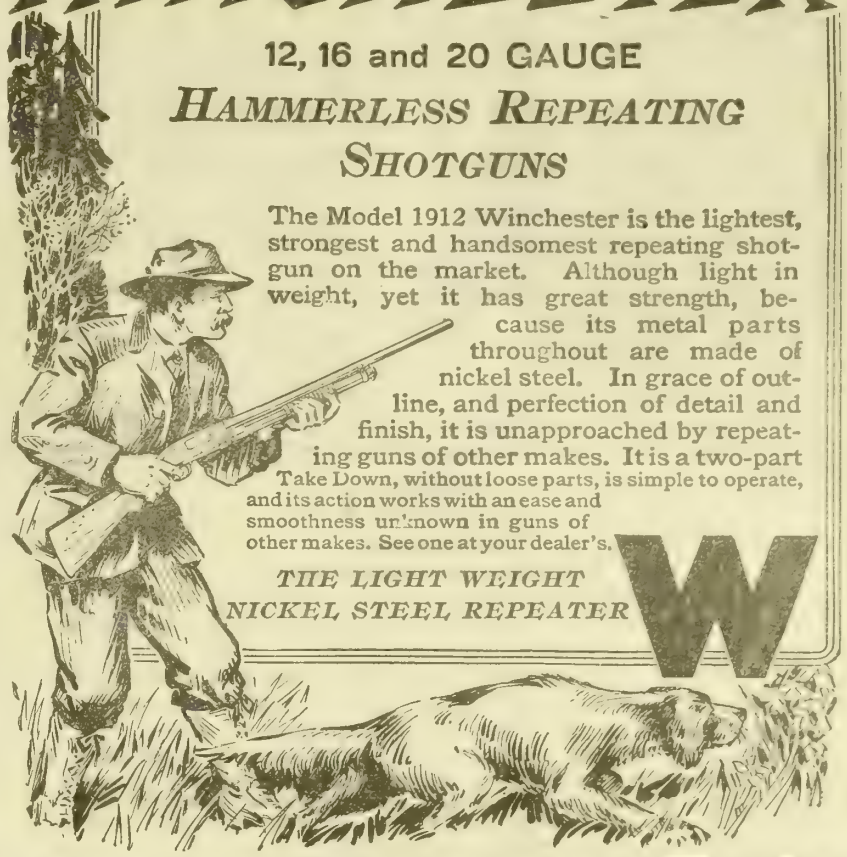
Post Toasties make a mighty satisfactory dish at any time.

—sold by grocers.

WINCHESTER

12, 16 and 20 GAUGE

HAMMERLESS REPEATING SHOTGUNS



The Model 1912 Winchester is the lightest, strongest and handsomest repeating shotgun on the market. Although light in weight, yet it has great strength, because its metal parts throughout are made of nickel steel. In grace of outline, and perfection of detail and finish, it is unapproached by repeating guns of other makes. It is a two-part Take Down, without loose parts, is simple to operate, and its action works with an ease and smoothness unknown in guns of other makes. See one at your dealer's.

THE LIGHT WEIGHT NICKEL STEEL REPEATER

W

The Next Time You See THIS in Your Hog-Lot Send for THIS

SEND NO MONEY

When your hogs rub against fence posts, buildings, trees, etc., **look out for lice.** It's a pretty good sign these blood-sucking parasites are at work in your herd. If neglected they will multiply by the thousands—soon infest the whole herd—keep your animals thin—stunt their growth—sap their vitality and invite cholera and other contagious diseases on to your farm. Dips are helpful but expensive—often dangerous and always troublesome. Why not let your hogs rid themselves of lice, mange and other skin diseases in the **natural way.** Let them rub against a *Rowe New Idea Rubbing Post* 30 days at my risk. **I'll furnish the Posts and the Oil and pay the freight.** The trial won't cost you a cent. You simply watch results and pay if pleased.

Rowe's New Idea Rubbing Posts

are simpler, safer, more durable and more economical than any other—use any kind of oil, crude or medicated. **Have no valves,** nothing to get out of order, work in all kinds of weather the year round. Dirt can't clog them as it does valve and cylinder machines. Rain can't wash out oil. No oil wasted. Every drop is applied as needed **right on the itch** when the hog rubs. Pigs of all sizes and ages can rub on these posts and keep vermin-free and healthy. Three rubbing bars to each Post. One Post accommodates 30 hogs.

Try Them 30 Days FREE—Pay if Pleased

Just write and tell me how many Posts you want to try 30 days at my risk. I'll furnish the Machines, Oil, everything and even **pay the freight** to prove my claims. Send no money. Order direct from this advertisement or if you prefer write for big illustrated folder today.

Save $2 to $12 on EACH Post at these Cut Prices—Pay if Pleased

1 Post $ 7.75 | 3 Posts $21.75
2 Posts 15.00 | 4 Posts 28.00

1 Gal. of Medicated Oil FREE with each Post. Freight charges paid.

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Also Makers of famous Can't-Sag Gates (2)

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A corn crib or a fence! You can set up the Denning as a full sized corn crib in 10 minutes. When the crib is empty, use the material for making fences. Then use it for a crib again whenever you need it. You can do this with the

Denning Corn Crib

Self-Supporting — NOT like ordinary Wire Fencing with which Posts have to be used. Less Work! Less Expense!

The Denning comes in sections—each section 4 feet high—makes a crib 12 to 16 feet in diameter—8 feet long—1½ or 2 inches between slats. Best storage for fodder, either shredded or in full stalks. You feed the stuff right out of the crib.

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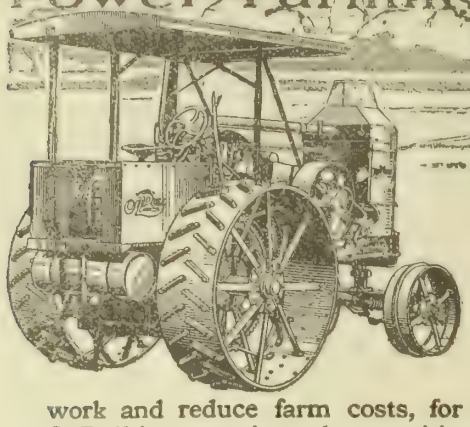
See how much less the Denning costs—how much better it is than any other material.

THE DENNING MOTOR IMPLEMENT CO.
Dept. C 2 Cedar Rapids, Iowa

RUMELY
Power Farming Machinery



Right on Your Own Farm

The OilPull Tractor will cut the drudgery of farm work and reduce farm costs, for the simple reason that the OilPull is a year 'round proposition. It saves money plowing, harvesting, threshing, hauling, drilling and at other power jobs.

RUMELY OilPull TRACTOR

15-30 and 30-60 Horsepower

The OilPull burns cheap kerosene or distillate at all loads, at any kind of work. It is throttle governed—there is no fuel waste, the power is steady and uniform.

The OilPull is oil-cooled—no danger of radiator freezing. It is easy to operate—any intelligent person can run it after a little instruction. The 15-30 has two speeds for road work.

Ask for OilPull catalog HA1. You'll find it interesting.

The GasPull is a leader in gasoline tractors. There are no better stationary engines than the Rumely-Falk for kerosene and the Rumely-Olds for gasoline. Every Rumely machine is backed by Rumely service—49 branches, 11000 dealers.

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Kerosene Tractors	Engine Gang Plows	Gasoline Engines	Cream Separators
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Easy to Load
Sides or Rear
Saves Labor
Light
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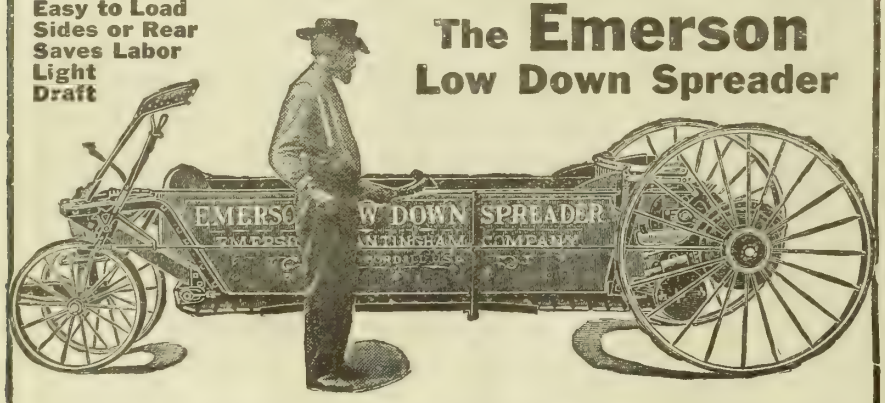
The Emerson Low Down Spreader



YOU put manure on the farm to furnish plant food for the growing crops. The more thoroughly pulverized and nearer plant food form this manure is applied the less atmospheric waste and better results. The Emerson Spreader actually pulverizes and applies the manure in more available plant food form than any other low down spreader.

Send for Book of Spreader Facts Tells all about Emerson construction and describes all special features. Every farmer should have a copy of this book. Send your name and address for free illustrated book.

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Pick Your Corn With the Shuck on and Use

The Bloom Improved Low Feed Ear Corn Cutter and Crusher

It will handle ear corn husked or snapped, green, wet or frozen; cutting shuck and ear, also crushing and splitting the cob into very small pieces at the rate of 100 to 250 bushels per hour. Manufactured in two sizes for hand or power, also mounted on team truck with gasoline engine. Just the machine for cattle feeding. We also manufacture The BLOOM 1½, 2½ and 4½ h. p. Gasoline Engines. SOLD DIRECT. Ask for prices and circulars. This ad may not appear again—save it for reference.

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POWERFUL AIR RIFLE

Length 31⅛ inches. Working parts of the best grades of steel. Lever action, shooting barrel removable. Use shot or darts. The stock is finely polished walnut. Shoots small game. Powerful, accurate, durable. You can have this air rifle for distributing only 8 of our fast selling art pictures at 25 cents on our special offer. Everybody will take one.

IT COSTS YOU NOTHING to try, as we take back those you can't dispose of. Send no money, just your name and address. M. O. SEITZ, 9-D-81 CHICAGO.

and notwithstanding this I am told that the cars pay big dividends. The line here and that at Santiago, over the mountains about three or four hours off by train, belong to a German company, which has a monopoly of the transit. They operate the Santiago cars by hydroelectric power, and that so cheaply that their profits from that line alone are about $300,000 a month. The Valparaiso line is said to clear about $1,000,000 a year.

Pretty Girls Are Conductors

But there is one attractive feature about the car line that I failed to mention This is the conductors. They are women and a very few of them are pretty young girls, although the great majority will, I venture, never see 30 or 40 again. The woman conductors were brought into the cars more than a generation ago. It was at the time of the war with Peru, when all of the men, including the street car conductors, were sent north to engage in the fighting. At that time the women took the men's places, and they have held them to this day I am told that they make very good servants, and that, although they have to be watched as to turning in all the fares, they are more honest than men would be in the same places. As it is, the company keeps a check upon its conductors by making them give each passenger a ticket which is collected later on by an inspector who goes through the car for the purpose. The companies have also detectives whom the girls nickname Judases, to watch and see that all pay their fare and that no fares are knocked down. The conductresses wear black sailor hats and dark dresses. The have on white aprons, in the pockets of which they carry their money and tickets, and strapped round their waists are little boxes for the checks they give the passengers. They make reports at a little kiosk in one part of the city at the end of each trip. Another good feature of the car lines is the use of black numbers, which indicate their routes. This is in accordance with a custom that prevails all over Germany, and it is far better than our way of marking only the names of the routes on the cars.

Women for Turnstile Operators

Where I ended my ride I was near one of the cog railroads that lead to the upper part of the city. When I entered the station I had another surprise. It was a woman who opened the turnstile and gave me my fare, and she did her job quite as well as a man. She took my money and then shut me inside a cage like that of an elevator. She next rang a bell, and a moment later I was high above the roofs of the buildings along the shore, with a magnificent view of the ocean below me. I could see the harbor with its shipping and the hundreds of small boats at anchor, while away off at the side around the end of the bay was the town of Vina del Mar, the summer resort of the Chileans.

The seasons are changed south of the equator, and it is in January, February and March that the Chileans go to the coast to get cool. Vina del Mar is the Newport and the Atlantic City of the west coast. It has hundreds of luxurious villas like those outside of Paris, and all the accompaniments of a city of pleasure, such as clubs, golf, lawn tennis and foot ball. It has a mile track, where the Chileans bet on their favorite horses and where races are run every day throughout the season. Indeed, the whole town looks like a fashionable resort or one of the great spas of Europe. The most of the houses are of French architecture; and many of them would cost, if built in our country, from $50,000 to $100,000 apiece. Not a few of them have beautiful gardens. There are hedges of roses, great beds of geraniums, and also palms and other tropical plants.

Like Cities of Southern Europe

Walking down from the hills to my hotel, I observed many other things that reminded me of southern Europe. The street cries were like those of Naples or Madrid. Peddlers were moving around with baskets of vegetables, fruit and fish on their heads calling their wares. The bread wagon was a horse with a great basket on each side of his back; and I passed a milkwoman on a street corner, who was selling milk fresh from the cow. The cow had a calf standing beside it, and I was told she would not give down her milk without her baby was present. The calf wore a cloth muzzle, and it looked lean and lonesome. I stopped and bought a glass of milk for a nickel, receiving therefor about a half pint.

I stopped and bought a glass of milk for a nickel

A little further on I stopped at a bookstore. The clerk spoke English and German, and the books were in a half dozen languages. Valparaiso is a cosmopolitan city. Most of its business is done by foreigners, and it has foreign churches, foreign clubs and charitable institutions. It has a branch of the Y. M. C. A., and one of the Salvation army. It has a British hospital, and there are various institutions kept up by the Germans.

The town is cooler than Santiago, and it grows quite as fast The new harbor plans provide for an expenditure of about $15,000,000 in gold, and when completed they will give a space for safe anchorage equal to about 200 acres. This will furnish protection to the annual entry of almost 2,000 vessels, with a total of 7,000,000 tons, which is the amount of traffic expected now the canal is completed. The work includes a breakwater of a thousand feet and a quay wall about twice as long. It will have coal wharves, custom houses and warehouses and all of the modern arrangements for loading and unloading goods from the cars to the steamers and from steamers to cars.

Chile is Shaped Like Snake

But before I go farther in my letters from Chile I want to give you a bird's-eye view of this country. For the last month I have been traveling through the northern part of it. I have visited port after port, and now, here at Valparaiso, I am a little more than half way down the coast. Chile is the longest country on earth in proportion to its width. It begins at Cape Horn and stretches its way northward like a snake along the western slopes of the Andes for a distance of 2,700 miles. It is three times as long as Egypt, which runs for 900 miles through the desert. Let us suppose that the Chilean snake is a rattler and that the islands of

Tierra del Fuego at the south are the rattles. Then the button would be the rocks of Cape Horn and the fiery fangs of the rattlesnake's head would be the River Sama, where Chile ends at the Peruvian boundary. This Chilean snake is so long that if you should lay it on the United States from east to west with the button at Boston, its tongue might lick the great Mormon tabernacle in Salt Lake City without stretching its body, or if you should start it crawling eastward, beginning at Cleveland, it might go on to New York, and thence bending southward move on to Panama before its rattles had left the forest city on the great lakes.

Large as Two Californias

The area of Chile is also worth notice. The country is on the average from 100 to 150 miles wide, and it has, all told, almost 300,000 square miles. That means that it is twice as big as California, five times as large as Georgia and more than seven times the size of Ohio, Kentucky or Virginia. Chile would make four Minnesotas or six Pennsylvanias and have room to spare; and if Texas and Maryland were sliced into bits and put together they would just about fill it. It is almost a hundred thousand square miles bigger than Germany, France, and over three times the size of that tight little island of England and Scotland.

This long-drawn out country, running as it does southward from the equator, gives it all sorts of climate and many resources. In the northern part, where I have been traveling, it does not rain from one end of the year to the other. At Santiago, which lies in the great central valley, only a short distance east of Valparaiso, there is rain on thirty-one days every twelve months, while at Valdivia, in the southern part of that valley, it rains 172 days every year. A little further south the rainfall is greater. There are localities where the people facetiously say that it rains thirteen months every year.

This being the case, the northern part of the land is a desert. The central part is a rich farming country with orchards and vineyards and great haciendas, many of which are watered by irrigation; and the southern part has lands that grow hay, wheat and grain, the fields being fed by the plentiful rainfall.

Making Same Mistake We Did

The latter region has also enormous areas of forest. It will surprise you to know that one-fourth of all Chile is

A moment later I was high above the roof

wooded and that just now they are cutting down the woods and burning them, as we foolishly did in the past, to make farms. Altogether the wooded area of Chile is as large as the combined states of Ohio and Indiana. It is more than 75,000 square miles.

Before I leave this general description I want to tell you about the lands and industries of the Strait of Magellan and the archipelago of Tierra del Fuego. They are a part of the frontier of this shoestring republic, and as one looks at them on the map he might imagine them to be somewhat like the country that the late Captain Scott found about the South pole. On the contrary, they have a climate about as mild as that of Sitka, Alaska, which has been compared to that of Cincinnati or Washington city. The sheep of that region feed out of doors all the year round and hundreds of millions of pounds of wool are exported from the strait each year. During my last visit to Chile this sheep industry was at its beginning. It has since grown beyond all that was prophesied then and there are now single companies which own more than 1,000,000 head of sheep.

That part of Chile is made up of the submerged range of the Andes some of which are covered with glaciers. The country has a light fall of snow in the winter, but it seldom lies long, and the sheep burrow down through the snow for the grass.

Where Nitrate Comes From

In striking contrast with that region is northern Chile, from which I have come. That part of the republic would have an almost tropical heat were it not that it is tempered by the cold Humboldt current, to such an extent that white men can live and where near the coast. There are thriving towns, ports at the end of each little valley, which has water from the snows of the Andes, and there are cities at the places from where the nitrate and minerals are shipped to the United States and Europe.

Northern Chile is mostly a desert, but it compares favorably in its resources with the most fertile parts of the earth. I have already written of the nitrates. That region supplies most of the nitrate of soda used by farmers all over the world. From that source alone the Chilean government has already received hundreds of millions of dollars, and I am told that it has so much fertilizer left that it will continue to receive tens of millions more every year for three generations to come. The country also is rich in copper, and it is the great outlet to the vast treasures of the Bolivian Andes. They are discovering new copper mines and iron mines and they have already unearthed enormous deposits of both of these minerals. Among the best of the copper properties are those of the Guggenheims near Antofagasta and the best of the iron deposits are those belonging to the Bethlehem Steel company, farther down the coast near Coquimbo. Each of these properties is worth tens of millions. I shall write of them in the future.

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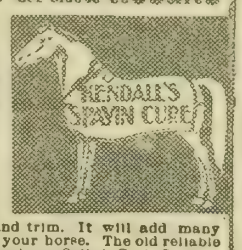

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1. Raised and lowered its plows by motor power.
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In Addition to Doing All That a Good Tractor Should

Big Four Tractors made good every day at Fremont. They'll make good every day on your farm. Making good is a habit with them.

Remember the three special features above. Keep in mind, too, these facts:

The Plow, the power plow hoist, and tractor are a complete unit. The plows are raised and lowered by the power of the motor, either moving or standing still. A touch of the plow lift foot pedal instantly raises the plows or lowers them into the ground.

The Big Four excels at threshing and all belt work. Always ready—easily and quickly started—a tractor you can depend upon.

A size for every farm—"20" and "30," 4-cylinder, 3-speed—"45," 6-cylinder, 3-speed.

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Good Farm Machinery—Since 1852,
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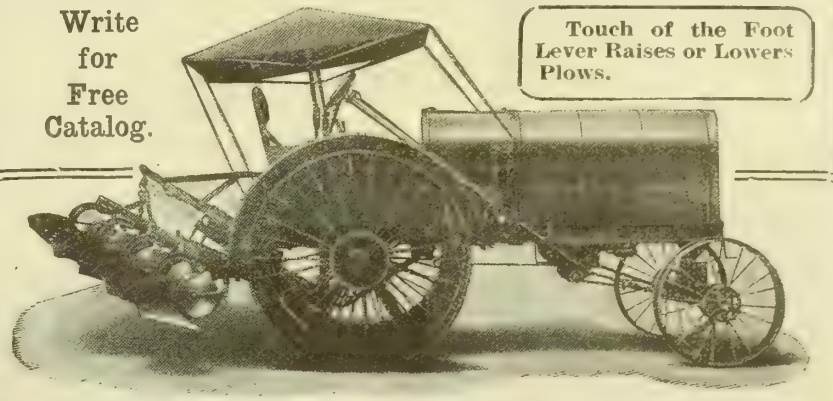
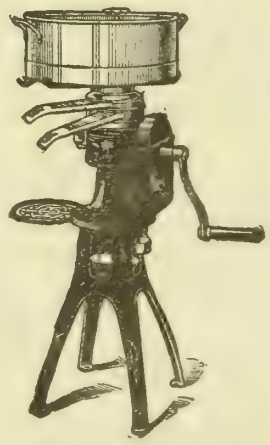


Buy International Harvester Cream Separators



HERE is how wise farmers make money with International Harvester cream separators. They separate the milk at milking time when it separates best. Once or twice a week they have only the cream to take to the creamery and the fresh, warm skim milk builds up thriving young farm stock that means money later. They save slow and wasteful skimming by hand and save many creamery trips.

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Better than a GOLD MINE

SPRINGDALE Ranch brings me an income of $30,000 per year. Better management could put it up to $40,000. I am now feeding 700 head of three and four-year-old steers on it which I want to sell.

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Handy to operate, lightest running. **Crush** ear corn (with or without shucks) and **grind** all kinds of small grain.

10 sizes 2 to 25 H. P., capacity 6 to 200 bushels. Conical shaped grinders — different from all others. Investigate.

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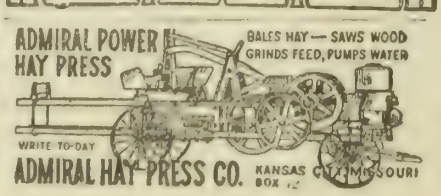
that tells all about them, with **free** folder about values of different feeds and manures.

E. N. P. BOWSHER CO.
South Bend, Ind.



Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

White or Yellow Clover?

J. D. K., Montana: Will you allow me a little space in your useful farm paper to write in regard to sweet clover? It seems that every writer in all the farm papers has the following to say: "Of the two kinds, the white is much to be preferred." I have had considerable experience with the white and yellow both, but I prefer the yellow every time, and I will give my reasons:

First—It makes a far superior hay, as well as superior honey; then it is easier cured. It is almost impossible to cure the white in the windrow, and if left in the swath until cured there will be nothing but the stems to haul in, and they will be but little more valuable than hazelbrush. The yellow will improve the soil the same as the white. I knew of a piece of ground that had never produced over thirty bushels of oats to the acre, but the first crop of oats after it was in sweet clover for two years made 118 bushels to the acre. This was the yellow kind.

The yellow variety will make every bit as nutritious hay as will alfalfa, and for pasture the alfalfa is not in it, for it does not bloat. At least, I have never known it to bloat. It will make permanent pasture on soil too dry for alfalfa. If it is not pastured too close it will bloom next to the ground and ripen seeds to reseed itself. I consider yellow sweet clover the most valuable plant that I know of and would very much like to have someone tell me the why and wherefore of this preference for white. Give me the yellow every time.

Editor's Note—We are very glad to receive this letter. The writer, judging from his letterhead, is a breeder of pure-bred draft horses, and has no doubt had experience in feeding them sweet clover hay. In the bulletin on sweet clover sent out by the University of Nebraska we note that they say the large yellow sweet clover is often preferred by growers to the white. They, however, warn prospective clover growers against another species of the yellow, called the small yellow annual, which grows close to the ground and is much more bitter than the two other varieties. They say that there is some confusion of the large and small yellow varieties, making it difficult to secure the large yellow variety. This is their reason for preferring the white.

Montana Road Laws

H. T. J., Montana: Your article on "Where Shall I Locate My New Home?" did not warn your readers that Montana was organized as a state without a system of roads on section lines.

In April, 1910, I had a petition before the county commissioners. My neighbor went before the board and deeded to the county thirty feet wide along the section line over his forty, which would bring me up to the school section. My neighbor asked the commissioners to see if I would give him a half interest in fence running north between us. I would! The chairman of the board said, "He has given you a road; go on and use it." I was unable to find the deed in the commissioner's room. Was directed to county surveyor's office. Deputy could not find document. In a few days clerk and recorder called to me on the street and said, "Deed is on record." I took his word.

In three months my neighbor sold his ranch, explaining to the new owner about road and half interest in my fence. Lane was there a year ago, and then it was discovered I had no road. The supposition is that someone, in the interest of the new owner, asked clerk and recorder to see petition, plat, deed, etc. Deed had not been recorded. Made a copy of deed, put copy with petition and destroyed the deed. There was besides a quarter-mile of school section to bring me to county road, an old freight trail.

A year later the deputy register of state lands went before a new board of commissioners with me and stated to board that if they would make application to state board at Helena that state board would "grant without cost to Chouteau county the land on school section for a road." The board positively refused to make the application.

Answer—In our homeseekers' edition we did not go into the laws very deeply for the obvious reason of lack of space. We dealt more particularly with crops and climate. There is probably no state in the union in which there could not be great improvement made in the laws relating to property, and before purchasing any piece of land it is very important to have the deed and abstract of title examined by a competent attorney who is familiar with the laws of the state in which the property to be purchased is located.

— —

Milk Fever in Sows

B. & N., Michigan: I would like to ask a question of some hog grower that has had experience with sows pigging. We have some very fine Yorkshires, and when they came to pig they had fever in the breast, and one sow lost her milk altogether and we had to take the pigs away from her, and she never regained her milk. I wish someone would tell me what to do in such a case. I am very much pleased with your paper. There is some very fine information in it.

Answer—This trouble is generally caused by heavy feeding just before farrowing time, and very often just after this period. Many sows are heavy milkers and heavy feeding will throw an increased flow of milk into the udder which cannot be taken care of by the pigs. Sows should be fed a reduced ration at least three or four days before farrowing and no food whatever given for at least twenty-four hours after farrowing. To a heavy milk sow, especially if she has a small litter, from thirty-six to forty-eight hours should elapse before any food is given her. Plenty of water, drawn fresh from the well, should be given to the sow at least three times a day after farrowing.

Should the udder become caked and feverish, apply hot cloths and bathe with hot water, rubbing the udder freely. Oftentimes we have reduced, and sometimes entirely wiped out, this trouble in this manner. The feeding, however, is the main thing to rely upon to prevent the trouble, rather than be compelled to cure it.

We thank the writer of this letter for his expressions of confidence.

United States annually consumes 350 pounds of wheat and wheat flour per capita.

In the last twenty-five years the population of Germany has increased from 48,000,000 to 66,000,000.

Increased Saddle Horse Demand

The demand for this class of horses has doubled since the outbreak of the European war. It is not unlikely that this will give a new impetus to the breeding of the saddle horse, which has been decreasing in the United States the last few years. Buyers from foreign countries are even now at work in the corn belt collecting these horses and shipping them by the carload.

Turkestan Alfalfa Seed Found Inferior

A WARNING to alfalfa growers to avoid the use of commercial Turkestan seed is contained in Department Bulletin No. 138 of the United States Department of Agriculture, which is shortly to be issued under the title, "Commercial Turkestan Alfalfa Seed."

Specialists of the department have been investigating the comparative merits of different kinds of alfalfa seeds and have reached the conclusion that there is nothing to recommend the Turkestan variety for general use in this country. It is, they say, particularly unsuited to the humid climate of the east, which, as a matter of fact, uses most of the Turkestan seed imported into this country. This seed is also not sufficiently hardy to warrant its general use in the upper Mississippi valley, where hardiness is an important factor. The investigators, however, are careful to distinguish between commercial Turkestan alfalfa and special strains of hardy alfalfas that have been developed from certain introductions of seed from Turkestan. Valuable varieties of alfalfas unquestionably exist in central Asia, but these are at present only fitted for use in experimental work in breeding.

At the present time approximately one-fifth of the alfalfa seed used in the United States is imported. Of this quantity practically all—95 per cent in the last twelve months—comes from Russian Turkestan. In the European market commercial Turkestan is the cheapest seed available; in this country its wholesale price is less than that of domestic seed. In spite of this fact, however, a mistaken belief in its superior qualities has resulted in raising its retail price to a point frequently above that of domestic seed. No such preference is shown in the alfalfa-growing regions of Europe. There French seed is commonly considered the best, with Italian ranking next and Turkestan last. Under these circumstances very little French and Italian seed finds its way to the United States, the bulk of the importations being, as already stated, the cheap commercial Turkestan.

Fortunately, growers who wish to avoid this variety can readily identify it by the presence of Russian knapweed seeds. These seeds have not been found anywhere except in commercial Turkestan seed, and here they are practically always present. Russian knapweed is in some ways similar to quack grass, Johnson grass and Canada thistle, spreading both by seeds and underground rootstocks. The seeds are slightly larger than those of alfalfa and cannot all be removed by any practicable method of machine cleaning. Their chalky white color makes them especially conspicuous and their symmetrical form—slightly wedge-shaped—distinguishes them from the notched seed of other species often found in varieties of alfalfa from other sections. The knapweed seeds, however, are not usually found in large quantities, and any lot of alfalfa should, therefore, be examined in bulk. The examination of small samples is not sufficient to show whether the alfalfa comes from Turkestan or not.

Railroad Watch

To advertise our business, make new friends and introduce our catalogue of Watch bargains we will send this elegant Railroad watch by mail post paid for ONLY 95 CENTS. Gentlemen's size, full nickel silver plated case, locomotive on dial, lever escapement, stem wind and stem set, a perfect timekeeper and fully guaranteed for 6 years. Send this advertisement to us with 95 CENTS and watch will be sent by return mail post paid. Satisfaction guaranteed or money refunded. Send 95c today. Address R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO.

Four tons alfalfa equals eighty bushels corn in fattening value in Colorado

Alfalfa in the San Luis Valley. The Farmers' Most Valuable Crop Wherever It Can Be Grown. Returns of $40 Per Acre Per Annum Not Unusual.

In previous issues of this paper we have shown you cuts of Wheat, Oats and Peas, as they grow in the San Luis Valley, Colorado. This week we show you an alfalfa field. Every farmer who has a farm adapted to the raising of alfalfa knows that it is his most valuable crop. It can always be sold for cash, or it can be converted into cash in the production of Pork, Beef or Mutton.

Good alfalfa land is limited in area. Very little is raised East of the Missouri River for the soil and climate is not suitable. The farmer who has a good alfalfa farm has the high priced land of the future. Make no mistake, buy land that will produce alfalfa.

Two years' crops of alfalfa will pay for the land.

In the San Luis Valley, cattle are being fattened every year on no other feed but alfalfa and they sell on the market close to corn fed cattle. Alfalfa grown in the mountain states has greater fattening qualities than that raised elsewhere.

Hogs are raised on alfalfa and fattened on peas at one-half the cost of raising them in Nebraska or Iowa. Hogs fattened on peas bring a premium in the market over corn fed hogs. (Ask your commission man about this.) Then why not buy land that you can get at one-third of the price of good land in Iowa and Nebraska, that will produce more dollars in crop returns, and reap the benefit of the raise in value of the land that is sure to come as the land is settled up. That is the way the farmer of the middle west became rich. You can become wealthy too by buying land in the San Luis Valley.

Remember, we guarantee the purchaser $15 per acre advance in price if he will put the land in cultivation and desires to sell any time within three years and for any cause whatsoever.

This guarantee protects the purchaser and it must convince him that we expect him to make good. It is the strongest recommendation any land can have.

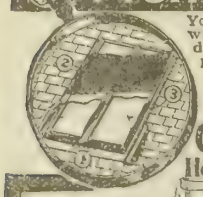
No WIND MILLS to buy or keep in repair. Pure artesian water can be had on every farm at a slight cost.

4,000 ACRES OF LAND TO SELECT FROM. Prices, with water, from $50 to $60 per acre; one-fifth down, balance in eight equal annual payments.

Do not neglect this opportunity but write now for further particulars.

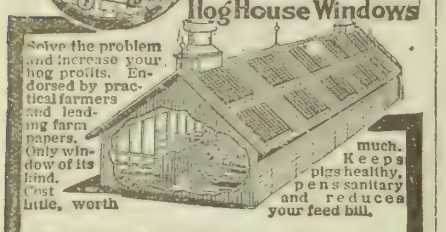
San Luis Valley Irrigated Land Company
712 Omaha National Bank Bldg. Omaha, Nebraska.

Direct Sunlight Means More Hog Profits for You.



You can't raise winter pigs without sunshine. Side windows can't give it. Young pigs must not be exposed to cold. You need sunshine direct on floor of the pens.

CHIEF Sunshine Hog House Windows



Solve the problem and increase your hog profits. Endorsed by practical farmers and leading farm papers. Only window of its kind. Cost little, worth much. Keeps pigs healthy, pens sanitary and reduces your feed bill.

Easily Installed in Any Hog House New or Old

Shingle over flashing, top and sides and job is done. Three big features: 1—Perforated trough lets water run off, prevents leaking. 2—Galvanized screen protects glass. 3—Copper clips hold glass without putty. The only modern, scientifically correct hog house windows on the market.

"CHIEF" Capolas

Keep fresh air in hog houses, barns and other buildings. Rain, snow and bird proof. Galvanized steel, last lifetime.

Chief Silo Roofs

The best, strongest, longest lasting, most improved roof on the market. Made of heavy galvanized steel, self-supporting, no rafters or beams necessary. Made in sections that interlock. Easy to install.

SHRAUGER & JOHNSON CO.
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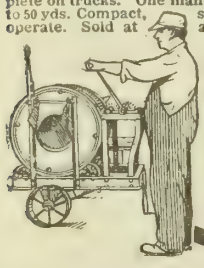
A Real Concrete Mixer That Every Farmer Can Afford

A wonderful mixer, hand or belt power, also complete on trucks. One man machine. Daily capacity 18 to 50 yds. Compact, simple but strong, easy to operate. Sold at a price never before made.



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To introduce the machine, to convince you that it's best, we'll ship to responsible farmers on five days' trial and your money back if not up to claims. Write for particulars and prices.

Contractors' Machinery Company
205 Johnson Street
Keokuk, Iowa

Send for Free Catalogue and prices direct to consumers on my All Steel grain dump farm wagons and farm trucks, steel and wood at saving prices. Write today.

Marvin C. Van Derveer
No. 22 Fourth Street, Council Bluffs, Iowa.

Trained Automobile Men Wanted

PREPARE yourself for good position at the school of practical experience, at the school with a reputation, where you really can qualify for good position and big pay. Write for interesting booklet.

LINCOLN MOTOR SCHOOL
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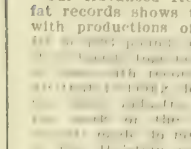
RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

W. P. SCHWAB, Clay Center, Nebraska.

HOLSTEIN CATTLE



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HOLSTEIN CATTLE

Our Advanced Registry of milk and butterfat records shows that we have 22 cows each with productions of above 575 pounds butterfat in seven days or butter for the year. All [illegible] with records of equal production. Of [illegible] nothing exceeds in value [illegible] The [illegible] to produce the supremacy [illegible] cow as a milk and butter [illegible] Write for **FREE** Illustrated Descriptive Booklet.

Holstein-Friesian Asso., F. L. Houghton Sec. Box 179 Battleboro, Vt.

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A R O dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

THE ABOVE IS A PICTURE OF ECHO'S CRIMSON WONDER, GRAND champion boar at Nebraska this year. This great boar will be sold in the sale of Putman & Son and Lamb Bros., at Tecumseh, Neb., on October 1.

Review of Live Stock Market

By A. C. Davenport

THE eyes of stock men are glued to the hog market. The performance of the trade in that department of the live stock business has been most interesting and hogs have attracted more than the usual amount of attention. The hog market in fact has been more or less spectacular in its movements ever since the beginning of the European war.

It will be remembered that during the first week of the war, or to be more exact, between July 29 and August 5, the market broke $1 per hundred pounds. Before another week could roll around all this loss had been recovered and more, too, hogs actually selling at the high point of the year during the second week in August, or a little better than an average of $9 for high day on the basis of Omaha. On August 7 the country was cautioned in these columns not to expect too much of the market as long as the export trade was so uncertain, and it was pointed out that the bears were anticipating that the packers might take advantage of the lull in exports to break the market a month earlier than usual. This has proven the bears to have been on the right track. During the latter part of August the market continued very good under speculative buying and the month closed with prices right close up to the high point of the year.

With the opening of September the packers really began the very kind of a campaign predicted by the bears. As it is usually right around October 1 before the packers are able to make any serious inroads upon hog prices, the bears were also right about the break coming a month earlier than usual. Ever since the beginning of the month the packers have been steadily hammering away at the market, with the result that prices at present are around 50 to 60 cents lower than the last of August.

The bulls did not believe it possible that the packers could break the market, considering that receipts at the six big markets for August showed a decrease of 370,000 head as compared with the same month of last year. A continued heavy falling off in the receipts for September to date has made it still harder for the packers. That they have succeeded in breaking the market so sharply in the face of light receipts has been a surprise to the bulls, but there were some features of the trade that the bulls failed to take into consideration.

Foreign Trade Fallen Off

In the first place there was the decrease in the export demand consequent upon war conditions. According to the figures just at hand from the Department of Commerce at Washington there was a decrease in exports during August as compared with August, 1913, of 5,312,000 pounds of bacon, 6,465,000 pounds of hams and shoulders, 15,009,000 pounds of lard and 317,000 pounds of pickled pork. As September has failed thus far to bring any improvement in the foreign demand it will be readily understood that packers are feeling the loss of the foreign trade.

A decreased export demand is not the only influence exerted by the war upon the hog trade. It is well understood by everyone familiar with the market that one of the very best outlets for packing house product is the southeastern states of the union, in other words the cotton belt. Ever since the civil war cotton has paid so well that the southern states have gradually gone into a one-crop basis, that crop being cotton. Not only is the south dependent upon the north and west for grain and hay with which to feed its live stock, but even the farmers themselves have acquired the habit of consuming western hog products. The war having cut off the shipping demand for cotton, southern farmers find themselves loaded up with a commodity that is not salable under present conditions, or if salable only so at a very low price. In consequence the southern demand for all northern and western products has experienced a tremendous slump, and hog products have suffered along with others. Here again packers find the demand for all kinds of provisions greatly diminished.

For this is not all—the absence of any great business activity at the large consuming centers in the east has also tended to reduce the consuming power of the public. Unfavorable industrial conditions in the east, decreased exports, and decreased demand from the cotton belt, taken together have greatly diminished the buying demand for hog products, Thus the packers have been placed in a position where they are under no necessity of buying fresh supplies of hogs with which to replenish stocks of provisions. On the contrary they can very easily limit their operations to supplying the current hand to mouth demand for fresh meats. This will explain at once why the packers, by simply sitting down and allowing things to drift their own way, have been able to smash the hog market in the face of very light receipts.

Hog Futures Uncertain

The future of the market, as has frequently been stated before in these columns, is rendered so uncertain by the war that it is hazardous even to make a guess. All things are possible in times like the present and the sudden ending of the war, or a sudden change in the situation which would start both cotton and provisions across the water, and start provisions moving southward, might bring about a sudden and unexpected reaction in the market. On the other hand conditions as they stand at present writing are such that packers may be able to still further depress the market.

A feature worthy of notice is that reports during the last week indicate a number of cholera outbreaks in different sections of the corn belt, and these reports are confirmed by an increase of pigs at leading market points. An extensive outbreak of cholera would naturally have a tendency to strengthen the market at some future time owing to reduced supplies of hogs. Its first effect is to weaken the market, as it tends to increase shipments, especially of immature hogs.

Sheep Somewhat Lower

While hogs have held first place in public interest the sheep market has been hardly less interesting. It will be remembered that early in the year sheep receipts were extremely large, showing heavy gains over all previous years. As the year has advanced the receipts have steadily decreased until the greater part of the gain has been wiped out. Receipts during the month of August showed very little gain over a year ago, and they have continued very light thus far during September. It was not surprising under such conditions that the market during the first half of September scored an astonishing advance, prices on lambs making a gain of around $1.00 per hundred in a very short time.

The best range lambs at the high point the middle of the month touched $8.75 on the basis of Omaha, which was over $1.00 per hundred higher than they sold during the same month last year, and the highest that they ever sold for in the history of the trade at this season of the year. It was hardly reasonable that such a sharp advance could be mintained and at

(CONTINUED ON PAGE EIGHTEEN)

European War and the American Farmer

(CONTINUED FROM PAGE THREE.)

gian farmer. The facts are that the imported horse of equal quality will outsell the American-bred horse. This should not be, and we believe the time will soon come when it will not be.

The time was when the high-priced Shorthorn cow or bull was an imported animal. The American farmer now breeds the best obtainable in the cattle line in this country. The American farmer and breeder has shown his ability to produce the best of cattle, and in return they are selling for top prices.

One just cause for the imported horse selling at an advanced price is the inspection made by the governments of these foreign countries. Before an animal can be used for breeding purposes he must come up to a certain standard. Our national and state governments should take advantage of existing conditions by following, to some extent at least, the inspection laws of these foreign countries regarding breeding horses.

Good Prices for Cattle

Excellent opportunities for profit in the raising of cattle are offered to the American farmer. Prices for beef are certainly satisfactory, and it is reasonable to presume these prices will continue to be satisfactory for some time to come. During the last decade our exports of beef have decreased 60 per cent, while our population has increased 21 per cent. It will be many years before the farmers and stock raisers can hope to take up this slack in production.

We freely admit it would look good to be getting $1.50 or $2 per bushel for the next crop of wheat, but wouldn't it look equally as good to keep on the farm a good herd of cattle and hogs, for which a good, profitable price is sure to be obtained? By keeping these animals on the farm its fertility will be maintained, making it possible for the American farmer to raise an increased number of bushels of grain per acre each year.

If the farmers raise the different kinds of grains, grasses and live stock each year, and it is practically impossible for a failure to occur in all of them, which can easily come to the man who stakes his whole success on a crop of wheat or any other one grain or grass.

While it looks promising for a good price for wheat next year, the Twentieth Century Farmer feels sure its policy in the past of advocating a crop rotation of the different grains and grasses and the selling of this crop through good, well-bred live stock is the safe policy to follow at this time.

RATE—Five cents the word per issue. Cash must be sent with all orders

Count every word, initial and numeral, including address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred thousand farmers are regular paid-in-advance subscribers to TWENTIETH CENTURY FARMER. If you have any wants, or if you have anything to sell, insert an ad. in this department.

LANDS—Arkansas

LITTLE RIVER VALLEY LANDS—Rich and cheap, on railroad. Sessions Co., Winthrop, Ark.

California

NEW COLONY, NEAR SAN BENITO—Ideal climate, cream of earth, easy terms; no irrigation or fertilizing; near railroad. Excursion October 6. Write today for particulars and inducements for this trip. San Dominie Colonization Co., 340 Brandeis Theater Bldg., Omaha, Neb.

Colorado

BIG OPPORTUNITY FOR STOCKMAN For rent, 1,440-acre stock and grain farm in eastern Colorado, 9 miles from good town (splendid level roads), 50 miles from big market of Denver. This is the finest ranch in the west and is well known all over the country; good improvements; fine water in abundance; splendid neighborhood. My grass cannot be excelled and will keep stock fat all winter unless heavy snows come; in fact, ranch will care for at least 400 head the year around. Have been operating this ranch myself with hired help, but now want to rent to a responsible man who has at least $3,000 cash to invest with me in stock. I will put up an equal amount and share profits half and half with a man capable of doing the work. I have put up over 200 tons wild hay and alfalfa on the ranch this year which I will leave on the place. Am now putting in 100 acres more alfalfa and have another 100-acre field plowed ready for oats or other grain next spring. A big chance here for the man who can inspect and make deal before October 1. Write me at once, or, better yet, come and see me. N. P. West, 514 Majestic Bldg., Denver, Colo.

SACRAMENTO VALLEY—CLOSE TO the city; two-hour train service; two railroads; alfalfa ten tons per acre; 50 bushels wheat per acre; all kinds fruit. Dairying pays well; cows average $100 yearly each. Poultry and eggs bring highest prices. Best of soil; highly improved neighborhood. Many Nebraska people there now. Free literature. W. T. Smith Co., 1111 City National Bank. Omaha.

Florida

OWNER MUST SELL TEN ACRES good fruit land, Orange county, Florida; near railroad and not far from Orlando. Full particulars upon request. Otto Hudson, 2580 Spaulding, Omaha, Neb.

FARMERS, MECHANICS AND renters, read this: Are you contented where you raise one crop a year, or working under a boss? Would you be your own boss in your own home and raise three crops a year on your own land, with no winter? Send 2c stamp for answer to your questions to a former Kansan. Judge Rightmire, Stuart, Fla.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87. Lincoln, Neb.

WANTED—TO HEAR OF GOOD farm or unimproved land for sale. Send description and price. Northwestern Business Agency, Minneapolis, Minn.

For Exchange

CLEAN STOCK OF HARDWARE AND implements, together with two large buildings in live town of 2,000 population, to trade for good land. Will trade stock and rent buildings if desired. Address W. E. Whittier, Gothenburg, Neb.

Idaho

WE HAVE A NUMBER OF IRRIgated fruit properties for lease on cash or crop rental basis. Orchards may be intercropped with corn, potatoes, onions, root crops or melons. Lessee must have team, implements, etc., and be prepared to handle work in a competent manner. Leases for 1915 now being arranged. Excellent climatic conditions, long growing season, deep, rich soil, established community adjoining Lewiston, Idaho. H. L. Powers, Manager Lewiston Orchards, Lewiston, Idaho.

A NICKEL A WORD A WEEK BUYS space in this column. Your ad will be read in 115,000 farm homes.

Grand Island Fair

The Central Nebraska Agricultural association is going to put on one of the best county fairs of the year at Grand Island, September 29 to October 2, inclusive. President L. C. Lawson attended the Nebraska State fair and secured some of the best herds of cattle and swine on display there. Although this is only the second year for this fair, they have good permanent buildings and unusually good accommodations for the stock on display, as well as for the spectators and exhibitors, and get out a very neat and complete premium list.

LANDS—Minnesota

MINNESOTA LANDS! WE SAVE buyers many dollars. Deal direct. Large, responsible company. Finest stock and dairy district; improved and unimproved. Write St. Croix Valley Land and Loan Co., Drawer G. Rush City, Minn.

Montana

DOLLAR WHEAT HERE TO STAY. Judith Basin (Montana) land, producing from 40 to 50 bushels of wheat per acre, can be bought at about $40 per acre from the Farmers' Land Co., of Lewistown, Mont. (inc.) Prices advancing. Buy now.

Nebraska

FARM NEAR OMAHA — 160 ACRES within five miles of Omaha street car line. Good improvements. No better soil in Douglas county. Has 30 acres in alfalfa, produces five tons per acre sold last season at $14 per ton. Close to alfalfa mill. Farm will rent for $1,200 per year. Must be sold to settle partnership. Price, $112.50 per acre. Address T. E. Stevens, 712 Omaha Nat'l Bank Bldg., Omaha, Neb.

160-ACRE IMPROVED VALLEY CO. Nebraska farm, near town, near school; 45 acres alfalfa, 100 for wheat, balance pasture; tolling good soil; price, $8,500; easy terms. John L. Maurer, 1201 Farnam St., Omaha.

North Dakota

NORTH DAKOTA LANDS, DIRECT to purchaser; crop conditions in North Dakota were never finer than now and land prices are going up. To obtain settlers along our 1,200 miles of track here we have obtained listings of several hundred thousand acres of choice lands, ready to farm, and will sell these at cost. Prices will never be so low again. Roads, schools, churches, railroads, all established. Very low excursion rates Mondays and Tuesdays. Come and see lands yourself, or write for full particulars. J. S. Murphy, Immigration Agent, Soo Line Railway, Minneapolis, Minn.

WHEAT RAISING HAS ALL OTHER kinds of grain-growing outdistanced for profit. When you can produce an acre of wheat at the market for $7.40 and you can get 40 bushels per acre and sell at from $1.25 to $1.50 per bushel, there's sure something in it. This is possible on any one of our 100 improved farms in Cavalier or Pembina counties. As soon as you see them you will be ready to say we have not overdrawn the statement. All grains, grasses, vegetables and potatoes do better there than in either Nebraska or Iowa. You will have there every modern convenience, and likely better transportation facilities, than where you are now. You can't avoid liking the country and people. Improved farms run from $55 to $50, easy terms and long time. Come and see. We are owners; all we have is here. Have lived here for 35 years, so we have a reputation to maintain. For other information write Fred W. McLean, General Manager, Red River Valley Land Co., Fargo, N. D.

Oregon

OREGON STATE PUBLICATIONS free; Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions—they will have painstaking answers. We have nothing to sell. Address Room 110, Portland Commercial Club, Portland, Ore.

LANDS—WISCONSIN

UPPER WISCONSIN — BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

HALF MILE FROM TWO LARGE fishing lakes, 6 miles from railroad town, 80 acres good hardwood timbered wild land at $20 per acre, easy payments. Martin Yde, Milltown, Wisconsin.

OFFICIAL BULLETINS CONCERNing soil, climate and crops of Wisconsin mailed free to those addressing Wisconsin State Board of Immigration, Capitol 1000, Madison, Wis.

Wyoming

GRAIN LANDS AND STOCK ranches in southeastern Wyoming at bargain prices and on easy terms. For particulars address Federal Land Company, Cheyenne, Wyo.

MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

WHY PAY BIG PRICE FOR OAK posts? You can buy direct and save money. J. Bone, 486 Brandeis Bldg., Omaha.

GOVERNMENT FARMERS WANTED—Ages 21 to 50. Make $125 monthly. Write Ozment, 39-F. St. Louis.

FIR LUMBER! RED CEDAR SHINgles! Choice. Mill direct. Save money. Write Lansdown, Drawer H, Everett, Wash.

VIOLIN FOR SALE CHEAP. SENT on trial. Write Miss Bertha Mardiss, Route 5, Rosedale, Kan.

HONEY AND BEES FOR SALE—Honey, new crop, basswood and clover, put up in new tins for table use. Strong, healthy colonies of bees, on ten straight brood combs; directions for wintering free. For prices and particulars write The Hawkeye Apiaries, B. A. Aldrich, Prop., Smithland, Ia.

PATENTS

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., 808 F St., Washington, D. C. Established 1880.

BUSINESS CHANCES

PARTNER WANTED TO GO INTO the cattle business; German preferred; 700 acres already under cultivation. Address Box 24, Omaha, Neb.

AUTOMOBILES

FOR YOUR FORD CAR—SUPPLIES direct to you. We save you the dealer's profit. Free catalogue. Write and save money. Gasolette and Fordezers. You need both. Ask us. The Ford Supply Co., 2129 Farnam, Omaha, Neb.

Two Ads Pulled $126

Central City, Neb., Sept. 12, 1914.

Twentieth Century Farmer:

The Twentieth Century Farmer is the best paper I know of to advertise in. It brings more returns. I put two ads in your paper last fall for my cockerels and sold $126 worth.

MRS. OWEN KAVENEY.

Mrs. Kaveney raises Barred Rocks and has advertised them in many papers for years. She picks T. C. F. as the best puller of them all.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

WANTED—MEN AND WOMEN—18 OR over. Get government jobs. Thousands appointments this year; $65 to $150 month. Write immediately for list of positions available. Franklin Institute, Dept. L 94, Rochester, N. Y.

MAKE $100 A SEASON IN SPARE time only and get all your own clothes free. Easy to get orders for men's suits with our beautiful samples and up-to-date styles. Write at once for free book of samples and styles, agents' inside costs and retail prices, full information and our big, new offer. It's a wonderful opportunity. Knickerbocker Tailoring Co., Dept. 161, Chicago.

WE WILL PAY YOU $120 TO DIStribute religious literature in your community. Sixty days' work; experience not required; man or woman; opportunity for promotion; spare time may be used. International Bible Press, 210 Winston Bldg., Philadelphia.

AGENTS—YOUR GREATEST OPPORtunity to become permanent representative for largest manufacturers high-grade soaps and toilet goods. Sure, steady income—$25-$75 weekly. Hundreds doing it. Unlimited possibilities; fastest sellers; business good year round. Particulars free. Write today for immediate appointment. E. M. Davis, President, 267 Davis Bldg., Chicago.

MEN WANTED—PREPARE AS FIREmen, brakemen, motormen, colored train porters; no experience necessary; steady work. Write Inter Railway, Y 193, Twentieth Century Farmer, Omaha.

SITUATIONS WANTED

MAN AND WIFE WANT WORK ON farm; best of references. Earle Evans, Nemaha, Neb.

AK-SAR-BEN SPECIALS

LADY BARBERS AND MANICURIST. Largest lady shop in Omaha. Neb. 316 South 14th St. Basement Paxton Hotel Annex.

POULTRY—Leghorns

S. C. BUFF LEGHORN HENS, dozen, $10. Splendid layers. Jessie Chatfield, Rosevale, Neb.

Orpingtons

PRICE LIST FREE—SINGLE COMB Buff Orpington, Toulouse geese, Indian Runner ducks. Peter Brehm, Harvard, Neb.

Rhode Island Reds

ROSE COMB RHODE ISLAND RED cockerels, $9 dozen. Claude Musselman, Lyons, Neb.

Guineas

WHITE GUINEAS. $1.25 EACH. Nettie Campbell, Elyria, Neb.

Ducks and Geese

FISHEL WHITE RUNNER DUCKS. $1.00 each; $10 per dozen. Ida M. Oliver, Isabel, Kan.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

THE 115,000 FARM FAMILIES WHO regularly read this page are anxious to buy their breeding stock early this year. A nickel a word a week is the cost of advertising what you have to sell.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned; are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

I HAVE 100 HEAD YEARLING steers for sale; also know of 8 or 10 loads of heavy feeders—Herefords, Angus and Shorthorns—that I will help buy for 50 cents per head commission. Write me your wants if in need of cattle. Harry I. Ball, Fairfield, Ia.

DOGS

COLLIES—AIREDALES — TERRIERS. Send for list. W. R. Watson, Box 501, Oakland, Ia.

FERRETS

FERRETS—GOOD HUNTERS. RATters. F. Breman Co., Danville, Ill.

Review of Live Stock Market

(CONTINUED FROM PAGE SIXTEEN)

present writing the market is reacting sharply. While no one, as a matter of course, can foretell the future with any great degree of certainty, sheep men are prepared for a somewhat lower range of prices, although they do not expect that sheep will go back to where they were before the bulge. In other words, they are looking for a good stiff market, but not for such wild prices as prevailed during last week.

Cattle Situation Unchanged

Cattle have been devoid of especially new or interesting features. Receipts during the week just closed were very large, in fact at some points the largest since a year ago. Under the influence of the heavy runs, prices on the common to medium grades broke very sharply at all market points. On the other hand, strictly good to choice beef cattle, owing to the great scarcity of that kind of stock, remained fully steady. It looks very much as if the cattle market during the next few weeks would be governed to a large extent by the receipts. With prices as high as they have been of late it is an easy matter to break the market as often as receipts become excessive. On the other hand, with a fair consuming demand the market has shown that it can rapidly recuperate whenever receipts become light.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Champion Duroc Sale

This is the last call for the sale of Messrs. Putman & Son and Lamb Bros. of Tecumseh, Neb., on October 1. This is a sale of unusual importance. Of course, the main feature of this sale is the fact that Echo's Crimson Wonder, the grand champion boar at Nebraska, is going to be offered to the highest bidder, but aside from this we want to say that this boar is not the only attraction in the sale by any means. There are several other herd boar propositions that are really plumb good ones. Among these are several January boars sired by Grand Model, the grand champion boar at Iowa this year. These young boars are not in show shape, but they are good, big, strong, smooth, rugged fellows, extra heavy boned, right up on their feet, and the kind that will go out and do good, hard service and be show prospects for next year. Other attractions are Successor, a son of Advancer No. 1 and out of almost a full sister to Model Queen, champion sow of 1910. There are two extra good senior yearling boars, both sired by Put's Top Colonel, and a junior yearling boar by Chief Select that is a plumb good one from end to end. In fact, this junior yearling boar is an unusually good prospect, with good size and plenty of style and quality. There are also two right good January boars sired by Wonder Colonel and out of a Crimson Wonder Again dam. One of the really good spring pigs is by a Chief Select boar and out of a Colonel Gano bred dam. In the sow line, there are five sows bred to Watts' Model Again, a grand young boar sired by Watts' Model, that has every right to take rank as one of the great sires of the breed. These are all tried sows, and among them are several that are just simply good enough to go into any man's herd—big, smooth, heavy boned, roomy, just the kind we are striving to breed. Several choice young sows will also be sold with a breeding privilege to this boar. There will also be three fall sows and three early spring gilts sired by Grand Model, the grand champion boar at Iowa. Three sows will be sold bred to Echo's Crimson Wonder, the grand champion boar at Nebraska this year. Here is a blending of blood lines that will not be duplicated in any other sale in the United States this year. Mr. Duroc breeder, if you want a boar or a good sow or two, here is a mighty good time to get busy, for you will travel a long way and spend a lot of railroad fare before you will find a better opportunity than this sale to get some really high class stuff. Make arrangements to attend this sale. If you cannot do so, send your bids to G. E. Hall of this paper, and they will be carefully looked after.

Duroc Boars for Sale

We wish to call the attention of our readers to the advertisement beginning in this issue of A. F. Barnes of Petersburg, Neb. Mr. Barnes is offering a few fall boars and a choice lot of spring boars for

THE ABOVE REPRESENTS THE TYPE OF BOARS TO BE OFFERED in the Duroc-Jersey sale of Robert Young of Cook, Neb. See his ad elsewhere in this issue.

sale. These boars are sired by Belle's Crimson Wonder, Colonel Chief, B. & L.'s Wonder, Belle's Big Wonder and Golden Model 4th, and they are out of Crimson Wonder bred dams. Mr. Barnes is pricing these hogs worth the money. He is crowded for room and feels the necessity of moving them at once. He has one of the very best herds in northern Nebraska—a herd that has been intensely Crimson Wonder bred for years. You can absolutely depend that he will treat you right and give you value received. Write him for further particulars, mentioning the Twentieth Century Farmer.

Friesland Farm Holsteins

Dr. B. B. Davis, room 200 Bee building, Omaha, Neb., proprietor of Friesland Farm Holsteins, has a few choice individuals that he is offering for sale at this time, both in the line of bulls and females—particularly bulls. He has a number of sons of Kalmuck Skylark Johanna that should be readily picked up by anybody wanting a first class young bull. As will be remembered, Kalmuck Skylark Johanna is the oldest son of the world's famous producing cow, Katy Gerben. This bull was sired by Sarcastic Lad, the grand champion bull at the world's fair, St. Louis, being the same line of breeding that produced Colantha 4th's Johanna, for several years a world's record cow for a year's production, the record being over 27,000 pounds of milk and 1,247 pounds of butter in 365 days. These young bulls are well marked, splendid dairy type, excellent quality and with the splendid ancestry behind them they are bound to make good as breeders. If you are going to be in the market for a bull, we have no hesitancy in advising you to write to Dr. Davis, because unquestionably he has one of the very best herds of Holstein cattle in the west. No man could be more exacting in the matter of the selecting of his breeding stock than Dr. Davis has been. As a result of this discrimination he has brought his herd up to a high degree of excellence that should commend it to the attention and patronage of anyone wanting some first class cattle. These bulls are being priced well worth the money and we trust that any one of our readers who is in the market will write him for further particulars, mentioning the Twentieth Century Farmer.

Young Sells October 2

On October 2, the day following the Putman & Son and Lamb Bros.' sale at Tecumseh, Neb., Robert Young of Cook, Neb., will hold his annual sale at his farm, midway between Cook and Tecumseh, at which time he will put up a splendid offering of Duroc-Jersey sows and gilts and Duroc boars that are worthy of the attention and patronage of anyone wanting some really first-class hogs. This is without question the best offering Mr. Young has ever made. It will consist of four fall boars, sixteen spring boars, eight spring gilts and twelve young sows with litters at side or right close up to farrowing time. The boars in service in this herd are Model King, a son of Valley King; Nebraska Model by Iowa Model; and Gano Wonder, by the celebrated Colonel Gano. Here are three boars that carry the best blood lines of the breed, are excellent individuals themselves and are proving unusually strong breeders, as will be seen by their get in this sale. The fall boars are big, strong, rugged fellows, and among them are a couple that are good enough to go into anybody's herd. The spring boars are an unusually uniform lot and will have all the size that could be asked for by sale day, age considered. The bred sows and the sows with litters should meet with favor, for they are a splendid lot of choice young sows. Not only is this true, but we saw several litters here, great, big rugged fellows, nine or ten in a litter, just the kind that will make a hat full of money for the buyer. When you buy a sow with nine or ten good, big, strong pigs, you are eliminating the chance of losing the sow and litter at farrowing time. We repeat again, that we think here is a mighty good place to get in. These sows are sired mostly by Model King and Nebraska Model, both sons of champion boars. They are bred to Gano Wonder, a splendid son of Colonel Gano Make arrangements to attend this sale. Or better, make arrangements to attend the sale the day before and also this sale. There never was a better time to get into the hog business than right at this time. Market prices on hogs are high, and they are going to continue to be high. This means good prices for breeding stock. If there is anything in this offering that you want, and you are unable to attend, send your bid to G. E. Hall of this paper at Tecumseh, Neb., on October 1, and it will be carefully looked after. Kindly mention the Twentieth Century Farmer when writting for catalogue.

Great Duroc Offering

One of the most important Duroc sales to be held in the west this season will be that of R. Widle & Son of Genoa, Neb., on October 13. This sale is important for several reasons. In the first place, the hogs going into this sale are practically every one of their own breeding, and the immediate results of years of labor by this well known firm to bring their herd to a high standard of perfection. In the second place, this offering will contain a number of individuals that should be eagerly sought after by breeders all over the country. A number of them are included in their show herd that is making such sensational winnings all over the leading show circuit of the country. This is not the first year that they have been able to go out and make such strong winnings in competition with the best herds in the country. The nice part of it is, as we said above, that the hogs they are showing are practically all of their own production. Their offering this year will be largely sired by their leading herd boar, Critic B, the grand champion boar at Nebraska in 1912. In looking over this offering a short time ago we were deeply impressed with the unusual stretch, bone, smoothness, size and quality that permeates this herd all through. It certainly goes to show what can be accomplished by any breeder who has a definite idea of the type of hog which he desires to produce and has the tenacity to follow that idea to its culmination. The offering will consist of ten fall boars, twenty spring boars, ten fall gilts and five spring gilts, forty-five head in all. The entire offering, with the exception of five head, are sired by Critic B. Besides the Critic B. stuff, there are two fall boars by Valley Colonel by Prince of Colonels. These boars are out of a full sister to Colonel Gano. There are also four spring boars, one by Invincible Chief out of a Golden Model 15th dam, and three by Dusty Colonel and out of a Dusty Critic dam. The Critic B. pigs are out of sows sired by Prince of Colonels, Belle's Crimson Wonder, Uneeda Crimson Wonder, Wallace's Wonder, Lincoln Chief, B. & L's. Wonder, Crimson Wonder Again and King the Colonel. At the Nebraska State fair Messrs. Widle & Son won thirty-one ribbons, including one championship. At the Kansas state fair they won twenty-eight ribbons, including six firsts, three championships and one grand championship. If you are looking for a strictly first-class herd boar or a sow or gilt that will materially add to the quality of your herd, you can make no mistake in attending this sale. Get in touch with this firm at once and have them place you on their mailing list for catalogue. Make arrangements to be present on sale day, and in case you cannot do so, if you will send your bids to G. E. Hall of this paper they will be taken care of in the proper manner. Kindly mention the Twentieth Century Farmer when writing.

Sale Dates

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
November 5—Harry Tidrick, Winside Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb.

Duroc-Jersey Hogs

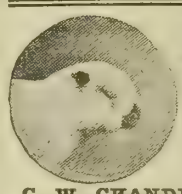
October 17—Henry Stuthman, Pilger, Neb.
October 13—R. Widle & Sons, Genoa. Neb.
October 23—F. B. Nelson, Lindsay, Neb.
October 31—Robert Leisey, Wisner, Neb
November 5—Harry Tidrick, Winside. Neb.
November 11—F. A. Lemmerman, Creston, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner. Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger. Neb.
February 8—R. Widle & Sons, Genoa. Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg. Neb.
February 11—F. B. Nelson, Lindsay. Neb.
February 12—Robert Leisey, Wisner. Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa. Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son. Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday, Rising City. Neb.
March 1—Harry Tidrick, Windside, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Holstein-Friesian Cattle

October 19 and 20, 1914—H. C. Glissman, Station B, Omaha. Sale at South Omaha.

Shorthorns

October 29—Rapp Bros., St. Edward, Neb.
December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt,



FOR SALE — Imported Buttar Ram A. S. A. 219369. Sired our highest selling rams, 3 seasons. Price $20. Yearlings and twos, actual weights 160 to 240 lbs.; also priced down to sell. All registered Shropshires.
C. W. CHANDLER, Kellerton, Iowa.

SWEET CLOVER SEED WANTED
Pay highest market price. Send sample of what you have to offer, advising amount. If not threshed, let us know how much you expect to have for sale. Write us before you sell.
A. A. BERRY SEED COMPANY, Clarinda, Iowa.

WEALTH IN INVENTIONS. Patent your ideas. Send for our Free Book, and advice HOW TO SUCCEED. SUES & CO. Attys. 539 7th St., Washington, D. C.

STOP HOG DISEASES

Here's a device that's the greatest safeguard against the deadly hog diseases that annually wipe out thousands of hogs. No matter how large or small your herd, you cannot afford to be without the

STAR HOG OILER

This machine is the only one that measures the oil out to the hog—no waste, nothing like it for economy. Just place the "STAR" in your hog lot, the herd will take to it right off. No bother—no trouble. The machine is always ready for use—always acts as a disinfectant against the hog diseases. Positively removes lice, cures mange and scurvy. Uses crude oil or "STAR" Medicated Oil, works anywhere and everywhere—hottest and coldest weather—can't clog—lasts for years.

—THIS AD WORTH 50 CENTS—

Clip this ad and take it to your dealer. He will allow you a 50 cent discount on the machine, providing you bring this ad with you. Accept NO OTHER. If your dealer can't furnish the "STAR" Hog Oiler write us for circular and prices. Don't delay—by having a "STAR" Hog Oiler your herd will be greatly protected against many diseases—take on fat quickly and thus bring you bigger and surer profits. Get the "STAR" today.

STARBUCK MFG. CO.
PEORIA, ILLINOIS.

Prize Winning Durocs

AT

30 Boars AUCTION 15 Sows

T

Genoa, Neb., October 13, 1914

40 Head Sired by Critic B, Champion Boar at Nebraska, 1912.

31 Ribbons Won at Nebraska State Fair and 28 at Kansas State Fair, including Four Champions and 1 Grand Champion.

This offering will consist of 10 fall boars, 20 spring boars, 10 fall gilts and 5 spring gilts. Included in the offering will be quite a number of our SHOW HERD. It will, in a large measure, be a CRITIC B offering, all but 5 head being sired by this great boar. Here is an opportunity to get a herd boar or a few choice young sows. We are not putting a poor individual in the sale. Catalogs are ready.

Auct., Col. E. Z. Russell.
Fieldman, G. E. Hall.

R. WIDLE & SON,
Genoa, Neb.

Grand Champion Duroc Sale

AT

Tecumseh, Neb., Oct. 1,'14

25 Boars 15 Sows

Attractions: Echo's Crimson Wonder, champion boar at Nebraska, 1914. Successor by Advance No. 1. Puts' Royal and Wonder Col., two great yearling boars by Puts' Top Col., Wolf Creek Chief by Chief Select. Fine December and January boars by Grand Model, champion boar at Iowa, 1914. Also five sows sired by this boar and bred to Echo's Crimson Wonder, champion boar at Nebraska. Five sows bred to Watt's Model Again, one of the best young boars in the west. Also five sold with breeding privilege. This will be one of the greatest opportunities of the season to get a genuine herd header of champion blood lines. No sale this year will contain more real herd boar material. Write for catalog at once to

Auct., Col. N. G. KRASHEL,
Fieldman, G. E. HALL.

W. M. PUTMAN & SON
or LAMB BROS.,
Tecumseh, Neb.

DUROC-JERSEY HOGS

I HAVE THE GOODS

Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

BOARS! BOARS! BOARS!

Several fall boars and a few choice spring boars for sale, sired by BELLE'S CRIMSON WONDER, COL. CHIEF, GOLDEN MODEL 4th and BELLE'S BIG WONDER, out of Crimson Wonder bred dams. I am offering these boars at bedrock prices for quick sale. **A. B. BARNES, Petersburg, Neb.**

IMMUNED DUROC BOARS.

I am offering an exceptionally strong lot of Duroc Jersey boars for sale, largely of Crimson Wonder and Golden Model breeding. They are the best lot I have ever offered and are being priced worth the money.
E. R. DANIELSON, Osceola, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

MR. DUROC BREEDER

Are you on the market for a herd boar? If so, write me just what you want. I have them sired by Lucy's Select, Proud Wonder Jr. and other top boars of the breed. **L. J. KUZEL, CLARKSON, NEB.**

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.

F. E. MERRICK, OSCEOLA, NEB.

BIG SMOOTH DUROCS

Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.
HENRY KOEHLMOOS, Pilger, Neb.

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.

GEO. W. SCHWAB, Clay Center, Neb.

CEDAR'S DUROCS

The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.

P. P. CEDAR, GENOA, NEB.

HEKRDLE'S DUROC BOARS.

I have the best lot of spring boars for sale that I have ever produced. Sired by A. A.'s Model and Beauty's Wonder. A combination of the Crimson Wonder and Golden Model blood lines. Correspondence solicited. A. A. Hekrdle, Stanton, Neb.

35 TOP BOARS

35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st, Prince Munice, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

HENSLEY'S DUROCS

30 spring boars for sale: sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

DUROC HERD BOARS

Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd headers I have them. They are out of prize-winning sires and dams. **Clarence Wallace, Wisner, Neb.**

IF YOU WANT WHAT YOU WANT when you want it, place an ad. in the Market Place of Twentieth Century Farmer.

POLAND-CHINA HOGS

McCULLOUGH'S BIG POLANDS

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Five Cents the Copy | Omaha, October 3, 1914 | Number 721

There Is a Difference in Tobaccos

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V. Stefansson, the famous explorer, who has recently discovered a tribe of blond Esquimaux in the arctic regions of Northwestern Canada, seys:

"Tuxedo is mild, cool and soothing—just the sort of tobacco I need. Tuxedo goes with me wherever I go."

V. Stefansson.

Tuxedo is the Mildest, Sweetest, Most Pleasant Smoke in the World, Because—

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Tuxedo

The Perfect Pipe Tobacco

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J. N. Marchand

TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

What is the Matter With Our Rural Schools?

I. Notwithstanding Improved Rural Conditions, There is a Spirit of Unrest in Country Life

Editor's Note—What is the matter with our rural schools? This is a question that has been agitating farmers and school men for the last few years, and the only thing upon which they seem able to agree is that there is something radically wrong. As to the root of the trouble, its cause, symptoms and the remedies to be applied, there is a wide difference of opinion, each looking at the subject from his own viewpoint and in many cases able to see but one side of the matter.

For the last year and more the Twentieth Century Farmer has been seeking a man to investigate this subject in a broad, impartial manner; one whose character and experience would fit him to look into it from the standpoint of both the farmer and the schoolmaster, and who could set before our readers every phase of the case in a clear, concise manner, offering practical and helpful suggestions regarding the solution of this great problem—perhaps the gravest problem in rural lie today.

In Mr. Ben F. Robinson we believe we have found the man we sought. A farmer boy himself, having received his education in the rural schools of our country and having taught in the rural schools for many years, now a teacher, but in thorough sympathy with the needs of the rural students and understanding and appreciating the difficulties and problems to be met, he has given much thought to this subject for many years. In this issue we publish the first of his articles. We hope our readers will give these articles careful consideration and much thought, as we believe Mr. Robinson has a message which will prove helpful to the farmer, who is too engrossed in business to give the matter the time and study that Mr. Robinson has given. As you will note, he delves deep, going back to the foundations of the social structure, whose needs the rural school is designed to serve.

THIS is indeed a wonderful age for country life. In a material way the statement seems to demand no proof. It is interesting, however, to note even briefly some things that have contributed to the development of such an age.

A few decades ago the farmer plowed his field with a walking plow, drawn by two horses; scattered the seed by hand as he walked to and fro across the field; reaped the grain with the cradle and pounded it out with a flail. Today he uses the gang plow; sows the seed with the broadcast seeder, cuts many acres a day with his self-binder and acts merely as an overseer while the steam thresher and its crew deliver the harvest to his granaries.

Not long since the country lad cultivated the corn with one horse hitched to the double shovel, making one row at a "round." Now he drives two teams to the modern plow and does four times as much.

So one might continue at length to show how the marvelous improvements in machinery have lightened the burden of the farmer and contributed to his prosperity.

When husking corn on the frosty November mornings twenty-five years ago the farmer thought but little of the selection of seed and care in the breeding of corn. This fall he will exercise the utmost care. Every seed ear must be sound as a dollar, well formed and well filled. For the farmer is a student. He knows that land is too high and its products too valuable for him to take any chances on poor seed.

The older ones of us remember that when as boys plowing the rich soil of the Missouri valley we thought little about soil fertility or the rotation of crops as a means of preserving it. To us as men comes the soil survey bulletin and maps naming and describing many distinct types of soil as found in a single state. And the inoculation of soil with bacteria by fertility-restoring crops seems like a fairy tale.

Means of communication have changed. Years ago the farmer roamed over half a township hunting help for threshing or shelling. Now a few minutes at the telephone after supper fixes all the details for 'swapping work." Or, suppose the binder breaks down. The old system demanded that the farmer leave the machine in the field, hitch up and drive several miles for the needed repairs. Now he 'phones the dealer, who covers the distance in his car and adjusts things, while the farmer rests his team and the hired man takes another drink (of water.) Or he goes for the repairs in his own machine.

How has the farmer's wife fared? At one time she strained the milk into crocks, waited twenty-four hours for the cream to rise, churned by hand and sent the butter to town on Saturday afternoon, carefully packed away in a market basket, to be traded out at the store. Not so now, for the cream is immediately separated and taken at regular intervals to the station, where its value is received in cash. Other menial tasks that only a short time since seemed like drudgery are now comparatively easy, so that, all things considered, the life of the country woman is not so different from that of any other woman upon whom the duty and responsibility of a household rest.

From the social standpoint rural conditions have changed radically. The rural delivery, telephone and good roads, with modern means of travel, have brought the farmer's family into contact with town people to such an extent that they are no longer referred to as "country jakes" or "hayseeds." As a class farmers of the middle west have become so prosperous during the last decade that many things which are necessities to them would seem luxuries to some less fortunate town and city people. True, there are exceptions to the above, but we are speaking in general rather than specific terms.

Many a man with tired feet, soft muscles, impaired digestion and unstrung nerves is working and waiting patiently for the time when he shall leave the clamor and confusion of the busy city and with his family retire to some quiet place where he shall be content to make, by his actual labor, a simple and independent livelihood.

No, people are realizing that farm life is not mere drudgery. They know that the farmer is indispensable, and that rural communities are, after all, the important element in the social and economic activities of any agricultural region.

In spite of all this, however, the careful observer notices certain indications of discontent, of unrest in our country life. So evident has this spirit of unstability become that one feels that there must yet be something wrong; that there must still be a serious farm problem which will require rigid investigation and persistent effort to solve.

In succeeding articles we shall attempt to discover the problem and to suggest means for its solution.

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Building a Silo at a Cost of Twelve Dollars

How Two Boys Made a Discarded Cistern Into One of the Most Valuable Structures on the Farm

By C. H. Esthaven

THERE is a silo near Oregon, Mo., which was built by a couple of boys at an actual cash outlay of only $12. It is fireproof, storm-proof and sun-proof. It requires no hoops, no props, no paint; it is simply an old cistern converted into a silo by an ingenious piece of "top-working." It was filled a year ago last August at a cash cost of $11 with less than two acres of corn, and the twenty-six tons of silage thus made kept perfectly and wintered eighteen head of stock. Mr. E. W. Headley, sr., on whose farm we found this silo, says, "I don't know what we would have done without it."

Saved from a Fire

This silo has a very unusual history. It is the salvage from a farm fire; and in this case the salvage has proven greater than the original loss. Some years ago the barn on the Headley farm was destroyed by fire. A fine, big barn has replaced the old one, but in the rebuilding the location was changed and the cistern, which for many years had done service at the old barn, was left without roof or spout to fill it, and was consequently useless as far as its original function was concerned.

But the old cistern still had possibilities, and it was left for E. W. Headley, jr., now a second-year student in agriculture at Columbia, to discover them. That was two years ago—before he went away to school. One day he and his younger brother, Orlo O., went to their father and laid the plan before him.

"Daddy," said the older son, "I believe we can make a silo out of that old cistern; and we can do it without spending very much money."

How They Did It

The plan was explained and the father said, "Go ahead." And go ahead they did. The cistern was eight feet in diameter and twenty feet deep, and its walls and bottom were sound. Those two boys went to work, removed the arch and in its place built a brick wall eight inches thick, continuing the circular walls of the cistern six feet above the foundation of the old arch. This gave the silo—for a silo it then became—a depth of twenty-six feet. A conical roof was put on and in it an opening was made for filling. A rectangular frame with tight door had been placed in the brick wall for the removal of the silage. Then the boys carefully plastered the bricks inside and out with cement, and the old plaster walls of the cistern were gone over with a fresh coat wherever weak spots appeared.

The silo was made and finished in three days, just as it stands now, without a fault or crack, and just as it will probably be standing twenty years from today. The boys did not count their own labor, but outside of that the total expense was $12. That was two years ago. Twice this silo has been filled and twice its contents have been fed out, each time yielding a surprisingly large amount of good feed just when most needed. And at no time has there been any trouble from gas or mouldy silage. It stands ready for its third filling with a clean record—no loss from spoiled silage or poisoned animals, no cost for upkeep.

Put to Severe Test

Last year put to a severe test the feed supply on most farms in this part of Missouri. The Headley family is accustomed to large herds and flocks, large barns, bulging mows and full cribs; but last year was the exception. The herds were not materially decreased, but the feed supply was at a minimum. The year preceding had been bad enough—the year the new silo was being first tried; but last year reduced all farm factors to their lowest terms. It was, "How shall we feed our stock till grass grows again?"

On the Headley farm the problem was solved by the silo those boys had built at an expense of only $12. Into it was put, on August 11, a little less than two acres of corn, which was estimated as yielding about thirty bushels to the acre. A cutter run by a six-horse engine did the work nicely, as no elevator or blower was required. It took just three and a half hours to fill it. The bill for cutting the silage was $11, and the additional labor, farmer-fashion, was not counted, as that was all neighborhood help repaid in labor. The feed thus provided wintered twelve cows and six calves, with an occasional feed of silage to spare for the brood sows. That was all the cattle had, too, from Christmas week until near the first of April. These animals came through the winter in good flesh and with no symptoms of poisoning or other sickness.

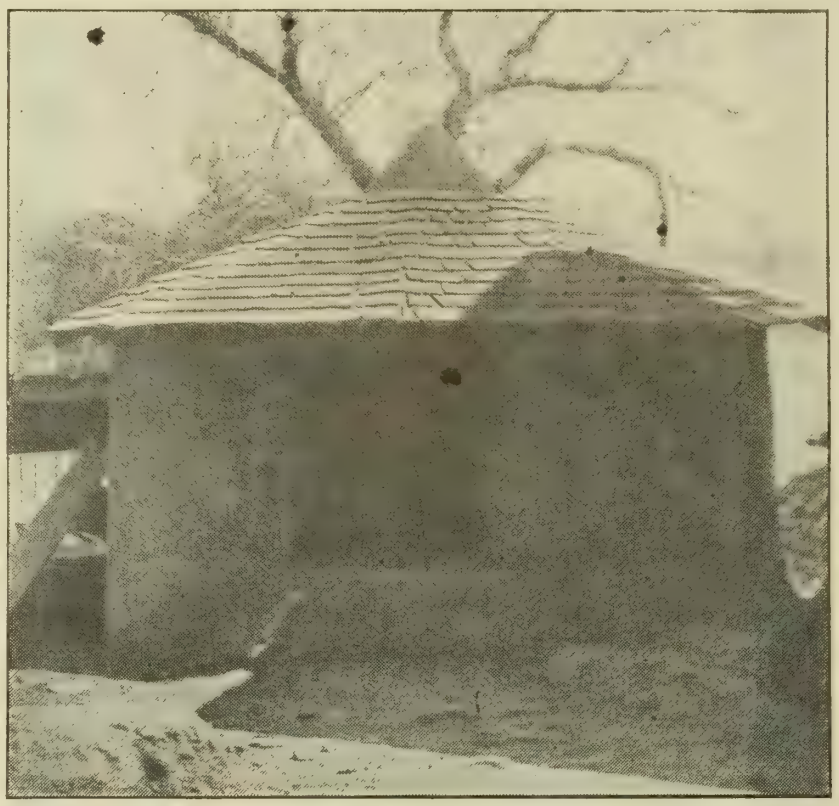
The silage was tramped thoroughly, and at no time, says Orlo O. Headley, was any trouble with gas experienced by those who worked in the pit, tramping down the silage as it came from the cutter. In fact, he spoke of it being a very cool and pleasant place to work, the falling silage keeping up a constant change of air. That the silage kept perfectly is attested by those who fed it out.

Bushel Basket Hoists

And to get it out a rope was run through a pulley in the apex of the roof. Two persons did the feeding, one going down to fill the bushel baskets attached to the rope and the other taking them at the top and carrying them to the feed bunks. They do not speak of this as a hard or unpleasant task, but it is to be noted that in this case there are two persons to do the feeding. Where there is but one man about the place a different arrangement would be necessary, but that could easily be provided for in a larger carrier and some easier means of hoisting.

The best evidence of the faith Mr. Headley and his sons have in the pit silo is the fact that they are now at work making a new one, 10x30 feet, not to take the place of the first, but to supplement it. This one will cost, they believe, not to exceed $60, including materials, digging and other labor; and when it is finished they may feel reasonably secure against any shortage of feed in the future.

It should be noted that Mr. Headley's farm is in the loess soil formation of the Missouri valley. A cistern or silo dug in this soil may be plastered with a thin coat of cement and will stand without deterioration for many years. This fact is being eagerly grasped by many a farmer living upon the loess formation as a great natural advantage. The value of this advantage, as in Mr. Headley's experience, is measured largely by the enterprise with which it is met.



Semi-Pit Silo Made From Old Well

Milk Testing for Every Farmer

MANY suppose that the price and operation of a Babcock milk tester is quite beyond the average farmer. But a tester of one-farm capacity and a quart of acid can be bought for $5 or $6. The results can be read as simply as the temperature in a thermometer and without technical computations. Besides, explicit directions always accompany each machine.

Anything short of a month's test is not considered fair to the cow. This makes a great amount of work that is really the darwback in amount of work that is really the drawback in subject to a greater variety of feeding and care in a year than most dairy cows. A test of three or four consecutive milkings a month for the whole season is more accurate for her than the other method. It can thus be done at times when other work is less pressing.

Much of the extra work of weighing the milk can be omitted and still furnish you accurate enough data to get rid of your "boarders" and to select the good producers for breeding. And that is what the practical farmer wants, rather than fine points in the records.

Everything necessary for the testing goes with each machine. It should be installed conveniently in the milk house. Have ample facilities for cleaning the bottles and providing the necessary hot water. Have a special book for the recording of records and keep it handy; have a tester bottle for each cow, even though you have more cows than the capacity of the machine; label each bottle with a cow's name; this saves time and prevents mistakes. Have a tray or convenient carrier for these and take them to the milk yard each time a test is to be made. After each cow is milked stir milk thoroughly by pouring from one pail to another and then with the pipette provided fill the cow's test bottle.

Under such a system the work can be greatly expedited. Don't be discouraged if it takes a great deal of time at first. With practice one can test six cows' milk in a half-hour.

As to applying the results, I used this method and got rid of two boarders in a herd of

(CONTINUED ON PAGE SIXTEEN.)

Another Good State Fair Held at Huron

South Dakota Makes Splendid Showing in Agriculture and Live Stock Lines

By H. J. Gramlich

WITH ideal weather conditions and an attendance in advance of that at any previous fair, the South Dakota people made a mark which will be difficult to eclipse by other associations this season. All conditions seemed to help make this exposition a mark setter and, aside from a rain preceding the opening, there was no chance given for the fair to be anything other than a success. Huron is a small town, statistics showing its population at some 8,000, yet it opens wide its gates of welcome to the people of the state, and surely does nobly at entertaining the vast crowds in attendance at the fair. Practically every home in the city takes in roomers, and thereby the lack of hotel accommodations goes scarcely noticed. The fair grounds lie some six blocks from the center of the town, and the visitors either walk or take one of the numerous hacks. Business was so thriving for the vehicles that the livery men equipped them with lead teams during the busy days, and the sight of numerous four-horse teams galloping up and down the wide boulevard would lead a stranger to wonder if the show inside the grounds was much better than that on the outside.

Grounds New and Buildings Modern

The grounds at Huron are especially adapted to their purpose. The virgin sod still holds sway over most of the tract. The soil is a loam, with just enough sand to dry quickly after a rain, yet not sufficient to blow in any degree. Sufficient slope prevents any possibility of mud holes, even in the wettest times. The trees are still quite young; however, they will soon furnish much shade and enjoyment. Numerous rest rooms and shady porches offer ample substitute for the shade furnished by trees on older and more eastern fair grounds. As the fair has been at Huron but a few years, the buildings are all new and up-to-date. Live stock accommodations are very good, although this year additional buildings had to be erected to handle the overflow of displays of sheep and hogs.

South Dakota has had a good season if we may judge by agricultural exhibits on display at the fair. Conversation with numerous farmers disclosed quite a general complaint of black rust damage to the spring wheat and drouth damage to the corn in places, but nevertheless there was a general feeling of optimism and belief that the state as a whole had fared very well for the year.

Grains, grasses and fruits of all kinds were represented by splendid specimens. The poultry building was more than full, while the other agricultural buildings had every foot of available space utilized. As at all of the other fairs this season, the implement display was rather light.

The stock show proved to be the feature of the entire fair. A special trainload of stock from Lincoln, Neb., augmented by three trains from the Minnesota State fair, and innumerable consignments from breeders within the state, gave the stock barns an opportunity to be taxed to their limit. The absence of common individuals was noticeable in all classes.

Horses Were Percherons and Belgians

In the horse department it was purely a Percheron and Belgian show, and both breeds were certainly creditably represented. The total number of Belgians exceeded the number of Percherons, which speaks well for the advancement of the breed. South Dakota breeders were not so much in evidence as usual; however, the influx of breeders and importers from other states swelled the entries to a large total. Percheron rings were very well filled. The largest class was the aged stallions. Of these there were sixteen led out, and they were a very even lot of clean individuals. Championship went to the grey Kimbal shown by Guirin of Iowa. He is a very typy colt, with splendid action. The same exhibitor made several other strong winnings on colts by Barnam. These young stallions were strong enough to win in both get of sire and group of five stallion classes. Brown & Miller of Iowa made strong winnings in the mare classes. Hadley of South Dakota was awarded the mare championship upon his winning 2-year-old, a close-built imported filly of correct Percheron pattern.

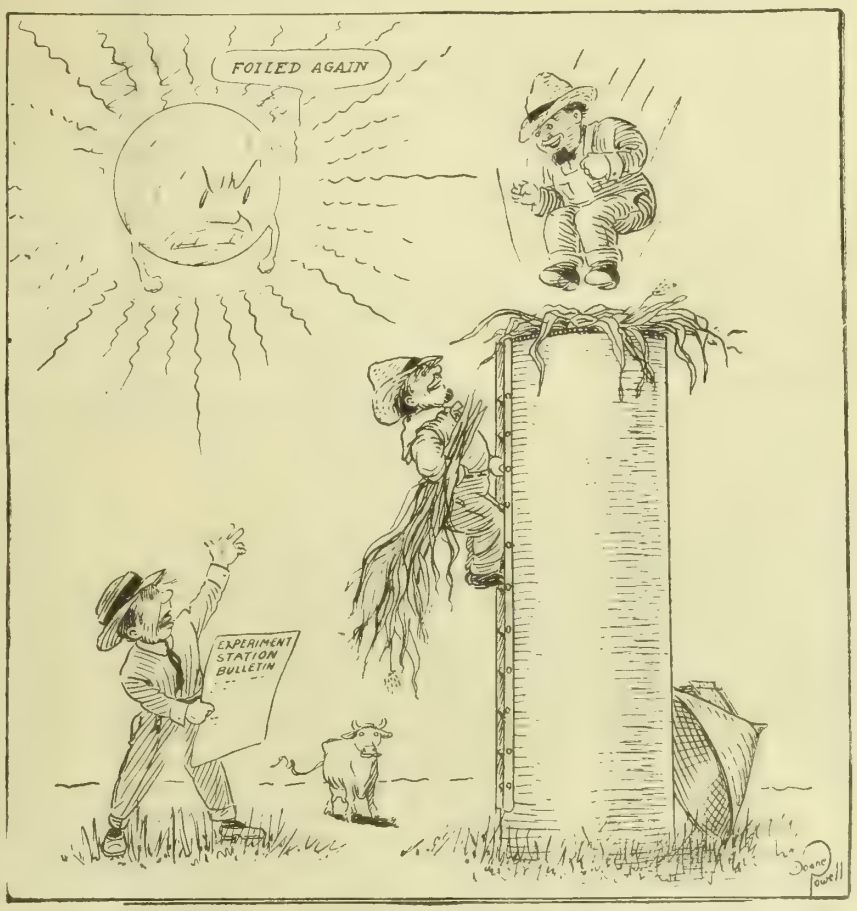
In the Belgian rings the competition was very keen. Classes each contained upward of ten entries, practically all of them being imported individuals. From the eleven aged stallions the Bay Irvine entry was allotted the blue. At the head of the ten 3-year-olds stood a sorrel of recent importation shown by the Ford Importing company. This horse was later made champion of the show. With a little time to fill out and flesh up, this stallion should come forth capable of winning in any ring. Crouch won the futurity at Des Moines. A 3-year-old mare shown by Irvine was allotted the mare championship, the same exhibitor winning three out of four firsts in the mare classes. Judging in the horse department was done by the writer.

Quality in Cattle and Hogs

The beef cattle display was one of much quality. The best show herds in the land were there. One hundred head of Herefords, with practically no common ones among them, made a great showing for the breed. Repeater 7th and Miss Repeater, both 2-year-olds by Repeater and owned by Harris of Missouri, were champions. These same two had won at Des Moines and Lincoln. The judge, Mr. Davis of Iowa, did a careful job, and his painstaking yet quick work met with much approval. Mr. Davis also judged the Aberdeen-Angus. This breed was represented by fewer cattle, but a very even lot. Prof. Wilson of Brookings passed on the Shorthorns, and for the most part placed ribbons as they had been at previous shows. Saunders of Iowa captured both champions. Three exhibitors of Red Polls put up a nice display for this breed. Hill of South Dakota captured most of the high honors.

The hog show was much larger than any previous one at Huron. The quality was of the best in this department also. Waltemeyer of Iowa was there with his undefeated herd of Durocs, including the grand champions from Des Moines and Hamline. Cedar of Nebraska made a strong fight with his winning group from the Lincoln fair. Wilson Rowe of Davenport, Ia., judged all of the hogs. Polands were almost as numerous as Durocs, but formed more of a state show. Hampshires, Chester Whites and Yorkshires were each represented by several herds.

Who Cares for Dry Pastures?



Last year, 1913, the state agricultural colleges and experiment stations urged the use of the silo to save the corn crop, which had suffered in many localities from the hot winds and lack of moisture. It was so successful that silos sprouted up like mushrooms all over the corn belt and were the means of saving thousands of dollars' worth of valuable breeding stock. This year there were localities in which the same dry conditions existed. There again the silo saved the day.

Among the Flowers After the First Freeze

THERE are some things in the flower garden that should be given attention after the first freeze. This freeze has a tendency to ripen up all tender growths on the roses and shrubs and put them in a fit condition for the severe weather to follow. The tops of bulbs are cut to the ground and they are ready to be taken care of.

Gladiolus bulbs can remain in the ground for awhile, as it takes a severe freeze to injure them, and the bulbs will fill out and ripen some during the next few days, if the tops were green when the freeze came. I have had these bulbs remain in the ground over winter in northern Oklahoma, but they will not do so farther north. The bulblets are hardy and will come up in the spring. The best way to keep the bulbs is to dry them well, then put in paper sacks and hang them up in a room that does not get down below freezing. A warm room will not injure them except that they will dry up a little more and not start quite as strong and as quickly in the spring.

Tuberoses should be dug as soon as the tops are killed, as the center shoot of a tuberose is very tender and the blooming of the bulb depends on its being kept alive. Scatter them in a dry, warm place to dry thoroughly, for they will rot if piled up damp or green. The heart of the bulb is prone to rot if not carefully cured. The bulbs when dried can have the surplus roots

(CONTINUED ON PAGE THIRTEEN)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

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COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Corn is high, consequently we are inclined to feed new corn as soon as possible and as much as we can. Be careful about this. Overfeeding new corn may cause serious trouble in the hog lot.

If you missed any cockleburrs, don't pull them now and leave them to dry up, for they will produce plants next year. Pull them and burn them. It doesn't take much work and will save lots of trouble next year.

We recently visited a farm on which hog cholera prevailed eight times in the last ten years. There are many others of the same kind, and these parties are liable to keep up this clip if they don't clean up and keep cleaned up.

At a public sale we saw a corn planter sell for $25 after having been used ten years. It looked almost like a new one. A good shed was responsible. If all your implements are not in the shed, get them there as soon as possible.

Give the winter quarters for the hogs a thorough cleaning and disinfecting before putting in the bedding. It is not so easy to fight lice in the winter. Good, clean, thoroughly disinfected quarters will be of material assistance in keeping down lice.

Every farmer and stock raiser should read carefully the Twentieth Century Farmer's market reports. The markets, on account of the war, are very unsteady and should be closely watched. Mr. Davenport is giving the markets careful study. His long connection with the markets fits him in a special manner for this work. Carefully read what he has to say every week.

Poor Serum Sold in Nebraska

Reports are reaching us of farmers having their hogs vaccinated with the double treatment and then losing a large per cent of the hogs. In a very large number of these cases the cause is poor serum.

We have in previous issues of the paper warned farmers about using serum that may not be potent. The only way to know whether or not serum is potent is by actual test.

The rulings of the Live Stock Sanitary board in Nebraska are such that all serum offered for sale must either be made by a plant after having obtained a government license, or the serum must be tested under the direction of the board.

All serum sold by government licensed plants must be tested according to regulations prescribed by the government. This test is made by the manufacturer and not by any employe of the government, so in reality the test will be just as honest as is the manufacturer who makes it.

One manufacturer of serum in Nebraska submitted two samples of serum to the board for test, both of which fell down. This manufacturer told the board that he intended to sell the serum just the same; that he would submit to them a list of the parties to whom he sold this serum and that he would be responsible should loss occur.

The position taken by this manufacturer brings up two things: Can the Live Stock Sanitary board enforce its ruling? If they can enforce their rule, do they intend to? Or do they intend to let poor serum be sold regardless of consequences?

The Twentieth Century Farmer believes hog growers are entitled to protection against unscrupulous manufacturers. We believe that authorities having this matter in charge should give them this protection, or say that they can't or don't intend to give the protection and quit spending any more money in this direction.

If farmers will write to us giving us the facts in cases where their hogs die after vaccination (if possible sending us an empty bottle in which the serum was shipped), we will do all we can to stop the sale of this poor serum. It is nothing in our pocket, but we are ready and willing to expose unscrupulous manufacturers if we know the facts.

Farmers should absolutely know that the serum injected into their hogs has been tested. Insist on knowing this, no matter who does your work.

Dry Farming Congress

October 7 to 17, 1914, are the dates for holding the International Dry Farming Congress, and Wichita, Kan., is the place selected for holding it. It is announced that this is to be the greatest meeting in the interests of dry land farming that has ever been held. There have been extensive arrangements made for large educational exhibits, which will demonstrate many things in dry land farming that will awaken interest in methods of handling crops on dry lands. This will be a real "show me" proposition and thereby be an educator from the start. The United States government has arranged for 8,000 square feet of floor space for its display, which will be gathered from various states where dry farming is being successfully carried on.

The program indicates that there will be, as usual on such occasions, a great many long-winded, dry speeches made by governors and other distinguished politicians who know nothing whatever about dry farming, or even being dry. This feature of honorary formality could be improved upon by keeping the program on such occasions reasonably within the bounds of educational influences and agricultural instruction. Among the practical speakers will be Dr. T. U. Carver of the rural organization service in the federal Department of Agriculture; Charles J. Brand, chief of the office of markets, in the same department; Frank L. McVey, president of the University of North Dakota, and others of distinction are to be added.

In the interests of western agriculture it is important that this meeting be well attended. Intensive cultivation, or dry farming, is necessary in solving the cultivation problems in the arid and semi-arid sections of our country that have in recent years been opened up to homestead entry. The real value of these lands, as developed by the employment of the dry farming methods, should be known to all owners and prospective owners that they may proceed understandingly in their attempts to establish their homes and business.

Dry Land Pasture Grasses

A few years ago there was considerable discussion on the efforts put forth by the Department of Agriculture in testing of foreign grasses of the hardier kinds. This was looked upon by our grass experts as one of the valuable plant enterprises of the department and destined eventually to accomplish great good in the discovery of varieties suited to this climate and our western conditions. While our native grasses are not lacking in nutritive properties for the making of beef and mutton, there may be varieties secured in some of the foreign countries that will add to the forage resources of our grazing districts.

It is to the advantage of the pasture lands to carry as much in variety as possible, as through this means we add to the feeding and keeping capacity of the grazing districts. It has proved reasonably true that the pasture of many kinds of grasses has produced better feeding results than that confined to one or two varieties. This is the argument advanced by the cattle raisers of the sand hills country of northwestern Nebraska, where there are more than 100 varieties of grasses and forage plants which have been listed by the state botanical department as cattle feed.

The Nebraska sand hills, while prolific in varieties of grasses for live stock, offer possibly the best opportunities for the successful propogation of some of the arid grasses of the Asiatic countries. Nebraska is never entirely satisfied in its possessions and always stands ready to be shown how it may climb higher in the achievements of production.

Sunshine as a Disinfectant

Sunshine is the best known disinfectant. It is also one of the essentials to the proper growth and development of young animals. Too many farmers in arranging their farm buildings do not pay enough attention to the question of sunlight.

We have seen many stalls in barns, when the young calf or foal is dropped, that are absolutely without sunshine, some of them not even having light. Farrowing pens are made into which practically no sunlight can get. How can you expect good results from your efforts in raising a crop of pigs with such accommodations as this?

Cholera germs are secure and multiply in these dark, damp places. If in building the farrowing house provision is made for a maximum amount of sunlight material assistance is given in keeping down an outbreak of hog cholera and in giving the young pigs a chance to make good, profitable hogs.

A stunted pig is an unprofitable one. Many of our farmers will be building new farrowing houses this fall. The proper building of this house is worth more than many of us think. The house may cost $200, $300 or $500. It is expected to last for years. Thousands of dollars' worth of hogs will first see daylight in this house. Wouldn't it be profitable to give the location and construction some attention?

In the construction of your farrowing house make sunshine and sunlight your first and most important consideration. If you place the windows on the side of the building, have plenty of them, and don't have them too small. Some farrowing houses have a double row of pens, with windows in an offset in the roof. If you build this way have plenty of glass in the offset. The best house in this line we have seen had a solid row of windows in this offset.

We have seen farrowing houses constructed with windows in the roof, and the plan always appealed to us as being a sensible and practical one. With windows in the roof the little pigs get the benefit of the direct rays of the sun and the pen can be kept most sanitary.

Grass-Fat Cattle

From all quarters come reports of excellent grass conditions for the cattle on pasture, and at no time have there been more rapid gains made than now. Cattle are in a high condition of thriftiness and have been on good grass from the start, and are now in excellent shape to take on flesh. Such conditions encourage the holding of these cattle for a later date in marketing, notwithstanding the present good prices.

Conflicting reports are coming from various localities as to the prospect of fall shipments. Some indicate a much less number of cattle to come to the market, while other sources claim the usual fall shipments. It is the general opinion of practical men on the range and cattle-growing territory that the shortage will be even greater than the most optimistic estimates have placed it.

The present prospects for a good average crop of corn bespeak an active demand for feeder cattle, which will cut into the beef trade among the steers that otherwise would quietly pass to the slaughter. A good grade of grass steers are good property to put into the feed yard on short time feed and are generally money-makers. The late fall and early winter feeding can be carried on usually cheaper than the mid-winter feeding.

Does Wintering Cattle Pay?

Will it pay at present prices to buy and winter cattle? This is a question quite frequently asked by the farmer who has strawstacks, cornstalks, hay and pasture, grown up and frosting down. A large part of this feed supply is wasted on the farm when not consumed by the farm stock. With the average farmer it always pays to winter cattle from the mere fact of converting these unsaleable feeds into beef.

There are thousands of farms at the present time scattered all over the corn belt states that have not the stock on them to consume the rough feed that they have produced this season. Of course, hay and straw may be baled and turned into a merchantable article and put onto the feed market and sold. But in seasons of great plenty both hay and straw become almost a drug on the market and are disposed of in this way only by the farmer who has not stock to feed it.

This is one of the seasons that presents peculiar conditions, with very high-priced stock and a feed supply that means low-priced feeds, or a great waste of feeds, for the want of fodder-eating animals to consume them. The farmer who has a liberal supply of these waste feeds, or feeds not in demand with the shipping trade, can afford to pay present prices for cattle to take up these feeds.

The wintering of stock cattle, however, is a business that must be properly managed and handled in order to make it pay. The mere disposing of a lot of straw, stalks and winter pasture by means of putting it through a bunch of cattle does not necessarily argue that it is profitable. So far as the principle of retaining the fertilizing matter on the farm is concerned, it is good argument, but the investment in cattle to winter on the farm ordinarily means more than this to the farmer or dealer. It means that these cattle are brought onto the farm to turn the various kinds of consumable feeds into beef or growth of animal, and that this feature of gain accounts for the investment, taking chances of there being an increase or decrease in the price per hundredweight paid at time of purchase.

A good, healthy bunch of young cattle cannot help but prove a good investment, even at present prices, to any farmer who has these cheap rough feeds to use in wintering them, in conjunction with all the good hay they can consume. Plenty of feed and a variety, with pure water and exercise, will grow a bunch of young cattle into a profitable investment, and on many farms the feed used in wintering a carload of such cattle would never be missed.

The weak colt, calf or pig should have special attention at this season of the year. If they go into the winter weak their chances of making a good animal are slim. Prices are too high to take any chances on these young animals taking up the slack without special care.

Value of the Corn Crop

The value of the corn crop is governed largely by the disposition made of the entire product. This is true under all conditions of crop, large yield or small yield, drouth influences or the most favorable conditions of moisture. If the grain alone is to be saved and the fodder permitted to go to waste, the value of the crop is depreciated just to the extent of the feed value of the fodder. The feed value of the fodder depends on how it is preserved and prepared for the animals that are to consume it.

The old-time method of western corn raising left the standing stalks to dry up, frost, bleach and become a worthless, weather-beaten feed called "the stalk pasture," and, all things considered, the most worthless feed product on the farm. These standing cornstalks, it must be admitted, afford quite an amount of feed for cattle and horses, and if the autumn season is dry and conditions for curing favorable, have a value variously estimated from 25 to 50 cents per acre.

This feed value of the fodder product seems extravagantly low when compared with the value of the shredded fodder, or even the whole fodder fed from the early cut and shocked corn, which is eaten with a relish by all fodder-eating animals, and almost without loss when fed to grown cattle. It is a well known fact that all fodder-eating animals will leave other feed when offered green cut fodder, thus clearly proving the desirability of this form of feed from the animal appetizing point of view.

It is very seldom that the domestic animal eats what is not good for it, unless starved into it. It may eat too much under conditions of hunger, which are not natural, caused by stinting the ration. The sweet, juicy, green cornstalk has a specially facinating power over the bovine that suggests an irresistible appetite, which insures that this quality of feed will be eagerly devoured, especially when the animal is prompted by hunger. The preserving of this property in the stalk is the secret of fodder preparation.

The corn binder, the corn shredder and the silo have made this possible, and at a cost that is within the reach of the corn grower and cattle feeder. The value of the corn crop as a feed is but little more than half accounted for when the ear is taken and the fodder left. It has been demonstrated by farm tests that the shredded fodder has yielded a feed value far in excess of the same acreage in meadow.

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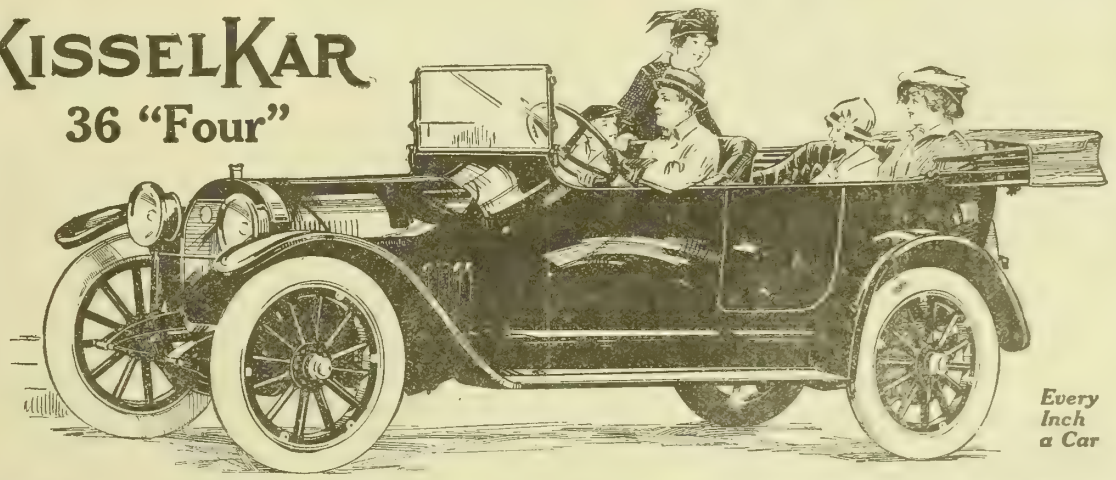

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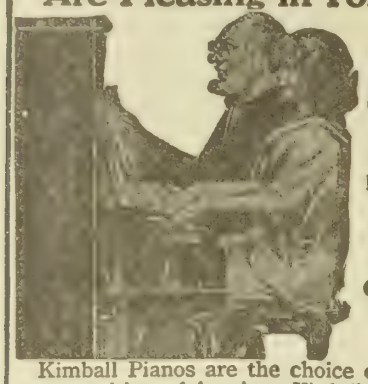

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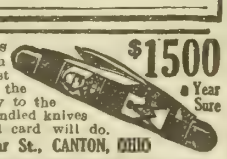

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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

All in an Hour

"Eight o'clock. Why, it's almost school time!"
And Ted looked up at the sun.
"There's really no use in beginning,
When you can't get anything done!"
So he wasted a whole long hour,
Tick! tick! it went slowly by.
What wonders he might have accomplished,
Had he only the pluck to try!

"An hour! why, that's sixty minutes!"
Cried Dick, with his face aglow.
"I've time to read over my lessons,
And run on an errand or so!"
He blacked father's boots in addition,
Combed Brother Bob's curly brown hair,
Mailed some letters, and brought in the eggs—
And then had three minutes to spare!
—A. F. Caldwell in Youth's Companion.

In the Raspberry Canes

"Look, Uncle Jack!" said Harry, holding up a little stick, "what kind of eggs are these?"

"What kind of stick is it?" asked Uncle Jack.

"A raspberry cane," answered Harry. "It had a row of little holes in it, so I took my new knife and split it, and I found all these little oval eggs inside."

"They are the eggs of the white cricket," said Uncle Jack, examining them carefully. "Sometimes it is called the snowy tree cricket."

"Will they spoil our raspberry bushes?' asked Rose.

"Not at all," answered their uncle." They would no more eat either leaves or fruit than Shep would," and he stooped to pat one of the big collies that was standing by watching eagerly to see what was going on. "The white cricket is strictly a meat eater. Even if they are shut up until they starve, they won't eat fruit or vegetables."

"What kind of meat do they like?" asked Harry.

"Other bugs. Next spring these eggs will hatch out if you don't injure them. From them will come tiny creatures, almost like the full grown tree cricket, only that they have no wings. These little insects will lie quietly hidden under the leaves all day and as soon as it is dark they will begin to prowl around looking for food. Any little bug that comes their way is meat for them, though the aphides are what they like best. You remember what aphides are?"

"Of course," answered Rose; 'plant lice.' "

"Do they sing, like the common crickets?" asked Harry.

"Yes, but only at night. They sleep all day and at night they come out and sing and eat until they are positively all swelled up. All summer long they spend in this way, and they keep on growing and growing, and their wings sprout and grow, until by fall these little creatures that were so tiny in the spring are fully developed tree crickets over three-quarters of an inch long."

"When do they lay their eggs?" asked Rose.

"In the early fall. The mother crickets dig these little holes in the softer wood of trees and bushes; then, when the eggs are laid, the tree cricket has finished its life work, and when the frosts come they all die."

"Then they never see their babies, do they?" asked Harry.

"No," said Uncle Jack, "but they don't care about that. If they did see them they would probably think them a new kind of bug and eat them up. Nature is a wise old mother for us all, human and insect, and she provides for us in the things in which we are not wise enough to provide for ourselves."

"Well, she didn't provide very nice mothers for the baby crickets," said Rose. HOME EDITOR.

(Prize Story.)

The Race

By Ila M. Watson, Aged 14, Spencer, Ia.

About four or five years ago we had a Scotch collie dog that we named Rover, and we had a pet sheep that we called Nanny. Papa made us a couple of harnesses for them and we trained them to draw the little wagon and sled.

When winter came my brother Oscar and I thought we would have some fun. He hitched Rover to the sled and I hitched Nanny to the wagon. When we had done this he said, "Let's have a race." I said, "Let's do."

We took them down to the end of the lane, a distance of about twenty-five rods. Oscar said, "I will holler, go!" I said, "All right." And Rover began to bark and tried to start the race.

"Go!" Oscar shouted, and they both knew what it meant and started at a neck-breaking speed, with Rover taking the lead. I kept yelling at Nanny, "Get up or they'll beat us." Nanny galloped ahead of Rover, and I shouted back at Oscar:

"We're going to beat."

Nanny came puffing up to the goal. She had won the race. Rover had spent too much time barking since Nanny went around him. Mamma and papa had been watching us and they laughed till they cried.

(Honorable Mention.)

A Spelling Contest

By Hattie Miller, Aged 13, Jones, Okl.

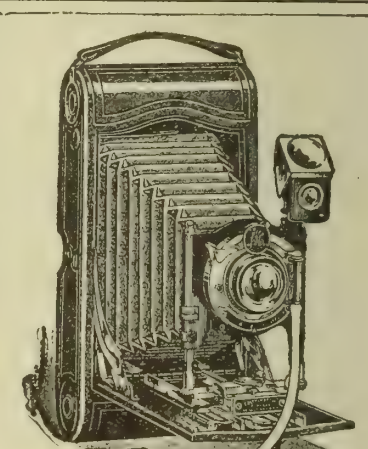
This township has four schools in it and we hold a spelling contest every year. So our school entered the contest last year, and all the schools met at the Choctaw school house to spell. There were several children from each school, and my best girl friend, aged 13, won the banner.

In about a month she had to go to Oklahoma City, about fifteen miles from here, to spell. We all bought new dresses to wear to hear her spell. The contest was in the morning, and there were about forty

(CONTINUED ON PAGE TWENTY.)

Picture Contest No. 17

Write a verse of four lines about this picture. Each of the two children writing the best verses will receive a book as a prize. The verse must be original. In awarding the prizes consideration will be given to writing, neatness, construction of verse and the originality of the matter. Try to say something the others will not think of. Often the verses, while good, are all very much alike. Give your name, age and address. Verses should be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha. All verses must reach this office not later than October 17.



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6878—Ladies' Shirtwaist. An ideal model, plain in both front and back, with small sleeve, full length or shorter. A wide collar trims the neck and the fastening is in front. Suitable for madras, linen, batiste, taffetas, satin and lightweight woolens. The pattern, No. 6878, is cut in sizes 34 to 44 inches bust measure. Medium size requires 2⅛ yards of 36-inch material.

6879—Ladies' Skirt. Made with a two-gore underskirt and a two-gore tunic, cut away at the lower half of the front. Suitable for either one or two materials, the latter being newer and smarter. The pattern, No. 6879, is cut in sizes 22 to 32 inches waist measure. Medium size requires 2¼ yards of 36-inch material (striped) and 1¾ yards of 36 or 44-inch plain goods.

6890—Ladies' Dressing Sacque—This pretty model has a seamless shoulder yoke coming far down on the arm. The fronts and back are gathered where attached and the open neck is finished with a collar. The sleeves may be long or short. The pattern, No. 6890, is cut in sizes 34 to 44 inches bust measure. Medium size requires 2¼ yards of 44-inch material.

6881—Ladies' Dress. Made with sleeves extending to the neck edge and forming a small shoulder yoke. The blouse has an ornamental collar at the open neck and front closing. The skirt has three gores. The pattern, No. 6881, is cut in sizes 34 to 44 inches bust measure. Medium size requires 4⅛ yards of 44-inch material, with 1 yard of 36-inch contrasting goods to trim.

6870—Girls' Apron. Linen, gingham or calico can be used to make this apron. The apron is made in one piece and fastens at each shoulder with a button and buttonhole. The pattern, No. 6870, is cut in sizes 4 to 12 years. Age 8 years requires 1⅛ yards of 36-inch material and 6 yards of banding.

6871—Boys' Dress. This dress is for the small boy. The dress is made to be slipped on over the head. The pattern provides for a pair of straight trousers. The pattern, No. 6871, is cut in sizes 2and 4 years. Age 4 years requires 1¾ yards of 44-inch material and ½-yard of 27-inch contrasting goods.

6898—Ladies' Apron. This loose garment has a small square yoke piece, crossing the shoulders, and the same in front and back. The lower sections of the apron are fairly full and gathered along the top. Sleeves which reach above the elbow may be used or not. The pattern, No. 6898, is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 4⅝ yards of 27-inch material.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

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Of Interest to Our Women Readers

Fall O' the Year

When the summer flowers are dying,
And the birds are southward flying,
And we hear the wild geese crying,
As they travel through the air;
When we see the farmer going
To the field, and start in sowing
Winter wheat, to have it growing,
Then it's getting fall o' year.

Oh, the richness of October!
And November, gray and sober,
With fat turkeys and the gobler,
And Thanksgiving time so near!
All the canned fruit in the cellar,
Squash and pumpkins ripe and yeller,
Jellies, jams and apples meller,
All proclaim it's fall o' year.

We will miss the flowers of June days,
And the warmth of summer's sun rays,
And the leafy woods and pathways,
With the songs of birds to cheer;
The coy maiden and her lover,
As they walked through fields of clover—
Sweet the mem'ry now it's over;
Fields are bare—it's fall o' year.

Yet we're glad that God intended
All the seasons should be blended,
For when summer days are ended,
Then the autumn time is here.
Now the leaves are flying, dancing,
Led by Northwind so entrancing;
Soon old Winter will come prancing,
Then farewell to fall o' year.

—Sarah Wood Cashner.

Our Home Chat

Our poem this week is written by one of our own circle, a fact that will make it doubly interesting to many of you who have become familiar with Mrs. Cashner's beautiful thoughts as expressed in her letters and verses on this page. Doesn't it bring the holiday feeling with it? One almost wants to hasten to the kitchen and begin to prepare the Thanksgiving dinner.

* * *

Did you ever try using the paper plates and paraffine paper that can be purchased for almost nothing at the stores? These plates, covered with the paraffine paper for moist things, such as meat, are splendid to set leavings from the tale away on, and it saves a lot of dishwashing.

* * *

At one of the fairs this year we saw a particularly interesting display. We were passing it by at first as being a furniture display of no particular interest, until a friend called our attention to it. "They are all folding beds," she said, and we went back to look more closely. Sure enough, there were handsome leather couches and davenports, a peculiar screen and, most interesting of all, a nice looking library table, and all opened out into more or less comfortable beds. There was a time when the folding bed was a great, clumsy thing unsafe and ugly. Now one may have a good, safe bed in the parlor or living room for the accommodation of unexpected guests, and no one will know there is a bed there unless he makes a careful examination of all the furniture.

HOME EDITOR.

Autumn Leaves

In many places the last days of autumn are marred by the burning of the leaves raked up on the lawn, and blackened spots in the green sward mark the site of the bonfires. Besides the unsightly places thus caused there may be serious danger to buildings, for these bonfires often come when everything is dry, and but a small spark is needed to start a devastating fire.

Few know how easily all the advantages in appearance and tidiness may be gained without the disadvantages, and yet the leaves may be turned into some real use instead of converted into a few ashes. Every poultry grower should know that they make the best kind of scratching material, the rustle of the dry leaves giving to the hen the impetus to go to singing, and it is usually the singing hen that is the profitable one. They contain the eggs and larvae of numerous insects, which help to compensate for the lack of insect life during winter. They do not collect moisture like straw, and when past their usefulness as scratching material they are so brittle that they go back almost to dust. The grain sinks readily down beneath them, and hens must work if they find it.

Choose a dry day, for if there is moisture in the leaves when gathered they will mould and prove undesirable. Rake into bags and store away for future use. Just before the first snows cover the bulb beds with a generous layer, holding them down with evergreen boughs. And the rest will be gladly used by the poultry from time to time during the winter. The yard will be more neat and tidy because of absence of any burnt spots, and the enjoyment of the hens, as they rustle about, almost forgetting that they are not in the yard, will prove a real pleasure.

BESSIE L. PUTNAM.

Our Weekly Recipe

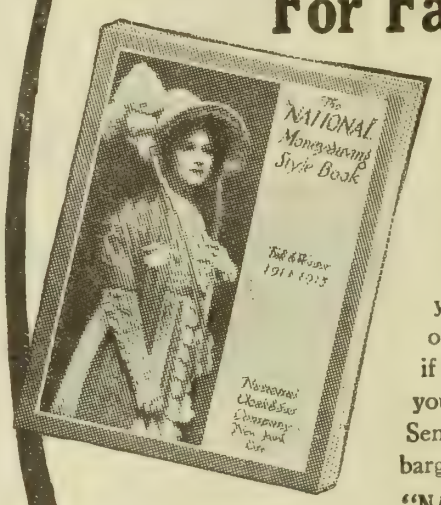
Potato Puff—Four cups cold mashed potato. Beat up with four tablespoonsful melted butter; add four eggs whipped light and two cups of cream; salt to taste; beat together thoroughly; pour into a shallow dish and bake in a quick oven until browned. This is an excellent way to use up the left-over mashed potato from one or two meals.

See that boat rowed by two men; when they keep time in rowing it goes smoothly over the rough waters; but if not, each wave gives its shock and any stroke of the oar wrongly applied may capsize the frail skiff. Marriage is the bark, the rowers the wedded pair on the sea of life. Only by pulling together can they lessen the dangers of the voyage.—Duc de Livis.

Probably the most effective way, according to the Youth's Companion, to prevent our boys and girls from using slang at home would be to make it a required subject of study at school.

Free—the New "NATIONAL"

Money-Saving Style Book For Fall and Winter



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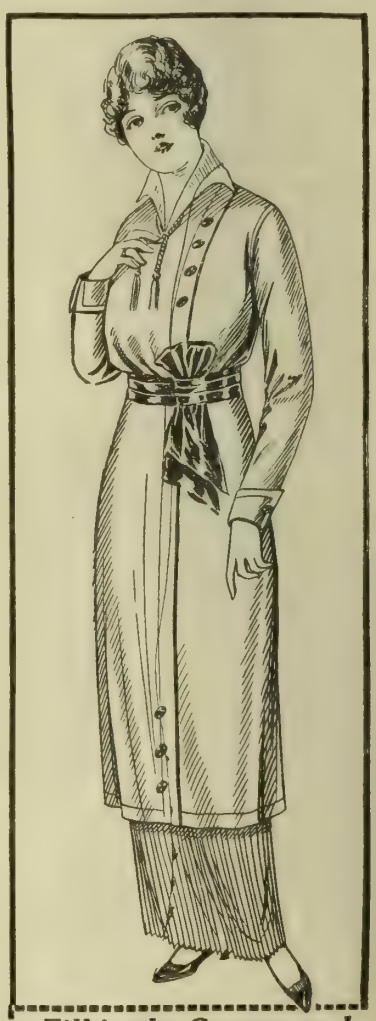

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The Dairy Cattle Situation

THERE is a great deal of conjecture as to just what the dairy cattle situation is to be from a market standpoint during the next few months. Straws show which way the wind blows and perhaps a few incidents will be worthy of comment in this connection just at this time.

In the first place, if the interest that has been taken in dairy cattle is a good index of the attitude of the people toward the dairy cattle industry, and if one is to judge by the things that he sees at the state fairs and the shows, he cannot fail to be impressed with the fact that people are more interested than ever before. There are larger crowds watching the exhibits and the exhibitors are keener and more enthusiastic than they have been in past years. This has been the situation at the various fairs that have already been held and they may be taken as a criterion for the other fairs that are to come during the next few weeks.

Another straw that points in the right direction is the readiness with which people are buying dairy cattle. The breeders are experiencing the best of trade. One gentleman writes, "I have no cattle for sale. I wish I had. They are ready sale at good prices, all right." This is from a breeder who is well established, but has a small select herd, and he always found it possible to dispose of his surplus cattle, but they have moved more quickly and at better prices this fall than ever before.

Another breeder says that he has recently sold his bull calves at prices ranging from $150 to $500 apiece, some of them at the age of only a few days. He is comparatively young in the work also.

These three things are only a few of the points that can be taken as an indication that the demand for high-class dairy cattle is going to continue strong. The prices of dairy products are steadily going up. They are better on the large market the first of September than they have been on a like date for the last four years. The New York price was 32 cents, while a year ago it was 31 cents and two years ago 29 cents, and three years ago 27½ cents.

When butter is high dairy cattle are nearly always in keen demand, and that goes to emphasize the fact that without doubt we shall find a strong call for good dairy stock throughout the entire season.

As one gets farther away from the large manufacturing centers and goes to those points where the farm and farm industries are supreme, he finds that the influence of the unsettled conditions in the countries across the water is much less noticeable. Here the farmers are not lacking for money, the deposits are strong because they are mostly put in by the producer, and for that reason the farmer is not necessarily denying himself those things which he looks upon as wise and judicious investments. Certainly dairy cows are in this class.

The dairy farmer, especially the man who is well established, is not as a general thing a man who depends upon credit very largely for the conduct of his business, and, therefore, it seems thoroughly possible—in fact, it seems unquestionable, that the demand for breeding stock of the dairy breeds will be strong, and it will be a splendid time to sell at least that class of stock that is in position to produce.

Throughout the majority of the farming sections of this country there is an abundance of feed, and where feed is plentiful the farmer is looking for the best market in which to sell it. It, therefore, follows again that the dairy cow is going to be a great factor because she offers a higher price for the produce that is raised on the farms, and, furthermore, she will help to build up the productive capacity of the farms at the same time that she pays this premium on what is being raised.

Surely, when all of these things are taken into consideration, the market for dairy cattle is not doubtful and there is no reason for one to be cautious or suspicious about the advisability of selling.—Kimball's Dairy Farmer.

Consideration of Production

I have been asked my opinion as to crediting dairy cattle when in the show ring, with their milk and butter production.

I would consider the idea impracticable. In order to be a successful dairy judge one must have in his mind the scale of points of the ideal dairy cow, and, in placing the animals, whether young or old, should conform to that scale. Did the judge attempt to take into consideration the milk and butter production he would soon become so confused as not to know where he was at.

For instance, an animal comes up before him, a splendid specimen, with all the requisite dairy points, but one that has perhaps not been given the chance to make a record. One reason, perhaps, is that she has freshened on the exhibition circuit. On the other hand, an animal may enter the ring with a large milk and butter record, and, while some of her dairy points may be to the extreme, yet she may lack others that tend to make up the ideal dairy cow. Had the milk and butter production been taken into consideration in the past, the type of our dairy cattle would be far from coming up to the present standard.

I believe it quite possible to have great production along with the ideal type. At one time great emphasis was placed upon the high pelvic arch as being necessary to support the immense udder; but of this we hear very little at the present day. The best breeders of today are rejecting sires from cows of this type and prefer those cows near the ideal type, with as good milk and butter production.

The most of our great record cows of today are much the type that are required in the show ring; and why is it? It is just because in many cases their sires are ideal animals. If breeders would pay more attention to the selection of sires with strong dairy points, as is being practiced by some of the most successful breeders, what a transformation would take place in the appearance of our dairy cattle within the radius of the next five years!—M. L. Haley in Farm and Dairy, Peterboro, Ont.

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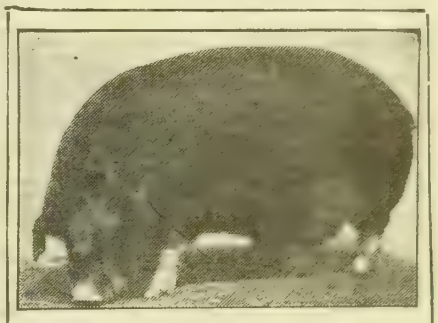

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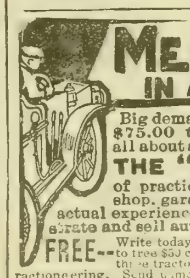
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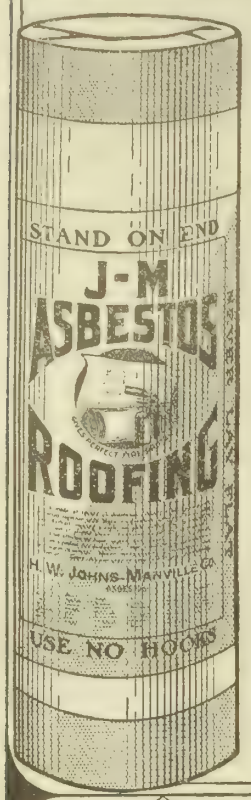

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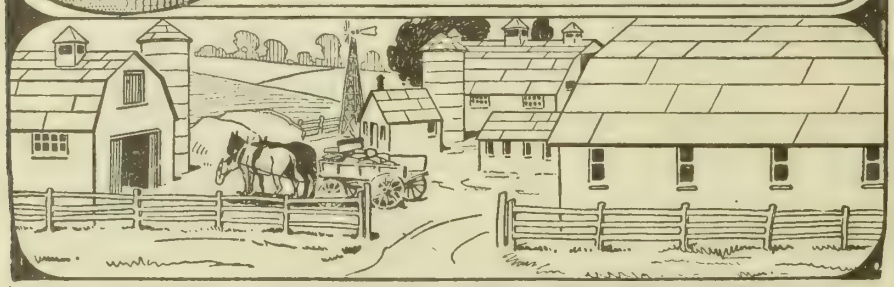

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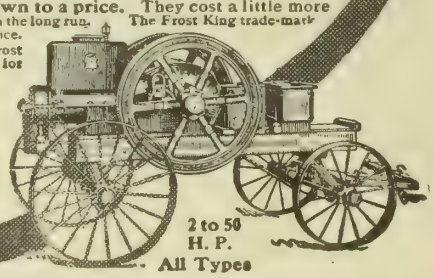

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This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Alfalfa With Wheat

J. E. O., Nebraska: I have some intention of sowing some alfalfa in the early spring on fall plowing with wheat. About one bushel of wheat and then roll the ground. I have never seen this tried and would like to have some of the readers' views on it. I saw some disced in on cornstalk ground with a full stand of wheat, and it was not very good.

Answer—The plan of sowing alfalfa with wheat in the spring is generally not successful. First, alfalfa is a tender plant, and the seeding should not be done until all danger of frost is past. If one does sow it with wheat and gets a good stand, dry, hot weather often prevails at harvest time so that when the protection from the hot sun given to it by the standing wheat is removed the tender plant is killed and very often the stem destroyed.

If you want to be reasonably sure of a good stand we would advise sowing without any other crop. Fall seeding of alfalfa is successful and is to be recommended when there is sufficient moisture in the fall to germinate the seed. We have seen some very good stands of alfalfa sown this fall. Would be very glad to hear from any of our readers as to their experiences in sowing alfalfa with other crops.

Swellings on Horses

L. C. S., South Dakota: Will you please tell me through the columns of your paper what is wrong with my horses? I have a black mare 11 years old that has a swelling between her fore legs and just back of the fore legs on the left side of the body, which has been there for about two weeks. Sometimes there is a small sore about the size of a nickel on the underside of the belly that runs a sort of thin, sticky pus. The mare is very thin in flesh and has a colt suckling her.

I also have a sucking colt that has a swelling about the size of a quart can on the left side of her body and just back of the front legs. It feels hard to touch, but no pus runs from it. The swelling on the colt has been there just as long as the one on the mare. I have been using a strong liniment on the swellings and a dip and disinfectant on the sores.

Answer—We could not tell the nature of these swellings without making an examination. Would suggest opening them very freely to see if there is not some deep-seated pus. If there is no pus found you may be able to localize the trouble. It may be a mild type of distemper or influenza.

Method of Vaccinating

G. S., Kansas: Your bulletin No. 11 has ben received and is much appreciated. Please accept my thanks and advise me where I can find correct information for the application of the Dorset-McBride-Niles method of immunizing hogs.

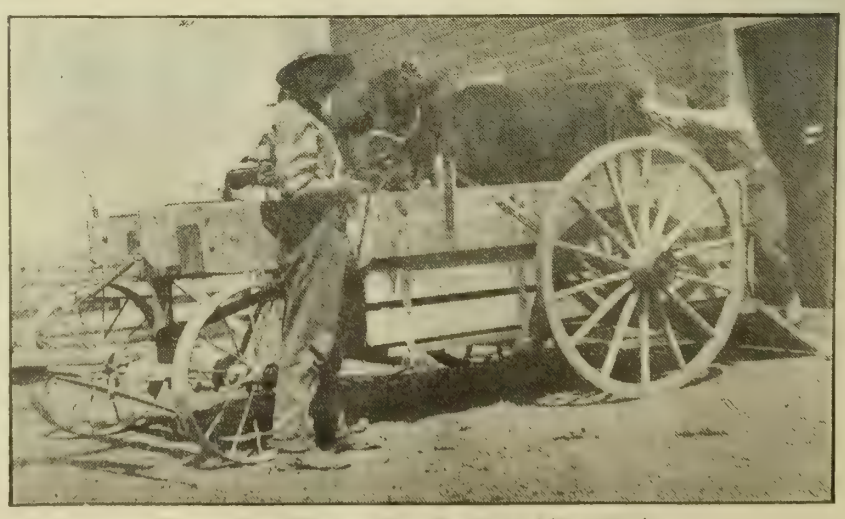
Answer—This method is the one used by everyone using the serum treatment. We spoke of how to treat hogs on pages 31 and 32 of the bulletin mentioned. We advise, however, that no one attempt to vaccinate hogs unless he has thorough training and knowledge of how the work should be done. If you want to vaccinate your hogs we would advise that you take it up with Dr. Schoenleber, head veterinarian of the agricultural college at Manhattan, your state. Before vaccinating hogs in the state of Kansas laymen must get permit to do the work. Such permit is granted by Sam S. Graybill, live stock sanitary commissioner, Topeka.

Condemning Farm Land

A. F. B., Nebraska. I have been a reader of the Twentieth Century Farmer ever since it was started and have never asked a question or favor, so will ask one now. I have a 200-acre farm adjoining the city cemetery. Can it be condemned and taken for cemetery purposes?

Answer—It can if it is over one mile from the city limits. The county board places a valuation on such land and fixes the date of transfer. If the owner is dissatisfied with the valuation set he may appeal from their valuation.

A recent letter from a farmer in one of the best hog-growing districts in the state says some of his neighbors thought it was about time to vaccinate to protect them from a possible attack of cholera. They are now losing their hogs rapidly. Why? Good virus and poor serum. A few cases of this kind will make our hog growers think it will be better to use good feeding methods and sanitation as a protection rather than take the chances of introducing the disease by vaccination.



Convenient Wagon for Hauling Live Stock.

Among the Flowers After the First Freeze

(CONTINUED FROM PAGE FIVE.)

and foliage removed and be stored in boxes or sacks, where the air can circulate through them. They should be kept in a fairly warm room, at least a few degrees above freezing. In the spring you can start them early in pots and have them in bloom sooner than if you wait to plant them in the open ground, for they cannot be planted safely until settled, warm weather. Bulbs that have not bloomed in the fall can be taken up and potted and will bloom in the window.

Dahlia bulbs, or rather tubers, should be dug a few days after the first good freeze. Great care should be used in digging them, for every tuber that is detached from the stem will not grow. The eyes are on the main stem just where the tuber attaches, and every tuber should have a little portion of the stem attached or it will not have an eye and cannot start growth. These detached tubers will remain solid as well as the others, and I have known them to remain fresh all summer, but they cannot start any more than a potato with all its eyes removed. Dahlia bulbs must be packed away in dust, sawdust, chaff, or something that will keep them from shriveling. I have had them live out all winter, but it is not safe to risk it even here in Kansas, for they will kill out as often as they will live. They will not stand the bulb freezing.

After the first freeze is the time to take up any hardy violets you want to bloom in the winter. If they have been taken up sooner they will have a tendency to run to foliage. The hardy Russian violet is the best for the amateur, but the Lady Campbell and the California are both good winter bloomers, but they will kill out usually if left outdoors, while the Russian will form great clumps and bloom twice a year.

If you have some tender roses and do not want to take them up, you can give them a pretty good protection in the garden, and often carry them through the most severe winter. It is not so much the freezing that hurts roses as the sun shining on them when frozen, and the alternate freezing and thawing. The very best method of protecting them is to turn a box over the plants. The bottom of the box must be water-tight so that it will not let water drip down on the bushes and freeze. Bore a few holes in the sides to admit air. If there is no danger of water getting in, straw and leaves may be packed around the plants before putting the box over them, but if this material gets wet it will rot the plants. I have seen roses kept over by wrapping them in burlap sacks and packing straw around the roots.

If you have an evergreen or any hardy shrub growing in a lawn vase, remember it cannot stand the freezing at the roots it will get in such a position. You must either bank up around the vase to the top or take it down and set in a cellar, or protect some way so the frost can be drawn out somewhat gradually when a thaw comes.

L. H. COBB.

Voting for War

The one thing to keep in mind about this war is that the people have had nothing to do with it, except the men to march out and be shot and the women to stay at home and hunger.

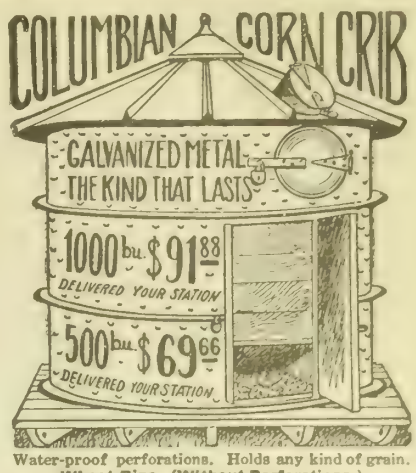
War was declared by a small group of German officials, Russian, Austrian, English and French officials. They decided to settle their issues by slaughtering farmers, clerks and storekeepers. They never asked these small fry what they might think about it. The matter was decided in a closed room. The word went out, and several million working folk shouldered muskets and began to maim and massacre each other.

The people who are lying in heaps in Belgium and France, mangled and dead under the ghastly moonlight, had no idea what it was all about.

No war should be declared except by a vote of the whole people.

The men who are to do the dying in battle, who are to suffer from wounds and who are to pay the bills afterward ought to have the privilege of saying whether or not war shall be declared.

The women, also, who bear the brunt of the hardships, who must rear the orphaned children and look after the neglected shops and crops, surely ought to have their say.—Dr. Frank Crane in Evening Bulletin.



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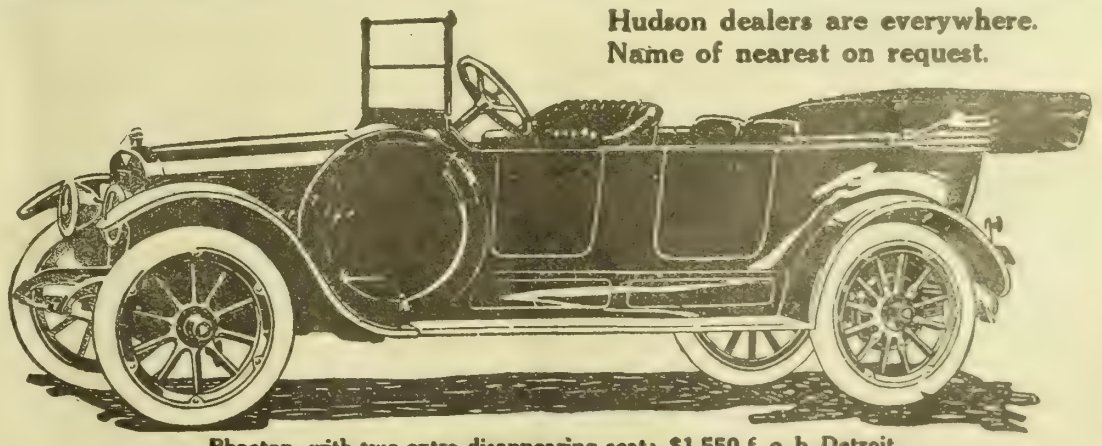

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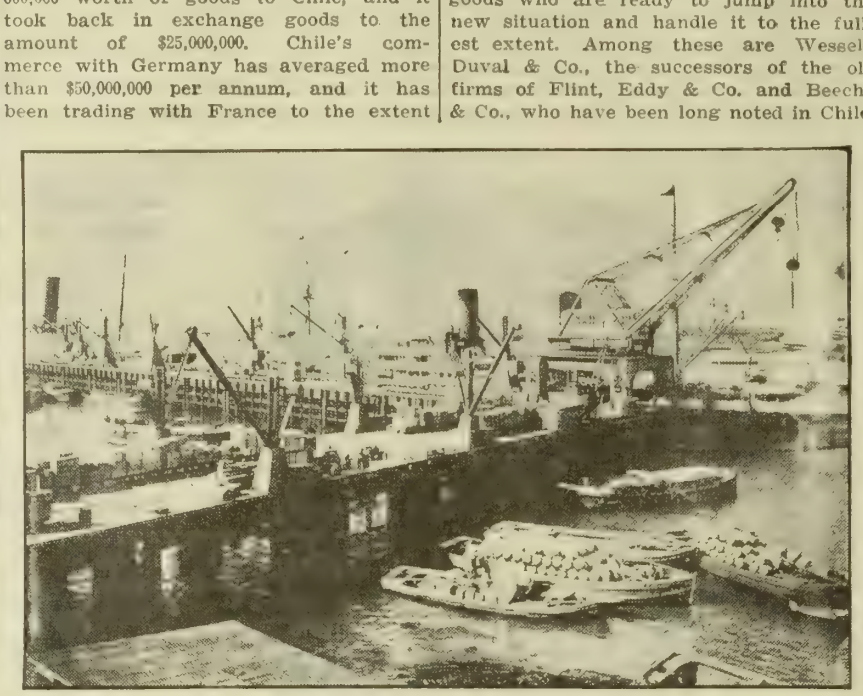
Big Syndicates of South America

SANTIAGO, Chile—The great war in Europe and the completion of the Panama canal will mark the beginning of an enormous trade between the United States and Chile. Under the old conditions this trade has trebled since 1903, and within the last four years has increased 140 per cent. It already amounts to $40,000,000 per annum, but this is only about one-sixth of the whole, and much of the balance is divided among Great Britian, Germany and France, whose factories and ships are now tied up in this terrible war. The foreign commerce of this country now aggregates more than $250,000,000 per annum, and the bulk of it is with Europe. In 1913 Great Britian exported $30,000,000 worth of goods to Chile, and it took back in exchange goods to the amount of $25,000,000. Chile's commerce with Germany has averaged more than $50,000,000 per annum, and it has been trading with France to the extent of $15,000,000. Belgium also has had a good slice of the business, and Australia has been sending in coal by the shipload. In another letter I will take up some of the items and show the mighty openings created by the war. This letter I shall devote to the present conditions and describe some of the big things that Americans are already doing with a view to the future.



Valparaiso Harbor, Where the Chilean Government is Now Spending Millions of Dollars in Improvements.

Few Americans in Trade

Within the last few months the Chilean government has put its exposition buildings at the disposal of a commercial museum for the display of American products. The government is especially friendly to Americans, and within recent years it has bought a great deal of its railway material from the United States. It now proposes to subsidize a line of steamers which will go northward through our canal to our Atlantic ports, and it is anxious to establish the closest of trade connections with us in view of the loss of its European commerce.

We have already a number of American ships that are plying between New York and Chile. Some of them belong to Grace Co., which controls the largest part of the American business on the west coast. This company has eight new vessels in course of construction. They are large steamers and fitted for the South American trade. They will come down through the canal to Valapraiso. The same firm has other ships plying north and south along the Pacific coast, carrying lumber and flour, and it has many vessels engaged in the carrying of nitrates, which from now on will probably go through the canal. The Graces are especially fitted to handle present conditions. The firm has its branches in New York, San Francisco, Los Angeles, Seattle and New Orleans, as well as in London, Manchester and Birmingham. It has the countries of the west coast of South America divided up into selling districts, just as our wholesale houses divide up their domestic territories, and its branches, agencies and traveling salesmen cover almost every part of Ecuador, Peru, Bolivia and Chile. It has long led in the selling of American farm machinery and in the handling of kerosene and illuminating oils, but it also does a general wholesale business of importing and exporting, selling everything from needles to steam dredges, and from push carts to locomotives. It is the South American representative for the west coast of the General Electric and International Harvester companies. It is noted for taking big contracts, and its capital and business already run high into the millions.

In addition to the Graces, there are a number of other firms pushing American goods who are ready to jump into the new situation and handle it to the fullest extent. Among these are Wessell, Duval & Co., the successors of the old firms of Flint, Eddy & Co. and Beeche & Co., who have been long noted in Chile, and also Williamson, Balfour & Co. and Anthony Gibbs. These companies have offices in New York and are already engaged in American importation. The same might be said of Duncan, Fox & Co., which is an English house with branches in the United States. All of these firms sell more or less American flour, cottons and various kinds of American machinery. Nearly all handle farming implements and are ready to take orders for American goods of any description. Our chief typewriter companies have their agencies here and our phonographs and graphophones are distributed throughout every city and town. The Singer Sewing Machine company is in evidence everywhere, and the National Cash Register keeps not only the accounts of most of the stores, but even the cash of the telegraph and postoffices as well.

Many After the Trade

Many of our great combinations of capital have long been planning to work the South American trade, and the present situation finds them ready to take advantage of it. The United States Steel company has had its agents in every country of the west coast, and for some time its own ships have been going from New York to these ports by the way of the Strait of Magelian. They will now go by the Panama canal, and their return freights will be such goods as have hitherto been carried by the steamers of Germany, France and Great Britain. The United States Steel company already sells more than half of all the steel used in Chile, and it is rapidly absorbing that class of business throughout South America. A large part of the building now going on is in steel, and the new railroads in course of construction, will now be dependent upon us, rather than Europe, for their rails and other materials.

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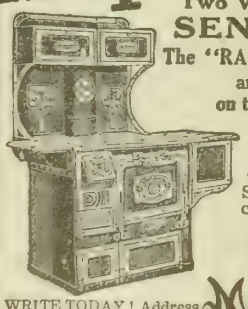

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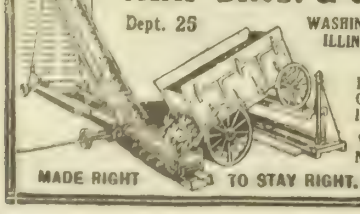

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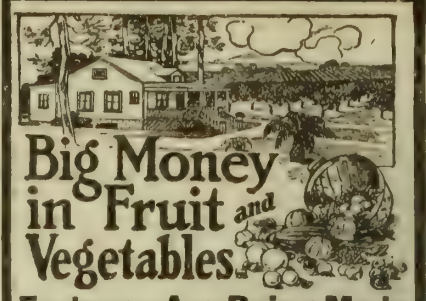

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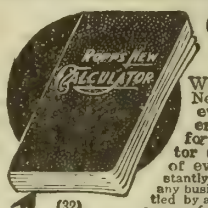

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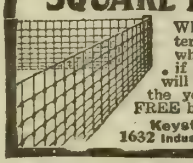

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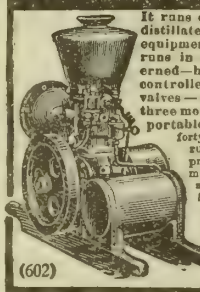

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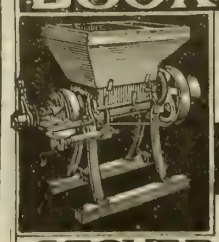

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out, it had almost completed a dozen large steamers which were to be employed in carrying the iron ore from its mines near Coquimbo, Chile, to the Bethlehem Steel works. It was estimated that the ore freight would amount to something like 1,000,000 tons per annum, and the ships were built with the expectation that the return freight from the United States to Chile would be practically nothing. The company expected to make its money by carrying the ore to its own mills. The present situation will enable this fleet to have full cargoes of United States goods on the return voyages, and the company will probably do a general carrying business in addition to its steel and ore shipments.

Another Big Opportunity

The same will be true of the nitrate fleet that in the past has gone south through the Strait of Magellan and thence to Europe and the United States. From now on that fleet will probably go through the canal, and as the United States is one of the largest customers for nitrate, the steamers that land there will load up with American goods and bring them back to Chile. We are now taking something like 400,000,000 pounds of nitrate a year, and Chile is ready to consume a like amount of American goods. This nitrate business is controlled by Americans. It is handled by the Nitrate Agencies, Limited, the majority of whose stock is owned by W. R. Grace & Co., and its return freight will probably be run in connection with the Graces.

Another effect of the war will be to send millions of dollars' worth of American capital into Chilean investments. It means new banks and new syndicates of various kinds. This is a land of big things, and the Americans are gradually getting their fingers on some of the most valuable properties. Take the Bethlehem Steel company. It has recently acquired an iron mountain near Coquimbo, a port on the west coast of Chile, between Antofagasta and Valparaiso. The ore lies only about five miles from the coast, and is so situated that it can be loaded by gravity. That property is said to contain more than 100,000,000 tons of high-grade ore, which assays from 60 to 70 per cent of pure iron. The mines have enough ore to supply the Bethlehem steel works for more than fifty years.

Copper Mines Are Great

Some of the greatest copper mines of the world are in Chile, and in the hands of the Guggenheim syndicate. I refer to those being worked under the Chile Exploration company and the Braden Copper company. The Braden copper mines lie about 200 miles southeast of Valparaiso. They were opened up by Americans, including William Braden, E. W. Nash, Messmore Kendall and others, and were afterward sold to the Guggenheims. Within the last few years something like $14,000,000 have been spent upon them, and they are now potentially about the largest of the world. The Braden mines have something like 200,000,000 tons of ore in sight, and the company is putting up mills that will treat 6,000 tons daily. The mines are now producing about 2,000,000 pounds of copper a month, and I am told that the profit is over 8 cents a pound. Four thousand men are employed, and among them many Americans. The are milled in 1913 amounted to 780,000 tons, and the company expects to produce almost 3,000,000 pounds per month from now on.

The Chile Exploration company is the name of the Guggenheim branch which is developing the Chuquicamata copper mines. These are situated far north of the Braden property. They are about 150 miles by rail from Antofagasta, lying in the coastal range of the Andes at an altitude of 9,500 feet. The ore body already developed is 8,000 feet long, 1,000 feet wide, and no one knows how deep. Diamond drills have been put down in places to a depth of 1,100 feet, and enough ore has been found to keep the great plant now being built busy for more than sixty years. There are something like 200,000,000 tons in sight.

Finest Plant in World

The plant of the Chuquicamata mines will be one of the finest in the world. The Guggenheimts have 1,500 men building it, and it will be finished in 1915. It includes great crushing machines, acid-proof concrete tanks, and electrolytic plants that will treat more than 300,000 pounds of copper a day. The machinery has steam turbines, and generators of 10,000 kilowatts. Much of the machinery will be run by electricity, which will come through a transmission line eighty miles long. The plant has already built twelve miles of standard gauge railroad, and some of its mining is to be done with steam shovels from Panama, by which the ore can be gotten out at an extremely low cost. All of this machinery will be in operation next year, at which time it should be producing copper at the rate of 10,000,000 pounds per month, an output that will be doubled in 1917 by the erection of an adtional 10,000-ton plant. This copper will go north by the canal, and the ships will be ready for return freights to Chile.

Will Need Many Men

The Bethlehem Steel mines and the Gugenheim mines will necessitate large forces of workmen, and the management will, of course, be American. The Guggenheims are now building houses for their employes at Chuquicamata and Braden, and they are introducing American methods and American conveniences. They will have a number of American families connected with each property, and these will be permanent forces for the introduction of American goods and of American trade. At Chuquicamata the little city now going up will be a surprise to the Chileans. It is to have a theater, a hospital, two public schools and a public library and music halls for the workmen. There will be a telegraph and postoffice building and a Protestant and a Catholic church. Everything is being done with a view to permanency; for the getting out of the enormous body of ore will require the moving of more earth than we moved at Panama. It will require the payment of wages which will eventually amount to more than $225,000,000. It will last for generations and it means a permanent American establishment in Chile. The Chuquicamata mines are owned by Americans whose authorized capital is $110,000,000, of which shares to the amount of $95,000,000 have already been issued. Daniel Guggenheim is the president and among its managers are Isaac, Simon, Murray and S. R. Guggenheim. This shows something of the kind of money that is going into Chile.

Another big United States company that will probably take advantage of the present situation is that which owns the Cerro de Pasco copper mines of Peru. I have already written of its works in my letters from that country. It is backed by millions, and it includes such names as the Vanderbilts, Henry C. Frick, J. B. Haggin and the Hearsts. They own a property on the very top of the Andes that is said to be worth at least $50,000,000, and they have spent millions upon it. They are now exporting something like 2,000 tons of copper a month. This has been going to the markets in foreign steamers, and it will now have to rely upon American vessels. The mines are operated by 6,000 or 8,000 Peruvians under American foremen and engineers, and they have a little American town in the highlands. They have built an American railroad to connect with the line that goes to the tops of the Andes from Lima. That road is the best managed in Peru as well as by far the best built.

Uncle Sam in Right

Indeed, the United States would seem to be coming into its own again as to South America. It was our people who started the sister continent on its way to industrial development. The first steamship line that plied along the west coast was founded by a Yankee, William Wheelwright of Newburyport, Mass., and it was he who built the first railroad on the South American continent.

He introduced the first gas plant and organized the first fire company. He was also the first to propose a feasible plan for a transcontinental railroad from ocean to ocean across Argentina and Chile. William Wheelwright organized the Pacific Steam Navigation company, which later on went into the hands of English capitalists, and which still has the most powerful fleet on the west coast.

The first railroads up the Andes were built by Americans. The most wonderful

(CONTINUED ON PAGE SIXTEEN.)

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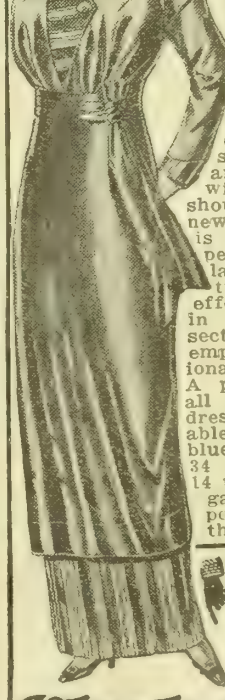

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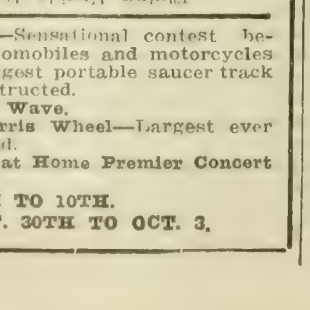

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Warehouse Law for Nebraska

A PUBLIC warehouse law for Nebraska is being written into the platforms of one or two of the political parties of the state. The proposed law is being agitated freely at this time of war and strife throughout Europe, the tense situation abroad being given as a real reason why a warehouse law should be enacted. Neither Nebraska nor Iowa has such a law, while the neighboring states—Minnesota, Missouri, Kansas and Illinois—are said to be reaping the benefits resulting from the war by reason of their public warehouse laws. For lack of suitable storage facilities Nebraska and Iowa can only indulge in the "from hand to mouth" benefits accruing from day to day, whereas the states having the public warehouse facilities are in position to take advantage of the present and future market quotations.

Kansas, with its public warehouse law, compared with Nebraska on December 1, 1913, as to prices paid farmers for wheat, corn and oats as follows: Kansas farmers received for wheat 79 cents; for corn, 78 cents; for oats, 45 cents; whereas Nebraska farmers received 71 cents for wheat, 65 cents for corn and 38 cents for oats. The difference in favor of Kansas farmers per bushel of wheat, corn and oats was 8, 13 and 7 cents respectively. The Kansas corn crop for 1913 was a failure, hence the difference greater than usual. However, for the last four years Kansas prices have averaged 6 cents per bushel higher than Nebraska.

It is urged that the proposed warehouse law would help everybody in the state, not only the farmer, but also the manufacturer, the miller, the banker, the merchant, the packer, the lumbering man, the commission man, the railroads—everybody. The negotiable warehouse receipt would be the medium of carrying on business transactions between the various trades on which money could be borrowed at current rates. Increased consumption of home products would doubtless result all along the line, much to the encouragement of all the trades. With prices continually favoring the neighboring states having public warehouse facilities, it is not improbable that Nebraska will soon fall in line and provide for the storage of grain and other property in elevators and warehouses under state control.—Implement Trade Journal.

Big Syndicates of South America

(CONTINUED FROM PAGE FIFTEEN.)

of them were the work of Henry Meiggs, who had made millions in California about the time that gold was discovered there. Later on he failed, and then came to Chile, where he made millions more. It was Meiggs who built the first railroad from Valparaiso to Santiago. He constructed the first and most difficult part of Peruvian Southern that now goes up the Andes to Cuzco and Lake Titicaca, and is a part of the through line to La Paz, Bolivia. Meiggs also built the Central railway back of Lima, a road that will eventually be extended into the Amazon valley, United States proposals to that effect having been made within the last few years. The Central railway was perhaps the most remarkable feat of civil engineering ever performed. There is not a rack and pinion section connected with it, and nevertheless it ascends to an altitude of three miles in the course of one hundred miles, and the cars go over comparatively easy grades to that point.

Promoter Big Man

Meiggs was a big man, and was not afraid to deal in big money. Had he lived today he would have been in the same class with J. Pierpont Morgan and Edward Henry Harriman. He offered to improve the Valparaiso harbor at a cost of $40,000,000, if the Chilean government would give him a ninety-nine-year lease of the sheltered side of the port. The government declined, and thereby lost millions, which loss it is now trying to repair by putting millions into the present harbor improvments.

Among other Americans who have made fortunes in Chile were Don Juan Foster, whose family is still prominent; Benjamin Bernstein, who married into the Cousino millions, and George B. Chace, the silver king. Chace failed as a mining prospector in California and came to Chile. He here fell in with an old priest who told him of a silver mine that had been worked by the Spaniards 100 years and more ago. The priest had a record of the mine's location in the archives of his little church near Iquique. He showed it to Chace, and the result was the rediscovery of the rich silver property of St. Peter and St. Paul. This gave Chace his start. He made money out of the two Saints, and with that bought other mines, eventually becoming one of the owners of the Chuquicamata property which has since gone into the hands of the Guggenheims.

(Copyright, 1914, by Frank G. Carpenter.)

Milk Testing for Every Farmer

(CONTINUED FROM PAGE FOUR.)

eight. In one year I think I was paid four times over for the expense and time taken for the testing.

I began in the spring and made two tests of four consecutive filings each before grass time. I made similar tests about every four weeks until the cows were taken off grass. I averaged up the twenty-eight distinct tests of each cow. If a cow's milk runs lower than 3.4 per cent butter-fat she will never give enough in quantity to make her profitable.

But I made my test more definite than this. After one has milked a cow two or three years under all circumstances, by a careful measuring of her average milking it is easy to make a fairly accurate determination of the yearly production. I multiplied the number of gallons thus obtained by 8.4, which reduced it to pounds. Multiply the number of pounds of milk by the average per cent of butter-fat shown by the tests for that cow. This will be her yield of butter-fat.

It is generally agreed that no one can afford to keep a cow that produces less than 300 pounds of butter a year. But that doesn't mean 300 pounds of butter-fat. Increase the butter-fat by one-sixth and you will have very closely the butter yield.

Some parts of this method may not be strictly accurate and scientific, but when it will show some cows running as low as 260 and 280 pounds of butter a year you can be sure that no test, however careful, would bring them up to standard. It enables one to pick the producers and nonproducers, and that will pay you many times over for the time and expense.

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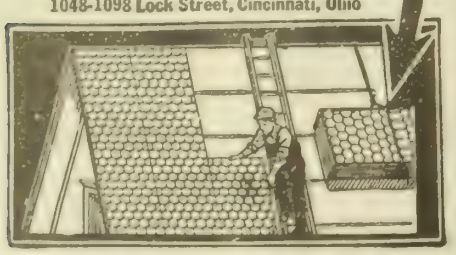

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Cold Storage for Apples

IN VIEW of the interference with the European market and the large production of American apples this season, specialists of the United States Department of Agriculture call attention of apple growers to the advantages of cold storage for steadying the market at harvest and for lengthening the selling period.

Glutting of the market will result, it is feared, in many thousands of barrels of good apples rotting in the orchard or being disposed of at prices which figure a net loss to the grower.

The following are the directions given by the apple-handling specialists of the department for using cold storage successfully in handling apples:

The proper function of cold storage is to retard the ripening processes of the fruit and the development of decay organisms and skin blemishes. The first responsibility for the keeping quality of his fruit rests with the grower, since it is his growing and handling methods that largely determine its vitality, freedom from disease, and general condition when stored. Cold storage is not a remedy or a restorative for poorly developed, weak, imperfect fruit, but is the most effective method of preserving the quality, flavor and appearance possessed by the fruit at time of picking.

The first step in successful cold storage of apples has been found to lie in the practice of such cultural, spraying and pruning methods as insure production of sound, healthy, well-colored fruit, free from disease. Assuming this as the first requisite, the following factors have been found to most influence the keeping quality of the fruit and furnish best conditions for long storage:

First—Proper maturity at time of picking.

Second—Care in all handling operations.

Third—Prompt storage after picking.

Fourth—A proper storage temperature.

Maturity Tests

Careful and extensive investigations have demonstrated that fruit picked at full maturity can be held for a longer period in storage, and is less affected by scald and decay than that picked when somewhat immature. Two important commercial varieties, Rome Beauty and Winesap, have been found to be especially susceptible to scald during storage if picked prematurely. There is no doubt that several thousand dollars are lost to the industry each year through the improper picking of these two varieties alone. The results emphasize strongly that more care and attention should be paid to this detail of the harvesting operations than is usually the case.

By full maturity, however, is not meant overmaturity, which may cause fully as heavy losses as immaturity. Each grower should study his own fruit and his own conditions in order to determine the proper picking stage. Probably the most reliable single indication of maturity is the whitening or slight yellowing of the "ground color" of the fruit. This is the color underlying the blush or red color and should not be confused with the latter.

Careful Handling

Care in all handling operations is the second important requisite of successful storage. A class of fungi, of which the common blue mold is an example, are known to be unable to attack and cause decay of healthy, uninjured fruit. In spite of this fact, very serious rots, both in storage and in transit to market, are the work of fungi of this type, and the largest contributory cause in all cases is bruising or skin breaking suffered by the fruit in the picking and packing operations. Microscopic bruises and breaks in the skin are large enough to afford entrance to the spores of these fungi and the necessity for the utmost care in all operations connected with the handling of the fruit to avoid bruising and mechanical injuries is more urgent than most growers realize.

Prompt Storage

There is a marked difference in condition between fruit stored promptly after picking, say not more than two days later, and otherwise comparable lots of which the storage is delayed ten days or two weeks. Such delay is especially injurious during a period of warm, humid weather. The delayed fruit at withdrawal from storage is riper, yellower and duller than the corresponding "immediate" stored fruit, and in addition develops more serious scald and decay. The importance of eliminating all avoidable delay in storing cannot be too strongly emphasized.

Storage Temperatures

From 31 to 32 degrees Fahrenheit is the standard storage temperature for apples, and this has been found to be the best for long keeping of the fruit. Higher temperatures permit the ripening of the fruit to advance more rapidly than at from 31 to 32 degrees Fahrenheit, with the result that the fruit at these temperatures reached the end of its storage life much sooner. In addition the lower temperature retards most effectively the development of fungus decays and skin blemishes. For a short storage period higher temperatures may be used without serious trouble, especially with the better keeping varieties, but for long keeping from 31 to 32 degrees Fahrenheit will best maintain the color, quality and texture of the fruit.

Apples should be withdrawn from storage while still firm, and in this condition can be held on the market in satisfactory shape for several days or weeks. If allowed to become excessively overripe in storage, however, they will break down very fast on withdrawal. Apples from 32 degrees Fahrenheit will, as a rule, hold in better condition after withdrawal from storage than will comparable lots from higher temperatures.

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Or A. W. Augspurger, care Twentieth Century Farmer, Omaha, Neb.

Feterita in Kansas This Year

KANSAS has 135,800 acres of feterita this year. This information is revealed by the canvass of the State Board of Agriculture, just completed, and is the result of the first efforts to secure statistical data about the crop.

Of the grain scrghums it appears none has risen so high in appreciation in so short a time. Practically unknown as a farm crop in the Sunflower state twenty-four months ago, its acreage is nearly three times as much as that of kafir in its statistical birth-year, and is little less than the 1914 acreage of milo.

Feterita sprang into prominence in Kansas only last year, as a superior dry-weather plant, coming through the severe test of that season with flying colors, yielding grain alongside of corn, kafir and milo that failed. In some cases it went all summer without a drink and returned creditable yields. This year it has also given a good account of itself. It not infrequently matures forty days ahead of kafir planted on the same dates. This indicates its peculiar adaptability to sections and seasons of limited rainfall and to regions of comparatively short growing periods.

Besides its dry-weather-resisting qualities and early maturity, the feeding value of its grain is pronounced as practically the same, pound for pound, as that of kafir and milo.

The rapid growth in popularity of feterita is remarkable. When one considers the long and favorable experience of Kansas with the sorghums, however, it is not surprising that this new member of the family should receive a ready welcome by the farmers. Before the grain sorghums were introduced Kansas was growing the saccharine kinds more extensively than any other state. Then came kafir, and it early met with favor, followed by milo, which has grown in appreciation, and feterita, kin of these, was at once cordially received because of the high regard in which its relatives are held.

For such a recent acquisition its widespread distribution throughout the state is noteworthy. The first acreage enumeration reveals the crop in every county in the state except Doniphan and Pawnee. It also suggests that the farmers in all parts are alert to try out new crops that appear of adaptability and merit.

Butler county, the leader in kafir for the last fourteen years, also ranks first in feterita, with 5,591 acres. Sheridan county, in the northwest, is second, with 5,247; Wilson, third, with 5,172, and Meade fourth, with 4,533 acres. Twelve other counties, Labette, Woodson, Allen, Neosho, Montgomery, Graham, Cowley, Thomas, Stevens, Sumner, Seward and Elk, in the order named, report over 3,000 acres each. Eight of these counties are in the southeastern corner of the state, which suggests that the crop is in favor there.

Of seventeen northwestern counties, all except four show plantings of more than 1,000 acres, and all counties on the southern border, with the exception of Cherokee, in the southeastern corner, report more than 1,100 acres each. An oblong block of fourteen counties in the southeast contain almost 31 per cent of the feterita planted this year, averaging 2,965 acres each. Almost 70 per cent of the state's feterita acreage is in the southern half. It is interesting to note that Stevens and Seward counties, in the southwest corner, which are first and second in milo, also rank well in feterita, being eleventh and thirteenth, respectively.

Now It's the Pig Club

The Pig club is the latest addition to the list of boys' and girls' clubs open for membership to the young people of the state. Membership rules will be much the same as for the corn and tomato clubs. The list of prizes that are expected to be offered—like the rules—have not been prepared. The leader in charge of the new club is J. G. McMillan. He is a graduate of the Iowa State Agricultural college and has been teaching agriculture in the High school at Holdrege. During the fall and winter he will appear on the program of a number of farmers' institutes and short courses to explain the nature of the work. The Pig club, the same as all the boys' and girls' clubs, is carried on co-operatively by the United States Department of Agriculture and the Nebraska College of Agriculture. Information concerning the club may be obtained from the Agricultural Extension Service, University Farm, Lincoln.

The rabbit industry at Taiban, in eastern New Mexico, added $350 to the local circulation last winter. Boys and men shot or trapped 7,000 of the little animals, for which a local buyer paid 5 cents apiece.

VELLASTIC

Ribbed Fleece Lined Underwear

VELLASTIC Union Suits sum up your ideal of perfection. Their velvet fleece is gratefully warm and complete—their ribbed fabric gives complete comfort—and the wear of VELLASTIC is wonderful. Doctors recommend VELLASTIC as a preventive of colds.

For Men, Women and Children.

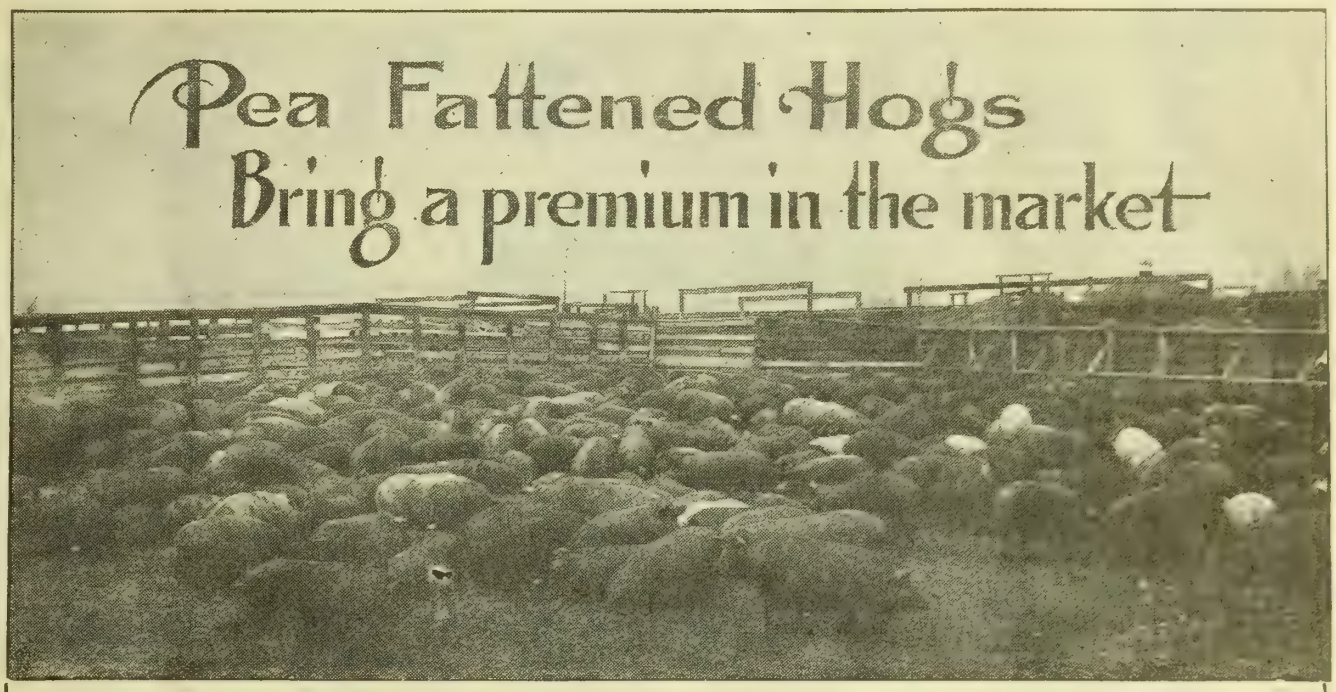
Union Suits or Separate Garments at 50c and up at most dealers. Look for the name VELLASTIC

Write for the Bodygard Book No. 8.

UTICA KNITTING CO.,
Utica, N. Y.

Makers of Bodygard Underwear
Veltastic, Lambsdown, Springtex.

Pea Fattened Hogs
Bring a premium in the market



HOGS IN THE SAN LUIS VALLEY, COLORADO, ARE RAISED ON ALFALFA AND FATTENED ON PEAS AT ONE-HALF THE COST IN NEBRASKA AND IOWA. SICKNESS AMONG HOGS IS PRACTICALLY UNKNOWN.

Hogs are considered by most farmers to be the most profitable product of the farm, even when cholera and sickness depletes the herd frequently. Then how much more profitable it must be to raise hogs in a country where hog sickness does not have to be reckoned with. What a lot of money most farmers would have if the hogs that died on their farm could have been cashed in instead of burned.

In the San Luis Valley, Colorado, hog raising can be relied on with all confidence that colera will not come about the time they are ready for market and wipe out the herd. In fact, cholera has never been known there but twice and then it was brought in with hogs from Kansas. Such a rigid quarantine is now maintained that no danger exists.

Hogs are raised on alfalfa pasture in summer and fattened on peas in the winter months. The hogs harvest the pea crop in the field. They will fatten as quickly on peas as on corn, and pea fattened hogs bring a premium in the market (ask your commission man about this). The average profit in raising hogs in the San Luis Valley is double what it is in Nebraska and Iowa.

One farmer who is a large hog raiser sells his hogs direct from the alfalfa field. He says his hog pasture last year

NETTED HIM $66.00 PER ACRE

Come with us and talk with this man about how he raises hogs by the acre. You can do as well as he.

Remmeber the guarantee that you get from us. If you put the land in cultivation and are dissatisfied for any reason within three years we will repurchase the land at $15 per acre advance of the purchase price.

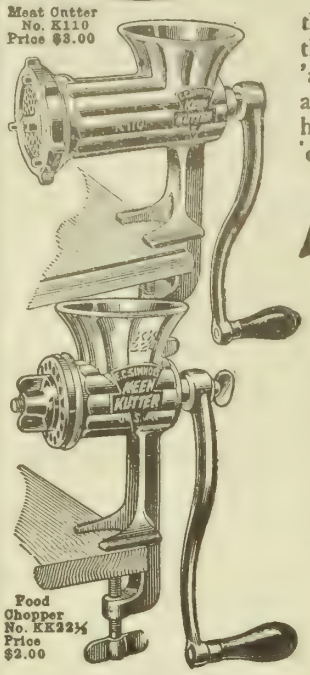
Price of land with water for irrigating from $50 to $60 per acre. $10 to $12 down, balance in 8 equal annual payments.

Write for further particulars.

The San Luis Valley Irrigated Land Co., 712 Omaha National Bank Bldg., Omaha, - Nebraska

Tom Profit Smiles

—makes me smile to think of the good things there'll be, after killin' time—I can fair smell the sausage meat a-sizzlin' in the pan *now*—'an I'm jus a-rollin' a big bite o' head-cheese around in my mouth. That *used* to mean hard work for the wimmin folks, but not *now*, 'cause they use a



KEEN KUTTER
Meat Cutter

for mincin' the pork for the winter grub. Ever eat meat cakes made from good beef with a sprinklin' o' minced onion an' celery salt an' some dried sweet peppers in 'em? You didn't? My! My! Your palate's a-goin' to hev a season o' enjoyment, after you get a Keen Kutter meat cutter or food chopper a-goin'. We use both kinds, reg'ler. They're sold on a warranty by the Simmons people an' the dealer's authorized to give back the money ef you don't like 'em.

Tom Profit.

KEEN KUTTER

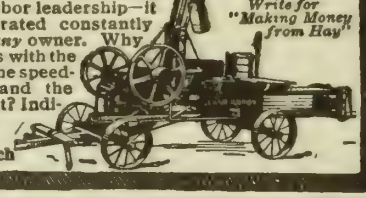
Make Big Profits Baling Hay

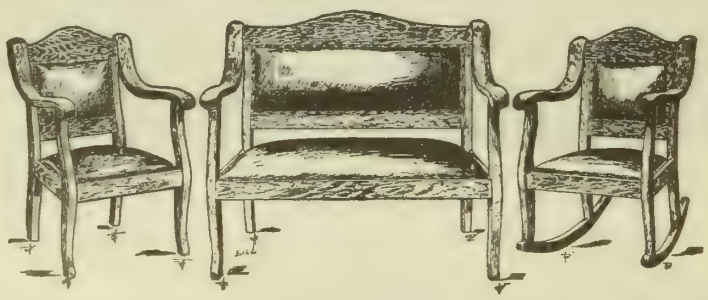
WE could ask for no stronger advertisement than the record of any Ann Arbor owner—anywhere. We have no doubt about Ann Arbor leadership—it has been demonstrated constantly for 29 years Ask *any* owner. Why not make big profits with the big record maker—the speediest—the neatest—and the lowest in upkeep cost? Individually guaranteed.

Ann Arbor Machine Co.
48 Broadway, Ann Arbor, Mich

Ann Arbor
"The Baler for Business"

Write for "Making Money from Hay"





3-piece Parlor Suite—Settee, Chair and Rocker. Strongly built. Solid Oak or Mahogany finish. Upholstered in genuine leather, black or brown Spanish. Seats upholstered over oil-tempered coil springs. Leather upholstered heavy padded backs. Casters on Chair and Settee. F. O. B. Omaha..... **$29.75**

QUALITY FURNITURE AT ATTRACTIVE PRICES

You will likely be in Omaha in September or October for a visit and to do your fall shopping.

When here make it a point to visit our splendidly equipped home furnishing store, the most complete in the West, embracing 3½ acres of floor space and carrying the best lines of furniture, rugs, carpets, draperies, and stoves. You will be delighted at what you see and will find especially low prices prevailing. We do not sell cheap furniture, but sell good furniture cheap.

Our complete mail order catalogue enables you to order by mail, at any time, anything you need.

Last year we added to our list of mail order buyers 9000 names in Nebraska, Iowa, Kansas, Missouri, Wyoming and South Dakota. We have hundreds of testimonials from them stating that goods purchased from us were entirely satisfactory.

We have a handsome, useful souvenir for you when you visit our store,

If you do not expect to be in Omaha soon, cut out the coupon below and send to us. We will then send you the handsome souvenir and our catalogue. Your name will be put on our mailing list and we will send you information on special bargains from time to time.

Beaton & Laier Co.
421 So. 16th St., Omaha, Neb.

FREE SOUVENIR COUPON

Beaton & Laier Co.
421 So. 16th St., Omaha, Neb.

Please send me your Free Souvenir and Catalogue.

Signed.....

Address.....

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

Fractured or Broken Limbs

Mrs. M., Wash.: In lifting a valuable breding bird from a high perch he twisted in my hands and snapped the bone of his right leg below the knee. It was a big loss, but I knew nothing better to do than to kill him and put him in the dinner pot. Now a neighbor tells me that I was very foolish and that I could have saved him. Could this have been done?

Answer—Broken bones are quite common where fowls have the run of the farm. Horses often step on chickens or other fowls, ducks and geese, for instance, breaking the leg bones. A broken thigh rather foils one in making a cure, but if the leg is broken below the knee it will heal rapidly if set in the right manner. Get ready a strip of muslin one-half-inch wide to two feet long, with some splints made from toothpicks or matches, and some glue. Rub some of the glue on the leg above and below the break; set the bone and bind first with a couple of layers of the tape. Dip the splints in the glue, put in place and bind tight with the remainder of the tape. Have the glue thin and warm. Place the bird in a small coop on straw. The leg will heal in a couple of weeks. Soak the bandage before removing. Strips of adhesive tape can be used with good result.

Disinfecting Houses

J. B. K., Washington: I came to you some weeks ago asking help for poultry afflicted with contagious roup. I think that perhaps I have the trouble stopped for the present, but wanting to give the poultry premises a thorough disinfection, come to again bother you as to the best disinfectant and most thorough way.

Answer—Thoroughly to disinfect you must first completely clean out the house of all filth or dust, then make it air-tight. There are three forms of gas disinfectants—formaldehyde, hydrocyanic acid and sulphur dioxide. I will not give advice on the first two on account of their poisonous properties if carelessly inhaled, but the last is secured by merely burning sulphur in an iron pot, or by burning sulphur candles. After several hours the house can be opened and fowls safely let in.

Liquid disinfectants are best put on with a spray, though one can do effective work with an old broom. Of the safest here we find a 5 per cent solution of carbolic acid, or cresol, one of the coal tar preparations, best. This last is cheapest. Using cresol or any of the coal tar disinfectants you use one pint of the preparation to six gallons of water. In using carbolic acid you add one pint of the acid to two and one-half gallons of water.

Disinfecting Drinking Water

Mrs. E. W., Nebraska: Would you please give me some hints on how to disinfect the drinking water, which seems to be the one main item of advice given one that has disease in the poultry flock?

Answer—Why advice in this line is given strongly is because of the difficulty in saving fowls once sick with disease, the main advice tending to prevention instead of cure, and when disease is present it is carried to the well by means of the drinking water, as most sick fowls haunt the drinking water vessels until they can walk no more. When sickness is present wash out the drinking vessels daily with a 5 per cent solution of carolic acid. To make the drinking water itself thoroughly safe for well fowls to drink after the sick and escape contagion, use the disinfectant in this proportion: Five teaspoonfuls of carbolic acid to the gallon of drinking water. This seems large, but it is only one-half of 1 per cent solution, but while using it in this proportion be very careful to withhold all other disinfectants.

One of the best in disinfectants is potassium permanganate. Get it in the crystal form, place in a large bottle and cork tight. When used merely pour enough of this solution into the drinking water to turn the water a slight pink in color. This will remain pink for several hours, after which pour it out and put in fresh disinfected water. As long as the crystals last in the bottle you can keep filling in more water to make the solution.

For contagious enteric diseases, such as cholera, you can use three-fourths grain of bi-chloride of mercury to the gallon of drinking water. But as this last, with carbolic acid, is so decidedly poisonous unless used by the most careful person, it is better to rely on the permanganate.

Removing Spurs

Now and then the question of removing spurs from valuable male birds comes up between the reader and poultry editor. It is advisable to keep the spurs of old roosters cut short because of the damage they do, not only to younger and more timid male birds, but to the hens. A writer for the Pennsylvania Farmer gives this advice in the matter: "Mark where you want the spur to come off, cut a nick around the mark; push a hot potato on the spur until it covers the nick. In a few minutes the spur will come off with the potato. If you saw off the spur and it bleeds, hold a lighted match to the bleeding tip; this will melt the horn of the spur, which will then harden and stop bleeding."

A Spelling Contest

(CONTINUED FROM PAGE EIGHT.)

children to spell against. The superintendent gave out about 200 words, and my best friend, Mittie Goyer, made the highest grade, which was 98. She was awarded a gold medal for being the best speller in the county, and her teacher gave her a gold lavalierre. After the contest we had a fine dinner, and then after dinner we had a jolly good time. Then, about 6 o'clock, we started home.

After we got home we had a good, hot supper. The people of our neighborhood were so glad that one night they gave her a surprise party. We played games and they served refreshments. About 12 o'clock we adjourned for the night.

Additional Stories

Henry Mahlendorf, Anoka, Neb.; Walter Baerage, David City, Neb.; Martha Irene Clarke, Lemars, Ia.; Joe Delio, Emma, Colo.; Ruth Elliott, Big Cabin, Okl.; Pearl K. Vieira, Hollister, Cal.

LANDS—Arkansas

LITTLE RIVER VALLEY LANDS—Rich and cheap, on railroad. Sessions Co., Winthrop, Ark.

Australia

VICTORIA, AUSTRALIA, WANTS settlers. Special inducements; government land; railways; free schools; cheap irrigation; 31 years to pay for farms adapted to alfalfa, corn, grains, fruit, etc.; climate like California; ample markets; reduced passages; special excursion being arranged. Free particulars from F. T. A. Fricke, government representative from Victoria, 687 Market St., San Francisco, Cal., Box 57.

California

SACRAMENTO VALLEY LAND, highly improved and irrigated locality, with frequent trains, at low prices, on easy terms. Buyers this year get free trip to Panama-Pacific Exposition in 1915. Free literature. W. T. Smith Co., 1111 City National Bank, Omaha.

Florida

OWNER MUST SELL TEN ACRES good fruit land, Orange county, Florida; near railroad and not far from Orlando. Full particulars upon request. Otto Hudson, 2580 Spaulding, Omaha, Neb.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

FARMS WANTED—WE HAVE DIrect buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

FARMS WANTED FOR CASH BUYers, and farm bargains for sale. Write me if you want to buy or sell. Terms free. Established 1881. John B. Wright, successor to Frank P. Cleveland, Real Estate Expert. 1315 Adams Express Bldg., Chicago, Ill.

For Exchange

CLEAN STOCK OF HARDWARE AND implements, together with two large buildings in live town of 2,000 population, to trade for good land. Will trade stock and rent buildings if desired. Address W. E. Whittier, Gothenburg, Neb.

Idaho

WE HAVE A NUMBER OF IRRIgated fruit properties for lease on cash or crop rental basis. Orchards may be intercropped with corn, potatoes, onions, root crops or melons. Lessee must have team, implements, etc., and be prepared to handle work in a competent manner. Leases for 1915 now being arranged. Excellent climatic conditions, long growing season, deep, rich soil, established community adjoining Lewiston, Idaho. H. L. Powers, Manager Lewiston Orchards, Lewiston, Idaho.

Iowa

A FINELY IMPROVED 80, TWENTY miles south of Des Moines, $80 per acre. Sure snap. Let me tell you more about it. J. L. Maurer, Omaha, Neb.

Minnesota

200 FARMS IN THE FAMOUS PARK region and Red River Valley District, Otter Tail and Wilkin counties. Level or rolling prairie land; timber land. Any size farm you want from $30 to $80 per acre. Easy terms. Otter Tail county has never had a crop failure; 50,000 acres of corn last year, making from 30 to 70 bushers per acre; natural clover and alfalfa country. Write for free booklet and lists. Park Region Land and Loan Co., Fergus Falls, Minn.

MINNESOTA! CHIAGO AND PINE counties, the dairy country, in the "Park Region." Clover, sweet grasses everywhere; lands cheap. Write for Honest Facts. St. Croix Valley Land and Loan Co., Drawer G, Rush City, Minn.

Nebraska

FOR RENT—160 ACRES LAND IN Merrick county, Neb. F. E. Griggs, Raymond, Neb.

GOOD IMPROVED QUARTER FOR sale; one of the best bargains in Nebraska; all in cultivation; 6-room house, barn, granary, well and windmill; orchard; some alfalfa, rest wheat and corn. For full description, price and terms address Lock Box 43, Grand Island, Neb.

FARM NEAR OMAHA — 160 ACRES within five miles of Omaha street car line. Good improvements. No better soil in Douglas county. Has 30 acres in alfalfa, produces five tons per acre sold last season at $14 per ton. Close to alfalfa mill. Farm will rent for $1,200 per year. Must be sold to settle partnership. Price, $112.50 per acre. Address T. E. Stevens, 712 Omaha Nat'l Bank Bldg., Omaha, Neb .

LAND—North Dakota

CAN YOU GROW WHEAT? RED river valley lands are the best wheat lands. We own and control 100 improved farms in Cavalier and Pembina counties, where you can plow and put in grain with the traction engine. You can raise and market wheat there for $7.40 per acre, and you can raise 30 to 40 bushels, which, if sold at war prices, will readily bring from $1.00 and upward per bushel, or about $40 per acre. Price of our farms varies from $35 to $50 per acre, on easy terms. You ought to get our illustrated free booklet, describing this section. Remember that each of these farms is a going farm. You can move right in and go to work. Fine dairy country, and all sorts of feed for cows is easily raised and the quality is fine. Water abundant and good. There is no better stock and grain country. To really appreciate this country you must see it. Here you will find every convenience you have where you are. Likely better, indeed. For healthfulness you will find this equal to any, anywhere. The climate will please you. Write Fred W. McLean, Mgr., Red River Valley Land Co., Fargo, N. D.

Oregon

OREGON STATE PUBLICATIONS free; Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions—they will have painstaking answers. We have nothing to sell. Address Room 110, Portland Commercial Club, Portland, Ore.

FORTY-ACRE THREE-YEAR-OLD apple orchard, best valley in Oregon; trees, Delicious, Rome Beauty, Winter Banana; alfalfa between trees cutting 2½ tons per acre, three crops per year. Will sell for $10,000; half cash, balance terms John Leigh, P. O. Box 544, Tacoma, Wash.

Texas

NEW COLONY, NEAR SAN BENITO —Ideal climate, cream of earth, easy terms; no irrigation or fertilizing; near railroad. Excursion October 6. Write today for particulars and inducements for this trip. San Dominie Colonization Co., 340 Brandeis Theater Bldg., Omaha, Neb.

Wyoming

BLACKBURN FARMS CROP CONDItions are the finest ever known. Wheat, rye, alfalfa and all the grasses grown there have done remarkably well, while potatoes and vegetables promise a great yield. This is a natural stock and dairy country, because the climate is suited to it. The wonderful endurance of the western ranch horse is due to the climate, good water and succulent grasses, as you know. Meat exposed to air there will cure as it hangs. Disease microbes can't live there, so hog cholera is unknown. What a place for the dairy and hog farm! But corn don't grow there, you say. Yes, that's true, but barley has more fat-producing qualities than corn, and you can produce as many bushels per acre, so it's really more profitable to feed barley. The alfalfa does so well in quantity and nourishment that a combination of barley, alfalfa, field peas, pure water and air makes the finest flavored meat, bringing highest prices. With hogs at present prices, and no fear of disease, who could not make a fortune raising Duroc-Jerseys in a few years? Water system in use over twenty years. This section has gold, silver, lead, coal oil, gas, soda, cement rock and granite, and only 573 miles from Omaha to Laramie station. Our interesting illustrated booklet tells you much more free. Get it today. Low excursion rate. A few sections to exchange for improved Iowa and Nebraska farms. Laramie Dev. Co., Laramie, Wyo., or A. W. Augspurger, Twentieth Century Farmer, Omaha, Neb.

GRAIN LANDS AND STOCK ranches in southeastern Wyoming at bargain prices and on easy terms. For particulars address Federal Land Company, Cheyenne, Wyo.

GOVERNMENT LAND——GET 320 acres. We stock your land, buy your crop. Some means required. Particulars free. Wyoming Settlement, Janet, Wyo.

BARGAIN—IRRIGATED FARM, 160 acres under government ditch, 12 miles from county seat town of 3,000. Trading point 3 miles from land. Price, $25.00 per acre; includes permanent water right. Terms, one-fourth down, balance deferred payments if desired. This is a snap. Write owner, P. O. Box 55, Shoshoni, Wyo.

Wisconsin

UPPER WISCONSIN — BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

LANDS—Wisconsin

I OWN TWO FARMS—MUST SELL one! Fine 80-acre farm handy to town, with stock, feed and machinery, for immediate possession; 60-acre field, clay loam soil, no rock, good surface. A dandy frame basement barn for 36 head; six-room house; on main road, 4½ miles from two railroad towns, half-mile to school. Only $6,600; $2,600 down. A snap for immediate possession. E. A Trusty, St. Croix Falls, Wis., Route No. 1.

OFFICIAL BULLETINS CONCERNing soil, climate and crops of Wisconsin mailed free to those addressing Wisconsin State Board of Immigration, Capitol 1000. Madison, Wis.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyies Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

WANTED—MEN AND WOMEN—18 OR over. Get government jobs. Thousands appointments this year; $65 to $150 month. Write immediately for list of positions available. Franklin Institute, Dept. L 94, Rochester, N. Y.

$120 ABSOLUTELY SURE—MAN OR woman to distribute religious literature; sixty days' work; quick promotion; no experience necessary; spare time work also. Ziegler Company, Dept, 126, Philadelphia.

WANTED — RESPONSIBLE PARTY to take charge of business in each county New Automatic Combination Tool, combined wire fence stretcher, post puller, lifting jack, etc. Lifts or pulls 3 tons, weighs 24 pounds. Sells to farmers, shops, teamsters, etc. Descriptive catalogue and terms upon request. Harrah Manufacturing Co., Box M, Bloomfield, Ind.

YOUNG MAN, WOULD YOU ACCEPT and wear a fine tailor-made suit just for showing it to your friends? Or a Slip-on raincoat free? Could you use $5 a day for a little spare time? Perhaps we can offer you a steady job? Write at once and get beautiful samples, styles and this wonderful offer. Banner Tailoring Co., Dept. 873, Chicago.

WANTED—TRUSTWORTHY FARMER boy desiring to be a salesman, willing to work, leave home, make good money, and learn salesmanship under personal trainer. Permanent position. Chance for advancement. Address French-American Art Company, 7 E. Washington Ave., Council Bluffs, Ia.

MEN WANTED—PREPARE AS FIREmen, brakemen, motormen, colored train porters; no experience necessary; steady work. Write Inter Railway, Y 193, Twentieth Century Farmer, Omaha.

MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

GOVERNMENT FARMERS WANTED —Ages 21 to 50. Make $125 monthly. Write Ozment, 39-F, St. Louis.

FIR LUMBER! RED CEDAR SHINgles! Choice. Mill direct. Save money. Write Lansdown, Drawer H, Everett, Wash.

25,000 RED CEDAR POSTS AND SEVeral hundred poles for sale. Let us quote you a delivered price to your station. Will ship subject to examination before payment. Farmers Co-Operative Co., Ltd., Clarks Fork, Idaho.

VIOLIN FOR SALE CHEAP. SENT on trial. Write Miss Bertha Mardiss, Route 5, Rosedale, Kan.

GOING TO BUILD? BUY YOUR FIR lumber, red cedar shingles, finish and mill work of us. We are located in the lumber center of today. We saw and sell to the consumer direct. We will save you money on what you need. Send us your lumber bill for estimate. Get our figures before you buy. The Keystone Lumber Co., Dept. R, Tacoma, Wash.

PATENTS

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., 808 F St., Washington, D. C. Established 1880.

AUTOMOBILES

FOR YOUR FORD CAR—SUPPLIES direct to you. We save you the dealer's profit. Free catalogue. Write and save money. Gasolette and Fordezers. You need both. Ask us. The Ford Supply Co., 2129 Farnam, Omaha, Neb.

POULTRY—Leghorns

SINGLE COMB WHITE LEGHORNS—Vigorous cockerels from great layers, $1.50. F. Strahan, Linwood, Neb.

S. C. BUFF LEGHORN HENS, dozen, $10. Splendid layers. Jessie Chatfield, Rosevale, Neb.

SINGLE COMB BUFF LEGHORNS, 50c each if taken soon. Mrs. Albert Nagengast, Howells, Neb.

Orpingtons

PRICE LIST FREE—SINGLE COMB Buff Orpington, Toulouse geese, Indian Runner ducks. Peter Brehm, Harvard, Neb.

SINGLE COMB BUFF ORPINGTON cockerels from good stock. Prices, $1.50 to $4. Read my guarantee. Send me the price you want to pay. If bird is not satisfactory, I'll return your money; you pay express both ways. Frank E. Davenport, Norfolk, Neb.

Plymouth Rocks

BARRED ROCKS, MAGNIFICENT thoroughbreds, heavyweights; 100 cockerels, 80 pullets, 100 Indian runner ducks. Low prices. Catalogue free. Hazeldell Yards, Essex, Ia.

CHOICE WHITE ROCK COCKERELS from large birds, $1.50 each till Nov. 1. Guarantee satisfaction. Mrs. Hans Greve, Central City, Neb.

Guineas

WHITE GUINEAS, $1.25 EACH. Nettie Campbell, Elyria, Neb.

Ducks and Geese

FISHEL WHITE RUNNER DUCKS. $1.00 each; $10 per dozen. Ida M. Oliver, Isabel, Kan.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTYthree pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

FOR SALE—THOROUGHBRED TURkeys, geese, ducks, 18 varieties of poultry; white and pearl guineas, bantams, dogs, hares, rabbits, fancy pigeons. Write wants. Free circular. D. L. Bruen, Platte Center, Neb.

THE 115,000 FARM FAMILIES WHO regularly read this page are anxious to buy their breeding stock early this year. A nickel a word a week is the cost of advertising what you have to sell.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned; are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

I HAVE 100 HEAD YEARLING steers for sale; also know of 8 or 10 loads of heavy feeders—Herefords, Angus and Shorthorns—that I will help buy for 50 cents per head commission. Write me your wants if in need of cattle. Harry I. Ball, Fairfield Ia.

SKUNKS

150 SCENTLESS SKUNKS FOR SALE—Can spare some old females if preferred, which raised from 6 to 11 this year, but mostly young ones which will be very productive next spring. Do not know the age of all the old ones. Which do you want? All narrow stripe. Lost only four since June. Feed milk, mush, rabbit, etc. A word of successful experience with each sale. Reference, First National Bank of Cambridge. Buyer makes, seller loses. Females, $10 each; males, $2.50 each. Frank Coler, Cambridge, Neb.

DOGS

COLLIES—AIREDALES — TERRIERS. Send for list. W. R. Watson, Box 501, Oakland, Ia.

FERRETS

FERRETS—GOOD HUNTERS, RATters. F. Breman Co., Danville, Ill.

AK-SAR-BEN SPECIALS

LADY BARBERS AND MANICURIST. Largest lady shop in Omaha, Neb. 316 South 14th St. Basement Paxton Hotel Annex.

STAMMERERS

YOU CAN BE PERMANENTLY cured. Write Omaha Stammerers' Inst., Ramge Bldg., Omaha.

BUSINESS CHANCES

PARTNER WANTED TO GO INTO the cattle business; German preferred; 700 acres already under cultivation. Address Box 24, Omaha, Neb.

A NICKEL A WORD A WEEK BUYS space in this column. Your ad will be read in 117,00 farm homes.

O. I. C. HOGS

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." C. S. BENJAMIN RFD 79 Portland, Mich.

RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

W. P. SCHWAB, Clay Center, Nebraska.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

Twenty-five cows and one bull, all purebred registered Holsteins, were recently unloaded at Williams, Minn. They were purchased by the Security State Bank of that place and sold to farmers on easy terms. These far-sighted financiers selected purebred registered Holstein cattle because they were sure that it was for the best financial interest of the community. They acted on their knowledge of Holsteins as producers as compared with other breeds. If pure-breds were good for them, why not for you?

Send for **FREE** Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Secy., Box 179, Battleboro, Vt.

Please mention the fact that you saw it in Twentieth Century Farmer when writing to advertisers on this page.

Review of Live Stock Market

By A. C. Davenport

THIS is the season of the year when cattle receipts should be large if they are ever going to be, and most market points have been well supplied during the last week. Still, the big markets for the current week have shown fewer cattle than for the same week a year ago by from 15,000 to 20,000 head. There is also about the same decrease compared with two years ago. Supplies at western markets have consisted very largely of rangers, while Chicago and eastern markets have been getting a good many grass natives.

Cattle values have shown no very great change during the last few days, but such revision as has taken place has been mostly on the side of lower values for the common to medium grades. On the other hand, choice to fancy cornfed beeves have been very firm owing to the great scarcity of that kind, and a new high top for the season has been made, choice yearlings touching $11.05 at Chicago. There is a possibility that such cattle may go even higher before the supply becomes more liberal, but as a matter of course the demand for such high-priced beef is very limited and an occasional carload is about all that any market has use for.

The great bulk of the cattle coming to market is made up of grassers, either rangers or natives, the fleshy grades going for beef and the thin stuff for feeders. These cattle continue selling to very good advantage as compared with previous years, the market on all grades being high. Prices bob up and down as the receipts become heavy or light, and present prospects would indicate that the market for some little time is likely to be largely under the influence of receipts. While the demand is very fair, it is not strong enough to prevent breaks as often as the runs become large, but there is sufficient urgency to it to put up the price again as soon as the run drops to a low point.

One of the greatest disadvantages under which the market is laboring is the tightness of money, which prevents many farmers from securing money with which to buy feeder and stocker cattle. Every would-be buyer who is kept off the market makes it all the easier to break prices with large receipts.

Several big trains of Canadian cattle have recently been turned across the border on account of the slack demand in the Canadian markets. Still, no one expects to see receipts at the big market centers run above normal for this season of the year.

A falling off of some 30,000 head in the receipts of hogs for the current week at the big market centers has been insufficient to offset the poor consuming demand and hold prices level. On the contrary, the downward movement has continued, prices being quite a little lower than this time a week ago.

Hog men seem to feel that unless something unexpected turns up to create a sudden boom in the demand for provisions the market will continue on down. Some of the bears have gone so far as to predict that hogs will be selling close to the $7 point on the Missouri river before November 1.

The cause for the downward movement in hogs was explained in these columns in detail a week ago as being the direct result of the European war, which has greatly reduced the export demand for pork products as well as the home demand, especially in the cotton belt. A sudden change in the situation that would create a better demand would, as a matter of course, tend to arrest further price reductions, but so far there have been no indications that such change is at hand.

A week ago at this time the sheep and lamb market, after a big bulge, was breaking sharply. The downward movement in prices was continued over into the present week and the market is now back about where it was before the big advance the first half of September. The break in prices was due to the increased receipts and to the fact that packers seemed all of a sudden to arrive at the conclusion that there was no necessity for paying record prices for sheep and lambs. At the same time the advance seemed to reduce the consuming demand and the packers were able to force prices down to a point more nearly in accord with their own ideas.

While sheep men still anticipate a good average market for sheep throughout the season, it would surprise no one if prices were to suffer a still further reduction within the next few days, as very heavy receipts are anticipated.

Receipts of sheep at leading market points for the current week, though larger than for some weeks, show a falling off of around 50,000 head as compared with a year ago, and a slight decrease as compared with two years ago. All of the increase in receipts shown during the earlier part of the year is now wiped out.

National Dairy Show

Every man who is interested in dairying and the breeding of dairy cattle should attend the big National Dairy Show at Chicago, October 22 to 31, inclusive. Special days for judging each breed of dairy cattle. Meetings of all the national associations connected with the dairy business.

Sale Dates

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb.

Duroc-Jersey Hogs

October 17—Henry Stuthman, Pilger, Neb.
October 13—R. Widle & Sons, Genoa, Neb.
October 23—F. B. Nelson, Lindsay, Neb.
October 31—Robert Leisey, Wisner, Neb.
November 5—Harry Tidrick, Winside, Neb.
November 11—F. A. Lemmerman, Creston, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday, Rising City, Neb.
March 1—Harry Tidrick, Windside, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Holstein-Friesian Cattle

October 19 and 20, 1914—H. C. Glissman, Station B, Omaha. Sale at South Omaha.

Shorthorns

October 29—Rapp Bros., St. Edward, Neb.
December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt,

FRIESLAND FARM HOLSTEINS

We have several good sons of Kalmuck Skylark Johanna and of King Segis Lyons for sale. They are from good A. R. O. dams. Can spare a few good females.

DR. B. B. DAVIS, 200 Bee Bldg., Omaha, Neb.

AYRSHIRES

LOVELAND FARM AYRSHIRES

for sale, sired by Garlands Success. Can also spare a few females. The largest herd of Ayrshire cattle in the west. Several choice young bulls

LOVELAND FARM, R. F. D. No. 1, Station B, Omaha, Nebraska

PERCHERON HORSES

At ordinary prices, farm-raised registered Percheron studs—1, 2, 3 and 4 years old. Kind disposition because well cared for. You would admire their big bone firtst, then their immense weights, because they are developing big like their imported sires and dams. And you will receive true old-fashioned hospitality on your visit at Fred Chandler's Percheron Farm. Just east of Omaha.

FRED CHANDLER, Route 7, CHARITON, IOWA.

HAMPSHIRE HOGS

HAMPSHIRE BOARS

Hampshire spring boars for sale; sired by De Kalb's King 100, a son of the famous Major. They are very growthy, and all priced to sell. Also have Aryshire bull calf for sale.

WILLIAM PAMP, Benson, Neb.

FISHER'S HAMP SHIRES

25 fall boars and 25 spring boars for sale. Sired by Winside Star, Fisher's King 5th, Tatro's Messenger and Paulsen's Choice. Prices reasonable.

ROY FISHER, Winside, Neb.

Prize Winning Durocs

30 Boars AUCTION 15 Sows

AT

Genoa, Neb., October 13, 1914

40 Head Sired by Critic B, Champion Boar at Nebraska, 1912.

31 Ribbons Won at Nebraska State Fair and 28 at Kansas State Fair, including Four Champions and 1 Grand Champion.

This offering will consist of 10 fall boars, 20 spring boars, 10 fall gilts and 5 spring gilts. Included in the offering will be quite a number of our SHOW HERD. It will, in a large measure, be a CRITIC B offering, all but 5 head being sired by this great boar. Here is an opportunity to get a herd boar or a few choice young sows. We are not putting a poor individual in the sale. Catalogs are ready.

Auct., Col. E. Z. Russell.
Fieldman, G. E. Hall.

R. WIDLE & SON, Genoa, Neb.

HERE IS AN ILLUSTRATION OF THE TYPE OF BOARS TO BE OFfered in the sale of R. Widle & Son at Genoa, Neb., on October 13. These are only a few of the good ones.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Widle's Prize-Winning Offering

This is the last call for the sale of prize winning Durocs to be held at Genoa, Neb., on October 13 by R. Widle & Son of that place. Without question, this will be one of the greatest Duroc sales to be held anywhere this year, east or west. No one sale that we know will contain as many prize winners and descendants of prize winners as this one. Messrs. Widle & Sons are putting nothing in this sale but strictly first-class stuff. In a large sense, it will be a Critic B. offering. By that we mean that the entire offering, with the exception of possibly two or three head, will be sired by Critic B., the grand champion boar at Nebraska in 1912. No better evidence of the strong breeding qualities of this boar could be produced than are evidenced by the general make-up of this entire offering. They have the size, bone and scale, together with plenty of quality, and we feel that we cannot too strongly recommend them to prospective buyers. The offering will consist of ten big, strong, rugged fall boars, twenty spring boars, ten fall gilts and five spring gilts. Quite a number of individuals included in their show herd this year will be offered for sale. In this connection, it might be well to state that this firm won thirty-one ribbons at the Nebraska State fair and twenty-eight at the Kansas State fair, including four champions and one grand champion. Get in touch with them at once for catalogue and arrange to attend this sale. We will guarantee that you will not be disappointed in the offering. In case you cannot attend and want something, send your bid to G. E. Hall of this paper and it will be taken care of. Kindly mention this paper when writing.

Deafness

From All Causes, Head Noises and Other Ear Troubles Easily and Permanently Relieved!

Thousands who were formerly deaf, now hear distinctly every sound—even whispers do not escape them. Their life of loneliness has ended and all is now joy and sunshine. The impaired or lacking portions of their ear drums have been reinforced by simple little devices, scientifically constructed for that special purpose.

Wilson Common-Sense Ear Drums often called "Little Wireless Phones for the Ears" are restoring perfect hearing in every condition of deafness or defective hearing from causes such as Catarrhal Deafness, Relaxed or Sunken Drums, Thickened Drums, Roaring and Hissing Sounds, Perforated, Wholly or Partially Destroyed Drums, Discharge from Ears, etc. No matter what the case or how long standing it is, testimonials received show marvelous results. Common-Sense Drums strengthen the nerves of the ears and concentrate the sound waves on one point of the natural drums, thus successfully restoring perfect hearing where medical skill even fails to help. They are made of a soft, sensitized material, comfortable and safe to wear. They are easily adjusted by the wearer and out of sight when worn.

What has done so much for thousands of others will help you. Don't delay. Write today for our FREE 168 page Book on Deafness—giving you full particulars.

WILSON EAR DRUM CO., Incorporated
255 Inter-Southern Bldg. LOUISVILLE, KY.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Duroc Jersey Headers

Duroc-Jersey breeders who are looking for a real herd header will do well to get in touch with Clarence Wallace of Wisner, Neb. Mr. Wallace will not hold a fall sale this year, but will offer his boars at private treaty. A perusal of the report of the Nebraska state fair will show this herd was one of the heaviest prize winners of that show. Mr. Wallace won grand champion on sow last year and came back and repeated the operation this year. The fact of the matter is, he won more ribbons than any other one breeder, besides winning the silver cup offered by the National Duroc association, and also the silver cup offered by the Economy Stock Powder company. One of the choicest herd boar propositions he has at this time is Fancy Model, second prize junior yearling boar this year. He is sired by Golden Model 4th, out of Fancy Advance 2d, champion sow at Nebraska this year. Another great young boar is Golden Wonder, a son of Golden Model 4th, and out of the dam Lucy's Wonder, out of Wallace's Wonder. He was the first prize boar in his class at Nebraska this year. There are also three other choice fall boars, little brothers to Fancy Model, mentioned above. Besides these fall males he also has a number of extra choice spring males sired by Colonel Chief, Proud Colonel, Long Wonder, Golden Model 4th and others. Get in touch with Mr. Wallace if you want something first class, both in point of breeding and individual make-up. Kindly mention the Twentieth Century Farmer when writing.

Splendid Duroc Litter

While at Wisner, Neb., last week we called on D. W. Kane of that place and spent some time looking over his herd of Durocs. While there we saw one litter in particular that attracted our attention. This is a litter of seven boars and three sows, sired by Golden Model 31st and out of a Golden Model 15th bred dam. This sow was the top sow in the sale at Herman Toelle at West Point last year, and this litter is certainly an unusual one. There are a number of individuals in this litter that are real herd headers—big, strong, smooth, heavy-boned individuals—the kind that breeders are striving to produce. If you are in the market for something really good, here is an opportunity that should not be overlooked. Besides this litter Mr. Kane has several other young boars coming on that he is surely pricing worth the money. These are sired mostly by Wonder Chief by B. & G.s Wonder. Get in touch with him at once if you want one of these boars, as they will not last long at the price for which they are being offered. Kindly mention the Twentieth Century Farmer when writing.

Stuthman's Duroc Offering

With this issue of the Twentieth Century Farmer we are starting an advertisement for Henry Stuthman, the well known breeder of Duroc-Jersey hogs at Pilger, Neb. In this offering Mr. Stuthman is going to sell ten fall boars, thirty spring boars and five fall and spring gilts. There are three choice fall boars by Melina's Wonder, one by Crimson Wonder Select, two by King the Colonel and four by B. & G.'s Wonder. The spring boars are by Crimson Wonder Select, Chief's Model, Golden Model 4th, Blue Ribbon Model jr., Blue Ribbon Model, Colonel Chief, Wonder Lad and Golden Model 31st. They are out of sows sired by Melina's Wonder, Crimson Wonder Select, Red Jim, Wallace's Wonder, Chief Select 2d. This offering is a very uniform, useful one and should receive the attention of any one wanting a choice boar. These pigs have not been crowded, but have simply been grown along and are in a condition to go out and make good. Keep this sale in mind and watch these columns for further announcement. If you cannot attend the sale and want something in the catalogue, send your bid to G. E. Hall of this paper and it will receive careful attention.

Stuthman's Duroc Sale

10 Fall Boars, 30 Spring Boars, 5 Fall and Spring Gilts

To Be Offered at Auction

AT

Pilger, Neb., Oct. 17, 1914

This offering will consist of a choice lot of boars sired by **Melina's Wonder, King the Colonel, Crimson Wonder Select, Sweet Rose's Wonder, Chief's Model, Golden Model 4th, Colonel Chief, Blue Ribbon Model Jr., Blue Ribbon Model, Wonder Lad** and **Golden Model 31st.** They are out of sows sired by **Melina's Wonder, Crimson Wonder Select, Red Jim, Wallace's Wonder, Chief Select 2d.** This stuff has not been crowded but is just in good breeding condition. Write for catalogue and be on hand sale day.

Auct., Col. N. G. Kraschel.
Fieldman, G. E. Hall.

HENRY STUTHMAN,
Pilger, Nebraska

DUROC-JERSEY HOGS

I HAVE THE GOODS

Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

BOARS! BOARS! BOARS!

Several fall boars and a few choice spring boars for sale, sired by BELLE'S CRIMSON WONDER, COL. CHIEF, GOLDEN MODEL 4th and BELLE'S BIG WONDER, out of Crimson Wonder bred dams. I am offering these boars at bedrock prices for quick sale. **A. R. BARNES, Petersburg, Neb.**

IMMUNED DUROC BOARS.

I am offering an exceptionally strong lot of Duroc Jersey boars for sale, largely of Crimson Wonder and Golden Model breeding. They are the best lot I have ever offered and are being priced worth the money.
E. R. DANIELSON, Osceola, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

MR. DUROC BREEDER

Are you on the market for a herd boar? If so, write me just what you want. I have them sired by Lucy's Select, Proud Wonder Jr. and other top boars of the breed. **L. J. KUZEL, CLARKSON, NEB.**

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.

F. E. MERRICK, OSCEOLA, NEB.

BIG SMOOTH DUROCS

Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.
HENRY KOEHLMOOS, Pilger, Neb.

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.

GEO. W. SCHWAB, Clay Center, Neb.

CEDAR'S DUROCS

The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.

P. P. CEDAR, GENOA, NEB.

HEKRDLE'S DUROC BOARS.

I have the best lot of spring boars for sale that I have ever produced. Sired by A. A.'s Model and Beauty's Wonder. A combination of the Crimson Wonder and Golden Model blood lines. Correspondence solicited. A. A. Hekerdle, Stanton, Neb.

35 TOP BOARS

35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st, Prince Munice, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

DUROC HERD BOARS

Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd headers I have them. They are out of prize-winning sires and dams. **Clarence Wallace, Wisner, Neb.**

IF YOU WANT WHAT YOU WANT when you want it, place an ad. in the Market Place of Twentieth Century Farmer.

POLAND-CHINA HOGS

McCULLOUGH'S BIG POLANDS

We have a splendid lot of Poland-China spring boars for sale. Sired by Smooth Big Bone, Columbus Again and Expansion Again. These boars have been grown right. They are big and smooth with lots of bone. For particulars write **O. J. McCULLOUGH, CLARKS, NEB.**

IMMUNE POLAND-CHINAS

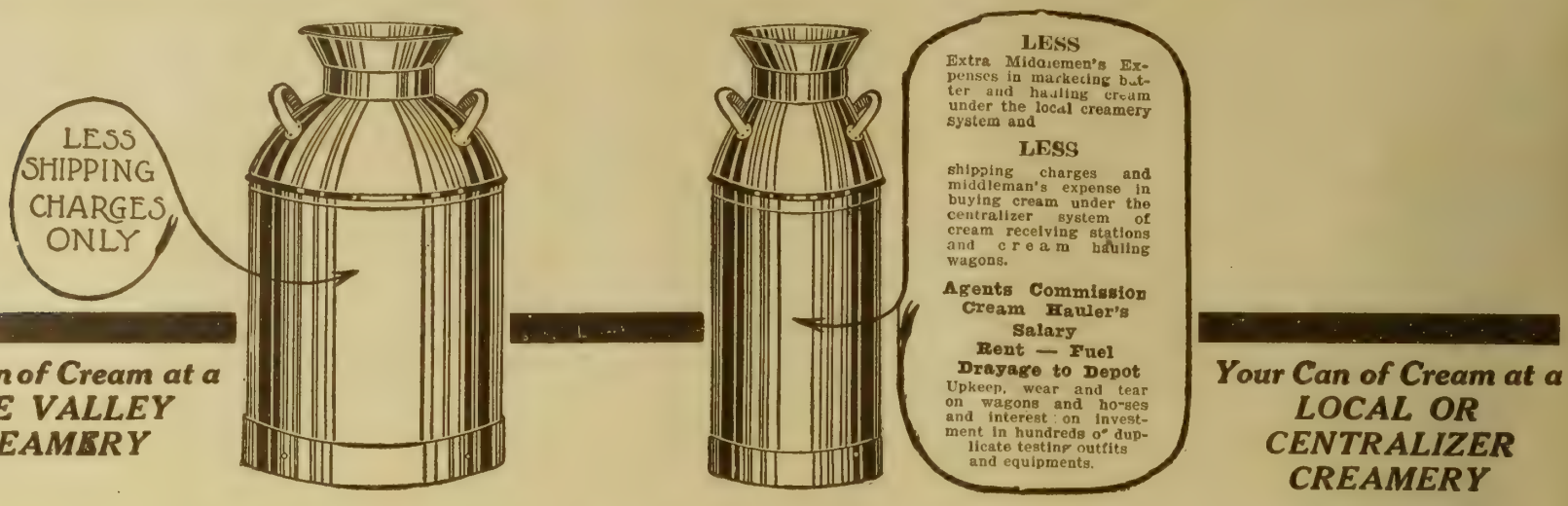
A choice lot of Poland-China spring males for sale. Sired by Blue Valley Oak. They are the big kind, with quality. Everything immune. Prices reasonable JOHN NAIMAN, Alexandria, Neb.

BERKSHIRE HOGS

60 spring pigs by Longfellow's Premier, Autocrat and others. They have plenty of size, stretch and bone. Prices reasonable.

GEO. PORTER, STANTON, NEB.

Does the Butter in your Can of Cream get Shaved by the Middleman in this Manner on its way to Market?



Your Can of Cream at a BLUE VALLEY CREAMERY

Your Can of Cream at a LOCAL OR CENTRALIZER CREAMERY

The reason Blue Valley Checks are bigger is

because our shippers put a tag on their can of cream and drive on down to the depot with it, thereby saving all the expenses of the Middleman.

The Blue Valley Hand Separator Shipping System

Supposing you take a load of hogs to town and one buyer offers you five or ten cents more per hundred than the others offer. The highest bidder gets the load of hogs, doesn't he? Well, why not sell your cream that way? Why not sell it where you can get the most money for it?

We are in a position to pay you more money because we save the expenses of the middleman system and add it to your cream check. Ours is a direct-from-farmer-to-creamery-proposition. No middlemen of any kind. No cream receiving stations. No cream wagon hauling routes. No commission men. No traveling men. You ship your own cream and we send you the cash for each shipment.

Isn't that just what you do with your hogs if the local hog buyer doesn't treat you right? Don't you bunch with your neighbor and ship a carload? We use Uncle Sam as our traveling man and we keep in constant touch with one another.

The average price paid for butterfat under the Blue Valley Hand Separator Shipping System is higher than the average price pair under any other creamery system! We will mail literature comparing prices paid under different creamery systems, the figures being taken from official state reports.

What better evidence could be produced that it is the right market for the producer? What better evidence could be given that it is the right system for building up the dairy industry?

Besides cutting out all these middlemen expenses we get a quality of cream under our direct shipping system which enables us to make the best butter. It is sold in Blue Valley Trademark packages in the big cities of the country at higher prices than ordinary butter sells for and the farmer gets the cash difference.

We are constantly turning money from the big cities back to the country. We get the money from the consumer in the big city and put it direct into the pocket of the farmer in the country. We help to build up your community more than your local middleman because we turn more money into your community and put the difference right into your own pocket.

Ours is a business system that appeals to business farmers. Our more than 70,000 shippers at our eleven creameries represent the best business element of their different communities because they realize what the extra money on each can of cream means month after month and year after year.

Blue Valley creameries are located in wholesale market centers where there are a number of railroads, thus enabling each creamery to get a large volume of cream within a reasonable shipping distance and serve a large number of cream producers. Creameries are located at Chicago, Ill.; St. Joseph, Mo.; Indianapolis, Ind.; Sioux City, Ia.; Detroit, Mich.; Grand Rapids, Mich.; Hastings, Neb.; Parsons, Kan.; Springfield, Ill.; Clinton, Ill.; Cedar Rapids, Ia. Ours is a business creamery system built up to meet hand separator conditions, thereby paying highest prices for cream.

Yours truly,

BLUE VALLEY CREAMERY COMPANY

How to Ship Your Cream to a Blue Valley Creamery

OUR GUARANTEE

You take no risk in shipping your can of cream to a Blue Valley Creamery. You are sure of the money for your cream and our binding guarantee insures the return of your empty can. No farmer has ever failed to get his pay for his can of cream during all the years we have been in business. We are proud, and we think justly so, of this record and it is worth a great deal to the farmer who is looking for a high price cream market and one that is at the same time reliable.

We have thousands of letters on file in our offices from shippers. We will send you copies on application. Each is a glowing recommendation of the Blue Valley System.

Cream is always shipped by baggage or express and low shipping rates have been fixed for 5, 8 and 10 gallon cans. The shipping charge includes the return of your empty can. Ask your local express agent or railroad agent about rates to our nearest creamery. If he can't give you the rates just drop us a postal card and we will see that he is informed. Our wagons meet all trains. Ship on any train that carries express or baggage.

Write for printed shipping tags or use an ordinary shipping tag and address it to the nearest Blue Valley Creamery. Be sure your name and address is on the tag and turn the can over to the transportation company. We will do the rest.

Write today, for our handsomely illustrated and interesting short story, entitled, "The Fable of the Cow." It is free for the asking.

Ship a can of cream to us today and try the Blue Valley System. Address our nearest creamery

Use the Attached Coupon

BLUE VALLEY CREAMERY CO., x-3

Gentlemen:—Send me **Free**, copy of "The Fable of the Cow."

Name .....

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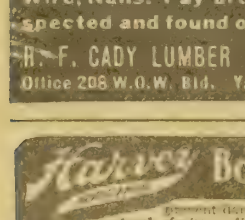

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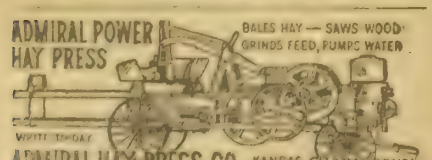

WRITE TO-DAY

ADMIRAL HAY PRESS CO. KANSAS CITY, MISSOURI

Please mention the fact that you saw it in Twentieth Century Farmer when writing to advertisers on this page.

Prattle of the Youngsters

What Kitty Said

"Elsie, why did you let the cat out?"

"She asked me to, mamma."

"What do you mean, child?"

"She scratched at the door and said, 'Me out, me out.'"

Doing His Best

Mother—Tommy Wilkins is the worst boy in school, Arthur, and I want you to keep as far from him as possible.

Arthur—I do, ma—he stays at the head of our class all the time!

It

A lady once asked a little girl of 5 if she had any brothers.

"Yes," said the child, "I have three brothers."

"And how many sisters, my dear?" asked the lady.

"Just one sister, and I'm it," replied the small girl.

How Did She Know?

Little Pauline, aged 4, and Paul, aged 6, were visiting their aunt. While there they discovered some caterpillars in the back yard. The boyish bravery of Paul soon induced little Pauline to help him and they fastened the caterpillars in a little house made of sticks.

When their aunt found them she said:

"Pauline, if I ever catch you playing with those things again I shall place one of them on your tongue."

"I'm not afraid; they ain't sour," replied Pauline.

The Expected Answer

Elsie is a self-willed child. One evening while her brother was studying his lessons she asked him something. Getting no reply, she repeated her question, and again repeated it with increasing petulance. Her mother said rebukingly:

"Don't annoy your brother, Elsie. Can't you see that he's busy?"

"I know," replied the child, "but he might at least have said, 'Shut up!'"

Suiting the Day

Billy (who is putting in a long Sunday afternoon)—Let's play auto with the chairs, mummy, and you take a ride with me!

Mother (with an eye to uplift)—I guess not, dear; I don't really approve of pleasure rides on Sunday.

Billy (after a moment of earnest thought)—But this isn't a pleasure ride. We'll play I'm taking you to see a—a moving picture show of scenes from the Bible.—Life.

As Usual

Jacky had been imparting to a friend the important and cheerful information that his father had got a new set of false teeth.

"Indeed, Jacky," replied the friend, "and what will he do with the old set?"

"Oh, I s'pose," answered Jacky, "they'll cut 'em down and make me wear 'em."

Limitations of Art

The head of a certain Washington family was recently approached by his son, just nearing his majority. "Father," said he, "I want a talk with you concerning my future. I have decided to become an artist. Have you any objections?"

The old man scratched his head effectively and replied:

"Well, no, son — provided, of course, that you don't draw on me."

Bright and Breezy

Not Alone

"She dresses with great pains."

"Yes; her shoes pinch, her corset is too tight and she frequently scorches herself with a curling iron."

Where Father Came In

Johnny—You're the meanest, hatefullest, spitefullest thing I know.

Tommy—And you're the crabbedest, ugliest—

Father—Boys, boys! You forget that your father is in the room.

Misrepresenting India

"India," said an Irishman welcoming a Welshman to Calcutta, "is just the finest climate under the sun, but a lot of fellows come out here and they drink and they eat, and they drink and they die, and then they write home to their friends a pack of lies and say it's the climate as has killed them!"

Proof Positive

"Do you know Bill Sarks?"

"Shore, I know him."

"What kind of a young man is he?"

"Pretty fair."

"Is he honest?"

"Honest? Shore. Why, he's been arrested three times for stealin' and acquitted each time."

Sufficient Reason

Betty was milking the cow, when the mad bull tore over the meadow. Betty did not stir, but continued milking. Observers who had run into safety saw to their astonishment that the bull stopped dead within a few yards of the maid and cow, turned round and went away sadly.

"Weren't you afraid? Why did he run away?" asked everyone of Betty.

"He got scared," said Betty. "This cow is his mother-in-law."

Too Bad

A housewife, being without a maid, wrote to a young colored girl whom she knew to be out of work and offered her a position. A day or two later she received this reply:

"Dere Mis Payne: I am verry sory but I cant come. I wish I gotten your letter jes a few days before, but now I cant come cause ime going to get married tomorrer. respeckfully Annie."

Many Have It

A local politician was traveling on a country road, and an old farmer gave him a lift.

"What are you in business?" the farmer asked.

"Me? I'm a professional man!"

"What profession?"

"I'm a politician."

"Politician!" scornfully replied the farmer. "That's not a profession. It's a disease!"

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The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Some Timely Reminders for Hog Raisers

Your Success with Next Year's Pig Crop Depends Largely Upon the Care Given the Herd Now

WE HAVE now reached the time of year for rounding out the season's work in making a good profit out of the hog business. The shoats to be put upon the market are now to be finished, the brood sows to raise next season's crop of pigs will soon be weaned and started through the winter on their own responsibility, so to speak.

The amount of this profit, to a considerable extent, depends on the thrift of the pigs. If we have a bunch to be fattened we must have them in the pink of condition, and not only have them that way, but keep them so, if we get the most pounds of pork from the amount of corn or other feed consumed.

To get the necessary profit does not mean that the hogs to be fattened must now be carrying any great amount of flesh, but it does mean that they must be thrifty, strong and vigorous. It means that they must not be covered with lice; it means that they must not be retarded in their growth by being infested with worms.

Far too many of our hog growers are feeding a bunch of pigs for the market that can't possibly make satisfactory gains just because of worms or lice, or both. Corn at 60 cents or more is pretty expensive worm and lice feed. Some of our hog growers complain of the prices they have to pay for worm killers sold on the market. We fully realize that these remedies cost money, at the same time hogs are by nature infested with these worms, and we believe it is far more profitable to pay the amount necessary to rid them of the pests than it is to feed them corn at 60 cents, oats at 45 cents, shorts at $1.40, etc. We believe the greatest profit can be obtained by hog growers not letting their hogs get infested with worms to such an extent that drastic measures have to be taken to rid them of these pests.

Equally as much can be said of lice. Why not provide methods whereby the hog will keep himself rid of them. He will do it if given a chance.

Sows at Breeding Time

The bunch of sows you are keeping to be bred to raise your next crop of pigs must be in first-class condition at breeding time if you expect good results to follow. You cannot expect a good, strong litter of pigs from a sow that is in a rundown condition when she is bred. Do not wait until the day you want to breed these sows to begin getting them in shape. Be sure they are not weakened by being infested with worms or lice.

The brood sow at mating time should not be fat, but should be in a good, vigorous condition. She should be in such condition that she can take on flesh gradually from the time she is mated until the day she is to farrow. Just have in mind the fact when feeding the brood sow that you are not alone feeding the sow, but that you are also feeding the litter she is carrying. If you want this litter to be strong and grow from the start, have your sow in the right condition when she is bred.

Both brood sows and hogs to be fattened have two battles to fight at this season of the year that they do not have at other seasons. The probable changing weather conditions just now are hard on hogs. We are liable any day to have a cold rain, a sleet or even a light snow. If your hogs are not in the best of condition they are liable to give you trouble on this account.

If you have not a good, dry shed, well bedded, in which your hogs may take shelter in case of bad weather, do not neglect another day providing them with such a place.

From Old to New Corn

New corn is now being fed, and on many farms the change from old to new corn will be too sudden. The whole digestive system of the hog may be disarranged by this change from old to new corn. It is necessary that this change be made, and with some farmers, on account of finances, old corn cannot be fed as long as it should be. In these cases it is all the more necessary to have the hogs free from worms and lice and in the best of thrift.

The successful growing of fall pigs we believe is more difficult than the successful growing of spring pigs. They must have the right kind of a start and must not be allowed to get stunted. If the pigs get a setback it is much more difficult to get them going right than in the case of spring pigs because of weather conditions.

The spring pig after weaning can go out in the pasture and get the best of food, while his fall brother can only get what is fed to him by the herdsman, and too often this feed is not of enough variety and not fed in sanitary surroundings. This makes it all the more necessary for the man raising fall pigs to have them in good thrift and to keep them that way.

The hog business is not a big, easy business. It is business made successful by close and prompt attention to many little details. One cannot successfully grow hogs and leave them to their own resources except possibly in the fall, when an alfalfa field adjoins a cornfield, one or both of which is supplied with water and a good shed or barn. In this case a hog will take care of himself if he is put into this field in good, thrifty condition.

Hogs Need Careful Attention

Too many people have an idea that anyone can successfully grow hogs—that it is "easy money." It is easy money if you know how and do as well as you know. Hundreds of farmers know how to grow and feed a hog, but don't do what they know should be done, just because they are busy and put it off. Thousands of dollars are lost to hog growers every year just because they don't give attention to the little necessary details at the right time.

We believe if it were possible to make accurate figures showing the amount of money lost to our hog growers each year on account of hogs being infested with worms and lice, being set back in their growth because of poor housing, improper bedding or no bedding at all, because they are not supplied with good, pure water, it would scare us into paying more attention to the many little things we must do to make the most of our opportunities in this great industry.

Hogs and the feeds necessary to fatten them are both high. It is both possible and probable for both of them to be higher. We know it costs money and some time to do all these things when they should be done, but would it not be good business? Would it not be money well invested to do the things necessary to keep our herds in the very best of growing condition? We always want to bear in mind one thing, and that is the amount of money we have

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Pedigree---What it is and What it Means

Fine, Uniform Individuals Cannot Be Produced from Indiscriminate Crossing of Blood Lines

IN ONE of the farm journals we recently read a letter from a hog grower speaking about the selection of a male to put into his herd, saying that too much attention is paid to pedigree and too little attention to the individuality of the pig. We fully agree with him in that very often too little attention is paid to individuality, but as to pedigree, we believe that far too often it is disregarded entirely. We do know, however, that many farmers, especially breeders of pure-bred stock, too often use a sire in the herd with a good pedigree, but not up to standard as to individuality. We are firmly of the opinion that the using of a sire with a poor pedigree is as bad business as using a sire of poor quality.

To get results that should be obtained the sire must have both a good pedigree and be good individually. What is a pedigree? Simply a record of the ancestry of the animal, nothing more, nothing less. This pedigree may be good or it may be bad, depending on whether or not the ancestry was good or bad. The record shown by this pedigree is right just in so far as the party signing the pedigree as the breeder is honest and careful in his breeding methods. Unfortunately, in the breeding business there are a few men who will take a promising animal and give it a pedigree, showing the sire and dam, which he may have in his herd, to be good individuals of proper breeding, when, in fact, the animal for which the pedigree is given may have come from inferior ancestry. We are pleased to state, however, that men of this character are few and far between among the breeders of pure-bred live stock.

Get Pedigree With Animal

Sellers of pure-bred live stock are often told by the purchaser that they do not care anything about getting a pedigree for the animal they buy. This is one of the worst mistakes the purchaser can make. How often have some of us been visiting a neighbor who is recognized as a good feeder of any kind of live stock, in looking over his bunch of pigs or calves we find they are by no means up to the standard usually found on this farm. We ask the owner of these animals why it is that his animals are not up to standard. He will reply, "I don't know; I have taken every care I could of them, and even given them special attention, but somehow or other they do not grow as they should." In nine cases out of ten the fault is in the pedigree of the sire of these animals. It is possible that the sire may have been an animal of good individuality, yet if the pedigree were examined it would probably show a streak of poor breeding not very far back. This is a case where the pedigree is invaluable to the stock breeder.

Compare Last Year's Sire With This

He should by all means have a pedigree of the sire of these animals, and when he goes next year to buy a male to put into his herd, should he do so by mail order, in addition to asking the three questions always asked when making inquiry, "What is the age, weight and price?" he should also say in his letter of inquiry, "Please send me a copy of the pedigree of the animal you are describing." He should then go to his desk and dig up the pedigree of the animal used last year, spread it on the table, comparing it with the animal he is contemplating buying and see to it that none of the poor blood lines shown in the pedigree of the animal used the previous year are in the pedigree of the animal he is contemplating buying.

Often have we come across the reverse condition. We visit a neighbor who is not a good feeder and scarcely, if ever, has his animals up to standard. We find in his herd good individuality, the animals looking good and thrifty, and evidently making good money for the feeder. He is asked how it comes that he has a bunch so much better this year than usual. His reply will be that "I don't know; I have not taken any extra care of them, but they just come along fine." It is a good guess that the sire of these animals had a first-class pedigree, showing strong breed character, backed up with individuals of easy feeding quality. This man, if he will, may materially increase his earning capacity by carefully keeping the pedigree of the sire of these animals and next year when he goes to purchase the new sire compare the pedigree of the animal he figures on buying with the one of the animal used last year, and see to it that the same blood lines are in both pedigrees in from three or four generations away from the individual.

American-Bred, But from the Best European Stock, These Horses Are the Kind the American Farmer Wants for His Own Work and That Are Most Saleable on the City Markets

Ancestry More Than Individual

Careful study of pedigree is as much the business of the stock grower as is careful study of feeds and feeding. To get the most out of the grain consumed we must have a good foundation. To be sure of a good foundation we must have animals of good breeding, which is nothing more or less than animals of a good pedigree. Too many of our farmers and stock growers seem to be scared of the word pedigree, and when it is mentioned to them they throw up their hands in holy horror and say, "I do not want anything to do with the pedigree. I want a good animal."

It is a well known fact among breeders who have bred animals that sometimes there are genuine freaks. We mean by this that there may be an animal of splendid individuality, having a pedigree that is recognized as practically worthless. In nine cases out of ten this animal will prove a dismal failure as a breeder. We sometimes have the other kind of a freak—a poor individual carrying a good pedigree. If we were compelled to make choice between the two we would prefer the poor individual with the good pedigree, rather than the good individual with a poor pedigree. It is not, however, necessary to use either, and the use of either one is certainly to be discouraged. If we will give the matter our attention we can easily buy and use a good individual with equally as good a pedigree.

A clear case of this kind came to our notice last year. At the Nebraska State fair we saw a very promising pig. We had a commission from one of the good breeders of the state to look out for a pig for him. This pig impressed us very much, so much so that we called the attention of the breeder, who happened to be at the fair, to the animal. He also was impressed with him and told us that he thought the pig would fill the bill. The owner of the pig was asked about his breeding. A glance at the pedigree was enough. There was a "yellow streak" in it, and consequently the purchase was not made. The price asked for the pig was $100. We afterward saw him sell for $26, and believe then that the purchaser did not get his money's worth. It was our privilege to see this pig during the last summer, and also see some pigs sired by him. The individual himself had not made the growth he should and his get were by no means what pigs of their age should have been.

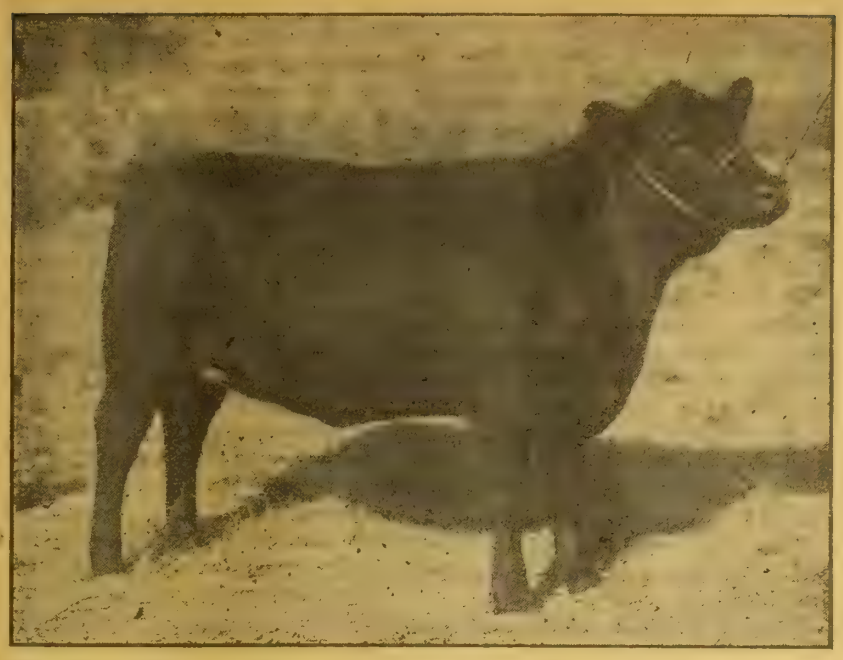
This Sire is Not Only a Good Individual, But His Pedigree Shows That He Came from a Line of Heavy Milking Ancestors. This Quality He is Transmitting to His Daughters

Value of Line Breeding

We made mention above of the desirability of one seeing to it that some of the same blood lines are in the pedigree of the animal intended for use that were in the one last used, provided this animal was the right kind. This brings up the question of what is called line breeding and by

many referred to as inbreeding. It is a question that should be given far more consideration than is given to it by the average farmer and breeder. Years of experience and careful observation along this line have convinced us that if best results are going to be obtained violent outcrosses in blood lines should not be made. We mean by this that we would not use a male of entirely different blood lines from the females without first either trying this cross or knowing what the cross would produce.

Just this year we used a boar of good individuality and of equally as good breeding on a sow equally as good as the boar, both individually and of pedigree, but having entirely different blood lines. We naturally expected good results, but the opposite was true. There were eight pigs raised and we doubt if there will be one in the litter that will be good enough to go out as a breeder. Suppose a whole bunch of sows had been bred this way. The loss would have been considerable. There can be no question but that the best of our show and breeding animals have been produced by mating animals having something of the same blood lines. We do not believe it best to make this mating too close. We would get from three to four generations away.



This Angus Heifer is from One of the Best Herds in the Country. She Shows the Results of Careful Breeding as Well as Proper Care and Feeding

We often hear farmers who raise animals for the block only say they don't want a show animal, they just want a good, strong, common individual. What is a show animal? It is nothing more or less than the best that can be produced by the party showing it. Probably this show animal did not eat a bushel of grain more than many of the other animals on the same farm not nearly so good. If this is true, why isn't it the kind of an animal to raise?

What the farmer needs and should have is the animal that will produce the most pounds of meat for the feed consumed. To get this he must not only study the individual, but he must study the pedigree as well. If his breeding and feeding operations are now satisfactory, keep them so by going along the same line, only selecting, if possible, better sires each year. The best and surest way to do this is to study the pedigree.

Retired Farmers and Why They Retire

Views on the Landlord and Tenant Proposition, One of the Most Difficult Problems of Retirement

LAST spring we commissioned Mrs. George A. Loveland to interview a number of farmers and retired farmers on the subject of retirement from the farm, their reasons for retiring and whether or not they were contented after retiring. In our issues of September 5 and 26 we published a number of these interviews, and believe that the man who is considering retirement can find much of value in these little stories of those who have left the farm.

In this issue we are publishing the story of a man who did not retire because he had never been a farmer, but who owned a large number of farms throughout the country. His experiences are related here because they have a bearing upon the nonresident owner problem, which confronts most retired farmers. We also give an interview with a farmer who has not retired and who has no thought of retiring. The owner of a good farm after twenty-five years of renting, he believes that he has reached his goal. Why?

Remember, these are real interviews with real men, and only the names are changed.

Forty Farms to Rent

"Mr. Shattuck," I said to a neighbor one evening, "I know you are a farm owner, and I wonder if you would tell me some of your experiences with tenants, and whether you think it pays to rent out a farm, or can you make more by loaning your money?"

"Experience? Well, I should say I had; gobs of it! And does it pay to rent farms? Why, I only average 2 per cent renting, while I can loan my money out and get 8 or 9 per cent. I own forty farms, by the way, in eleven different counties, all the way from 18 to 300 miles from here."

"But," I argued, "your farms are increasing in value all the time."

"Of course, and that's why I am holding on to them. They reach a maximum value, however, eventually, when it is no longer profitable to hold them; then I sell. A few months ago I sold a 231-acre farm in York county for $41,000; that is about $177 an acre; the improvements were just ordinary, nothing extra, but York, you know, is a dry county, and always has been, and always will be no doubt. Well, this man had six sons, and he was willing to pay a good deal more per acre to have those boys grow up where no liquor was sold. It is fine land, too, only a mile and a half from town."

"That seems like a big price," I commented. "Still, some friends of ours in Saunders county told me how an Iowa farmer had sold out for $225 an acre, so $150 looked cheap to him, and he paid that for land next to theirs."

"Yes, there are plenty of farms in Saunders county selling for $150 an acre, and $2, $3 or even $4.25, the highest cash rent I get, seems like a small return on such valuable land. Still, I'd rather rent for cash and get my little $2 or $3 without being pestered to death trying to get my share of the grain rent. My time is too valuable to spend it keeping watch of things, and, you know, it isn't in human nature when a man's landlord is, say seventy-five miles away, for him to be absolutely honest; it's natural for a tenant to leave your corn out where the hogs and chickens can get at it and keep his own safe in the granary. I used to have agents, but they were generally busy men, bankers, real estate men or the like, and couldn't spend the time to go out and look after my interests properly, so I'd rather take cash rent, even if I don't make as much."

"Do your tenants make many demands for repairs, etc.?"

"Well, some of them do pester me a lot; if a fan comes out of the windmill, or the well rope breaks or anything happens, but I generally look out for good tenants; besides, I have a pretty definite understanding about repairs and the like at the beginning. When I get a good tenant I try to keep him as long as he will stay. Some of them get ahead enough to buy farms of their own. My father had one tenant, Gottlieb Mueller, who leased a farm for five years, and at the end of that time came to him and asked for another five-year lease; then at the end of ten years he did the same. When he had been on the place fifteen years he had made enough out of the land to buy a farm of his own in the central part of the state."

After Twenty-Five Years

I had retired to the hammock east of the house to read, leaving a note on the front door to this effect: "You will find me in the back yard." In the midst of an engrossing editorial in the morning paper on "Tenant Farming" I heard footsteps in the grass, and on looking up saw one of our old friends, Mr. Howard Andrews, a farmer near Rokeby.

"I'm completely turned around," he explained. "I've been looking for the Tate's and have spent a lot of time wandering around this neighborhood; finally I concluded I'd ask you to show me where they live."

"Certainly," I answered heartily, "I'll walk down there with you, and on the way I want to ask you some questions. I know you can answer them, for you've had experience both renting a farm and owning one."

"I'll be glad to tell you anything I can," he agreed.

"Does it pay to own a farm, and when you rented, what kind of landlords did you have?"

"Well, according to my judgment it isn't wise to buy a farm unless you've a good deal of cash to start with. For instance, if you buy a $16,000 farm and have only $6,000 in cash, the interest on the $10,000 eats the profits up, and even if I had plenty of cash I wouldn't buy if I didn't have boys, or just because I wanted to own a home of my own."

"Yet there is a satisfaction in owning a home that you can't put a money value on. Your place is so pleasant, there in that sheltered valley, so far back from the road, with the green grass and trees all around. I think Mrs. Andrews' name, 'Green Peace,' just fits."

He smiled indulgently, and went on. "I rented for twenty-five years, and always had good landlords. There were two I didn't like, but I never had any trouble. It's been my experience that if a tenant does his part, and perhaps a little more, the landlord'll do his. I started out to make a reputation for being a good tenant; then I knew I could rent the best land. I never took a run-down farm, but always looked out for good land that had been well

(CONTINUED ON PAGE SIXTEEN.)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

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Chicago, 901 Hearst Bldg., H. W. King, Manager
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To all points in Canada, per annum, in advance 2.50
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It is a good plan to use any spare time in cleaning all the manure out of the yards before it freezes up. The cleaner our yards are the better the stock will thrive this winter.

Rats destroy more corn during the winter than many of us imagine. If possible, fix the crib rat-proof. Before the cribs are filled a good job of poisoning can be done. It will pay.

The county fairs in Nebraska have been unusually good and unusually well attended this year. The Big Four fair to be held at Fremont from October 12 to 17, being a combined fair representing four counties, is expected to be among the best. Superintendent Ronin reports a large number of good entries.

It is pleasing to note the many comments being made on the splendid increase in size and quality of the poultry exhibits at this year's Nebraska State fair. The leading poultry breeders of Nebraska, Iowa and Kansas exhibited a total of 2,631 birds. The states of the Missouri valley are steadily forging to the front in the production of poultry, both utility and fancy.

Most of the plants grown for the purpose of manufacturing drugs are grown in Europe. Since the outbreak of the war it has become impossible to import the plants and manufactured drugs, and a movement has been started to get the farmers of this country to raising these important crops. Many of them do not grow in this country, but a number of the most important do. The United States Department of Agriculture has issued a bulletin telling what drug plants may be raised here and how to proceed to grow them.

Prof. Bliss' Place Filled

The position of head professor of the animal husbandry department of the Nebraska College of Agriculture, made vacant by the resignation of Prof. Bliss, has been filled by the Board of Regents, appointing Dean Burnett as head of the department and Profs. Gramlich and Lee assistants.

Dean Burnett, of course, will not be able to devote much of his time to this department, but will have general charge, leaving the details to be worked out by his assistants. Dean Burnett, however, is in close touch with matters pertaining to animal husbandry. While having general charge of all departments of the college, the dean has always given close attention to the work of animal husbandry.

Prof. Gramlich has for some time past been connected with the extension department, his work here bringing him into close touch with many farmers and stockmen, by whom he is held in high regard. We feel safe in saying that the appointment of Prof. Gramlich to work in this department will be especially gratifying to stockmen and farmers generally.

Prof. Lee has been in this department for some four years past and by his attention to the work entrusted to him has made himself felt as being a man able to do efficient work in our college.

The Twentieth Century Farmer hopes to see the work go forward in a substantial manner and believes, in making the appointments noted above, the regents have acted wisely in filling the vacancy caused by Prof. Bliss going to Iowa.

Teaching by Object Lessons

The tendency of the present time is toward getting back to the original idea and purpose of the agricultural fair, that of education and teaching by object lessons. The beginners in agricultural fairs had no thought or purpose in display for the single purpose of pleasing the eye of the curious sight-seer. They were prompted by entirely different motives than those which now govern in the street fair, and too frequently the fair under the name of agricultural fair, giving it in this the distinction of the most honored and popular designation possible in the line of production.

It is only in recent years that the work of agriculture has broadened out to an understanding of its possibilities in education and development. The agricultural fair, show, exhibition or exposition, or whatever title it may choose for its designation, has had practically but the one purpose in view, that of display, the pleasing of the eye in grandeur, quality and exhibition taste and arrangement. These features of exhibition are not without their influence for good. They instruct by showing the possibilities of what can be done, what has been done, by good breeding, good seed and right management. They fail, however, of the greatest advantage in not being made to tell how they are produced, by what system of seedbed preparation, planting, cultivation, moisture, soil conditions, etc.

The Nebraska agricultural exhibit made by the agricultural college at the state fair this season, and at a number of county fairs in the state, has demonstrated how important it is to make every feature of display educational; make it tell its story, make it teach some lesson that will tell how it was produced, so that those who are interested in its growth or development may go home prepared to take up its reproduction, if they so desire, and with some assurance of success.

The county fair, and all fairs of an agricultural character, should plan for educational influence as well as to secure attractive qualities. Decorative taste in exhibit need not be sacrificed. This can be carried along with the main features of instruction, available with every distinct article exhibited, or nearly so. There is a growing demand for the reason of things. People are becoming more interested in the methods of production; they are training each day along the lines of scientific work and have this as capital stock to use when occasion requires. They are anxious to be told and shown how results are secured. Seeing is not enough for the present-day student; he must be shown and instructed as to the details of how these things are produced that are placed on exhibition and are of superior merit.

How to Pull Stumps

When once the process is understood, it is easier to get rid of stumps than to keep them in the ground. The stump of any kind of tree, large or small, is an accepted nuisance on the farm. It is always getting in the way and it is an everyday nuisance. In the cultivated field it takes up room and breaks plows with its widespreading, underground roots and can cause more exhibition of bad temper in the space of five minutes than a whole grove of trees will in ten years.

There is a limit to tree advantage on the farm. A well arranged small timber lot on the farm, where trees may be grown for posts and fuel, is a conceded advantage and convenience on the farm, but when a tree has served its purpose and is cut down it leaves a stump, not a thing of beauty or in any sense of value or advantage, but a blot on nature, a reproach on its former beauty and dignity as a tree. There is no reasonable excuse in this day of progress and improvement of mechanical ingenuity and inventive genius for a stump to be a stump, or for such ugly, out-of-place obstacles to be permitted to cumber the ground and mar the attractive farm landscape.

The stump puller, a machine of modern invention, has come into general use in all timbered districts as a practical, easily applied remedy for the stump trouble. These machines are so geared as to have wonderful leverage power in lifting stumps. When the stump puller is properly applied the lifting power of an ordinary farm team is represented as 300,000 pounds, and is capable of removing the stumps of large forest trees. With exceedingly large stumps it is sometimes deemed advisable to assist by the use of a small charge of dynamite, which shivers or splits the main roots, rendering the lift much easier. Every neighborhood should be equipped with a stump puller and use it in clearing the fields and roadsides of all old stumps and unsightly decaying trees.

What Are You Feeding?

Hogs at this season of the year should be strong and vigorous. We recently visited a farmer who has more than 300 hogs on his place. In looking over a bunch of about fifty in one yard we remarked to the owner that his pigs didn't look as thrifty as they should. He said, "Oh, I don't know."

Looking more closely at the hogs we noticed they were covered with lice. We asked him when he had dipped or sprayed them, and the reply was, "Not this summer." Corn at this farm was worth 65 cents per bushel. We wondered, while looking over this bunch of hogs, how many dollars this man had spent during the last summer for corn to feed lice.

Going from this farm to the one adjoining, we found a nice, thrifty, growthy bunch of hogs. No lice were to be found here. This farmer said he had dipped his hogs twice and in addition we found a rubbing post in the yard in good working condition.

It is immaterial to us what method a farmer pursues to keep lice off his hogs. He may dip, spray, sprinkle or use some practical rubbing machine, of which there are many on the market. It is, however, very material to the hog grower whether or not he uses one or more of these methods. No man can make any money feeding 65-cent corn to hogs worth from $8 to $8.50 per hundred that are covered with lice. It is no easy matter to keep lice down in your herd, but you can if you will. Will you?

Steady Horse Demand

Kansas City reports a steady sale of from 200 to 300 horses per day to the British horse buyers, who have been for several weeks operating there. While this is not considered an alarming special demand for one locality, nevertheless it furnishes a very healthy stimulant to the trade and gives horse dealers some assurance of the market continuing for some time.

There is no better feature of live stock stimulant than a good, healthy demand for the surplus good quality horses that are accumulating all over our western states. We need a strong market for several hundred thousand of these horses. This would put a little vim and independence in the farmer horse raiser, who has been trying to believe that there is no money in raising horses. The horse holds a place that no other motive power can substitute, satisfactorily. Breed more big, active horses; they will be in demand when grown at better prices than now prevail.

Did you select your seed corn and then dump it down in a pile in the crib or granary? If you did, do not lose any time in getting it hung up so it can dry. Binder twine or baling wire will either of them answer the purpose.

Improve Breed by Feed

That the breed quality of an animal can be improved by proper methods of feeding is a doctrine that demands considerable bolstering up in order to become to any appreciable extent operative in any kind of a herd or flock. It is an excellent argument, however, when applied to the already well-bred animal. The better the animal, the more satisfactory the application of feed on breed. But when this system of improvement is applied to the poorer grades of stock it is found that hereditary tendencies will not be improved enough to justify the endorsement of such an expression, when directed to breed qualities in the animal. It is a hard task to take a low-bred scrub and by any course of feeding accomplish satisfactory improvement. It must be conceded, however, that heavy feeding improves the scrub.

The tendency to development under the influence of the best flesh-forming combinations of feed for growing the animal has had its influence toward bettering quality. This is as forcibly correct as that poor care and starvation treatment of the pure-bred animal has a tendency to retrogression in quality of the animal.

To Make Up Shortage

There is a seed time and harvest for every feature of farm production. If this provision for nature's fulfillment of the opportunities within the control of man be neglected there will result a shortage, a scarcity in supply of whatever feature of production this neglect represents. The producer who at seed time stands idly by asking himself, "What shall the harvest be?" without lifting his hand in directing the affairs of seed time and production, becomes a contributor to poverty and want. There are times in the history of all people, of all countries, that a sort of spontaneous influence assists in directing and guiding their plans in keeping down serious needs and in keeping up an equilibrium in production.

There is a need now quite prominent before the people of this country—the production of more meat-producing animals. This very pronounced shortage will be felt more next year than now, and each succeeding year for several years will this dearth in production become a more sensitive question for solution by the people. It is conceded by all considerate thinkers and investigators that there is but one reasonable solution, and that is increased production. It has become a problem to be solved by the land owners of this country. The land is the basis of food supply, and there are millions of idle agricultural lands in almost every state in the union—lands that are not now utilized in the growing of crops or the production of live stock.

The demands are becoming greater each year; the increase in population is estimated at about 1,700,000 of people annually. There is demand for not only increased acreage in production, but increased production on the present acreage devoted to crop and live stock operations. The country is becoming more interested in agricultural improvement, in the production of larger and better crops, and yet the prices obtained are an evidence that the common people are not well fed. There are too many large, partially cultivated farms; too many idle farms, too many consumers and too few producers; there is an out-of-of-balance condition of producer and consumer, which it will take time to adjust.

The present live stock need is to economize time and opportunity in increasing production. The pig crop for next spring should be as large as possible. In hogs there is the greatest opportunity for quick returns, and pork meat may be made the substitute for other meats to a large extent, owing to its curing and keeping qualities. Center every effort on the wiping out of hog cholera and the lowering of meat prices by increased hog production. The corncribs of the country will soon be full of corn; these, with the alfalfa fields, should contribute to a largely increased supply of pork for next year.

Farmers interested in dairying, and we are pleased to note the number increasing each year, will be interested in Extension Bulletin No. 25, issued by the Agricultural Experiment station of Nebraska. This bulletin is entitled "The Babcock Test and Its Use in Herd Improvement." It explains fully the use of the Babcock test and shows the necessity of its being used generally by farmers and dairymen. You may be able to add many dollars each year to your net income by sending for a copy of this bulletin.

Gophers are busy in the alfalfa fields. It is up to the owner of these fields to get busy also. Take an old pitchfork handle and sharpen one end; dig around the gopher mound until you find the runway, then drop in a piece of potato or carrot into which has been placed a few crystals of strychnine; fill up the hole and you won't see any more damage from that gopher.

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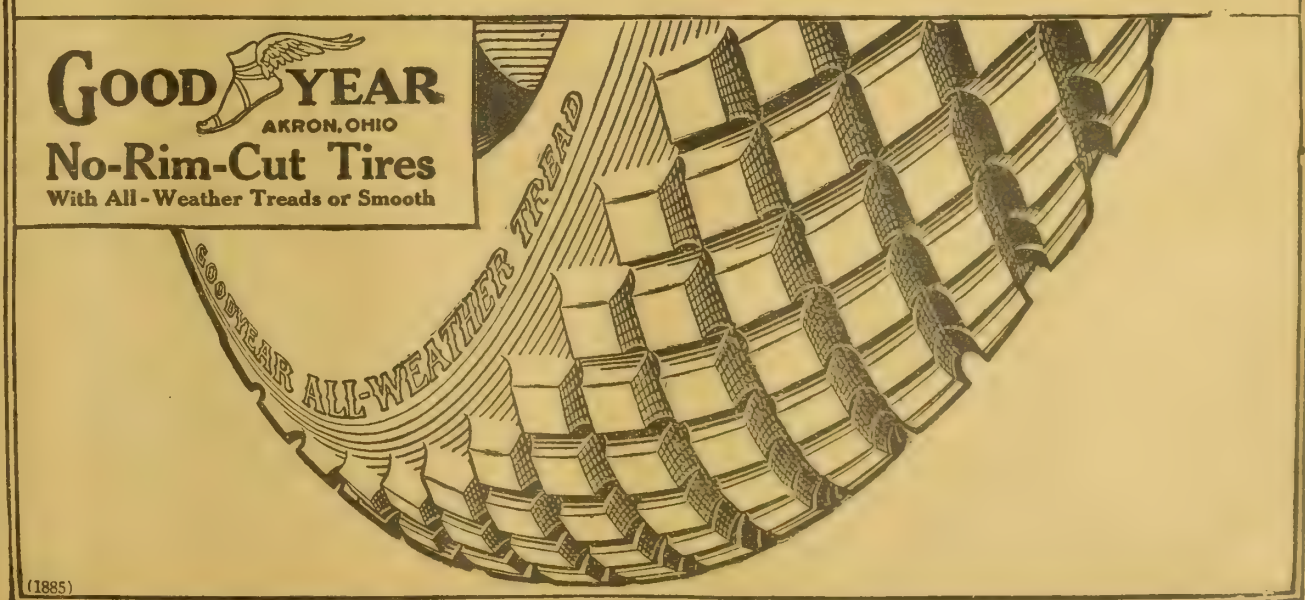

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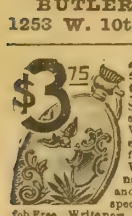

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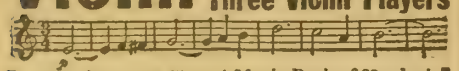

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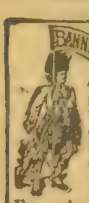

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Starting the Breeding Flock

THIS is the season of the year that most new flocks are started, and it is a very proper time to start. Every beginner in the farm flock industry should first prepare for his new flock enterprise by providing first, good, securely fenced pastures that will hold the sheep without any liability of getting out. Yards or corrals should be not only convenient, but dog-proof; the pasture enclosure should be constructed with a view of keeping the dogs out. It must be remembered that the flock loss all over this central western country and the old eastern sheep-growing states as well, results from the sheep-killing dog; therefore, it is very important that this feature of probable loss be well considered and well understood by the beginner in the sheep-keeping business. This, like all other features of loss liability, must be provided for in advance in order to be effective and guarantee security to the flock.

It is necessary that the farm flock be provided with hay of a better quality than is usually considered good enough for the cattle. It is a good plan to select the finest hay on the farm for the sheep. If the farm flock is to be made a permanent part of the farm industry there should be a sheep house built with overhead hay loft or mow sufficient to hold hay for the sheep it will house during the feeding season. This will always be found a paying investment; it is needed during the lambing season; it is needed every day and night when the flock is confined to the yards of corral that are wet, stormy or inclement, so that the sheep would be more comfortable in the shed or barn than outdoors.

It pays to keep all stock on the farm comfortable and in a condition of thrift. This is a very important matter for the beginner in any line of live stock on the farm, and this lesson should be indelibly impressed on the mind of every owner —that the condition of thrift in the animal is the only condition in which the animal is paying for his feed, for his keep, for the investme that is in him. It never pays to hold stock of any kind on a decline in condition. Every pound of flesh and growth costs so much per pound to acquire; starving it off or losing it from any cause is just so much value lost; therefore, in your flock industry be careful to keep the members of the flock always in a condition of thrift and good health. It will pay and you will enjoy owning and caring for them.

When once prepared properly to handle the farm flock, then select your breed, remembering that all the good mutton and wool breeds are money-makers. Some are more popular with the farmer, feeder, dealer and sheep handler than others. It is usually safer to be dealing among the popular breeds, as they offer better opportunities for sale. It is a good idea for some beginners to commence with a good class of grade sheep rather than pure-breds. It takes less capital for the investment and they are more readily disposed of in case the venture does not prove as flattering as anticipated. A sheepman will succeed with a bunch of good grades if it is in him to like sheep.

In starting it is very important to buy young ewes. The seller will always try to get rid of his old ewes, as these are the least desirable from the standpoint of the farm flock. Yearling ewes are the most desirable at this season of the year. In this class of sheep you get all their years of usefulness. They will start right in production, drop lambs when 2 years old, and should then be big, strong ewes, prepared to raise a good lamb. It is a bad practice to breed younger ewes and results too frequently in stunting the ewe and the raising of small, undersized lambs.

In selecting the ewes be careful in your choice, remembering that you are the buyer and that you are the chooser, and that you can get what you want if you take a little time to look around. Do not get careless and buy inferior ewes just because they are offered to you at a bargain. Get big, strong, well grown ewes. Get them of one man's breeding if possible, of one ram's get if possible, and have them look alike. This is not hard to do if you buy from the breeder. At all events, have a type of sheep in your mind and get as nearly as can be this ideal, all alike. It is a delight to see such flocks, whether grades or pure-breds. It indicates good, careful breeding, and you can depend on carrying this out in your breeding efforts if you are careful in the selection of a ram.

A good judge of sheep will quite frequently get splendid ewes for a start in flock work by buying out of the large shipments that come to the big markets for sale. This takes an experienced handler of sheep, a judge of fleece, age and general mutton and wool qualities of the animal. Thousands of very desirable breeding ewes of proper age come from the range in the big shipments to the central distributing markets. All sheep coming in this way should be dipped and carefully guarded until there is no possibility of disease being among them. When sheep are free from disease there is very little liability of the farm stock becoming sick or infected. Tick nuisance is the most common among sheep, but can be gotten rid of by close inspection and dipping, and when clean need give no more trouble.

The breeding season is here, even for the farm flock. October breeding brings March lambs. A little early, however, unless the ewe flock is well provided with good, tight stabling and plenty of nutritious feed, in good flesh and in the hands of someone having had experience in the handling of the breeding flock. One month later brings the lambs at a much better time in the matter of temperature, mild weather, less storm and severe cold. December breeding and the warm sunshine of the month of May sounds about right to the range flock handler, the sheep owner who must depend on outdoor care and treatment of the ewe and new-born lamb. These are features of importance and must be solved by the sheep owner, depending largely upon his resources, time to devote to the flock, care, extra feed, etc.

Money in Sheep

The sheep business of the country is generally in a very healthy and prosperous condition. The ranges and farms are not crowded; in fact, there is a scarcity of sheep to supply the demand. Sheep owners find there is as much clear money in raising sheep and producing wool at present prices as there is in most other live stock operations.

Mutton and Wool

The evidences of better bred sheep, whereby more mutton and wool are produced, is the argument that counts in these days of reform. The demand is for mutton first, then the largest fleece of good, merchantable wool. The ability of man to increase both mutton and wool qualities by selection of breeding stock is a plain and workable proposition.

Nebraska Farmers' Congress

Tentative plans for the fifth annual state convention to be held here on December 8, 9 and 10 were drawn up at a meeting of the executive board of the Nebraska Farmers' congress held at Omaha. The following subjects were agreed upon for discussion at the three-day gathering:

Co-operative creameries, improvement of rural schools, farmers' mu tual insurance associations, rural telephones, uniform live stock shipping laws, Torren's system of land registration, conservation of Nebraska water power and farmers' organizations.

The report of the laws committee of the congress on important legislation and of the committee on the reorganization of the State Board of Agriculture will also be heard.

Delegates from the 1,200 farmers' organizations in Nebraska, comprising the congress, are expected to be in attendance.

Among those at the meeting were:

President George Coupland, Elgin; Vice President Frank Tannehill, Norfolk; Vice President J. B. Grinnell, Papillion; Joseph E. Roberts, president of the State Board of Agriculture, Fremont; C. H. Gustafson, president of State Farmers' union, Mead; Dr. George E. Condra, president of Nebraska Conservation commission, Lincoln; J. A. Ollis of the Improved Live Stock Breeders, Ord; D. R. Ellis, secretary of the State Farmers' union, Omaha; W. R. Campbell, chairman of the Congress Committee on Rural Schools, Clarks; W. S. Delano, secretary of the congress, Lincoln; T. F. Sturgess editor of the Twentieth Century Farmer, Omaha.

It will be unlawful for any person or association to ship between the states for the purposes of sale any seed or grain falsely labeled, or falsely represented as to grade, character or name, if a bill introduced by Representative William A. Cullop of Inidana becomes a law. The bill provides punishment by a fine of not less than $500 or by imprisonment for not more than one year.

Provide For Some Ice

IT IS a good plan to get ready for some ice before harvest time comes, just as it is a good plan to get the mowing machine, rake and other tools ready before haying time is on hand. After being used to an ice supply for several years we would not think of trying to get along without it. The same is true with almost every farmer who has harvested a supply of ice. It is not a difficult thing to keep ice, and most any kind of a building will answer the purpose.

Probably as important a preparation to make as any is the deciding to put up a supply. Sometimes we farmers have to think over anything a long time before making a final decision. I know in my own case I thought about how nice a supply of ice would be for several years before I made much of an effort to get ice. After having it for a year I would not think of getting along without it. So, long before it is time to cut ice, make up your mind that you are going to have some, and then make arrangements for storage room.

I might say that most any kind of a building will do if the other conditions are right. Our building is not a fancy one and it is not made after plans a college man might suggest. It formerly served as a tool house, and although there are no double walls with dead air spaces, we never have trouble in keeping ice from one winter to the next. A hen house would do just as well, and there are few farms that do not have some building which would do for ice storage.

The first thing to look out for is good, natural drainage to carry off the water as it melts from the ice. In the absence of natural drainage tile should be laid in the bottom. This should be done before ice harvest time. Another thing to look out for is ventilation at the top. Open windows provide this. Most any building can be made to supply these two essentials.

A building suitable for ice storage can be built at very little cost. Rough-hewn posts gathered from the farm woodlot will do for the framework. No floor will be needed; the sills and plates can be made from 2x4's spiked together and single 2x4's are large enough for the studding. To these nail rough boards on the outside. Often an old building can be bought very cheaply and reconstructed. If rebuilding have it as near the milk house as convenient. Such a building may not have a very neat appearance, but it will keep ice.

To overcome defects of a double-walled building I use plenty of sawdust between the ice and the walls. This insultation gives plenty of protection; it takes the place of more correctly constructed buildings, and sawdust is cheaper than lumber. A foot of it should be placed over the bottom and a thickness of about eighteen inches between the ice and the walls. Keep it tamped down during the summer and watch out for air spaces.

One should figure on about once and a half as much as will be needed. No matter how careful one is in the packing and watching it during the summer, some of it will melt. If only enough for actual needs is packed the ice will run out before the summer is over with. I used to make this mistake, figuring the number of cakes I would need and the stopping when I got this number put up. After I ran short a few years I began to harvest considerably more than would be needed. A ton of ice occupies about fifty cubic feet, and twenty-five tons will supply the needs of a small dairy. A building 12x12 and eleven feet high would hold the ice, but it would be best to harvest thirty-five tons.

Iowa. W. J. LAWRENCE.

A Complex Business

NO BUSINESS needs better management all around than farming. So many chances for failure are present that it is the exceptional farm that is strong in every particular. Most farms succeed in spite of certain weaknesses. Some of these weaknesses can be corrected; others are due to conditions that cannot be improved, such as naturally poor soil, short growing seasons, steep hills, etc.

Much worthy effort is expended in producing good crops, but oftentimes a gain in the best of crops is lost by feeding to inefficient live stock. There is no surer way of losing money than by feeding crops to animals, the products or gain from which do not pay the cost of feeding.

Some men attribute their success to the particular kind of crop they grow or the particular way of feeding live stock. More likely their success is due to a good sized farm business, good or average crops, and a good quality of live stock.

On fourteen farms in southern Pennsylvania, where the receipts per cow were less than $40, not a farm made as much as $1,000 labor income. On twenty-four farms in the same district, with only a slightly larger acreage, but with the receipts per cow between $101 and $115, only three farms made a labor income of less than $1,000. Half these farms made more than $1,500. The reason is perfectly obvious. The first group of farmers were growing fair crops, but they could not possibly succeed when the other part of their business was so weak. The second group not only produced good crops, but they utilized them efficiently.

Another way in which some farmers fail is in the use of labor, both man and horse. Everything they do seems to take about twice as long as it should, hence they receive only half pay for their work. Farming does not pay for inefficient work any more than any other business. An acre of hay normally requires about ten hours of man labor for each cutting. Some men will waste nearly this much time in just getting started. They may grow good crops and have good stock, but their inability to work lessens their chances of success.

Successful farming calls for the best of judgment. It means good crops, good live stock, well fed and handled, and a thoroughly balanced business in every way.—E. H. Thomson in Farm Management Monthly.

How To Save Money on Tires

Firestone Tire & Rubber Co., Akron, O.
Without obligation on my part please send me free a Firestone Inner Tube Bag and your book, "The Care of Tires." I want Book No. 31. Below I give name of tire I use and dealer I buy from.
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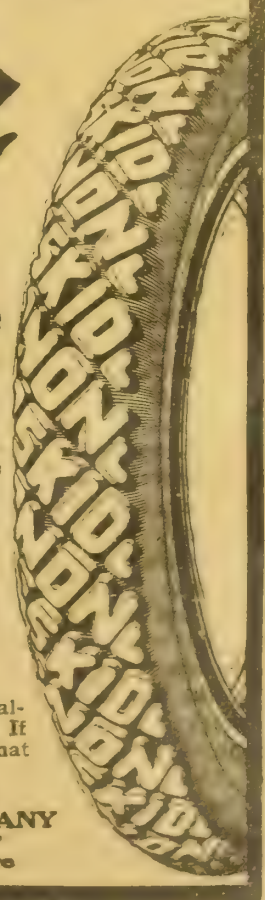

Of Interest to Our Women Readers

Smile It Down

Everyone who loves you
Loves to see you smile.
Loves to see you cheerful
And happy all the while.
Smiling comes so easy!
Do not wear a frown,
If you feel one rising,
Always smile it down.
—Anonymous.

* * *

Time

Time is
Too slow for those who wait,
Too swift for those who fear,
Too long for those who grieve,
Too short for those who rejoice;
But, for those who love,
Time is Eternity!
—Henry Van Dyke.

* * *

Earth and Infinity

There's part o' the sun in an apple;
There's part o' the moon in a rose;
There's part of the flaming Pleiades
In every leaf that grows.
Out of the vast comes nearness;
For God whose love we sing
Lends a little of his heaven
To every little thing.
—Augustus Wight Bomberger.

Baby Health Contests

The editor of this department has had a good deal to say in the past regarding the babies' health contests that are now being held at practically all the large fairs. We wonder how many mothers who read these columns have had opportunities to enter their babies in these contests, and, if so, how many have taken advantage of that opportunity. We believe thoroughly in these health contests and think that the more general they become the more general will become the chances of our American children to get a fair start in life.

The child who wins the medal, cup or whatever the premium may be, is not the one whose parents have got the most benefit from the health contest. The physicians make very careful examinations, as they must to be able to answer the questions on the score cards. The smallest defect is noted, and when a baby scores perfect, or nearly so, it shows that not only is the child normal and healthy in every way, but he is well built, intelligent and has been well cared for and well trained. The mother of this child has reason for pride, but that is practically all she gets out of the contest.

The mother who finds little crosses here and there on her baby's score card is the one who gets the most benefit out of the contest, although the child will not carry off any premiums or get his name in the papers. "Abdomen abnormally large," "inflamed tonsils," spinal curvature" and a number of other blanks, if these contain little check marks, indicate that now is the time to correct some slight defect which may mean pain, disease or possibly deformity if allowed to go unchecked and increase with the growth of the child. The mothers whose children's score cards bear these checks are those who profit by the contest.

Just because you hear a few babies crying, don't believe that the doctors and attendants are cruel. Babies do not like to have their throats looked into, nor do they generally like the scales on which they are weighed, and they express their disapproval by crying. They are not being hurt, nor in many cases are they very much scared. And the doctors are not cruel; they are always very gentle with the children, and careful. At least, we have been present at a large number of these contests and have never seen any evidence of cruelty as yet.

Douglas county, Nebraska, had a baby contest this year in connection with the county fair at Elkhorn. Practically all the babies entered were rural babies. Don't ever believe it if anyone tells you that rural babies do not rank as well as city babies. They do, only there have not been nearly as many country babies examined as yet. No one could wish to see a cleaner, sweeter, better cared for and more healthy lot of babies than the Douglas county farmers brought to this contest. We hope that next time there is a contest held in which your baby is eligible to enter you will enter him, or her, and help to bring up the standard of the rural babies, that people may not go on telling us much longer that the city babies are better than the country babies.

HOME EDITOR.

Our Weekly Recipe

SALMON WITH BUTTER SAUCE —Canned salmon is the greatest convenience about the house when a meal must be prepared hurriedly. It may be made delicious by proper preparation. Cook salmon according to directions on can. While still hot pour over it the following sauce: Three tablespoons of flour and two-thirds cup of butter creamed together; one pint of boiling water poured over this gradually, stirring, and the whole boiled up once. This sauce is improved by adding a little salt and lemon juice. This makes a delicious dish if served with plain boiled potatoes.

Fire! Fire! Fire!

I was reading the other day of the great loss of property by fire in the United States this last year. The reasons given were many, but the chief reason, going far, far ahead of all others, was defective flues, or chimneys, to put it plainer.

A little investigation shows the defection to center in the age of the chimney. An old chimney gets rotten in places and loses its mortar. This leaves holes out of which sparks or coals will fly if the draft be strong. We usually watch the chimney above the roof and in exposed places, but where it passes between floors or between ceiling and roof we may fail to know the "chinking" is out, and here the majority of fires occur.

Chimneys should always be under suspicion, especially if old or you have gas a long time. Gas dries a chimney out in a few years. Sometimes the stoves, especially the cook stove, will tell you that your chimney needs looking after. If the cook stove refuses to draw right, when you know it is not worn out, and you have looked well after all the dampers and find nothing wrong with them, better immediately give the chimney an overhauling for holes, as holes in a chimney will often let almost enough air in to choke out the fire below.

When I was young I was neither afraid of high water or fire. I cannot remember how many times I risked nearly all I owned by fire through sheer carelessness. Angels guard fools, I suppose, or I certainly should have burned out, root and branch, more than once then. But once after I stood by two old people and with them watched the fruits of many years' toil go up in smoke. Nothing saved of their home at all. There was a little insurance on the house. This would give them back a home not so good, but never again could they get back the dear and precious stuff that went into ashes.

I saw by their pale faces and their grief what it meant to lose a home. From that day to this I fear fire second to having death come into the home. That old man, who lived not far from me, had feared I would burn him out when I burned myself out, and was always, impudently I thought, prowling about to see if I left any live coals about at night; after that he never again had occasion to come, for I turned out to be a crank in that line. I watched the fires now that he put out as well as my own.

One cannot be too careful, and all, every one of us, need to watch our chimneys. IDA M. SHEPLER.

The Family

The family is like a book;
The children are the leaves,
The parents are the covers,
That protective beauty give.

At first, the pages of the book
Are blank, and purely fair,
But time soon writeth memories,
And painteth pictures there.

Love is the little golden clasp,
That bindeth up the trust,
Oh, break it not, lest all the leaves
Should scatter and be lost
—Cary.

Wood vs. Coal

Almost every housewife prefers wood to coal, in the kitchen range, at least, as it is cleaner, producing no soot.

Some people can't get wood, some think they can't and others get it. Last winter three of us neighbors got a year's supply of sawed stove length, and none of us have groves. We secured permission of a fourth neighbor to trim all the dead wood from his grove. We began in earnest and hired a circle swaer to work at each place two hours. Most of the wood did not require splitting, so all that was left each family to do was to split the larger pieces and stack the wood.

MRS. WILBER KRISTENSEN.
Iowa.

LIGHT BOOZE

Do You Drink It?

A minister's wife had quite a tussle with coffee and her experience is interesting. She says:

"During the two years of my training as a nurse, while on night duty, I became addicted to coffee drinking. Between midnight and 4 in the morning, when the patients were asleep, there was little to do except make the rounds, and it was quite natural that I should want a hot cup of coffee about that time. I could keep awake better.

"After three or four years of coffee drinking I became a nervous wreck and thought that I simply could not live without my coffee. All this time I was subject to frequent bilious attacks, sometimes so severe as to keep me in bed for several days.

"After being married, husband begged me to leave off coffee, for he feared that it had already hurt me almost beyond repair, so I resolved to make an effort to release myself from the hurtful habit.

"I began taking Postum and for a few days felt the languid, tired feeling from the lack of the coffee drug, but I liked the taste of Postum, and that answered for the breakfast beverage, all right.

"Finally I began to feel clearer-headed and had steadier nerves. After a year's use of Postum I now feel like a new woman—have not had any bilious attacks since I left off coffee."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum comes in two forms:

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The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.
—sold by Grocers.

Styles for Home Dressmaker

6188—Ladies' Dressing Sack. Any of the figured crepe materials can be used to make this sack, with the trimming of ribbon. The sack closes at the front and can be made with either the flowing or gathered sleeves. The pattern, No. 6188, is cut in sizes 34 to 42 inches bust measure. Medium size requires 2⅛ yards of 36-inch material and 5 yards of ribbon.

6907—Ladies' Skirt. Cheviot or broadcloth can be used to make this skirt. The skirt is cut in two gores and can be either gathered or plaited, and joined to a yoke, which may be opened at the front or at the side. The pattern, No. 6907, is cut in sizes 22 to 32 inches waist measure. Medium size requires 2½ yards of 44-inch material.

6263—Ladies' Coat—Serge, cheviot or broadcloth can be used to make this coat, with the collar and cuffs of satin. The coat is made in the three-quarter length. Medium size requires 2½ yards of 54-inch material and ⅞-yard of 24-inch satin

6902—Ladies' Apron—This plain apron covers the entire dress. The ends of the back form straps which pass over the shoulders and button to the upper ends of the yoke in front. The pattern, No. 6902, is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 3¼ yards of 36-inch material.

5972—Girls' Dress. Any of the woolen materials can be used to make this dress, with the collar and cuffs of contrasting material. The dress closes at the left side of the front and can be made with either the long or short sleeves. The plaited or gathered skirt can be used. The pattern, No. 5972, is cut in sizes 6, 8, 10 and 12 years. Medium size requires 3¼ yards of 36-inch material and ⅜-yard of 27-inch contrasting goods.

6877—Girls' Dress. In the new middy fashion, with a small opening in the front and a drop shoulder. The sleeve is small and the skirt is buttoned to the lower edge of the blouse. Suitable for woolen fabrics or for wash goods and for one or two materials. The pattern, No. 6877, is cut in sizes 6 to 12 years. Medium size requires 1¾ yards of 36-inch light goods and 1 yard of 44-inch dark goods.

6897—Ladies' Dress. This dress is very simple to make. It closes in the front and can be made with either the long or short sleeves. The skirt is cut in three gores and can be made with either the high or regulation waistline. The pattern, No. 6897, is cut in sizes 34 to 44 inches bust measure. Medium size requires 4 yards of 44-inch material, ⅝-yard of 27-inch contrasting goods and 1¼ yards of ribbon for the girdle.

All Patterns on This Page 10 Cents

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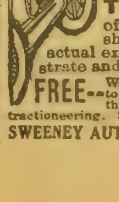

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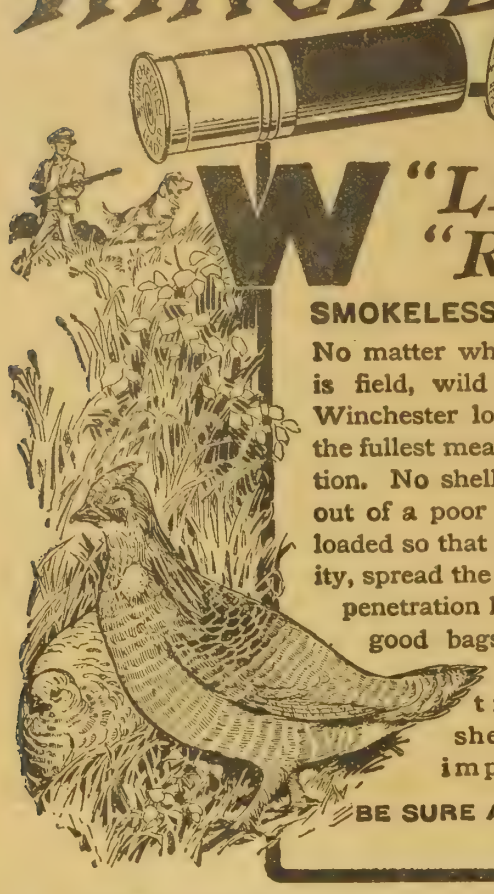

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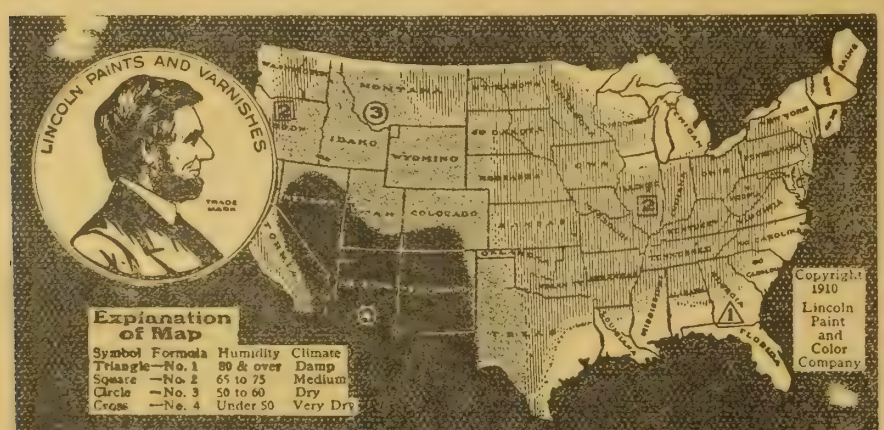

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Stories from Our Young People

The World; A Child's Song

Great, wide, beautiful, wonderful world!
With the wonderful water round you curl'd,
And the wonderful grass upon your breast—
World, you are beautifully drest.

The wonderful air is over me,
And the wonderful wind is shaking the tree;
It walks on the water, and whirls the mills,
And talks to itself on the tops of the hills.

You friendly Earth! how far do you go,
With the wheatfields that nod, and the rivers that flow,
With cities and gardens and cliffs and isles,
And people upon you for thousands of miles?

Ah, you are so great, and I am so small,
I tremble to think of you, World, at all!
And yet, when I said my prayers today,
A whisper inside me seem'd to say—

"You are more than the Earth, tho' you are such a dot;
You can love and think, and the Earth cannot."

—William Brighty Rands.

The Editor's Corner

There were only four stories sent in this week, but they were all good ones. The prize goes to Marguerite Barry, who won the prize last winter on her story, "The Martin School Menagerie." This makes her a member of the honor department, the roll now consisting of the following names: Orrie Campbell, Hubbard, Neb.; Bertha E. Hayes, Fayetteville, Ark.; John Wiebe, Bingham Lake, Minn.; Myrtle Woolery, Whiting, Ia.; Helen Barnhouse, Lane, S. D.; Walter Cheney, Turlock, Cal., and Marguerite Barry. Quite a list, isn't it, and from all over the country. Wouldn't it be nice if we could all get together some time and have a visit? It would mean that some of the members would have to travel a long distance, though.

We are printing two of the stories sent in and wish that we had room for Annie Eggers' story of her geese, which she raised and sold for $1 apiece, thus starting a nice little bank account; and Marion Noyes' story of the cow that has had seven calves in four years.

We will be very glad when you get settled down to your winter's work and have more time for the stories. They came in all summer beautifully, and we have noticed a great improvement in the quality of the stories received. Sometimes in the past it has been hard to find a prize story, because there were none worthy of appearing in print. Every week of late it has been hard to choose the prize story, because all the stories have been so interesting we were sure our readers would be glad to read them. Don't be afraid to try for the prize, and notice that it is the stories of the things that really happen that get the prizes and make the best stories. HOME EDITOR.

(Prize Story.)

The Black Cat

By Marguerite Barry, Aged 13, Atchison, Kan.

As I have never seen a superstitious story in your story corner I thought I would write one.

There was a little girl visiting our house this summer. Someone had told her if a black cat crossed her path she should turn back or a great misfortune would befall her.

She and several other girls and mystelf started to a party one evening, and a black cat crossed our path. This little girl would not go a step farther. The rest of us coaxed her not to be so foolish. Then we walked on, thinking she would follow, but she did not. She started back home, and, not knowing the way, she was soon lost. She walked on for some time and finally saw a street car line and followed it, and in that way found her way home.

We became worried when she did not follow us and hunted for her awhile. Then we telephoned home, where she had just arrived. My brother then took her to the party.

We told her she would have had less bad luck if she had gone with us. She said she would never turn back again, especially when in a strange place and not knowing her way home, for she had quite a fright. We teased

Picture Contest No. 17

Write a verse of four lines about this picture. Each of the two children writing the best verses will receive a book as a prize. The verse must be original. In awarding the prizes consideration will be given to writing, neatness, construction of verse and the originality of the matter. Try to say something the others will not think of. Often the verses, while good, are all very much alike. Give your name, age and address. Verses should be addressed to Picture Contest Editor, Twentieth Century Farmer, Omaha. All verses must reach this office not later than October 17.

her about the black cat all the rest of the time she was with us.

(Honorable Mention.)

Feeding the Woodpecker

By Edna Hack, Aged 15, Fremont, Neb.

One day last fall I noticed that a red-headed woodpecker always stayed around our place. He would sit on an old rotten post and peck all day long. One day when I was out in the yard I thought I would surprise him, so I shelled a little corn and put it on the post. Then I hid and watched until the woodpecker came. It ate all the corn that was on the post and then flew away.

The next morning I put some more corn on the post, but I did not hide this time; I just walked a little way from the post and watched until the woodpecker came. He ate the corn and noticed that I was standing there. Then he flew away and flopped his wings as if he were thanking me for the corn. Many more times after that I put corn on the post and every day he would come after the corn.

The Town of Marble

By Zelma Vandeventer, Aged 11, Marble, Colo.

We live near the beautiful little town of Marble, where the finest marble in the world is quarried. The marble is brought from the quarry on electric trolley cars down to the large marble mill, where it is being cut into large pieces to be shipped to Washington, D. C., where it is being used in building the Lincoln memorial.

The main street in the town is built of crushed marble. When the snow falls it makes a fine coasting track. We can start from the school house and go about a quarter of a mile without stopping. When the coasting is best we have large sleds or bobs.

One day six of the girls got bobs and went for a ride. Three of us were sitting backwards, and when we turned the corner we fell off in the middle of the street. The best coasting is about Christmas.

At the edge of the town is a large lake. It has about fifteen acres in it, and when it freezes over it makes a fine place to skate. In the summer it makes a fine swimming place for the boys.

Victor

By Katherine Willard, Aged 12, Molina, Colo.

Victor is a kindest, gentlest old horse we have on the farm. He is about 17 years old. One day not long ago he was hitched up with a young horse named Ted. There were two men and three ladies in the carriage.

As they were going down a hill Ted took a notion to run away. This frightened Victor, and they both ran away down the hill, striking a big rock. They got loose from the carriage and stopped at the foot of the hill. Victor turned around and looked at the people as much as to say, "I am awfully sorry."

The next time he was hitched up single, on coming to the top of he hill he was very much frightened and would not go down. He knew something terrible had happened when he went down hill before. The man had to get out and lead him down. I think he is a very wise old horse, don't you?

(Honor Department Story.)

Could She Drive the Car?

By Myrtle Woolery, Whiting, Ia.

"Think you could drive it, sis?"

Delvan's voice was not very pleasant to hear and Margaret colored.

"I am sure I could, Del," she replied, her eyes sparkling; "please let me try just a little while."

"Oh, I guess not, besides—" he glanced at her with a pitying smile, "you're afraid to go fast, and daddy got this car for me, anyway."

"Well, you're not such a great chauffeur yourself," returned Margaret with spirit; "you cannot go very fast, because it's the first time you have ever taken the car out alone."

"Just see if I can't." As he spoke the great shining car dashed forward swift and full and kept getting faster and faster until the speed read eighty miles.

"Oh, please slow down, Del," Margaret was saying. Then, just to tease her, he let go of the wheel and folded his arms. The girl gave a little cry of alarm, the car gave one great leap, a low, hollow sound followed and then all was still.

Margaret put up her hands to stop the dull, thudding pain in her head and rose unsteadily to her feet. There was the beautiful new car standing upright in the middle of a six-foot ditch, and her heart almost stopped beating, for there on the bank, very limp and cramped up, lay Delvan.

"Are you hurt, Delvan?" she asked in a troubled voice. "Are you all right?"

"My arm is broken and my shoulders are hurt pretty bad; then my (he bit his lips to keep from groaning and smiled faintly at the pity in her large, dark eyes) leg must be broken somewhere between the knee and ankle," he answered in a strange voice. "Is the car all right?"

"I guess so, but you—what can I do?"

"Can—can you run the car over to Dr. Arnold's"

"I am sure I can, Del, oh, may I try?"

"I don't know as I ought to let you, but run on and hurry back."

Margaret climbed into the car and started the engine, then began backing just a very little, while Delvan watched her with anxious eyes and shouted advice which she could not hear. At last she got safely upon the road and was soon lost in a cloud of dust. That evening Margaret entered her brother's room to see how he was; she found her father sitting beside the bed.

"So my little girl is quite a chauffeur I hear," he said, smiling as he lifted one of her long, brown curls.

"You bet she is, dad," Delvan spoke up briskly, "and as soon as I get well I am going to show her how to run that car—only I guess she knows how already."

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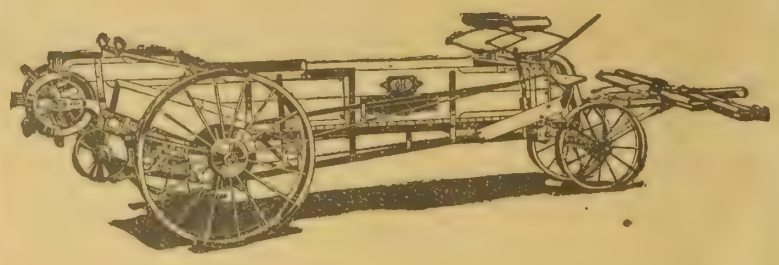

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Statement of the ownership, management, circulation, etc., of the Twentieth Century Farmer, published weekly at Omaha, Nebraska, required by the act of August 24, 1912.

Editor, T. F. Sturgess, Omaha, Neb.

Business managers, C. C. Rosewater and N. P. Feil, Omaha, Neb.

Publisher, The Bee Publishing company, Omaha, Neb.

Owners:
The Bee Publishing company.

Stockholders:
Victor Rosewater, Omaha, Neb., Chas. C. Rosewater, Omaha, Neb.; Leah Rosewater estate, Omaha, Neb.; Victor Rosewater, trustee, Omaha, Neb.; N. P. Feil, Omaha, Neb.; Stella R. Feil, Omaha, Neb.; Blanche R. Newman, Omaha, Neb.; H. A. Haskell, Omaha, Neb.; F. L. Haller, Omaha, Neb.; Joseph Rosewater, Cleveland, O.; Ida Rosenwasser, Cleveland, O.; Paul Rosenwasser, Cleveland, O.; Herman B. Rosenwasser, Cleveland, O.; Alice R. Cohn, Cleveland, O.; S. Meyer estate, New York City; Antoinette Gerber, Omaha, Neb.; Alice Meyer, Omaha, Neb; A. L. Meyer, trustee, Omaha, Neb.; Eugene L. Gelmer, Cleveland, O.

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N. P. FEIL,
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Sworn to and subscribed before me this 1st day of October, 1914.

M. P. NORD,
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Uncle Sam and South America

By Frank G. Carpenter

SANTIAGO DE CHILE—"And a vision appeared to Paul in the night; there stood a man of Macedonia, and prayed him, saying: 'Come over into Macedonia and help us!'"

This, from Acts 16:9, is the text of my letter. Uncle Sam represents St. Paul and South America, Macedonia. The cry is one of great need, and the sound thereof flies across the oceans from one continent to the other. It is the cry of more than 50,000,000 souls, and it voices a need of thousands of millions of dollars. It tells of the wants created by the warring nations of Europe and it begs Uncle Sam to send his goods over the seas to satisfy them. It is a composite cry, made up of all our sister republics. Listen a moment and hear how big the cry is. It represents a trade of hundreds of millions of dollars. In 1912 Great Britain sold South America $270,000,000 worth of goods. The sales of Germany amounted to $157,000,000, those of France to more than $100,000,000, and in addition Austria and Belgium each had a large share. These goods were scattered far and wide over the continent. An equal supply is demanded this year, but it is shut out by the war. Truly the cry from Macedonia is loud.

The Shoes for the Children and Babies Come from England, Germany and France. America Should Have This Business

Now stop again and listen more closely! Out of the composite you can hear the voices of the individual countries. That of Chile represents the loss of $75,000,000 in foreign supplies from Great Britain, Germany and France. The country is alive to its needs, and the government is subsidizing steamers to bring our goods here to make up the deficit.

But what is that shrill, small cry from the top of the Andes? It personifies the wants of Bolivia. It says: "I have been buying goods from Great Britain to the amount of $26,000,000 a year. Germany has been sending me its wares to the amount of $4,000,000, and I have been buying $2,000,000 worth of France. My wants now are the same, and I rely on the United States to supply them."

What Imports Cost

And then the voice of Peru! "My needs last year supplied by the British cost me $14,000,000. I got goods to the amount of $3,000,000 from Germany, and of $2,000,000 from France. Where shall these goods come from in 1915?"

The same sounds are heard from Ecuador, Colombia and Venezuela. The imports of each country represent millions; but they are drowned by the megaphones of the mighty republics on the east and southern Atlantic. The needs of Brazil and Argentina are enormous. Last year Argentina paid Great Britain $120,000,000 for its daily supplies, it got $52,000,000 worth of goods from Germany, and $34,000,000 from France. The purchases of Brazil from the same source amounted to more than $127,000,000, and in addition was the enormous trade with Belgium, Switzerland, Austria and other countries, now tied up by the war.

Indeed, the foreign trade of South America bulks large in the trade of the world. Within recent years the exports to the continent of the three great manufacturing countries now at war have been averaging about six times as much as their exports to China. In 1912 their sales to South America amounted to almost $500,000,000, while their their exports to China during that year were less than $80,000,000. Here are the figures: The United Kingdom sent exports to the amount of $245,000,000 to South America, and of only $54,000,000 to China; Germany sent $136,00,0000 to South America and only $20,000,000 to China, while the exports of France to this continent amounted to $54,000,000 in contrast with only $2,000,000 to China.

The imports from South America of the countries at war have been quite as large, so that the trade altogether represents, as I have said, more than $1,000,000,000.

A Billion-Dollar Trade

I do not like figures. They are a poor medium for the conveyance of thought. They are all right for an Isaac Newton, but they slide from the back of the ordinary intellect like water from the back of the typical duck. Still it is only by figures that we can get an idea of the trade losses caused by this war in Europe, and of the wants which Uncle Sam has now a chance to supply. The warring nations are among the great traders of the world. Great Britain stands first and then come Germany and Frence, with Belgium and Austria each doing its share. The total foreign commerce of Austria, Russia, France, England, Germany and Belgian amounts to more than $20,000,000,000. That of Great Britain alone approximates $7,000,000,000, and that of Germany is more than $5,000,000,000. France in its trade with foreign nations employs more than $4,000,000,000 a year, and Austria and Russia each more than $1,000,000,000. Little Belgium has a foreign trade which exceeds $1,500,000,000 and the bulk of all this buying and selling and the making of goods for the trade is practically stopped by the war.

Here are some striking figures of the imports and exports for 1913. In that year Belgium sold $715,000,000 worth of goods; Russia $800,000,000 worth and Austria $575,000,000 worth. These were the small merchants. The sales of Great Britain all over the world in that year amounted to more than $3,000,000,000; those of Germany were almost $2,500,000,000, while France came in with its share of $1,250,000,000. Each of the warring nations bought almost as much, or more than it sold, making altogether, as I have said, a foreign commerce amounting to twenty thousand millions of our money.

This gives some idea of the opportun-

ties offered to the United States in the increase of its shipping and banking and trade. Our foreign commerce in 1913 was more than $4,000,000,000. We shall have to increase it over 500 per cent to equal the value of that of the nations at war.

Figure by the Millions

But let us get down to brass tacks. I once had an interview with Mrs. Hetty Green, the richest woman of the world, in which she told me that her mind refused to comprehend more than $1,000,000 at one time. It is the same here. Let us divide the sums and look at the items. Here are some selections from the myraid wants of the individual countries which show just where the trade is and what we might do.

Take this little republic of Chile, with its population of three or four millions, and begin at the bottom. The nation buys its footgear from outside nations by the thousands of pairs, and the American shoe is so popular with the better classes that out of the supplies sold last year more than eleven thousand pairs came from the United States, eight thousand from Great Britain, six thousand from Germany and two thousand from France. We led in the trade, but we should have to more than double our business to supply the present demand. In babies' and children's shoes we did practically nothing. The sales of such goods amounted to 170,000 pairs, and of these only 1,000 came from our country. On the other hand, France sold 60,000 pairs, Great Britain 54,000 pairs and Germany 46,000. What Chile wants to know is whether the United States can supply the lack of 169,000 pairs of shoes for her babies' bare feet.

An Arcade in Santiago. Its Stores Should Be Full of American Goods

There are many other goods which come almost entirely from abroad. This is so with toys. More than two-thirds of them have come from Germany and France, and the Christmas of 1914 will be lean unless Uncle Sam sends the playthings.

America Little Slow

And then take our cotton and woolen mills. We have been shipping less than a million dollars' worth of textiles per annum to Chile, whereas the sales of Great Britain and India have amounted to more than ten million dollars; those of Germany to more than seven millions, and of France to something like three millions. The total amount of goods of that kind that has come from the countries now at war is twenty-five times as great as that from the United States. This means that an increase of 2,500 per cent in our sales of textiles to Chile is among the possibilities.

It must be remembered, however, that the trade is a special one. These people have their own styles and wants, and they will not stand being made the dumping ground for the American factories. They use all sorts of staple goods such as cottons, woolens, and silks; but, at the same time, there are many specialties peculiar to the country. One of these is the black shawl or mantas, which every woman wears in church and on the street. The most of these have come from Germany, France and Great Britain. All kinds of passementeries sold are from Germany and France, with only a small supply from Great Britain. The bulk of the carpets is from the United Kingdom and Germany, the most of the underwear from Germany and the United Kingdom, and the blankets are from Germany, Great Britain, Belgium and Spain. All the cotton lace comes from Europe and all of the thread. The ribbons are mostly from Germany and France; and Japan is the leader in the selling of handkerchiefs.

Steel Business Growing

As to manufactures of steel, our trade with Chile, thanks to the steel trust, is rapidly growing. Nevertheless, the most of the iron and steel still comes from Europe, and there are opportunities in all varieties of such manufactures. The country is using about 5,000 tons of corrugated iron and 19,000 tons of galvanized iron per year. Of the first, three-fourths has come from Great Britain, and of the second, Great Britain has sold 14,000 tons. We annually sell about 1,000 tons of corrugated iron and something like 4,000 tons of galvanized iron to Chile. In this same line Belgium has done a big business.

I could write a whole letter on the openings for railroad materials, and that not only to Chile, but as to almost every South American country. Chile is now taking about 1,000 tons of freight and passenger cars per annum; it buys in the neighborhood of 2,000 tons of locomotives and also thousands of tons of steel rails, railroad spikes, fishplates and car wheels. In all of these things the United States has a fair trade, but Germany, France, Belgium and Great Britain are doing the bulk of the business. The sales of the steel trust, however, have been steadily growing, and with the present opportunities they should increase many fold. It is the same with the locomotive and car business. I have one statement showing that Chile took last year 341 freight cars from Belgium and 248 from Great Britain, while from the United States it got only sixty-eight. In that same year we sold about one-third of the locomotives, the balance of the trade going to Great Britain and Germany. Just now Chile has under way enormous railroad extensions, and its supplies will have to come from our country.

Electric Possibilities Large

The electrical possibilities are large and they demand all sorts of machinery. Every town of any size has electric cars and electric lights. The country took about 400,000 pounds of electric bulbs last year, of which the bulk came from Germany, less than 20,000 pounds coming from the United States. Many of the big mining companies use electricity to operate their works. The Guggenheim

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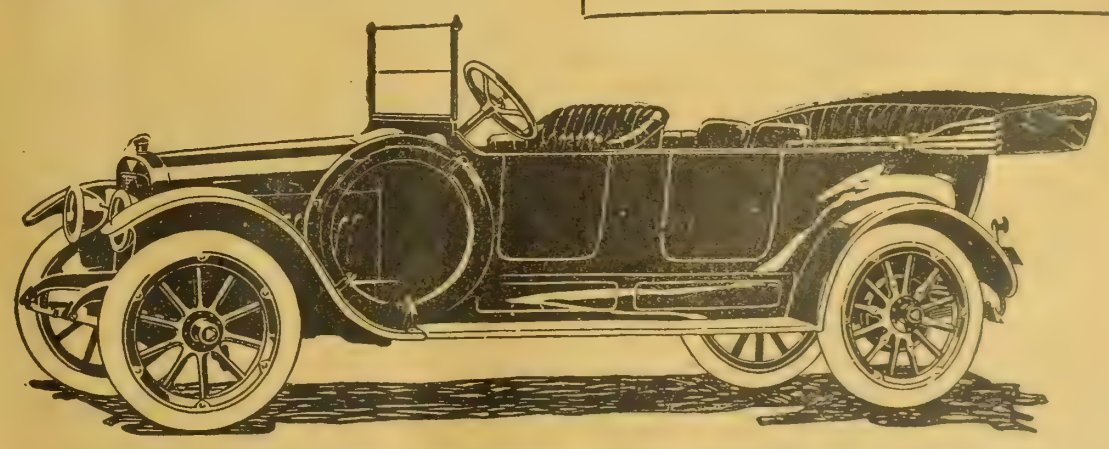

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Nicaragua Timber and Fruit Lands Co.,
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copper plant at Chuquicamata, which will be one of the largest of the world, recently awarded a contract for its electrical supplies to a German company. These included a steam plant on the coast and a transmission line seventy-five miles long from there to the mines. That contract may have to be carried out by Americans. There is a great deal of electricity used in the nitrate factories, and there are big opportunities for additional supplies in the street car lines, many of which are owned by the Germans. Most of the cars are of German construction. The only native thing about their operation being the woman conductors, who take up the fares.

And then the trade for automobiles. This is rapidly opening up not only in Chile, but in every Latin American republic. There are more than 2,000 automobiles now in Mexico City, there are 3,000 in Rio Janeiro and so many in Buenos Aires that the dogs there have to cross the street on the run. Many of the machines come from England, Germany and France, but they are being displaced by our cheaper American makes, which are now to be seen in almost every large town of the continent. There is a demand for motor trucks in the cities. And so I might go on country by country and item by item. The field is so vast and there is hardly an industry in the United States whose goods are not needed in some parts of South America. The wants comprehend every variety of manufacture and almost every article that the United States makes.

Invest Your Money in Good Land
in McHenry County. Any size tracts from 40 acres upwards on twenty annual payments. A good home, safe investment and increasing value. NORTHERN TRADING CO., Owners, Towner, N. D.

Need American Ships First

An almost imperative demand for this trade is American ships and those so backed by the government that they cannot fail to pay a good profit. It is probable that Chile and Peru will subsidize their lines of steamers, and send them through the canal to our Atlantic ports. Our government should do the same as to American vessels engaged in the South American trade. Until now practically the whole of this trade has been in the hands of the English and Germans, and they have so combined that our steamers could not compete with them. They have given such rebates to the South American exporters that our vessels could not get return freights, and this is especially so of coffee and other large products. We have been buying something like $70,000,000 worth of coffee a year from Brazil; and for every cup on our breakfast table we have had to pay a toll to the German and English shipping trusts, subsidized by their governments. Since 1840 the United Kingdom has paid out about $300,000,000 in such subsidies, France has been paying $8,000,000 a year in bounties of one kind or another, and Germany has built up its enormous shipping through subsidies and bounties. Practically all our exports and imports have been carried in foreign bottoms, and we have been paying taxes not only to the ships, but also to the banks, all the money transactions having been carried on through Europe. As it is now our foreign commerce amounts to more than $4,000,000,000 a year, and of this nine-tenths goes by sea. Our exports last year were more than $2,000,000,000 and only 9 per cent of them were carried in American vessels. Estimating the cost of freight and the banking at only 6 per cent, we have been paying enough in such charges to build a Panama canal every two years.

Freight Should Be Cheap

Our freights to South America should be the cheapest of the world. We take a large part of the exports of that continent and the vessels which bring them should carry back American goods at low rates. We take about 40 per cent of all the exports of Brazil and the ships that bring our coffee and rubber should return filled with American goods. We are taking vast quantities of Argentine meat; and from now on there will be a fleet of chilled beef steamers coming from Uruguay and Argentina to our Atlantic ports. Those ships have to go back and they should be loaded by the American factories. We take a vast quantity of nitrates from Chile, which should give us cheap return freights to that country. The Bethlehem Steel company expects to carry northward a million tons of iron ore every year.

(Copyright, 1914, by Frank G. Carpenter.)

Stacking Alfalfa in the San Luis Valley Colorado

AVERAGE SEASON'S CROP 4 TONS PER ACRE. VALUE $40. NETS BIG INTEREST ON $200 Per Acre LAND

WE have shown you in previous numbers of this paper views of the large crops of Wheat, Oats, Peas and other staples grown in the San Luis Valley. Also told you how cheaply hogs can be grown on alfalfa and fattened for market on peas. If what we have said is true it must appeal to farmers who are looking for land in some locality where farming is most profitable.

We ask no one to buy until he has confirmed what we have claimed by going out and investigating for himself. If you find what we have said to be true you surely should buy if you want land.

Recently a man some 65 years of age came to our office who had been a renter all his days. He looked back with painful regret at the many opportunities he has had in past years to buy land that has doubled in value several times since. Each time he let the opportunity slip that made so many farmers wealthy, and now he finds himself advanced in years without a farm and with less money than he had 30 years ago. There is no hope for him now. He has missed his opportunity.

There are many renters in the middle west today who still are in the prime of life, with money enough saved to buy a farm on the terms we offer but cannot buy the high priced land about them with any assurance of paying out. If you are one of them YOU should decide now while you have the opportuinty, whether you will follow the man mentioned above or your successful neighbor who bought land when and where there was a chance to get the increase in value. Mr. Renter, think about this.

Our lands are located only a few miles from Alamosa, a city of 4,000 people. It has all the advantages of any city of its size anywhere. Good schools, churches of various denominations, Carnagie library, etc. There is no pioneering to be done on our lands. You will have good neighbors.

We guarantee $15 per acre advance in value in three years, if put into alfalfa. We expect it to more than double in value.

Special rates of $31.68 are made the first and third Tuesdays of each month from Omaha to Alamosa and return. Write for particulars at once.

San Luis Valley Irrigated Land Co.
712 Omaha National Bank Bldg. Omaha, Nebraska

Retired Farmers and Why

(CONTINUED FROM PAGE FIVE.)

taken care of. We have a neighbor out our way now, a renter and a sort of shiftless fellow, and actually I hate to bring my horses on his place during threshing time; they get so full of cockleburrs. I never made any unreasonable demands for repairs or new equipment, and I took good care of everything and farmed the best I knew how."

"How about rent? Did you prefer cash or grain?"

"Well, I've tried both ways, and on the whole prefer the cash rent. I feel more independent, for if a man is renting out on shares, naturally he wants to have something to say about how the farm is to be carried on. In average years I make more, too, though, of course, when we have a partial crop failure I lose out. But, averaging it up, I think my cash amounted to only one-fourth of the crop instead of a third or two-fifths. Of course, $2, $3 or even $4 an acre rent doesn't seem like much return on a valuable farm, but the owner should figure in that his land is increasing in value right along, probably 6 per cent a year in places. However, I don't think it pays to buy high-priced land for speculation; better go further west, where land is cheaper. Two of my boys are in Idaho now, and they are very enthusiastic over that country, but Nebraska is good enough for me.

"No, I don't believe it's a good plan to sell your farm and live on your money. I think of a case now; a man who sold his farm for $8,000 had about $4,000 in cash. He moved into town and put up some little houses to rent. It took money to keep them up and both he and his wife were sickly, and I declare, when he came to die fourteen years after he didn't leave $500. And the farm he sold for $8,000 was worth $20,000.

"Help on the farm? Well, that is a problem, especially if you haven't any boys at home, or if you can't afford to keep first-class help the year around. You get just the floaters, the riff-raff, if you hire by the day or week, or such short periods, and sometimes they're worse than no help."

We had been standing in the corner in sight of the Tate's for some time, but I knew Mr. Andrews was in a hurry, so I said "Thank you," and "Goodby."

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

THE sales room is the smallest part of poultry keeping, the dining room the largest and most important. Killing and dressing poultry is a large part of the latter business, and before killing and dressing, the poultry must be fattened, for poorly nourished fowls are a drug on the market and a shame to the table. Before selling your chickens don't simply stuff the crop to add a weight the last seller must lose; stuff the body long before selling time, or shortly before, as the case may be.

* * *

A first-class fattening ration is cracked corn, some meat, and all mixed with milk or warm water. Plenty of sand should be given in the ration toward the last. Twelve hours before killing give the birds their last meal, and no water at all after this time. This insures empty intestines and crop. Give birds to be killed plenty of room, as crowding heats and gives the flesh a red cast when killed. You want them to have a good appearance and bring a good price.

* * *

Poultry for market is usually dry-picked, being killed by using a knife made for that purpose that opens the jugular vein at the back of the tongue, then after allowing the bird to bleed a few moments it is placed against the roof of the mouth and forced upward into the brain. Before doing this attach the legs of the bird by means of a stout slip noose to a beam; this must be high enough so you can handily pick the bird and far enough from objects that in its struggles the bird may not strike and bruise the flesh. This is an operation that you must not attempt for the first time except under the direction of one who already knows how. It is the proper killing that loosens the feathers and causes them to pick easily. The wings are locked by slipping one back under the other before the killing is done. The wings are picked last.

* * *

Ducks and geese are killed in the same manner as chickens and turkeys; then the coarser feathers are removed. After these are removed ducks and geese should be dipped in hot water for a few moments, then wrapped in clean cloths to steam, after which the rest of the feathers and down can be easily rubbed off. This dry picking leaves both feathers and birds in better condition for market.

* * *

Never scald chickens or other poultry for market before they have been dry roughed. When exposed to the air a scalded fowl shows every scratch and mark on it and soon looks old and stale. Scalding will take from 3 to more cents a pound from off the selling price. But if you have not succeeded in piercing the brain and the feathers will not loosen, then there is nothing else to do but pass it into the scalding pot. Put a little melted rosin in this water. This makes scalding of shorter duration and toughens the skin against abrasions.

* * *

Next—and a very important part—is the proper method of cooling. Remember that nothing is so foolish as pushing birds into market immediately after killing and without proper cooling. Chickens, ducks and geese, when cleanly picked, must immediately be immersed in a tub of cool water and allowed to remain from one hour and a half to two hours. But a turkey should not be allowed to touch water until all the animal heat has left the body. So merely hang these away in a cool spot for no less than twelve hours. When the chickens and ducks have been "plumped" the required length of time, then hang these also. It will require these about eight hours to cool, as they should cool before packing. Hang all birds in such a manner that no part of one bird will touch any part of another bird.

* * *

There is an art in packing. Carelessly packed birds go on market out of shape, bruised and unsightly where jammed together. Whatever hurts the appearance of a bird lowers the price. Never pack birds between straw or hay, because every straw cuts into the skin and flesh, giving a fresh bird the appearance of mortification already set in. Poultry must sell upon appearance. To pack aright place your packing stuff first on the bottom of the barrel, for a barrel is always better than a box. Over this lay strong paper, on this your first layer of poultry, every space filled so that while the fowls do not rub, yet they are too tight to move. When full spread over another layer of paper, then straw, then put on the lid. Each fowl is packed best if wrapped in paper made for that purpose. Some packers place cracked ice in with the chickens. In hot weather ship by express, in cold by freight, though you must look close after the time for delivery and the market they must go on.

* * *

The details of profitable shipping of dressed fowls you soon learn if you want to. The Thanksgiving market is near at hand now.

Squabs

So many persons keeping squabs in a small way have little idea that one does best with squabs who studies all of their needs and that there is money in squabs outside of merely selling to the commission man. Usually those who keep pigeons in limited numbers think almost any food fit for a chicken is pigeon food also, when it is not, and they should buy ready-mixed pigeon food, and as for roosts they do not know that there are cheap roosts practically sanitary because easy to clean, nests the same, and that "salt cat" comes in brick form for the birds to handily pick at, and that it contains many ingredients that have a tonic effect on the digestive system of the bird. As for selling, some pigeon keepers make their profit on selling all the squabs as breeders,

Now is the Time Your Hens Need a Tonic

Moulting weakens a hen—it brings her vitality down to low ebb. To help the hen over this period you ought to feed her a tonic to keep her system vigorous, well able to force out the old quills, grow a new feather crop and get back on the job laying eggs well before the winter sets in. Keep your hens toned up.

What your hens need right now is Dr. Hess Poultry Pan-a-ce-a. This splendid tonic is the result of my lifetime experience as a doctor of veterinary science, a doctor of medicine and a successful poultry raiser. It tones up the dormant egg organs, offsets the weakening effects of moulting, quickens quill shedding, makes for a new feather growth and makes hens lay.

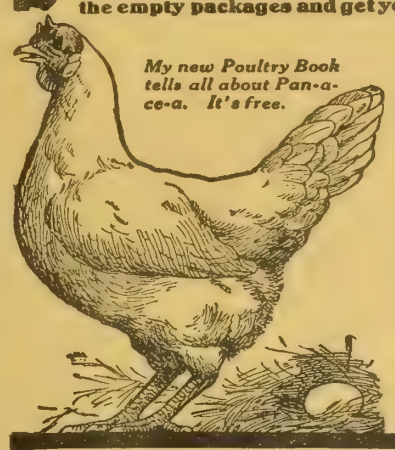
Dr. Hess Poultry Pan-a-ce-a

Not a Stimulant, but a Tonic

Shortens Moulting Period—Makes Hens Lay

This is also a splendid tonic for fattening poultry for market. It helps the birds digest the maximum amount of their ration and convert it into flesh. It keeps poultry healthy and fit while cooped up. Besides, my Poultry Pan-a-ce-a is an excellent constitutional remedy for roup.

So sure am I that Dr. Hess Poultry Pan-a-ce-a will make your poultry healthy, make hens lay, help chicks grow and shorten the moulting period, that I have authorized my dealer in your town to supply you with enough for your flock and if it doesn't do as I claim, return the empty packages and get your money back.



Sold only by reputable dealers whom you know, never by peddlers.

Buy On My Money-Back Guarantee

1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West. Pan-a-ce-a costs only 1c per day for thirty fowl.

Dr. Hess Stock Tonic

Taken off pasture, put on dry feed and closely confined, your stock are apt to get out of fix during winter. Some are liable to get constipation, dropsicals wellings, stocky legs, but most common and dreaded of all diseases, especially among hogs, is worms—worms. Dr. Hess Stock Tonic will keep your stock toned up, enrich their blood, keep their bowels regular and will rid them of worms. 25-lb. pail $1.60; 100-lb. sack $5.00. Smaller packages as low as 50c. Except in Canada, the far West and the South.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks, or keep it in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans, 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. I guarantee it.

DR. HESS & CLARK,
Ashland, Ohio.

This Cheap Farm Power Cuts the Expense-Increases Profits-Reduces Work.

HEIDER TRACTOR

Write for free catalog and find out how The Heider Tractor is made. How easy it works. How cheap to run. Why it's giving satisfaction and increasing profits on hundreds of farms and why you should have one to reduce your high cost of farming and to solve your hired help problem.

Heider Tractor
Can Be Operated With Kerosene, Gasolene or Motor Spirits

Does the Work of 8 Horses and Costs Less

It's a real one man tractor. Weighs 5,000 pounds. It takes the place of eight horses and one extra man. Will do any kind of field or belt work at the lowest possible cost. Has a 4-cylinder heavy duty motor. The Heider Tractor is the pioneer light tractor. Sells at a price which every farmer can afford. Don't spend money on experiments. Let us prove that the Heider is the best. Write today.

Heider Manufacturing Co.
220 Main St., Carroll, Iowa.

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Kerosene Tractors	Threshing Machines	Oil Engines	Gasoline Engines
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Steam Engines	Clover Hullers	Baling Presses	Lighting Plants

Catalogs on request—Mention machines in which you are interested.

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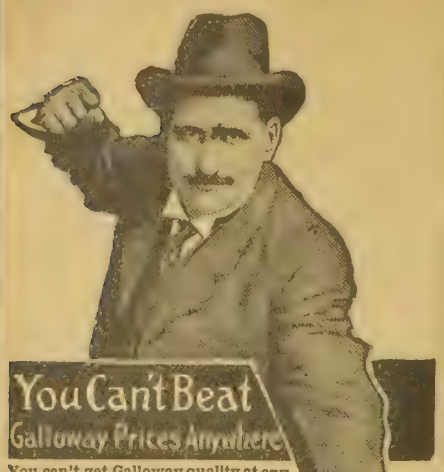
Chicago 1405 Michigan Blvd. Building Illinois



You Can't Beat Galloway Prices Anywhere

You can't get Galloway quality at anywhere near my price. I get one small manufacturing profit, the rest of your dollar buys what you need. The other way your dollar pays the profit of the manufacturer, the jobber and the dealer. You have tried the old way. Now try my way and see what you save.

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Hot and cold running water for country homes. Complete system ready to install $37.80. Easily installed by anyone or money refunded. Enjoy the comforts of life!

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MISSOURI WATER & STEAM SUPPLY CO., 2019 So. 6th St., St. Joseph, Mo.

WEALTH IN INVENTIONS. Patent your ideas. Send for our Free Book, and advice HOW TO SUCCEED.
Sues & Co., Attys., 539 7th St., Washington, D. C.

Sunshine is the Best Disinfectant in the Poultry Yard

from 50 cents apiece in summer to nearly a dollar apiece in winter; while others put all their squabs into cold storage and sell to special customers as needed. It takes some special advertising and looking after the business when you sell in these ways outside the selling to the commission man, but it pays those who are willing to undertake it.

Geese

The young geese, unless hatched very late, should be ready for market now, if not sooner. Geese usually sell when about 12 weeks old. Green geese they are now called. On the farm the geese are quite often saved over for the Christmas trade. This pays best if you have a good goose pasturage, as the feed bill in such cases is not much of an item. One way of disposing of your geese, if the number is limited, is to sell them to the countryside for breeders. The fall is the time to buy breeders, not the spring, when it is a case of buying geese, and many would buy if you let it be known abroad that you had breeders for sale. Too many farm women neglect this side line of selecting the best of all their flocks for sale as breeders in the fall. It is so easy to get up a country trade in this line if you only try in the right way. In selling geese, you can sell three geese with one gander if they are of the large breeds.

Pertinent Poultry Pointers

One of the most fatal diseases among turkeys is blackhead, yet a teasponful of nitro muriatic acid in each quart of drinking water will control this disease.

* * *

In both cases treatment should begin as soon as first symptoms appear; bran, middling and cooked vegetables should be fed in place of grain.

* * *

In well developed cases more stringent methods are required, such as killing and burning the worst affected fowls, cleaning up and disinfecting their pens and sleeping quarters with a strong solution of carbolic acid and kerosene.

* * *

Healthy poultry is profitable poultry, and with the high price of feed, labor and land, every farm animal should be pushed to the limit of its capacity, yet this cannot be done unless they are kept in a healthy condition.

* * *

The day of scrub stock is rapidly passing; almost every farmer and poultry raiser is interested in pure-bred stock and are beginning to realize that it costs no more to raise pure-breds than scrubs; they need no more attention and eat no more than ordinary stock, and if looks alone were considered, a flock of solid colored birds are enough more pleasing to the eye to pay for the investment, yet we all know that pure-bred poultry lays better, grows faster, are more hardy and more profitable in every way than the common mixed lot which, instead of increasing in value as pure stock does, degenerates more and more each year.

* * *

Quite often at this time of year black spots appear on the combs of some fowls, and the owner is puzzled to name the trouble. It seldom affects the health of the fowls, but is quite contagious and often ruins the combs. It is a fungus growth called black rot. Muriate of ammonia, one-half teaspoonful to the pint of drinking water, is recommended; and for the comb use some kind of ointment holding a strong per cent of carbolic acid.

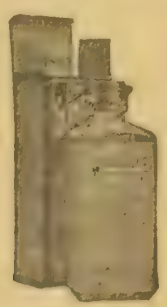
MRS. CHARLES CROSS.

The modern chicken doctor

treats the flock rather than the individual bird. He knows that most of the troubles are flock troubles, though not apparent in all at the one time. He knows that most sickness of Chicks, Chickens or Pigeons comes from infected food and drink, or defective housing. His favorite prescription is Germozone.

Germozone is generally used for flock treatment, though individually where necessary. Thousands give it twice a week regularly, a little in the drinking water. It is a great bowel regulator as well as a germ destroyer and, with chickens as with humans, the bowels largely gauge the health.

Germozone is especially desirable for use during changeable fall weather, warding off illness, which, if permitted a foothold, may drag along all winter, if not immediately fatal.



For Roup, Canker, Swelled head, Sore throat, Sour crop, Loss of feathers, Chicken pox, Bowel complaint, Cholera, Worms, Gapes, etc., Germozone carries a full guarantee with every package.

Germozone is a valuable remedy for all domestic stock

4 oz. bottle (trial size)	$ .25	32 oz. bottle (for steady users)	$1.00
12 oz. " (standard size)	.50	Gallon " (for large flocks)	3.00

Tablet form 50c per package, post paid. Liquid form sold by most druggists or poultry supply dealers or delivered (in $1.00 and $3.00 sizes) prepaid to any express office in U. S. Sample and Booklets Free on Request.

GEO. H. LEE CO. Dept. 7. Omaha, Nebraska

Breeders' Notes

Stuthman's Duroc Offering

This is the last call for the sale of Duroc Jersey boars to be held at Pilger, Neb., on October 17, by Henry Stuthman of that place. This offering will consist of ten fall boars, thirty spring boars, five fall and spring gilts. The fall boars are a strong rugged lot, three of them being sired by Melina's Wonder, two by King the Colonel, one by Crimson Wonder Select and four by a son of B. & G's. Wonder. The spring boars are by Crimson Wonder Select, Sweet Rose's Wonder, Chief's Model, Golden Model 4th, Blue Ribbon Model, Blue Ribbon Model, Jr.; Colonel Chief, Wonder Lad and Golden Model 31st. Here is an opportunity to get a variety of blood lines such as is seldom found in any offering. Some of the very best boars of the breed are represented in this sale. Get in touch with Mr. Stuthman at once for catalogue and arrange to be on hand sale day. If you cannot do so and want something, send the bid to G. E. Hall of this paper and it will be carefully looked after. Kindly mention the Twentieth Century Farmer when writing.

Nelson's Immune Durocs

One of the Duroc Jersey sales that should attract the attention of breeders and farmers in general is that of F. B. Nelson at Lindsey, Neb., on October 23. In this sale Mr. Nelson will sell fifty head, thirty-five head of them being boars and fifteen head sows. One feature of this offering is that they are strictly immune. There are four fall boars by the grand old champion of two states, Valley King. Among them one or two herd boar prospects. There is also one particularly good fall boar by Red Chief Wonder Spring boars are by Golden Model 4th, Invincible Chief, Melina's Wonder, Perfection Wonder, Chief Select 2d and others. These boars have been coming along just about right and are certainly worth keeping in mind by anyone wanting a first class boar. There will be quite a number of sows, the big, smooth, roomy kind, either well along in pig or with litters at side sired by Crimson Gano, one of the very best sons of Colonel Gano. These sows are sired by Valley King, Perfection Wonder, B. & L's. Wonder, Blue Ribbon Model and Red Chief Wonder. Guess you have a combination of blood lines there ought to please the most exacting. You will like them still better when you see them. Write for catalogue and arrange to attend sale. G. E. Hall will represent this paper and will handle all bids entrusted to his care. Kindly mention the Twentieth Century Farmer when writing.

Wineland Farm Jerseys

H. C. Young, proprietor of Wineland Farm Jerseys at Lincoln, Neb., is starting an advertisement in this issue of the Twentieth Century Farmer in which he is offering a choice lot of young bulls and also a few females for sale. Mr. Young says he has the best lot of herd bull prospects from Register of Merit dams that he has ever offered for sale. In fact, he says every one is a herd header and a good one. We will have more to say regarding this herd in an early issue. In the meantime, we would advise you to get busy and write Mr. Young if you are in the market for a good bull or a few females. He has one of the very best herds in the west. Kindly mention the Twentieth Century Farmer when writing.

Cedar's Winning Durocs

P. P. Cedar of Genoa, Neb., is one of the Nebraska breeders who has been actively participating in the larger shows of the west during the last few years, and also one who has been pulling down his share of the plums. He has been getting right up at the top in competition with the very best herds in the United States. So far this fall he has won seven firsts, ten seconds, seven thirds and quite a number of minor ribbons. Mr. Cedar is enjoying an extra strong demand and is just about sold out on boar pigs. However, he will have a mighty choice lot of sows to offer later on through these columns. Keep his herd in mind.

Widle & Son Heard From

R. Widle & Son of Genoa, Neb., who have been making such strong winnings at the leading fairs with their splendid show herd of Durocs, write from Springfield, Ill., that they have not fared very well at that show. From information at hand, it seems that the stage was set to the end that a man to win must be in league with those who had in charge the tying of the ribbons. When a man goes to the expense of fitting and developing a herd of hogs and travels hundreds of miles to place them on exhibition, it certainly looks like he ought to be entitled to a run for his money. Fair managers cannot be too careful in the selection of judges who are absolutely impartial and who have no axes to grind.

LANDS

PRODUCTIVE STATE AND DEEDED lands, crop payment or easy terms; along Northern Pacific railway, in Minnesota, North Dakota, Montana, Idaho, Washington and Oregon. No isolated pioneering. Free literature. Say what interests you. L. J. Bricker, 402 Northern Pacific Ry., St. Paul, Minn.

Arkansas

LITTLE RIVER VALLEY LANDS—Rich and cheap, on railroad. Sessions Co., Winthrop, Ark.

California

SACRAMENTO VALLEY LAND, highly improved and irrigated locality, with frequent trains, at low prices, on easy terms. Buyers this year get free trip to Panama-Pacific Exposition in 1915. Free literature. W. T. Smith Co., 1111 City National Bank, Omaha.

NEW COLONY, NEAR SAN BENITO—Ideal climate, cream of earth, easy terms; no irrigation or fertilizing; near railroad. Excursion October 6. Write today for particulars and inducements for this trip. San Dominie Colonization Co., 340 Brandeis Theater Bldg., Omaha, Neb.

Colorado

FOR SALE—4,320-ACRE RANCH 42 miles east and six north of Colorado Springs, on the Chicago, Rock Island & Pacific, near Ramah. Improvements: Eleven-room brick and frame dwelling, piped for hot and cold water; two-story brick store house building, one two-room house and a score or more other buildings for handling cattle. Water is abundant for every use in nearby running creeks; 400 acres under ditch, cuts 1,200 tons of hay, besides fall pasture. Good judges say it's worth $70,000; will sell for $60,000; one-third cash and the balance easy. Write A. T. Thorn, Secretary, Ramah, Colo.

Florida

OWNER MUST SELL TEN ACRES good fruit land, Orange county, Florida; near railroad and not far from Orlando. Full particulars upon request. Otto Hudson, 2580 Spaulding, Omaha, Neb.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

Idaho

WE HAVE A NUMBER OF IRRIgated fruit properties for lease on cash or crop rental basis. Orchards may be intercropped with corn, potatoes, onions, root crops or melons. Lessee must have team, implements, etc., and be prepared to handle work in a competent manner. Leases for 1915 now being arranged. Excellent climatic conditions, long growing season, deep, rich soil, established community adjoining Lewiston, Idaho. H. L. Powers, Manager Lewiston Orchards, Lewiston, Idaho.

Minnesota

200 FARMS IN THE FAMOUS PARK region and Red River Valley District, Otter Tail and Wilkin counties. Level or rolling prairie land; timber land. Any size farm you want from $30 to $80 per acre. Easy terms. Otter Tail county has never had a crop failure; 50,000 acres of corn last year, making from 30 to 70 bushers per acre; natural clover and alfalfa country. Write for free booklet and lists. Park Region Land and Loan Co., Fergus Falls, Minn.

WRITE TO US FOR FREE LISTS and literature concerning lands in Chicago and Pine counties, Minnesota. We will save you money. St. Croix Valley Land and Loan Co., Drawer G, Rush City, Minn.

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FARM NEAR OMAHA — 160 ACRES within five miles of Omaha street car line. Good improvements. No better soil in Douglas county. Has 30 acres in alfalfa, produces five tons per acre sold last season at $14 per ton. Close to alfalfa mill. Farm will rent for $1,200 per year. Must be sold to settle partnership. Price, $112.50 per acre. Address T. E. Stevens, 712 Omaha Nat'l Bank Bldg., Omaha, Neb.

GOOD IMPROVED QUARTER FOR sale; one of the best bargains in Nebraska; all in cultivation; 6-room house, barn, granary, well and windmill; orchard; some alfalfa, rest wheat and corn. For full description, price and terms address Lock Box 43, Grand Island, Neb.

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GRAIN LANDS AND STOCK ranches in southeastern Wyoming at bargain prices and on easy terms. For particulars address Federal Land Company, Cheyenne, Wyo.

"My Best Medium"

MEAD, Neb., Sept. 17, 1914.

Twentieth Century Farmer:

As usual, the Twentieth Century Farmer proved my best advertising medium. I sold 132 male birds and many hundreds eggs for hatching.

O. E. Henning.

If you have never before used this paper, try it this season. You'll soon be selling as many birds and eggs as Mr. Henning.

LANDS—Wyoming

BARGAIN—IRRIGATED FARM, 160 acres under government ditch, 12 miles from county seat town of 3,000. Trading point 3 miles from land. Price, $25.00 per acre; includes permanent water right. Terms, one-fourth down, balance deferred payments if desired. This is a snap. Write owner, P. O. Box 55, Shoshoni, Wyo.

AT BLACKBURN FARMS THEY ARE not troubled by hot winds or lack of rain, no sweltering heat. You can sleep in comfort every night. When it's good and comfortable for people, it must be good for stock, too. Doctor bills are rare; loss of stock by disease little or nothing. When you compare the country in stock raising with others, you are really surprised at the difference. Suppose you go there with a few Duroc-Jersey sows. Each one will produce two litters per year, or about twenty pigs each. Fatten the males and keep the females and continue to develop your herd year after year. How long will it take you to make a big fortune in hog raising? Hog cholera was never know there. Now, what's true about hog raising is also true about dairying. The climate is suited to dairying, for the food consumed by the cows is the very best grown anywhere and the water is snow water, well filtered. This combination will of necessity give the finest butterfat. This butterfat brings at the creamery as high as 38 cents per pound. How long would it take to make a fortune at this from a herd of Holsteins? Poultry growing will also make a remarkable showing. No matter what the farmer does, he can depend upon it he will not be annoyed with pests or disease. Farming and stock raising there has a stability unknown elsewhere. Wyoming university will take care of your boys and girls free of tuition after they are through with the country school. But you must see this locality and study it to appreciate it. A few sections exchanged for Iowa or eastern Nebraska improved farms. For other particulars write Laramie Development Company, Laramie, Wyo., or A. W. Auspurger, 548 Bee Building, Omaha, Neb.

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Oregon

OREGON STATE PUBLICATIONS free. Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions—they will have painstaking answers. We have nothing to sell. Address Room 110, Portland Commercial Club, Portland, Ore.

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UPPER WISCONSIN — BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

HAVE YOU $500? THEN INVEST IN good land in Polk county, a prosperous dairying region, 60 miles from Twin Cities. See such farms as No. 564, 50 acres at $1,500; No. 679, 80 acres at $2,400, or No. 683, 65 at $1,200. All with clay loam soil. Send for list of bargains. Baker, N 67, St. Croix Falls, Wis.

LANDS—Wisconsin

ARE YOU LOOKING FOR A FARM like this? 80 acres in that prosperous Centuria-Balsam lake region, Polk county, Wisconsin, on Soo short line, 60 miles from Twin Cities. 35 acres in field, 3 meadow, clay loam soil, good surface. New frame house, 24x26, 2-story; frame barn, 20x34; other buildings, well, fencing, etc. A snap for only $3,500. Baker, L 67, St. Croix Falls, Wis.

OFFICIAL BULLETINS CONCERNing soil, climate and crops of Wisconsin mailed free to those addressing Wisconsin State Board of Immigration, Capitol 1000, Madison, Wis.

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YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

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MAKE $100 A SEASON IN SPARE time only and get all your own clothes free. Easy to get orders for men's suits with our beautiful samples and up-to-date styles. Write at once for free book of samples and styles, agents' inside costs and retail prices, full information and our big, new offer. It's a wonderful opportunity. Knickerbocker Tailoring Co., Dept. 161, Chicago.

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WANTED—TRUSTWORTHY FARMER boy desiring to be a salesman, willing to work, leave home, make good money, and learn salesmanship under personal trainer. Permanent position. Chance for advancement. Address French-American Art Company, 7 E. Washington Ave., Council Bluffs, Ia.

WANTED — WORKING FOREMAN for ranch. One with grown family preferred. Must have experience in both ranching and farming. 5,000 acres under fence, 700 under cultivation. May take right party into partnership should they make good later on. Address T. J. O'Brien, Henshaw Hotel, Omaha, Neb.

MEN WANTED—PREPARE AS FIREmen, brakemen, motormen, colored train porters; no experience necessary; steady work. Write Inter Railway, Y 193, Twentieth Century Farmer, Omaha.

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FOR YOUR FORD CAR—SUPPLIES direct to you. We save you the dealer's profit. Free catalogue. Write and save money. Gasolette and Fordezers. You need both. Ask us. The Ford Supply Co., 2129 Farnam, Omaha, Neb.

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PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., 808 F St., Washington, D. C. Established 1880.

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BUFF ORPINGTON COCKERELS, hens. Belle Merrick Osceola, Neb.

PRICE LIST FREE—SINGLE COMB Buff Orpington, Toulouse geese, Indian Runner ducks. Peter Brehm, Harvard, Neb.

FOR SALE CHEAP, IF TAKEN soon, fine March-hatched S. C. Orpington cockerels, farm raised. Write for prices. Mrs. W. H. Mulliken, Nickerson, Neb.

SINGLE COMB BUFF ORPINGTON cockerels from good stock. Prices, $1.50 to $4. Read my guarantee. Send me the price you want to pay. If bird is not satisfactory, I'll return your money; you pay express both ways. Frank E. Davenport, Norfolk, Neb.

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BARRED ROCKS, MAGNIFICENT thoroughbreds, heavyweights; 100 cockerels, 80 pullets, 100 Indian runner ducks. Low prices. Catalogue free. Hazeldell Yards, Essex, Ia.

Wyandottes

ROSE COMB WHITE WYANDOTTE cockerels, $1 each until December 1. Don't delay. Mrs. E. G. Witt, Campbell, Neb.

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FISHEL WHITE RUNNER DUCKS, $1.00 each; $10 per dozen. Ida M. Oliver, Isabel, Kan.

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EGGS! EGGS! EGGS! THIRTYthree pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

FOR SALE—THOROUGHBRED TURkeys, geese, ducks, 18 varieties of poultry; white and pearl guineas, bantams, dogs, hares, rabbits, fancy pigeons. Write wants. Free circular. D. L. Bruen, Platte Center, Neb.

THE 115,000 FARM FAMILIES WHO regularly read this page are anxious to buy their breeding stock early this year. A nickel a word a week is the cost of advertising what you have to sell.

MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

GOVERNMENT FARMERS WANTED—Ages 21 to 50. Make $125 monthly. Write Ozment, 39-F, St. Louis.

FIR LUMBER! RED CEDAR SHINgles! Choice. Mill direct. Save money. Write Lansdown, Drawer H, Everett, Wash.

25,000 RED CEDAR POSTS AND SEVeral hundred poles for sale. Let us quote you a delivered price to your station. Will ship subject to examination before payment. Farmers Co-Operative Co., Ltd., Clarks Fork, Idaho.

SHIPLAP, $21.50 PER THOUSAND FT. This is our delivered price on No. 1 guaranteed fir shiplap at most any station in Nebraska. Other lumber and millwork at same low prices, shipped subject to inspection. Send your lumber list for freight paid estimate or ask for complete price list. Western Lumber & Millwork Company, Incorporated, 534 Perkins Bldg., Tacoma, Wash.

VIOLIN FOR SALE CHEAP. SENT on trial. Write Miss Bertha Mardiss, Route 5, Rosedale, Kan.

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FOR SALE—SCOTCH COLLIE DOGS. William Cramer, Dunlap, Ill.

FOR SALE—HOUNDS TRAINED AND experienced, $25 each; also yearling hounds, $10. No catalogues and pictures. References all over America. John B. Donaldson, Booneville, Miss.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned; are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

POLAND-CHINA PIGS—BIG TYPE pedigreed. Davis Bros., Lincoln, Neb.

GOAT SALE—BILLIES AND NANnies, the Nubian milk goats. W. B. Fuerst, Battle Creek, Neb.

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YOU CAN BE PERMANENTLY cured. Write Omaha Stammerers' Inst., Ramge Bldg., Omaha.

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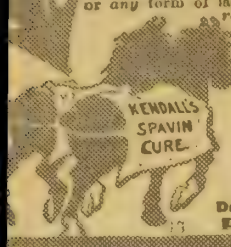
Don't take chances with spavin, splint, curb, ringbone, bony growths, swellings or *any* form of lameness. Use the *old reliable* remedy—

KENDALL'S Spavin Cure



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Dr. B. J. Kendall Co.
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Calf Profits

Are you getting them? Calf profits mean more to you now than ever before.

Blatchford's Calf Meal

has been known since the year 1800 as the complete milk substitute. Costs less than half as much as milk — prevents scouring — promotes early maturity. Sold by dealers or direct from the makers.

Write for New Data See actual figures showing you how to increase your calf profits.

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Purchase a Southern Farm

Prices range from $15 an acre up. Nature favors you with big crops, ample rain, mild winters, enjoyable summers. Social, religious, and school privileges the best. Beef, pork, poultry, sheep, and dairying pay handsomely. Large profits in alfalfa, truck, corn, cotton, nuts and apples. Great **industrial** openings in all parts of the South. "Southern Field," state booklets and all facts free.

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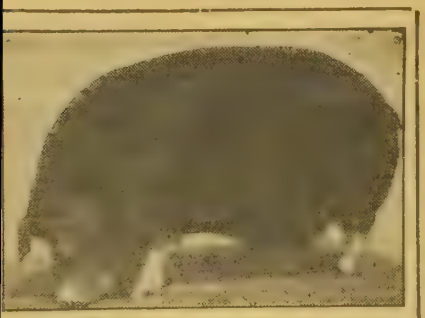


The Most Profitable Animal

on the farm today is probably the hog. Few are the farmers who do not raise at least a few hogs. The Twentieth Century Farmer has on its staff a man who has been for a quarter of a century a raiser of pure bred hogs. He is a recognized authority on the subject. Every week he takes up some phase of the subject and gives the readers of the Twentieth Century Farmer timely and practical advice. These hog articles alone are worth many times the subscription price to the average farmer.

Take advantage of our special subscription offer. Do it today, before you forget it.

ONE DOLLAR BUYS

1—The most reliable and practical treatise on hog cholera ever published — our 48-page illustrated booklet, "Hog Cholera—Prevention and Cure."

2—Our 24-page illustrated War Atlas, with big maps of the world and every nation at war.

3—The Twentieth Century Farmer for 15 months to January 1, 1916.

All Three For Only ONE DOLLAR

Address,

Twentieth Century Farmer

OMAHA, NEB.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Doing Without Necessary Things

M. F. J. E., Arizona: In your issue of September 19 is an excellent article on the above topic that I hope every farmer will read and keep in mind, and keep a "lookout" for that necessary thing. There are many other things, too, besides those mentioned by L. H. Cobb, that should be attended to at once and not left to "luck."

There was that broken stove leg, propped under the stove for the present and then left for weeks, until one day, when the wash boiler was on, it gave way and scalded the little child almost to death. Then follow those months of doctoring and fear, and oh, the suffering in that little body! All might have been saved by a few cents expended at the proper time.

There was also that can of lye, which seemed indispensable, in another home; they had meant to place a shelf for it, beyond the reach of baby fingers—only a few minutes' work—but left it until the little one drank of the terrible contents. Two years passed before the child could swallow even a bread crumb without being thrown into spasms.

In yet another home, there were the matches left carelessly here and there, until the little lad caught his dress on fire while building a play-fire. His side was badly burned, and it was months before it was healed, and then the poison came out in boils all over his face and body, leaving him disfigured for life. The cost of a matchsafe!

How many hours and hours of suffering caused from that delayed trip to the dentist.

I have in mind also a little shoe that went through at the toe. Father neglected to get leather for it when he went to town. It was left to "good luck" until a terrible sliver from a rotton board got into the little foot. Then, of course, the shoe was mended, but it was weeks before it could be worn.

What is there of more importance than health and bodily comfort? Do not put off that operation for years, until the best of life has been spent in suffering, and the body has become so weakened as to render an operation out of the question. They are bad enough at best, but when the body has been sapped of vitality, they are worse than bad.

If the farm machinery is demolished by a lost bolt, we may buy more, if we work hard enough. We may even buy another horse to replace the one that fell through those old boards on the pasture well. We cannot buy back those years spent in suffering, nor forgive ourselves for the neglect that caused so much suffering in others.

Editor's Note—We quite agree with our correspondent. We are all too apt to neglect little duties, and sometimes our carelessness results tragically.

Uses for Hog Millet

A. J. M., Wyoming: Will you please tell me if broom corn millet or hog millet is good feed for anything but chickens, and how it should be fed?

Answer—We have had no experience with this grain and should be glad to hear from any of our readers who may have had experience in using it. The only thing we can learn of the uses of hog millet is from experiment station bulletins. From these we learn that the grain is excellent hog feed, but should be ground when used for that purpose. There are also cases on record where it has been profitably fed to sheep. One bulletin states that it should be good dairy cattle feed, as it is rich in protein. It is also sometimes used for silage, though not as good for this purpose as corn or the kafirs. We find no details as to the method of feeding.

Warning! Against Alfalfa

The following clipping has been sent us by a farmer subscriber:

"If you don't want lots of trouble, don't sow alfalfa. Along in the middle of June, when the corn needed cultivation the most, we had to stop and cut the darned alfalfa. It was in bloom, three feet high. We had to haul in twenty loads of hay off of it.

In July the folks in town invited us to spend a week attending the chautauqua. I suppose they were glad when they got my postcard announcing that we could not come, because we had to cut that blamed alfalfa patch again. Gee, but it was hot hauling in that hay!

Worse still, I was fool enough to go to work and sow five more bushels of alfalfa seed. The only rest I'll get hereafter from hauling alfalfa will be on rainy days.

It got to raining again in September and about the first thing I knew that darned alfalfa was three feet high and all in bloom; it had to have another hair cut.

Then Barnum & Bailey's circus came to town and, darned my buttons, if I ddin't have to miss that circus for the first time in forty years. I got mad, and then turned the pigs, cows and calves into it; and still the blamed stuff kept growing to beat the cars. They could not keep it down; they got fat on it.

But still this alfalfa hay that we sweat so cuttin' and stackin' makes mighty fine stuffin' for the cows these cold groundhog days. Everything on the place eats it except the hired girl, and she ain't been here long.—From the Oklee (Minn.) Herald.

Reminders for Hog Raisers

(CONTINUED FROM PAGE THREE.)

in the bank after the animals are sold.

We must not keep in view the getting of the most dollars when the sale is made, or the spending of the least number of dollars to get them ready for market, but the handling of the herd in such a manner that we will get the greatest number of dollars after all expenses are paid. We believe the greatest net returns can be obtained if the herd is kept in good thrift all the time.

The unthrifty, out-of-condition pig is the dangerous one. He is the first one to drop off under almost any unfavorable condition. If by chance your herd comes in contact with hog cholera germs the unthrifty pig or the runt is the first to go wrong. Without doubt many an outbreak of cholera entailing a big loss can many times be traced to the unthrifty, wormy, lousy pig.

These things have been previously mentioned in the Twentieth Century Farmer, but we feel that careful attention to many of these matters at this particular time of the year warrants our again calling our readers' attention to them.

No More Blackleg

VACCINATE WITH **BLACKLEGOIDS** and save the animals.

BLACKLEGOIDS are

EASIEST SAFEST SUREST.

Used and endorsed everywhere that Blackleg is known.

Order through your veterinarian or druggist.

Write us for circulars describing Blackleg and telling how to prevent it.

PARKE, DAVIS & CO.
Department of Animal Industry,
DETROIT, - MICHIGAN.

The Marvelous Fertility of Blackburn Farms Is Proven Conclusively by Their Immense Productions

For instance, one farmer there grew 7,000 bushels of potatoes of very superior quality on forty acres in 1909.

Another grew 137 bushels of weighed oats per acre, while yet another produced 42 bushels of winter wheat, and brewing barley yields 60 bushels.

Four tons of alfalfa in two cuttings is not unusual, and flax has yielded 16 bushels per acre.

Turnips yield as high as thirty tons per acre at a cost of less than 50 cents per ton. All root crops yield enormously.

Grasses cure on the ground, and stock thrives upon them and seldom need other food or shelter during the winter.

All food grown here contains more flesh producing substances than elsewhere according to highest scientific authority.

Water for domestic use is perfect, and is had at 15 to 30 feet, and in an unfailing supply.

Disease germs cannot live here. Hence it is a veritable health resort for man and animal.

The government Forest Reserve adjoins these lands, and you can get from it all the timber you want for the cutting and hauling for improvements practically without cost by getting permission of the government supervisor, who has an office at Laramie.

There is no better place to make money in grain growing, stock raising and dairying, and live in the healthiest spot on the continent.

Laramie is a fine market for what you can raise, and it has anything in its stores that will be found in any city of 10,000 people.

The University of Wyoming, with its $500,000 equipment and 30 professors is there, eager to aid the farmer in his business and educate his sons and daughters.

A few sections to exchange for Iowa or Eastern Nebraska land.

Better let me send you free our illustrated booklet. Your address on a postal will do.

Laramie Development Company

LARAMIE, WYOMING.

Or A. W. Augspurger, 548 Bee Bldg., OMAHA, NEBRASKA.

Review of Live Stock Market

By A. C. Davenport

TIGHT money has been the dominating feature of the cattle and sheep markets during the last week. To be more exact, the money situation has been a big influence ever since the beginning of the war in Europe, but it has had a more direct and a more apparent influence during the last week or ten days.

It will be remembered that the breaking out of hostilities tightened money to such an extent that for a few days the packers almost stopped buying, but money speedily became easier, so that business in the live stock markets moved along again in a nearly normal condition. So long as receipts consisted largely of killers the money question did not bother the producers of live stock. Now that the season of the year has arrived when a large percentage of the cattle and sheep coming to market consists of feeder stock, the money question bobs up again in a way to demand the attention of producers. The range season is now right at its height and hundreds of trains of range cattle and sheep are heading into the big market centers. This is the time when the farmers in the corn belt fill their feedlots, buying the range cattle and sheep and giving notes in return, which are carried by the banks until the stock is ready to be turned into money again.

Tight Money Affects Feeders

With vast quantities of hay in stack and a bountiful crop of corn in the fields, not to mention green pastures and a world of all kinds of rough feed, the farmers of the whole country are in a position to feed large numbers of cattle and sheep. Not only are they fixed to feed, but they are anxious to feed, as they have confidence in the future of the market if they could get the stock. Right here is where the difficulty comes in—very few farmers have sufficient cash on hand to pay for the stock themselves, and they depend upon the banks to let them have the money the same as in previous years. While the banks are doing all they can they are forced to turn down a great many applications, for the very good reason that money is close and they have not got it.

The inability of the banks to furnish all the money required is keeping many men from buying feeder stock and right there is where the money situation is making its influence felt on the market. The inability of many would-be buyers to secure funds with which to buy stock is limiting the demand. A restricted demand coming at the height of the range shipping season could have no other effect than to weaken the market. This very result can be seen in all the big live stock markets where prices on both cattle and sheep have shown more or less decline during the last week. It is really fortunate for the selling interests that receipts have run no larger, the arrivals of cattle at the big centers being a little under one and two years ago, and the receipts of sheep being smaller than two years ago, but larger than a year ago.

Stockmen are all agreed that with money as plentiful as usual, and with the banks not only willing, but anxious, to take cattle and sheep paper, the demand for feeder stock would be very large. Under such conditions it is not at all unreasonable to assume that prices on both cattle and sheep would be much higher than those now prevailing. Not only does a good feeder demand put up the market on feeder stock, but it also tends to force killers upward.

Signs Are Helpful

Perhaps it is just as well for the good of the live stock business that money just at present is a little close. Prices on range stock were already high, and if feeders could get the money there is no telling how high they might send both cattle and sheep, possibly so high as to wipe out the feeder's profit entirely.

When will the situation change? No one can answer definitely, but within the last day or two there have been hopeful signs that the beginning of relief of the money stringency may be in sight. The reported engagement of considerable quantities of meat products, flour, cotton and horses for export have given rise to the hope that foreign trade is on the verge of improvement. Any change that will tend to release the hundreds of millions of dollars tied up in cotton and wheat and other farm products cannot fail to be of great advantage to the live stock markets. Whether the change will come soon enough to help out the big runs of cattle and sheep remains to be seen. Many stockmen, however, are of the opinion that help to be of any advantage to range stock must come quickly, as they are predicting an early close of the season, especially on cattle. Already the more optimistic of cattle traders are predicting a strong market before the end of the month so far as fat stock is concerned.

All predictions for a stronger market, especially on beef cattle, must be taken with allowances, for a reduced consuming demand is almost sure to follow every little upturn in the price of beef.

Hogs Still Going Down

Hogs have continued steadily downward, with only now and then a little reaction of brief duration. More than that, there does not appear to be anything in sight at the present time to stop this lower tendency. It will be remembered that even during normal years it is always an easy matter to break the market during October. Packers at this season of the year generally have sufficient product in their cellars and are not anxious to put away anything additional, so that the market is dependent almost entirely for support upon the demand for fresh meat. This year with the export demand and the demand from the cotton states greatly reduced packers are more indifferent than usual, so that at present writing there does not appear to be anything to prevent the market from continuing downward.

In times like the present, when no one can tell with any degree of certainty what a day will bring forth, conditions might suddenly materialize that would put an entirely different aspect upon the market. Whether they will materialize or not is the merest guesswork and under the circumstances it is better that each individual should guess for himself.

Sale Dates

Poland-China Hogs

October 29—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
November 5—Harry Tidrick, Winside, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb.

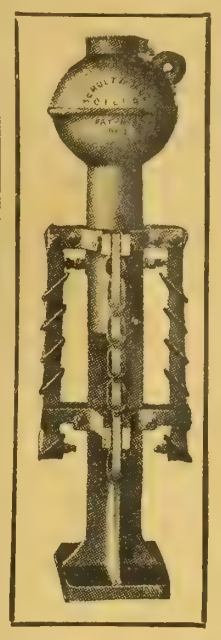
Duroc-Jersey Hogs

October 23—F. B. Nelson, Lindsay, Neb.
October 31—Robert Leisey, Wisner, Neb.
November 5—Harry Tidrick, Winside, Neb.
November 11—F. A. Lemmerman, Creston, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday, Rising City, Neb.
March 1—Harry Tidrick, Windside, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Shorthorns

October 29—Rapp Bros., St. Edward, Neb.
December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt,

The Sanitary Schultz Hog Oiler



The Oiler With the Flexible Arms

Overcomes the filth applying feature that cannot be avoided with wheel and roller hog oilers, but applies the oil in its pure sanitary state direct to your hogs.

Our Oiler is also considered the most economical Oiler to operate. Remember that we are the originators of the Hog Oiler and our patents cover exclusive features not obtainable in later and inferior imitations. Send for our big free Hog Oiler book, a 28-page copyrighted publication that tells you a whole lot more about the merits of our Hog Oiler and a number of other things that every hog raiser should know. We want a live agent for every locality.

Power Creek Manufacturing Co.
TREYNOR, IOWA

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The Great Worm Destroyer SAL-VET The Great Live Stock Conditioner

—is not a feed, but a medicated salt that rids all farm animals of blood-sucking, disease-breeding worms—makes stock thrive faster, look better, act better. Animals in healthy condition are much less liable to disease, than when "worm-infested" and run-down. Try SAL-VET at my risk—let me prove its value on your stock or no pay.

Send No Money—Just the Coupon

Tell me how many head of stock you have, and I'll ship you enough SAL-VET to last your stock for 60 days. Simply pay the freight charges on arrival, feed as directed. At the end of 60 days report results. If SAL-VET does not do all I claim, I'll cancel the charge — you won't owe me a penny.

SIDNEY R. FEIL, Pres.
THE S. R. FEIL CO., Mfg. Chemists
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LOOK FOR THIS LABEL

on all SAL-VET Packages. Don't be deceived by imitations.

Don't buy "Sal" this or "Sal" that. Get the original genuine SAL-VET.

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40 pounds	$2.25
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200 pounds	$9.00
300 pounds	$13.00
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No orders filled for less than 40 lbs. on this 60 trial offer. Never sold in bulk; only in Trade-Marked SAL-VET packages. Shipments for 60 days' trial are based on 1 lb. of Sal-vet for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular-sized packages.

(211) THE Dept. 10-10-14 CLEVELAND, OHIO

Sidney R. Feil, President, THE S. R. FEIL CO., Dept. 10-10-14 CLEVELAND, OHIO
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NELSON'S DUROC SALE

35 Boars and 15 Sows to Be Sold at Farm Near Lindsay, Neb., Oct. 23, '14

This is one of the best offerings I have ever made. The fall boars are by the grand champion, VALLEY KING, and one is by RED CHIEF WONDER. The spring boars are by GOLDEN MODEL 4TH, INVINCIBLE CHIEF, MELINA'S WONDER, PERFECTION WONDER, CHIEF SELECT 2D. A splendid lot of sows will be sold, well along in pig or with litters at side by CRIMSON GANO by Colonel Gano. Remember everything is immune.

Write for catalogue.

Auct., Col. N. G. Kraschel. Fieldman, G. E. Hall.

F. B. NELSON, Lindsay, Neb.

Stuthman's Duroc Sale

10 Fall Boars, 30 Spring Boars, 5 Fall and Spring Gilts To Be Offered at Auction AT Pilger, Neb., Oct. 17, 1914

This offering will consist of a choice lot of boars sired by Melina's Wonder, King the Colonel, Crimson Wonder Select, Sweet Rose's Wonder, Chief's Model, Golden Model 4th, Colonel Chief, Blue Ribbon Model Jr., Blue Ribbon Model, Wonder Lad and Golden Model 31st. They are out of sows sired by Melina's Wonder, Crimson Wonder Select, Red Jim, Wallace's Wonder, Chief Select 2d. This stuff has not been crowded but is just in good breeding condition. Write for catalogue and be on hand sale day.

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HENRY STUTHMAN, Pilger, Nebraska

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At ordinary prices, farm-raised registered Percheron studs—1, 2, 3 and 4 years old. Kind disposition because well cared for. You would admire their big bone firtst, then their immense weights, because they are developing big like their imported sires and dams. And you will receive true old-fashioned hospitality on your visit at Fred Chandler's Percheron Farm. Just east of Omaha.

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The Chief of Dairy Husbandry at University of Illinois Agricultural Experiment Station says: "A scrub bull is the most expensive and extravagant piece of cattle flesh on any farm." At the June sale of purebred registered Holstein cattle at Chicago, nineteen bulls were sold at an average of $1,750 each. Leaving out the record breakers ($3,000 each), the remaining nineteen cattle brought an average of $75 each. Pretty good evidence for you to consider.

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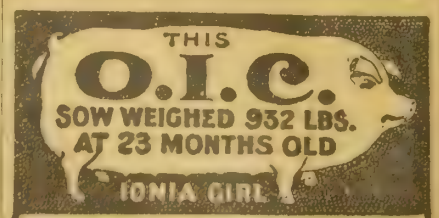
O. I. C. HOGS



I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN RFD79 Portland, Mich.**

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My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.

A few good sons of King Segis Lyons are still left.

DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

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I HAVE THE GOODS

Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

BOARS! BOARS! BOARS!

Several fall boars and a few choice spring boars for sale, sired by BELLE'S CRIMSON WONDER, COL. CHIEF, GOLDEN MODEL 4th and BELLE'S BIG WONDER, out of Crimson Wonder bred dams. I am offering these boars at bedrock prices for quick sale. **A. R. BARNES, Petersburg, Neb.**

IMMUNED DUROC BOARS.

I am offering an exceptionally strong lot of Duroc Jersey boars for sale, largely of Crimson Wonder and Golden Model breeding. They are the best lot I have ever offered and are being priced worth the money.

E. R. DANIELSON, Osceola, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.

A. W. LAMB, Albion, Neb.

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Are you on the market for a herd boar? If so, write me just what you want. I have them sired by Lucy's Select, Proud Wonder Jr. and other top boars of the breed. **L. J. KUZEL, CLARKSON, NEB.**

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.

F. E. MERRICK, OSCEOLA, NEB.

BIG SMOOTH DUROCS

Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.

HENRY KOEHLMOOS, Pilger, Neb.

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.

GEO. W. SCHWAB, Clay Center, Neb.

CEDAR'S DUROCS

The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.

P. P. CEDAR, GENOA, NEB.

HEKRDLE'S DUROC BOARS.

I have the best lot of spring boars for sale that I have ever produced. Sired by A. A.'s Model and Beauty's Wonder. A combination of the Crimson Wonder and Golden Model blood lines. Correspondence solicited. A. A. Hekerdle, Stanton, Neb.

35 TOP BOARS

35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st, Prince Munice, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.

J. N. FORBES, Plainview, Neb.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

DUROC HERD BOARS

Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd headers I have them. They are out of prize-winning sires and dams. **Clarence Wallace, Wisner, Neb.**

IF YOU WANT WHAT YOU WANT when you want it, place an ad. in the Market Place of Twentieth Century Farmer.

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McCULLOUGH'S BIG POLANDS

We have a splendid lot of Poland-China spring boars for sale. Sired by Smooth Big Bone, Columbus Again and Expansion Again. These boars have been grown right. They are big and smooth with lots of bone. For particulars write **O. J. McCULLOUGH, CLARKS, NEB.**

Immune Poland-China Boars

Splendid lot of big, smooth spring boars, sired by BLUE VALLEY, COLUMBUS WONDER and BLUE VALLEY ORANGE. If you want herd headers with size and quality, we have them. **THOS. P. WALKER & SON, Alexandria, Neb.**

IMMUNE POLAND-CHINAS

A choice lot of Poland-China spring males for sale. Sired by Blue Valley Oak. They are the big kind, with quality. Everything immune. Prices reasonable JOHN NAIMAN, Alexandria, Neb.

BERKSHIRE HOGS

60 spring pigs by Longfellow's Premier, Autocrat and others. They have plenty of size, stretch and bone. Prices reasonable.

GEO. PORTER, STANTON, NEB.

HAMPSHIRE HOGS

HAMPSHIRE BOARS

Hampshire spring boars for sale; sired by De Kalb's King 100, a son of the famous Major. They are very growthy, and all priced to sell. Also have Aryshire bull calf for sale.

WILLIAM PAMP, Benson, Neb.

FISHER'S HAMPSHIRES

25 fall boars and 25 spring boars for sale. Sired by Winside Star, Fisher's King 5th, Tatro's Messenger and Paulsen's Choice. Prices reasonable.

ROY FISHER, Winside, Neb.

RED POLLED CATTLE

Red Polled Cattle

Bulls and heifers as good as the breed affords for sale. Satisfaction guaranteed. Prices right. Write your wants or call.

W. P. SCHWAB, Clay Center, Nebraska.

JERSEY CATTLE

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and yearly milk and butter records. HAL C. YOUNG, Lincoln, Neb.

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Bargain Day on Cuts.....

You can buy any cut in the Twentieth Century Farmer for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as we have only one of each kind. Address,

Twentieth Century Farmer
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GERMAN SOLDIER.

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THIS ATLAS IS NEW IN EVERY DETAIL.

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Tables of what ten great wars have cost humanity.
"Who is Who" in this War with Portraits of all the Noted Leaders.
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"WORLD'S GREATEST WAR"

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Every map in this new atlas is made from new plates just engraved and are guaranteed correct in every detail. The coloring in the maps is clear and beautiful and each map shows five colors. Most maps are 15x20 inches in size; some are 9x13 inches and others 7x9 inches. We have absolutely the best and most complete set of map plates in print.

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(shows Russian Empire complete in one stretch).

2--PAGE MAP OF CENTRAL EUROPE (The War Zone).
This map was made especially to show the theatre of war. All fortified towns are marked in red. Even the smallest towns are shown. This map is 21x14 inches and is the only one of its kind in print.

Large clear colored maps of Germany, Austria, Servia, Romania, Montenegro, Turky, Albania, England, Belgium, Holland, France.

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If you are already a subscriber we will extend your subscription THREE MONTHS

ADDRESS **TWENTIETH CENTURY FARMER,** OMAHA

THIS PONY FREE!

"BUTTERCUP"

"BUTTERCUP" is a beautiful black and white spotted Shetland Pony with long silky mane and tail. She is about 6 years old, stands 42 inches high and weighs around 350 pounds. We have already given away 233 ponies to boys and girls who joined our Pony Club and **"Buttercup"** is just as fine as any of these other 233 beautiful ponies. This is saying a great deal when you consider that we go around to all the big pony farms and pick out the very best ponies we can get for children. **"Buttercup"** is as gentle and lovable as any pet could be and is thoroughly broken to ride and drive. Hitched up to her nobby little pony cart, with her nickel, trimmed harness flashing in the sunlight, she makes the prettiest picture you ever saw. Not only is she pretty, but she can carry along a whole buggy load of happy children at a fast clip—faster than many big horses can. Can you imagine anything you would like to own better than **"Buttercup"** and her complete outfit? Read this page through carefully and then send us your name and address so we can tell you just how you can get her for your own.

WE WILL GIVE YOU OR SOME OTHER BOY OR GIRL THIS PONY WITH COMPLETE OUTFIT, JUST AS IT LOOKS IN THIS PICTURE.

Here is "Buttercup"

THE OUTFIT

ALONG with "Buttercup" we send the finest and most complete Pony Outfit that you ever saw: A stylish four wheeled pony buggy—strong and easy riding (just like the one in the picture) a handsome black nickel trimmed harness and a hand made saddle and Indian horsehair bridle. No matter how rich a child's parents may be they could hardly buy him a better or more complete outfit than the one we send with **"Buttercup"** to you or some other boy or girl. The horsehair bridle is made especially for us by an old cowboy as Deer Lodge, Montana, and is hand woven out of many colored horsehair—red, black, blue, yellow, green and white. It is woven into remarkable Indian designs, mounted with fluffy tassels, and the reins end in a real cowboy quirt. You will be the first in your neighborhood to have one of these bridles if you send us your name and get **"Buttercup"** and the outfit. We had just as soon send this wonderful Pony Outfit to you as to any other boy or girl, but you must send your name and address right away so we can tell you all about our easy plan. Use the coupon below and mail it now.

Send Us Your Name Today

If You Want To Own "Buttercup"

As soon as we hear from you we will tell you how to go ahead and get "BUTTERCUP" for your own. Our wonderful Pony Club is known all over the country because it gives real Shetland Ponies to boys and girls and you can have one of our ponies as well as any other child. Don't let anyone persuade you that you can't get beautiful little "BUTTERCUP" and her outfit because our plan of giving away ponies is different from others. The fact that we have already given away 233 ponies to boys and girls all over the United States, from the state of Vermont to the state of California, several going over 1800 miles from St. Paul, is proof that we give ponies away. The postmaster or banker in your town knows that the Webb Publishing Company of St. Paul, Minnesota, established more than 30 years ago, is one of the largest publishing houses in the United States and can afford to give away ponies to advertise its papers. We never heard of one of the 233 children to whom we have already given ponies until they wrote us they wanted a pony and that is why you must send us your name and address at once if you want us to send you "BUTTERCUP" and her dandy outfit.

We Have Given Away 233 Ponies

Here are the Names of 30 of our 223 Lucky Pony Winners

"Bob," John B. Corn, Jr., Pulaski Co., **Arkansas.**
"Sweetheart," Lillias E. T. Howe, Nevada Co., **California.**
"Pippin," Doris Navarette, Fairfield Co., **Connecticut.**
"Pal," Julia Federer, Champaign Co., **Illinois.**
"Heinie," Clarance Niemoeller, Bartholomew Co, **Indiana.**
"Justin," Norma Thorsen, Palo Alto Co., **Iowa.**
"Jerry," Cleta Johnson, Douglas Co., **Kansas.**
"Keno," Vanessa Lykins, Bourbon Co., **Kentucky.**
"Merry," Isabelle Whitecraft, Baltimore Co., **Maryland.**
"Clipper," Adelaide J. Stever, Bristol Co., **Massachusetts.**
"Peter," Charley Mahoney, Chippewa Co., **Michigan.**
"Star," Clarance Grover, Trail Co., **Minnesota.**
"Mac," Ruth Mead, Saline Co., **Missouri.**
"Reggie," Clifford Smith, Yellowstone Co., **Montana.**
"Bumps," Barton Lewis, Dawes Co., **Nebraska.**
"Busy," John H. Albrecht, Jr., Camden Co., **New Jersey.**
"Sultan," Donald M. Robinson, Saratoga Co., **New York.**
"Silver-Tips," Georgia Lee Barringer, Stanley Co., **N. Car.**
"Paddy," Grace McGogy, McIntosh Co., **N. Dakota.**
"Flo," Loyd Thomas, Allen Co., **Ohio.**
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"Lady," Marion Jones, Franklin Co., **Tennessee.**
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"Lulu," Louise Damron, Benford Co., **Virginia.**
"Scotty," Catherine Rohrbeck, Pacific Co., **Washington.**
"Princess," Geneva Holt, Nicholas Co., **W. Virginia.**
"Polly," Alfred Hokenstad, Dane Co., **Wisconsin.**

Notice we print the names of 30 of our 233 Lucky Pony Winners. We would gladly print the whole 233 names if we had room for them here, but we will send them to you just as soon as we here from you. Possibly some of these happy children live in your county or a county near you and, if so, you probably know them because our Lucky Pony Winners are the best known children in their neighborhoods. However, it dosen't make any difference where you live; if you send us your name and are the lucky child to get **"Buttercup"** she and her whole outfit will be shipped without one cent of cost to you. If you send us your name the day you read this, we will send you 1000 votes for **"Buttercup"** and a big surprise that will double your chances of getting a Shetland Pony.

Every Club Member Gets a Prize

Every single child who sends us his name and joins our Pony Club will receive a handsome prize of his own choosing. Besides the Pony Outfit (and the Big Surprise we have for you) we will give Bicycles, Diamond Rings, Sewing Machines, Rifles, Cameras, Gold Watches, Flashlights and many other wonderful rewards that you never could get until now. Of course, "Buttercup" and her dandy Outfit is the best prize of all and you have the same opportunity to get her as any other boy or girl if you send us your name now.

Address all Letters To

THE FARMER'S WIFE PONY CLUB

544 WEBB BLDG., ST. PAUL, MINN.

CUT OUT THIS PONY COUPON AND MAIL TODAY

IN THE SADDLE

The Farmer's Wife Pony Club:-
544 Webb Bldg., St. Paul, Minn.

Please send me pictures of **"Buttercup"** and names of the 233 ponies you have given away, and also tell me how to take care of Shetland Ponies. I have no pony and want to join the Pony Club and get **"Buttercup"** for my own.

NAME_____

P. O._____

R. F. D._____ STATE_____

Send Your Name Today.

Our ponies are given away so quickly that you will be more sure of getting this one if you sit right down now and send us this coupon with your name and address or send it in a letter (either way will be all right). The work we require you to do to be a full fledged Pony Club Member, eligible to get "Buttercup" is so easy that any child who could drive a pony can do it. We shall write you promptly just as soon as we hear from you.

Address All Letters To

THE FARMER'S WIFE PONY CLUB

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TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, October 17, 1914 | Number 723

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Amazing Prices on STEEL Shingles

A lifetime bargain on Edwards Steel Shingles to a limited number—a sensational opportunity to those who write at once. You can buy the patented genuine Edwards Reo Steel Shingles—that won't rot, rust, crack, burn or leak—for the same price as good wood shingles.

Wood Shingles Out of Date

Wood Shingles are no longer popular since Edwards Interlocking Steel Shingles have proven to be the best, in all kinds of tests. Over 135,000 successful farmers now use Edwards Steel Shingles.

Easy to Lay—Saves Time

Come in big clusters ready to put on. A few nails, hammer and a little time—10 times faster and 10 times easier than putting on wood shingles, one at a time. Edwards Shingles are rust and leak proof.

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Get a copy of our $10,000 guarantee bond protecting all Edwards Reo Steel Shingle Roofs against dangerous lightning. We believe in protecting our customers.

How We Figure Prices

We sell our Steel Shingles at actual factory cost plus a small profit—our large business permits this. You get the jobber's profit, dealer's profit and salesman's profit, as we sell direct to you and we pay the freight.

Write Before We Are Oversold

This unusual offer won't last long. So write for prices and Catalog 1048 today—give us dimensions of your roof if possible. We manufacture all kinds of steel roofs for buildings, steel garages, etc.

The Edwards Manufacturing Company
1048-1098 Lock Street, Cincinnati, Ohio

EASIEST RUNNING MILL MADE

A Duplex Mill requires 25% less power and will do twice as much work as any other mill of equal size. Grinds ear corn, shelled corn, oats, wheat, kaffir corn, cotton seed, corn in shucks, sheaf oats or any kind of grain. There is no mill made that for speed and complete grinding equals the

Kelly Duplex Grinding Mill

Easily operated. Never chokes. 7 sizes. Fully guaranteed. Any power. Especially adapted for gasoline engines.

FREE CATALOG.

Duplex Mill & Mfg. Co., Box 312 Springfield, Ohio

SANITATION

would have saved a great many of the 7,420,912 **hogs valued at $59,455,700.00** lost in United States during 1913 from

HOG CHOLERA

You can make your hog pens sanitary if you use

KRESO DIP No. 1

The Standardized, Reliable Dip and Disinfectant.

We will send you free a booklet on the treatment of mange, eczema or pitch mange, arthritis, sore mouth, etc.

We will send you free a booklet on how to build a hog wallow, which will keep hogs clean and healthy.

We will send you free a booklet on how to keep your hogs free from lice and parasites and disease.

Write for them—they are free.

KRESO DIP No. 1 has been used at the large state fairs in the United States for the last ten years to prevent the spread of contagious disease. It has done it, and KRESO DIP No. 1 will do the same for you on the farm.

KRESO DIP No. 1 is Easy to Use—Reliable—For sale by All Druggists—Effective Not Expensive.

PARKE, DAVIS & CO.

Dep't Animal Industry. DETROIT, MICH.

Prattle of the Youngsters

Political Reasons

Enter the nurse.

"Please, 'm,' will you come in and speak to Master Willie? He won't let me bathe him. He says he's a socialist."

Proper Punishment

The Minister—For shame, my boy! What have those poor litlte fish done to be imprisoned upon the day of rest?

Tommy—Tha-that's what they got for—for chasing worms on a Sunday, sir.

Strange Growth

"Pa, what's a feebly?"

"There isn't any such thing, Harold."

"Yes, there is. It says in this book that the young man had a feebly growing down on his cheek."

Willie's Come-Down

Little Willie, after flattening his nose against the outside of the baker's window for about half an hour, at last entered with his mind evidently made up.

"I want to know," he said in a determined yet hopeful voice, "how much those wedding cakes are?"

"Well," answered the enterprising proprietor, "I have them at all prices. Tell your mother that I can do her a beauty for $20. The cheapest is $10."

"Ah, well," he murmured, in a resigned voice, "let me have one of those 1-cent gingerbread rabbits."

Unappreciated

Katherine's uncle had come to pay a visit, says the Delineator. After the first greetings were over and he was comfortably seated with little Katherine on his knee, he asked, as uncles often do, if she were "a good little girl?"

"Yes, but nobody knows it," was Katherine's prompt reply.

Practical Piety

One day two little girls were hurrying to school and were afraid they would be tardy. One little girl said:

"Let's kneel right down and pray that we won't be tardy."

"Oh, no," said the other, "let's hike on to school and pray while we're hikin'."

Then the Fight Began

So far as height and weight are concerned, Tommy and Willie were much of a muchness, and both the lads were born and inveterate fighters. The other day the following conversation took place between them; it followed hard on the heels of a heated argument concerning a certain missing marble:

"Aw," said Willie, tauntingly, "you're afraid to fight, that's wot it is."

"Naw, I ain't," reiterated Tommy, "but if I fight my ma'll find it out and lick me."

"How'll she find out, eh?"

"How'll she find out?" snapped Tommy. "By seein' the doctor goin' t' your house!"

"Why?"

"Because I'm goin' to git drunker'n a b'iled owl and raise all manner o' trouble!"—Judge.

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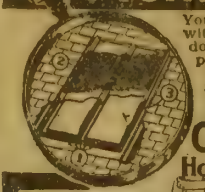

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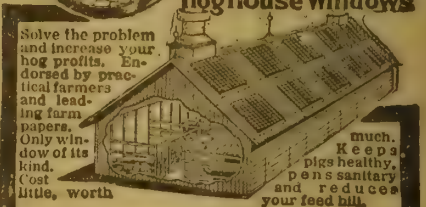

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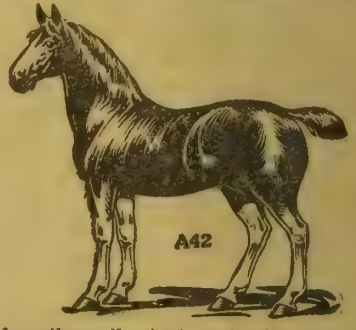

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Price $5 per bottle, and worth it. Address **McKallor Drug Co., Binghamton, N. Y.**

Bright and Breezy

Considerate

"Come out west, old boy, and visit me on my farm," wrote the enthusiastic Kansas man; "breathe the fresh air, eat young onions and get close to nature's heart."

"That sounds alluring," wrote the jaded easterner, "but do you think nature would let me get close to her after eating young onions?"

Cause for Pride

"What has Lem Swasher ever done to entile him to loaf and put on airs?"

"Nothin' on his own account," replied Farmer Corntossel. "As near as I can make out, it's ancestry that makes Lem so kind o' haughty."

"Has he distinguished ancestors?"

"Not exactly on his own account, but he owns a pup whose grandfather took a prize at a dog show."

Like for Like

He came in, laid down some suspicious-looking bills with a genuine dollar bill on top, and said:

"I want to pay for that barrel of apples I got."

"Can't take this money," said the dealer.

"Why not?"

"Most of it isn't good."

"The top layer's good, is it not?"

"Yes."

"Well, that's the way it was with the apples."

Mislaid

A trial took place recently in Texas before a negro jury. The twelve gentlemen of color were told by the judge to retire and "find a verdict."

They departed for the jury room. Then began the opening and shutting of drawers, the slamming of doors and other sounds of unusual commotion. Everyone wondered what the trouble was. At last the jury came back into the court, and the foreman arose and said:

"We hab looked everywhar—in the drawers, and behind the do', an' can't find no verdic'. It warn't in de room."—National Monthly.

No Place for Women

"Well," remarked the proprietor of the Junkville general store, as he closed the cash drawer and resumed his place behind the stove, "the women want to vote at the polls tomorrow."

The moralist twisted a plug of black tobacco between his molars and proceeded to chew himself into a logical frame of mind before replying:

"Cain't say I approve. 'Tain't respectable. Whut's the world comin' to, anyway? Women at the polls! 'Twon't be fittin' place for a woman."

Harmless Maniacs

"The rich young men are getting tired of automobiles."

"Yes, they seem to be."

"They want airships now."

"Well, thank goodness when they are seized with the speed mania up in the boundless blue they won't run over anything more important than a buzzard or a crow."

A VALUABLE BOOK FREE

It tells of experiments in feeding live stock both ground and unground grain, alfalfa and kaffir corn—also shows how 25% can be saved—shows values of different foods—tells about balanced rations—describes

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THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

What is the Matter With Our Rural Schools?

II. Home, Church and School Must Co-operate to Keep Our People Contented in the Country

By Ben F. Robinson

NO ONE doubts that there is a farm problem—a problem that stands out as predominant above all others and continually becomes more and more evident.

This problem is not, as it is often asserted, the task of increasing or perpetuating the fertility of the soil, for this is being done from year to year by modern scientific methods. In fact, there is little danger of our soil becoming worn out. These black prairie lands will probably be growing abundant crops of wheat and corn for generations to come. Nor is it a question of improving the kind and quality of farm crops and animals, for this, too, has been accomplished to a considerable extent and will be further accomplished as time goes on. So much attention is given to this that every state has its fair, many counties their corn-growing contests, and even small towns their harvest home festivals.

And what a splendid thing it is to carry home the blue ribbon, whether won in the local contest on the ten best ears of corn or at the state "meet" on the Red Polled heifer. These things are all right, and the farmer who falls in line with them catches the progressive spirit and becomes a useful man to his community.

Again, it is not a matter of increasing the business efficiency of the modern farmer, for he is no longer easily "fleeced" by the lightning-rod agent, or caught through some mining stock swindle. The integrity and industry of farmers as a class cannot be questioned. And a little confidential talk with the cashier will convince Doubting Thomas that the farmer is the man upon whom the banker is staking his money.

Finally, it is not the problem of making country life easy and comfortable, though this is in a measure very desirable. A glance at the improvement in farm machinery and the changes in the home and social life furnishes evidence that the country life is no longer the lonely and monotonous existence it was once thought to be. No, none of these things is the real farm problem; they are but constituent parts of it.

From Country to City

Miss Mabel Carney, in her excellent book, "Country Life and the Country School," says "The most serious condition of present country life is the silent but startling migration of the rural population to towns and cities." A moment's reflection impresses one with the truth of Miss Carney's statement. The ambitious country boy is attracted by the city. It seems to offer a larger field of opportunity. So he says goodbye to the old home, forgetful and neglectful of the opportunities around it.

Now this inflowing of young and vigorous strength toward the cities has had its damaging effect upon rural life. But migration to towns and cities no longer means the occasional shifting of a few of the younger people. It includes the uprooting and withdrawal of whole families, many of whom represent the highest standards of the country community.

As a result leadership has been withdrawn from the country and country life has lost prestige in more ways than one. The farm has produced many good men, but more of them should stay where they were produced. This does not mean that all the children born upon farms should stay there. In this age of specialization all children naturally inclined to trades or professions should be given an opportunity to learn them, but let us not forget that farming is indeed a profession and one well worth the consideration of the highest types of manhood.

This exodus to the city must stop. It has gone far enough. The farm is the cornerstone of our national prosperity. In spite of worthy politicians it matters little whether the president we elect in 1916 is a democrat or republican, but it is important that we have sufficient sunshine and rain to develop the wonderful crops of corn and alfalfa that spread in vast acres over our hills and fertile valleys.

Thirty-five per cent of our entire population gain a living directly from the soil, and the remaining number are indirectly dependent on it; consequently, whatever affects the country is of general concern. The real problem, then, is to maintain a standard people upon our farms.

Life Must Be Satisfying

This is the most perplexing problem of our present rural life. Its solution will be accomplished only when country life is made fully and permanently satisfying. Partial satisfaction—even financial prosperity—is not enough, for the wealthiest agricultural states show a greater decrease in number and quality of their rural population than do the poorer sections.

A noticeable aspect of this shifting of farmers is the rapid growth of tenantry and landlordism. Taking the country over, two-fifths of the farms are run by tenants. Neglected farm buildings, deserted churches and poor schools are some of the evils of this system. It is not our intention to discuss this at length; it is enough to say that no satisfying rural condition was ever built upon a system of tenantry and landlordism. That the land be tilled by those who own and cherish it is the cornerstone of every successful rural social order. Therefore, it is plain that solving the farm problem means keeping the land owners in the country. To do this we must make country life just as attractive as that of the town or city.

There are three prominent factors in determining whether country life shall be satisfactory, namely, the home, the church and the school. We mention these three, for as a rule all social activities radiate from them as sources.

Were I questioned concerning the matter I should without hesitation designate the first as the most important of the three. The home was the first institution; it is the place where privacy from public life may be had, and where perfect fidelity should ever be present; it is the factor whose memory is not forgotten and from whose influence a child cannot escape, whether good or bad.

Children's Rights at Home

The farm home should be a clean, beautiful and attractive place, with flowers, books and music—a place where the boy and girl can rest when the day's work is done. Music, books and magazines are so cheap nowadays that no home need be without them; they do wonders in keeping young folks at home. Why not have good walks, a blue grass lawn and a flower garden? Someone says, "I haven't time. I am busy milking cows, feeding pigs and fighting mites." Well, these things are all right. They go along with farm life, but they must not be carried on to the exclusion of other more important things, else some day there may come cause

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Opportunity in Irrigated Land Industry

Prosperity Brought to One Community by Development of Its Resources May Be Duplicated Elsewhere

THE importance of the beet sugar industry to the United States should not be lost sight of by our people, especially the sugar-producing ability of certain districts in the central and western states. It is true the sugar-producing ability of this western territory has not yet been more than touched upon in the present development, but it has been sufficient to demonstrate the possibilities of these western irrigated districts and such other available territory as may be brought under this same means of cultivation.

The beet sugar industry, both from a general and local point of view, means much to our western states in their business development. It means much to our entire people and country in the building up of an agricultural industry to supply an article of food in general demand. It is estimated that it will require five more factories each year to accommodate the increasing demand for sugar in this country. Seventy-five per cent of all the sugar now used in the United States is imported, leaving only one-fourth of our sugar supply of home manufacture. This would plainly indicate that our facilities for sugar development should be increased to cover this three-fourths shortage in supply.

War Cuts Off European Supply

Moreover, it has become a matter of urgent importance that there should be a great increase in sugar production in this country. The European war has cut off from the United States the possibility of importing enough sugar to meet our needs. If we want sugar to use we must raise and manufacture it ourselves. Not only this year, but for several years to follow, there will be a greatly decreased crop of sugar beets in the European countries, if any at all, as the manufactories and beet crops are being destroyed, and it will be years before they will be restored and the sugar industry in the old countries back on its former basis. The greatest economic loss caused by the war is in men, and there will not be enough left to carry on any industry as it has been carried on in the past for at least a generation to come.

We believe one of the greatest opportunities of the farmers and business men of the central western states at the present time is in the raising of sugar beets and the manufacture of sugar. Last spring, on account of the reduction in the tariff on sugar, it was feared that we would be swamped by huge importations of this staple and the home product be unable to meet the competition. As a result of this anticipation the price on sugar beets per ton was reduced 50 cents. This danger being removed, one of the largest of the sugar companies has announced that, although they contracted for the beets from the farmers at $5.25 per ton, they will pay $5.75. This is, of course, an average price, as the scale of payment is a sliding one, being fixed by the sugar content of the beets, but it is estimated that this is about the price that will be paid under this present arrangement. It is believed that the other companies will follow the example of this first company and pay the higher price for the raw material, thus stimulating the production.

Sugar Beet Raising

A large percentage of the beet sugar raised and manufactured in the United States is raised and manuactured in Colorado and western Nebraska, as this is a crop that is raised under irrigation, and where there is an abundance of sunshine. A description of the huge beet sugar plant located at Scott's Bluff, Neb., will perhaps give our readers an insight into the general proposition of sugar beet raising and the subsequent conversion of the beets into the finished product.

Scott's Bluff is located in the fertile valley of the North Platte river. In 1910 the Great Western Sugar company built a factory there at a cost of $1,600,000. It is conceded to be one of the finest plants of its kind in the country and has a capacity of 1,700 tons a day, with an average season's run of 125 days. There are 500 persons employed during the operating season, including those employed at the twenty-two receiving stations, where beets are delivered at nearby railroad points for shipment. This company paid out at this plant during last season $270,000 for employes' salaries and $1,221,738 for beets. There were 216,353 tons of beets manufactured into sugar.

Feed Lots, Where 1,800 Head of Cattle Consume the By-product

One of the Big Beet Fields

The factory runs continuously, day and night, after starting, until the supply of beets is worked up. There were 506,656 bags of sugar produced last year of 100 pounds each, and the yield this season is largely in excess of 1913. In 1913 the average yield was 11.35 tons per acre, reckoning according to the beets received at the factory. Twelve tons per acre is ordinarily considered a good yield, and if the expenses of growing do not exceed $35 per acre there is left, at $5 per ton, a profit of $25, not to mention the tops, worth 25 cents per ton.

On good lands that are rich in plant food the weight of tops is as high as 75 per cent of the weight of the topped beets. Accordingly, a twelve-ton yield of beets would produce a nine-ton yield of tops in addition thereto, providing the tops are taken away immediately after being cut off the beets. The topped beets, and also the tops, shrink in weight if left lying in the field, but, of course, the tops will suffer a much greater shrinkage than the beets, as they contain a much higher percentage of water.

Variation in Sugar Content

The sugar content of beets per ton varies greatly with varying soil and weather conditions. In ordinary years it is estimated to be about two and one-half bags. On account of particularly favorable weather conditions this year it will no doubt be much higher than usual. The yield per acre varies from six to twenty tons, according to quality of seed, weather influences, cultivation, etc. The highest tonnage ever produced in this valley was a fraction over thirty-four tons per acre, the average yield being twelve tons.

A Russian colony located near the factory in the vicinity of Scott's Bluff contract for the hand work—thinning, hoeing, pulling, bunching and topping the beets—at a price of $18 per acre. This leaves only machine and horse power work to be carried on by the farmers, such as preparation of the seed bed, planting, cultivation, delivery to the factory, etc. These Russians work under a printed contract, which prescribes payment as follows: Bunching and thinning, $6 per acre; second hoeing, $2 per acre; third hoeing, $1 per acre; pulling and topping, $9 per acre. In addition to this, the contract allows 25 cents per ton for each ton in excess of the average, twelve tons per acre.

Work is Done by Russians

The Russian labor is practically a necessity in the growing of sugar beets on a large scale, which means growing for the factory. They live in little colonies by themselves; they own their own homes, small, cheaply constructed dwellings, on small lots of ground, on which they cultivate and raise a large share of the produce that is needed to sustain them. They have their own schools and churches, are self-sustaining and in most respects are an independent, law-abiding and industrious people. When the beet sugar season does not demand their attention they are willing workers at any line of labor that the community offers.

The contracts for the growing of beets are made in February, so that the business season can be lined up for the work anticipated. This gives both grower and manufacturer an opportunity to be fully fortified for the activities of production and manufacture. The securing of good seed is of prime importance, and is usually supervised by the factory in importing large quantities. Germany and Russia have been the main sources of seed supply. The cost is 10 cents per pound, and uniformly good quality of seed is obtained. The seed question is important from the fact that there are but few sections of country that can grow a good quality of seed. The biggest problem confronting growers next year will be that of securing good seed.

The planting season corresponds with that of corn planting, and as soon as the beets are sufficiently advanced so as to show plainly in the rows the thinning and cultivation is commenced. This, with hoeing, is kept up until four cultivations have been given and the beets are in perfect growing order, then they are laid by, and the beet laborers seek work in the harvest fields, where they usually are engaged in advance.

The beet sugar industry carries with it the manufacture of a very valuable by-product, beet

pulp, a refuse in the manufacture of the beets, but which may be used very profitably in the fattening of cattle and sheep. The beet pulp in 1913 at this factory provided the basis of feed for 4,500 cattle and 15,000 sheep. There is ordinarily added to this alfalfa hay and cotton seed cake, or syrup, which makes the best balanced ration in the estimation of expert feeders. The usual ration per day per steer is 120 pounds of beet pulp, 15 pounds of hay and 4 pounds of syrup. For a sheep, 15 pounds of pulp, 2 pounds of alalfa hay, ½-pound of syrup or 2 pounds of cottonseed meal. The highest gain recorded was four pounds per head per day on a load of Galloway steers. The usual gain was about equal to the average corn-fed cattle.

The beet pulp is sold to stock feeders at 50 cents per ton during the first thirty days that the factory is in operation, and 75 cents per ton thereafter. A wide range of experiments has developed that this pulp has a feeding value of $1.75 per ton. The beet pulp is carried out by means of water and dumped into two open silos, each 104 feet wide on the bottom by 500 feet long, with ten-foot high sloping sides, carrying four-foot bulkheads on top. When filled to the usual depth of fifteen feet these two silos together hold about 25,000 tons of pulp. The sugar company feeds about 1,800 head of cattle and about 10,000 head of sheep each year, which consume approximately half of the output of pulp. The balance is sold to local feeders in no way connected with the company.

Unites Agriculture and Manufacture

The extent of business that such an industry as a beet sugar factory influences for any community within a shipping radius can only be appreciated after a visit among the people who comprise the growers and patrons. A successful sugar beet district means irrigation. It means an assurance of a crop every year; it means a specialty business to a degree. The growing of sugar beets unites agriculture and manufacture. Here at Scott's Bluff, in this great, rich valley, is a degree of agricultural activity seldom found in any district of country. Everybody seems happy and contented. Why not? Look at the producing energy of its people. Plowing, cultivating, raising commercial and feed crops, everybody employed, and at the pinnacle of business prosperity stands this great manufacturing enterprise that directly and indirectly is furnishing remunerative employment to thousands of persons—men, women and children—who under ordinary farming conditions would not be there.

Contemplate for a moment what a successful producing enterprise like this is worth to a community, making it possible for such a vast source of wealth to be mined from the soil, making possible the great live stock feeding industry that it has built up, of the merchandising development and the supply of increased business industry of a local character that it has called into activity. A beet sugar factory solves the question of business prosperity of any district of country having good, natural agricultural resources.

Sedalia Scene of Successful State Fair

Splendid Mule and Saddle Horse Show, but Not the Pure-Bred Cattle Show that Would Be Expected

HELD at Sedalia September 29 to October 3, the Missouri State fair was blessed with ideal state fair weather, and in consequence there was a record-breaking attendance. The roads were fine, a necessity these days in getting the largest crowd to any gathering of this kind on account of the thousands of farmers and others using their automobiles as a means of transportation.

One entering these grounds from any entrance is pleased with what he sees. The buildings are substantial, up-to-date and well taken care of. The grounds are well drained and are kept clean. The exhibits, while not as numerous as at some other state fairs, are of good quality and show that Missouri is taking the rank it should in producing good live stock of all kinds and in growing the different grains and grasses adapted to the different localities.

It is unfortunate that railway lines are not more numerous running into Sedalia, so that patrons visiting this show might go and come with more speed and with less expense. This is especially true because of the lack of hotel and rooming house facilities in Sedalia. Most visitors to a state fair want to make a stay of at least two days, making it necessary to spend at least one night in the city. It is practically impossible for Sedalia to take care of a crowd that should be in attendance at the annual Missouri show.

From observations it appealed to us that there was not the hearty co-operation of the officials of the city of Sedalia with the state fair people that there should be. On Wednesday one of the big traveling circuses was given license to show in Sedalia, giving the usual two performances, this, of course, materially reducing the attendance at the fair both afternoon and evening. It appeals to us that any city at which a state fair is located should lend every assistance to make the fair a success and not be a party to helping reduce the total attendance.

Politics Hinder State Fair

Some state fairs are handicapped in their efforts by too much state fair politics. The Missouri State fair is handicapped by too much party politics. By statutory provision the governor of Missouri appoints the State Board of Agriculture, which board is directly in charge of the state fair, selecting its officials, employing all help, etc. The present secretary, John T. Stinson, has filled this position for the last seven years and has been an efficient and untiring worker in building up the state fair in Missouri. We are reliably informed that the governor of Missouri has a brother who it seems has not as good a paying job as the secretary of the state fair, and that the governor recently made it known to the members of the State Board of Agriculture that he wanted his brother to have this position; they were probably also told that if he did not get this position some new faces would be seen on the board (the terms of six members expiring each year). Anyway, Mr. Stinson was given to understand that with the expiration of the fiscal year his services would no longer be desired.

In looking over the names of the men who comprise this board we are very much surprised that they should meekly submit to such an edict of the governor. We understand that a few of them did stand out, but the majority submitted. Men who have had to do with state fair matters know full well what it means to put a man in charge of a state fair who is not acquainted at all with state fair business and not in touch with the live stock interests. If the Missouri State fair is made to suffer on this account, the members of the board must take the blame, for by statute they are placed in charge of the state fair and should stand out and run it as they see fit regardless of the dictation of the governor or any other man.

There is maintained on the Missouri State fair grounds a club house, used by the members of the State Board of Agriculture for the entertainment of themselves and their friends during the state fair week. This club house is maintained at state expense. During the recent state fair an elaborate dinner was given to the mayor of Kansas City on the day of his visit to the state fair. We believe this is all wrong, whether it is done in Missouri or any other state, but this is not all. The member or his guest are not only dined, but they are wined as well. Do the taxpayers of Missouri know they are footing the bills for dining and wining the members of the state board and any guests whom they may see fit to take to the club house?

Horses and Mules

As in all other state fairs, the live stock show in Missouri is a very prominent part of the fair. Missourians have no cause for being ashamed of the quality of their live stock. What they should have and bring to the fair is more good live stock of all breeds. In two classes of live stock is this state fair different from all others; this is in the show of saddle horses and mules. Without question, Missouri ranks first in the breeding and raising of these two kinds of stock. The show of both of them was certainly strong. The saddle horse judging was done in the live stock pavilion in the evening and was attended by large crowds of lovers of the saddle horse.

The total of all horses was 194, divided as follows: Light horses, 122; ponies, 32; Percherons, 25; Clydesdales, 8; Belgians, 4; French draft, 3. It will be seen, as noted above, that the saddle horse show is the big show in this division.

The mules were shown in the arena, as were the horses and cattle, but it was noticeable that where a class of mules were in the ring the horses and cattle out at the same time were neglected. The farmers of Missouri wanted to see the mules and they saw them. It was never before our privilege to see such splendid mules as were brought before the judges in this show.

Cattle and Hogs

The cattle show in numbers was not what it should be by any means. Missouri produces some fine cattle, but we believe Missouri farmers are not taking hold of the raising of pure-bred live stock to the extent they should. There were on the grounds seventy Herefords, forty-eight Shorthorns, twenty-eight Angus, thirteen Galloways—a total of 159 in the beef breeds. In the dairy show were thirty-three Jerseys and ten Holsteins. In addition there were twenty-five fat steers, making a grand total of 227 cattle.

The hog show was good, in most breeds the best showing ever made at a Missouri state fair. In numbers the Duroc-Jerseys led, with 300; Poland-Chinas, 176; Chester Whites, 109; Hampshires, 45; Berkshires, 56, and Yorkshires, 26; a total of 712.

In the hog division the showing of Duroc-Jerseys was particularly good. Barring the Widle herd from Genoa, Neb., and the Van Meter herd from Illinois, all the Durocs were shown by Missouri breeders. The judge had no trouble in finding quality in all classes. The junior yearling sow shown by C. L. Taylor of Olean, Mo., was a popular grand champion. She was a splendid specimen of the breed and would have made a good grand champion in any show. The junior yearling boar shown by Van Meter was not a popular grand champion. A very large part of the ringside would have made either the aged boar shown by Sheeley & Clatterbuck or the senior yearling shown by Smith Bros. the grand champion over the Van Meter entry. The herd of R. Widle & Son, Genoa, Neb., was a consistent winner all the way along the line.

The Hampshires and Berkshires were all shown by Missouri breeders, who made a very creditable showing. Many of the animals shown by these breeders would have received favorable consideration in any ring. The Ches

(CONTINUED ON PAGE SEVENTEEN)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
Minneapolis, Minn., 3159 Park Ave., H. E. Dimond, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

Do not let the hogs lie around the straw piles., These straw piles are the best of disease and lice breeders.

A few brickbats in the feed trough of the greedy horse will compel him to eat more slowly and may possibly save a case of colic or indigestion.

We are in receipt of Vol. 63 of the American Poland-China Record. In this volume are recorded boars numfrom 200,001 to 209,799, and sows from 470,772 to 491,998.

When feeding oats to the pigs always scatter them on a floor or other hard surface. Do not feed them in a trough. Oats must be picked up slowly and well masticated or too much loss results.

The late fall rains have helped to produce, in many fields, a fourth cutting of alfalfa. This hay should be carefully taken care of and used for hog feed during the winter. Good alfalfa hay will take the place of some of the high-priced feeds you buy.

"From contented cows," the catch phrase of a well known condensed milk manufactory, is a familiar expression to all and brings to mind a picture of Holsteins grazing in green pastures. Unlike many advertising pictures, this contented cow picture is from life. The condensed milk company has a herd of over 200 Holsteins, the breeding stock being imported from the finest herds of Iowa, Wisconsin, Pennsylvania and Ohio. These cattle are maintained on a model farm in a fertile valley in the state of Washington as an example to shippers from whom milk is purchased of the proper way to manage their dairy farms.

Uniform Live Stock Shipping Rules

The Nebraska Live Stock Sanitary board, through Dr. L. C. Kigin, secretary, has issued an invitation to the live stock sanitary boards, or commissions, and to state veterinarians of several states, to meet in Omaha Thursday, October 29, 1914, at the Live Stock Exchange building to discuss and try to formulate uniform shipping rules for live stock for both interstate and intrastate shipments.

The Twentieth Century Farmer has in previous issues of the paper spoken of the importance of this move. We can see no good reason why the rule for shipment of live stock from Nebraska to Iowa should be different from the shipment of the same animals from Iowa into Missouri or Kansas, nor can we see why the rules for shipment within any of these states should be different.

This question was brought forcibly to our attention during the recent state fairs. Breeders were at these fairs selling animals to go into different states. They found that one requirement existed for shipment to one state, and an entirely different requirement for another state.

Much more efficient work can be done by the officials of the different states having these matters in charge if uniform rules are made. The transportation companies are put to endless trouble by these mixed regulations. It's a hard matter for a railroad or express company to keep all its employes, having to do with these shipments, posted on the rules for the different states. The transportation companies are anxious to co-operate in the work. Uniform rules will be of material assistance to them.

We wish to commend the Nebraska board for taking the initiative in this important matter. We hope to see a good attendance at this meeting and hope the representatives from the various states will come prepared to enter into a free discussion of the rules to be adopted and to yield some points in order that a uniform set of rules may be adopted.

Producers Not Complaining

There is a general good feeling among all the stockmen, breeders and handlers who are buying or selling on the present markets. Stock generally is being exchanged at remunerative prices. The producer of these animals feels that he is getting reasonably well paid for his part in furnishing the trade with these animals. There are so many helpers assisting in the placing of this feature of production before the consumer that the last man served is necessarily called upon to pay pretty liberally for the privilege. It is very essential that the class referred to as consumers should be well looked after in all their needs and necessities as laborers, as industrialists, as they are the people who pay all the bills and expenses of production. This class of persons, to a very large extent, have no part or lot with the produce of the soil or the feed lot until they are introduced as consumers and prices made to them.

Horses and Tractors

One of the big horse breeders' associations has sent out to the farm papers of the country a long article filled with misleading statistics, claiming that the tractor has been found to be a failure on Canadian farms. Some few of the farm papers have gone so far as to publish this article in full. We believe that the horse-breeding associations that are fighting the tractor and the tractor concerns that are trying to prove the uselessness of the horse are both on the wrong track. The best way to build up a business is not to tear down your competitor's business, but to prove the value of your own product in its own field. There is a place for the right kind of a tractor on almost every farm. There is also a place for the draft horse. No amount of opposition can keep the tractor from coming to its own and nothing can ever take the place of the draft horse in certain lines of work or greatly decrease the value of a good horse.

Cotton Alone

The condition of the southern farmer who raises little else but cotton is an example of what may be expected by the farmer of any locality who "puts all his eggs in one basket" by raising all corn, wheat, cattle, hogs or any other crop.

The war has practically stopped the sale of cotton. A large per cent of the southern farmers are cotton growers almost exclusively. Although they raised a good crop, their market is practically closed. The result is a serious condition in that section of the country. Had these farmers diversified their efforts by growing some corn and wheat and hogs their financial condition would be far different.

In a former article in this paper we urged farmers to follow the line on which they are working, that of raising general farm crops and live stock, and to not be led astray by taking the advice of the fellow who says there are millions in raising wheat, or any other one grain, next year or the next.

We symapthize with the southern farmer on account of unforeseen conditions, but hope the lesson learned this year will induce him to be a general grain and live stock man. When the southern farmer does more generally follow these lines his financial condition will be materially bettered.

The Horse's Paradise

How often do you stop and think carefully about the comfort of the horse you are working every day? Does he have good, clean feed to eat, fresh, pure water to drink and plenty of good bedding?

The farmer's horse should receive more attention than is sometimes given to him. Generally the horse comes in from the field tired and warm; he is given a drink of water, which has probably stood in the tank all day, or possibly a week; it is warm, slimy and absolutely unfit for anything to drink, yet the faithful horse must satisfy his thirst here or do without. He is put in the barn, tied up by the head, sometimes so short he cannot lie down with any comfort at all, given some corn and hay, and many times the hay is musty and full of dirt. Is it any wonder he gets the colic?

In how many barns being constructed this fall has the builder arranged box stalls for any of his horses? We know box stalls cost more money and take more room than the ordinary stall, but the box stall is the horse's paradise, so to speak. In it he can turn around, lie down as he likes, roll if he wants to and have as near complete rest as is possible for a horse to have, provided, of course, he has plenty of dry bedding. Someone may say a box stall takes too much bedding. More bedding makes more manure, so a more general use of box stalls might, indirectly, be the cause of better crops.

The good horse is an animal of value and by farmers very largely depended upon for the making of a large part of their money. Would not it be good business to do the very best we can with these horses in the way of feed and care? Without doubt a horse well fed and properly housed will be able to do more and better work while in the field, and many years may be added to his usefulness.

Is Gasoline a Luxury?

Probably there never was a special tax imposed upon any people for the purpose of meeting an emergency that some particular class did not feel it to be unjust. The present war tax, imposed to fill the gap left in our national funds by the decrease in imports, was supposed to be levied on luxuries alone. In this catagory was included gasoline, probably because it is used as the motive power for the pleasure cars of the wealthy. Gasoline, however, is used for quite a different purpose on the farm. It furnishes motive power for the automobile there as well as in the city, but the automobile on the farm is not as often a luxury as a business vehicle. It also furnishes the motive power for running many of the other machines, most notably gas engines and the tractor. We believe that gasoline is used much more extensively for purely business purposes than as an aid to pleasure-seeking, and that if the authorities who imposed this special tax had seen things from the farm or producers' viewpoint they would have gone farther in their search for articles to be classed as luxuries and found a number which would come much more fully under that head.

Compensation Law

While the workmen's compensation law submitted by referendum to the voters at the coming Nebraska election does not in any manner apply to farmers, the question as to whether Nebraska is to get in line with the other twenty-four states having such a law will largely be decided by the farm vote, or, in other words, by persons who are in no way affected by the passage of this law.

The principle of the measure, compensation without obligation, is vitally necessary to the welfare of the workers in our mills and factories who are unfortunate enough to be injured in their work and to the families of those who are killed.

Lawsuits brought under our present law, based on proof of negligence, do not provide a remedy for one case in ten. In the other nine cases the victim gets nothing unless his injury is so severe and his resources are so low that he is obliged to become a public charge, and then it is charity, not justice.

The workman's compensation law, on the other hand, makes provision for definite and prompt payments in every case of industrial accident, no matter how caused, and it does this without waste of dollars for lawyers' fees and court costs.

The proposed law may not be perfect as it stands. Even its friends admit that fact, but no law of the same magnitude ever was perfect when first enacted. Employers of the workers who are asking this much-needed legislation are willing to give the new plan a trial, giving us one example, at least, of capital and labor agreeing.

Tubercular Cow Crooks

In our issue of September 26 we called attention to the quarantine by the national government and the state of Illinois against shipments of cattle from the five counties in Illinois known as the Elgin district.

The American Journal of Veterinary Medicine in their October issue have a strong article on this subject. They say that during the last five years from 25 to 90 per cent of the cows shipped out of this district by James Dorsey and the gang working with him have been found tuberculous, in cases where they have been given a tuberculin test at their destination.

In the past Dorsey and his crowd have been able to control the legislature in Illinois to such an extent that they have prevented the passing of any legislation requiring the tuberculin test by the cities of that state. They have also been strong enough at Washington to prevent a quarantine being made against them.

Through the efforts of Dr. O. E. Dyson, state veterinarian in Illinois, Governor Dunne issued a quarantine against cattle coming from Wisconsin and several states. This was a decided setback to the operations of this gang, as they were buying affected cows in large numbers in Wisconsin and selling them from their home plant in Illinois. A $20,000 fund was raised by this crooked bunch to fight, in the courts, this proclamation of Governor Dunne. Without doubt the fight will be carried to the next legislature and an attempt made to pass favorable legislation that these tricksters may carry on their business of selling diseased cattle to the unsuspecting buyer.

Farmers in general and dealers in dairy cattle in particular will be very much interested in the outcome of this fight. In the meantime let us again caution buyers of dairy cattle against buying cows without first having them tested by a known reliable veterinarian. We mention the fact that one should have an examination by a known reliable veterinarian, for in the Elgin district two crooked veterinarians have already had their licenses revoked and one more is now on the list whose license will probably soon be revoked.

Plano Harvester Indictments

On September 8 indictments were returned by a federal grand jury at Chicago against the following former (not present) officers of the Independent Harvester company of Plano, Ill.: William Campbell-Thompson of Chicago, former president; James W. Thompson, William Crimmin, Martin O. Shoop, Ward K. Spain, Clay A. Hopkins, Attorney Ning Eley, Herman H. Borschers, Henry Clay Borschers and Edward E. Preston. None of the present officials of the company is involved.

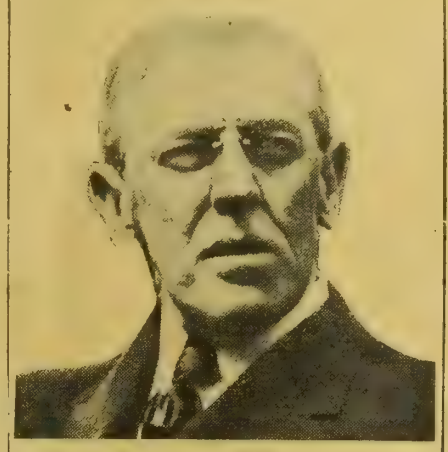
The complaint is the use of the mails to promote an alleged fraudulent stock-selling scheme. The government says that from $2,000,000 to $3,000,000 worth of stock was sold to farmers all over the country, principally in the west and northwest, much of which has been a total loss to those who were induced to buy. One of the principal inducements held out, according to the government, was that of price reduction on machinery to all stockholders. Harvesting machinery manufactured by the company was promised at from 15 to 25 per cent below the regular prices. This agreement was carried into effect, according to the government, only on a losing basis for the corporation, making stock-selling the principal part of the business. Some of the co-operative enthusiasts who believed those who urged them to use caution in that sort of investment were doing so solely through "prejudice against co-operation" may be interested in watching the final outcome of this case.—Price Current.

Contracting a crop of wheat for a certain price and then refusing to carry out the contracts when the war caused a raise in price is the accusation brought against certain farmers by elevators. In one case it was a co-operative elevator, too. Commenting on this, an eastern farm paper remarks that other men violate contracts under like temptation, and farmers are no worse than other men. True. On the other hand, there are honest men in every business, and it would seem to us that the farmer should endeavor to be as good as the best and not hide behind the trite statement that it is possible to find men who are dishonest in all walks in life. A contract is a contract, no matter who makes it, and we believe that the majority of farmers will carry out their contracts even if at a loss.

Wilson and Roosevelt Agree

on the principle of the

Nebraska Workmen's Compensation Law



Father of New Jersey's compensation law—the first and most successful in the United States—on which this Nebraska law is patterned.

Endorsed also by La Follette, Bryan, Taft, Gompers, Mitchell and every "Big Man" of the day; Pledged by all National Party Platforms

Champion, as President of the United States and in the "Outlook," of Workmen's Compensation laws for every state in the Union.

"Workmen's compensation is a measure of humanity, right and justice. I hope to see the principle established in every state."—Woodrow Wilson.

"No injured man should be obliged to sue his employer for damages. The employer should be his best friend in time of disability—and workmen's compensation brings this about by providing automatic relief for every injury."—Theodore Roosevelt.

As showing that both organized labor and the owners of our mills and factories (the only ones affected) wish to accord the new system a fair trial, read these resolutions:

RESOLVED—That this convention urge the members of Trades Unions and friends of the wage earners to vote for the Workmen's Compensation Law of 1913 to the end that Nebraska may enact into law the principle of compensation, and be in the van of progressive states in eliminating a vast economic waste which falls wholly under the present system on the wage earner, the one who can least afford to carry the burden.

Adopted at Lincoln, Neb., September 18th, 1914, at the Annual Convention of the NEBRASKA FEDERATION OF LABOR.

Recognizing the unfairness of the present Employer's Liability Law and the necessity for a system which will award fixed and prompt payments for all injuries to employes, without litigation or deduction of attorney's fees or court expenses, and believing further that such a system will tend to reduce the number of accidents in our mills and factories, be it

RESOLVED, That this Association urges the voters of Nebraska to vote "YES" on the Workmen's Compensation Law at the General Election to be held November 3d.

NEBRASKA MANUFACTURERS' ASS'N.

The Compensation Law does not apply to farmers, to employers having less than five employes, to householders—nor to the employes of any of them. For the sake of humanity.

Every voter—whether affected by the law or not—is urged to

Vote "YES" on the Workmen's Compensation Law

at the General Election, November 3d.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

My Folks

I think my folks are very queer—
You'd be surprised at things I hear.
Sometimes it seems I'm very small,
And then again I'm big and tall.

At night I tease to stay up late,
But mother says: "No, no, it's eight.
Go right upstairs; and hurry, too.
Indeed—a little boy like you!"

At six next morning, from the hall,
She wakes me with this funny call:
"Come, come, get up; and hurry, too.
For shame—a great big boy like you!"

When through the night I grow so fast,
How very strange it doesn't last!
I shrink and shrink till e'ght, and then
I'm just a little boy again.
—Anne Porter Johnson in Harper's Magazine.

The Editor's Corner

The stories are beginning to come in splendidly. We are always glad when you get settled down to your school work or get used to vacation time, as these are the two periods of the year when you are too busy to write. The picture contest suffered especially these few weeks, and we are going to give you another week on the present picture. Look it up in the last issue and send in your verse about it. We will take verses up to the 24th instead of the 17th. Don't get mixed and send in verses about the picture in this issue, as this is not the contest picture, and you will have to look it up in last week's paper.

We had a story this week from a little girl, who lives on a farm, about the English sparrow. She said that the people who lived in cities heard no other birds and liked the chirping of the sparrows. Evidently she has never lived in the city. Out in the residence districts, where there are parks and trees, there are all kinds of song birds, and the children in the city schools know and love them as well as the country children. Close in, where there are no trees, there are no birds except the pigeons and sparrows, and the city people have no love for the sparrows. One day I said to a lady who lives in a downtown flat, "I like to wake up in the morning and lie listening to the bird songs."

"Bird songs!" she said, quite indignantly. "I hate birds; they wake me up with the first sun rays with their ugly chirping."

You see I had forgotten that she could hear only the sparrows. No, city people don't like them any better than you do.

And, speaking of birds, I wonder how many of you have seen the new bulletin gotten out by the government called "Bird Houses and How to Build Them." If you haven't this bulletin already, send to the United States Department of Agriculture, Washington, D. C., and ask for Farmers' Bulletin No. 609. It is for free distribution and tells how to build houses for different kinds of birds and where to place them to get the birds to occupy them. For boys, especially, who are handy with tools this is a good little pamphlet to have, as it pictures accurately just how the houses may be made and gives good, clear directions, as well as telling some interesting facts about birds.

HOME EDITOR.

(Prize Story.)

Jacky's Find

By Rachel Cary, Aged 11, Monte Vista, Colo.

Jacky was a dear little city boy. One night his papa came home and said they were going camping. Jacky was delighted. He packed his camping things over and over in his little straw suitcase.

At last, one morning they were ready to start, and soon were speeding over the road in their pretty red motor.

Papa said on the way that nothing would please him more than to shoot a deer, as it was in season.

That night when Jacky was in bed he dreamed he shot a deer. The next morning after papa had gone fishing Jacky begged mamma for a stick, line and hook, and he went fishing. He had no more than got to the brook than he heard a rustling in the bushes and out stepped two deer. Jacky dropped his pole and flew to camp.

"Papa!" he screamed. Papa came running and Jacky pointed to the bushes. Papa ran there, and "bang" went his gun.

One deer got away, but papa had killed one, and when the camping trip was over Jacky had the antlers of the deer put in his little bed room.

(Honorable Mention.)

Trip to the Stone Quarry

By Dorothy Mullis, Aged 14, Dunbar, Neb.

One Friday afternoon, after taking the eighth grade examinations, the eight-graders and Miss Crawford started for the stone quarry. We walked down the railroad track. My sister has a pony and cart. She took our supper and drove around by the road to the place where we had our supper.

After reaching a shady place near the stone quarry some of the boys and girls tried fishing, and they caught eight fish. We took pictures of ourselves wading in the water and when we were starting. We ate our supper early so we could climb a big hill near by. Upon the hill were many shells and flowers. After climbing to the top we looked down and saw a large creek. We all started down the hill, when one girl fell and went rolling over rocks and stumps of trees until she reached the bottom. She hurt her back and scratched her arms and legs. Two older girls carried her to the cart and my sister took her home. We started home right after them. We were very tired when we reached home. This girl said she would never forget the trip to the stone quarry.

Additional Stories

Inez Welch, Fairmont, Neb.; Elizabeth Bogue, Madrid, Neb.; Edna Hum, Honey Creek, Ia.; Anna Hansman, Carroll, Ia.; Grace Mary Douglas, Sonoita, Ariz.; Puline Gobby, Riverdale, Cal.

Is Your's Soft Pine?

In a recent talk to the boys of Epsom college on the value of character the earl of Rocebery said that the world constantly carves and chisels at the character of everyone. Some woods are so soft that they never repay the trouble of carving and chiseling; some woods split so easily that they are valueless; but other and finer woods, like old mahogany, get richer and more beautiful as they get older. The world judges the character of a man by his manners. Simple, manly manners are the indications of a manly, straightforward character. Tennyson was right when he wrote:

For manners are not idle, but the fruit
Of loyal nature, and of noble mind.
—Youth's Companion.

School Again

In the spring we are always glad when school is out and we can put away our books for three or four long months. But when school time comes again there is something very pleasant about beginning our work. We go across the fields with our school books and lunch pails, and can hardly wait to get to school, where there are so many happy games to be played with our friends and so many interesting things to be learned. And the teacher, though we sometimes think she works us too hard, is pretty good, after all. We often don't realize how well we like her until she comes back in the fall, and then how glad we are to see her!

GOOD MEN WANTED

at once to learn the auto business Big future for you or anyone who makes himself an auto expert You learn here by doing the work yourself. Lifetime opportunity to learn the highest and most expensive auto work ever given Omaha's NEW Auto Training College, the largest of its kind in the west, conducted by experienced Automobile men of Omaha, giving the highest and finest practica lauto training work to be found anywhere Experimen come and same course to perts We teach You get higher than you can auto repair American AUTO College enced repairmen take exactly become expert work. training here at any regular shop, we have equipment that they don't have, and intructors who teach you principles that they don't even know

$900 to $3,000 a YEAR, Salary or Bus. Profits in Repairshop or Garage, or as Salesmen. Factory Testers, Chauffeurs, Repairmen, Starter Experts or Garage Manager If ever you are going to make a change to get into a higher paying and more pleasant line of work, DO IT NOW, the opportunities are the best now that they have ever been Take our wonderful training course now until you are competent, and then go right into the automobile business from here. Positions now open needing capable men, and we want some good men at once to take up this work

Special $50 course in Elec Starting & Tractioneering FREE with regular course Learn here in 6 wks or more Tuition small Life scholarship. Work easy and interesting Many make expenses while learning. Free catalog at once.

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LINCOLN AUTO SCHOOL,
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Breakfasts of "Other Days"

ran something like this:

Ham, bacon or sausage; fried potatoes; doughnuts and coffee — prepared by overworked mothers.

Today's and Tomorrow's Breakfasts

run about like this:

Post Toasties

—with cream or fruits; a poached egg or two; crisp toast; and a cup of **Postum**—a royal starter for any day.

Quick, easy to serve, appetizing, and —

"Mother" has it easier!

—sold by Grocers.

Of Interest to Our Women Readers

The Slighted Visitor

Miss Happiness came callin' when the day had jes' begun,
A-lookin' fur an answer to the smilin' of the sun,
She brought a gentle message in most every sort o' key,
From the singin' of the robin to the hummin' of the bee.
But I said, "I'm rather busy an' I haven't time to play,
If you should happen 'round, I hope you'll call another day."

Then Trouble came an' told a tale of glory an' of strife.
He sneered at birds an' blossoms an' the uneventful life.
He dragged me by the collar through the fields of discontent.
He kep' a-stickin' to me, no matter where I went.
I'm thinkin' of Miss Happiness, whose smile is hard to win,
An' how she came a-callin' and I wouldn't let her in. —Selected.

Our Home Chat

There is never any need to worry about what to have for the next meal if there is a good cook book in the house. Many women make the mistake of being afraid to try new recipes; they think it wasteful to use the materials when there is a possibility that the result will be uneatable, and so go on serving the old dishes until the whole family is heartily sick of them. The discovery of a new dish that gives pleasure to the family is worth the spoiling of a good deal of material on some unsatisfactory ones.

* * *

It is time to begin thinking about that neighborhood club again. If there is one, the meetings have begun, or will soon. If there is not one in your neighborhood, it is certainly time for someone to get busy and start one. If you can get the teacher to help you, very likely the school house may be made the meeting place and the men be induced to join at least one evening meeting a month. We heard of so many enjoyable clubs last winter that we are hoping many more may be started this fall. The ideal way, it seems to us, in most neighborhoods is for the women to meet one afternoon a week, except that once in every four weeks, or once a month, an evening meeting take the place of the afternoon meeting, and the men be invited to take part. This is where the school house comes in handy, as many people will come to the school house who would not come to a private house, especially in a community where there is a division on the grounds of nationality or religious faith.

* * *

So many of the "helpful household hints" we see printed in papers, especially neswspapers, are gathered from just anywhere and used to fill the columns, without reference to their value, and apparently without even being given a reading by any woman. "Articles infested with fleas or moths should be saturated with benzine," is one we read the other day. Any woman who has had experience with this dangerous substance knows the probable result of saturating an article with benzine and packing it away, which may easily have been the proceeding of some young and careless housewife who read this "hint." The better class of women's and farm magazines may be relied upon, but it is well to use care in following advice of this kind unless you are sure of the source.

* * *

We recently read a bit of interesting advice to farm women that ran something like this: "While your hands are busy washing dishes, rest your mind by thinking beautiful thoughts." That may be all right for some women, but if you happen to be inclined to be absent-minded anyhow, you want to look out that you don't forget what you are doing and pour the dishwater into the kitchen stove, or something of that kind. It pays to keep your mind more or less on what you are doing, as the writer knows from several sad experiences. HOME EDITOR.

Our Weekly Recipe

CORNBREAD—One cup flour, two cups cornmeal, two cups sour milk, one-half cup syrup or sugar, two eggs, two spoonsful melted butter, two level teaspoonsful soda; salt. Mix soda with the flour and meal and stir in the sour milk. Add the two eggs beaten together, then the syrup and then the melted butter, salting to suit. This is good baked in flat pans and eaten hot.

Butter and Morals

Farm women are the salt of the land, all right.

Having admitted this to start with, I want to spell out a little lesson for some of us to heed if we would be good and shame the evil one. I have in mind a certain farmeress who made excellent butter. In fact, it would be set down as the veriest gilt edge product by the expert in such matters.

The woman's reputation as a buttermaker extended far and wide. It was very seldom that the counrty or village stores got any of her product. Private parties consumed it all. And yet what did this woman do?

In an evil hour she sent her good husband to the store with a crock of her magic butter. The grocer wondered why; it was such an unusual thing that he asked the reason of his being so fortunate.

"It's this way," said the good buttermaker's husband. "I am mighty busy just now; couldn't take time to run off to Ballard's with this crock. I was coming to the store anyhow, so I told Delia I would take this one crock here; she could send Ballard another one later."

And, of course, the grocer was satisfied.

An old customer came to the store some time later, one Peter Ferguson, an intensive fruit farmer, who was a peculiar chap in that he could not, perhaps would not, eat all sorts and kinds of cow product that might chance to come to the store.

"Hello, Pete," greeted the grocer as the latter halted on his way to market with a load of berries. "I've got something for you. Come in."

"I'm in a hurry, Dan," returned Ferguson. "I will stop when I come back."

"All right, only don't buy any butter in town; I've got some gilt edge for you this time, some of Mrs. Bland's make—"

"Mrs. Bland's, eh? Well, well, save it for me, Dan."

Well might the fruit grower express surprise. The butter made by Mrs. Bland was known far and wide as the best ever. Ferguson had often asked for her butter at the store, but had never been able to get it; she always sold to private parties; had, in fact, more such customers than she could supply.

On his return Ferguson got the Bland crock of butter, paying therefor a considerable premium. "Never care about the price," he said, "so long as I am getting a first-class article."

Ferguson was delighted. He set the crock down on the kitchen table with the remark:

"There, Mary, there's something that'll make your mouth water."

When told who made the butter Mary Ferguson expressed surprise that he should find any of it at the grocery.

"I thought Mrs. Bland was too exclusive to send her golden butter to an ordinary grocery."

"So did I, but—"

"I'll bet there's something wrong here. See if there isn't."

And there was. Two inches of the surface was like melting honey; beneath this two-thirds of the crock was a mess of stuff unfit to eat. The

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"A prominent physician whom I consulted told me the muscles of the digestive organs were weakened and could not perform their work without help of some kind, so I have tried at different times about every laxative and cathartic known, but found no help that was at all permanent. I had finally become discouraged and had given my case up as hopeless, when I began to use the pre-digested food, Grape-Nuts.

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discovery was a distinct shock to the good owners of Fruit Farm.

"The idea of paying an extra price for axle grease!" angrily exclaimed Mrs. Ferguson. "That woman, whom I thought was too good to live, is an arrant cheat. You just take this back next time you go to town, Peter—"

"Not me," broke in the man, shaking his head. "There's some mistake, of course—that is, I imagine I have fathomed the facts."

"Yes?" said his wife.

"Of course, this isn't the natural kind of butter Mrs. Bland puts out. If it was she'd soon find the price of her butter cut in the middle. This isn't fit for packing stock. My idea is that she had a poor batch. Frugal soul that she is, she hit upon the plan of sending the butter to the store, where it would be placed among a lot of other makes, mixed in the common lot and shipped to the city. Nobody would be the wiser and she would save the loss of that batch of butter."

This was in fact the real solution of the mystery. Mrs. Bland had been ill for a few days, her cream was neglected and consequently the butter came wrong. It seemed a pity to waste a whole crock of butter. By sending it to the store she would get the market price, thus saving a dead loss, and no one would be the wiser.

Had the buttermaker imagined for a moment that one of her neighbors would get the butter she would have cut off two fingers before she would have let it go out. As it was, the purchaser kept the secret for a while, but as such secrets will, the truth leaked out in time and Mrs. Bland lost much of that respect she once held in the hearts of her neighbors.

I am not sure that the farmer's wife lost any of her butter trade because of this little indiscretion, but it might easily have been otherwise. You may be sure that her neighbor, Mrs. Ferguson, lost much of the respect she once held for the woman who made gilt edge butter.

Had the Fergusons been so minded they might have humiliated Mrs. Bland in a way that would have been a lifetime source of remorse. Even the grocer, who sold Ferguson that crock of butter in good faith, was not the wiser for many years thereafter, until once, in a moment of confidence, Peter Ferguson told the story and the two laughed over it.

"Of course, the woman didn't imagine any of the country folk would get that crock of butter," said the fruit grower, "but one never knows."

Michigan. DOROTHY LOCKE.

Two Steps at a Time

"I'd like to stain the front stairs; they look so shabby," said Mrs. Newife, "but we use them so constantly I don't see how I can."

"Stain every other step," said Mrs. Neighbor, "and make everyone go up and down the stairs two steps at a time. Then, when those steps are dry, stain the others. You can put small pieces of wood on those that are to be used and place a notice at the foot of the stairs to remind the men so they won't forget."

The United States makes the steel pens for about fifty countries.

Styles for Home Dressmaker

6886—Ladies' Dressing Sacque. A perfectly plain garment extending well down over the hips. At the open neck is a wide collar, and cuffs finish the short sleeves. A sash marks the waistline. An excellent style for challie, cashmere and many wash materials. The pattern, No. 6886, is cut in sizes 34 to 44 inches bust measure. Medium size requires 3 yards of 36-inch material.

6876—Ladies' Skirt. A two-piece design which may have high or regulation waistline. It is suitable for cheviot, serge and other woolen fabrics and may be closed in the center of either front or back. The pattern, No. 6876, is cut in sizes 22 to 32 inches waist measure. Medium size requires 2¾ yards of 36, 44 or 54-inch material.

6875—Ladies' Shirtwaist. Any of the flowered materials can be used to make this shirtwaist, with the collar and cuffs, of contrasting material. The waist closes at the front. The pattern, No. 6875, is cut in sizes 34 to 44 inches bust measure. Medium size requires 2 yards of 36-inch material and ½-yard of 27-inch contrasting goods.

6872—Ladies' Kimono. This kimono can be made with the trimming bands and with either the long or short sleeves. The kimono has a yoke in the front and back. The pattern, No. 6872, is cut in sizes 34 to 44 inches bust measure. Medium size requires 4 yards of 40-inch material and 1⅞ yards of 18-inch satin for bands.

6885—Child's Dress. Cut in sacque style and closing in front with buttons in a box pleat band. Small sleeves are used and a handsome collar finishes the open neck. The sleeves may be long or short. The pattern, No. 6885, is cut in sizes 2, 4, 6 and 8 years. Medium size requires 1⅞ yards of 44-inch material, with ½-yard of 27-inch contrasting goods.

6867—Girl's Apron. This is a good design for wearing over the school frock. Front and back are each in one piece, closing in the back. The sleeves extend to the neck edge, forming a yoke on each shoulder. The pattern, No. 6867, is cut in sizes 4, 6, 8, 10 and 12 years. Medium size requires 2 yards of 36-inch material, with 1⅜ yards of banding.

6889—Ladies' Apron. This covers the entire front of the dress and the skirt portion of sides and back. It may be made of gingham, calico and other wash materials. The pattern, No. 6889, is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 2¾ yards of 36-inch material.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Big Profits for Boys in Trapping

ASSUMING that most of our boy readers are progressive Americans who are fitting themselves for life's battles by securing a thorough education, trapping must be followed as a "side line" to studying.

However, during vacation one can extend his operations; or, where some are so unfortunate as to be compelled to work a part or all of the term, trapping offers unusual opportunities for a hustling youngster, as it affords plenty of outdoor exercise and insures a rugged constitution, while the increasing popularity of furs makes the business highly profitable from a financial standpoint.

The writer knows several boys living in the edge or suburbs of good sized towns who make neat little sums trapping fur-bearing animals before and after school time, and while this may be practiced to a considerable extent, it is with the country boy that it will prove the most remunerative, since he can arrange his "route" or line of traps in such a manner that he can attend to them while going to and returning from school.

Where one devotes considerable or all of his time to trapping during the fur season he should arrange his line of traps so that it will lead in a circuitous route; that is, it should begin near his home, and after extending to whatever distance desired it should assume an angle that will bring it back close to the point from which it starts. This saves any loss of time one would sustain in case the line of traps ended at quite a distance from where it began. Two short, circuitous routes are preferable to one long one, as the trapper thus will be enabled to leave the catch from his first route when he reaches home, refresh himself with a lunch and a brief rest, and then take up the other route after noon.

Proper Season for Trapping

While the period during which fur-bearing animals should be trapped will vary slightly in the United States, there is little variation in the temperate zone, which embraces the greater portion of our country.

There is an old saying among trappers that any month requiring the letter "r" in spelling it is a suitable period for trapping fur-bearing animals. This would include the period reaching from September in the fall to April in the spring.

But this period is too lengthy. It is true that fur-bearing animals may be captured as early in the season as September, and that their skins will be marketable, but the price received for such furs is so very low that it would seem the part of wisdom for every trapper to refrain from actual operations till later in the season.

No set date can be given for beginning to trap. We begin, as a rule, in late October or early November, although this date may vary, according to the temperature of the season. If the weather is too warm the flesh side of furs will turn a dark blue in curing, the hair is thin and pale and slips from the pelt, even with a light stroking of the fingers.

Such furs are called "blues," and will command about one-third the price they would bring if the animals had been left to run till the weather cooled up, at which time the fur would thicken naturally, be darker in color and firmly attached to the pelt, while the flesh side would be clear and uniform in color. A few dark specks under the fat on the fleshy part of a fur will slightly lower its value, although not materially lowering its quality.

The "prime" fur is the one that commands the top market price; and, after all, this must be the guide as to the period when one should begin trapping. After the nights grow cool and frosty the trapper should capture a few animals. If the fur is firmly set to the hide and the pelt side is of a clear, flesh color after a day or so of curing, it is "prime," and trapping may be continued; if not, one should wait a few days longer. With furs selling at the present extremely high prices, it is the height of wastefulness to place them on the market in a low-grade condition.

Editor's Note—This is the first of a series of trapping articles. While the information contained in these articles is intended, primarily, for boys, they are based on the experience of a practical trapper from boyhood to an age of 30 years; hence will prove valuable to men of mature years. "Preparation for Trapping" will be the subject taken up in the next article, October 31.

Out in California they are trying to make the eight-hour labor law apply to farm labor. Naturally, the farmers and their papers are strongly opposed to such a law. In the last issue of the California Cultivator there was an amusing cartoon showing its probable effect. The state inspector is leaning over the fence to see that all obey the law. Everyone on the farm is leaving work when the whistle blows, including the hired man who leaves a load on the track in front of a moving train and the bird in the air that drops the worm because it has already put in eight hours hunting.

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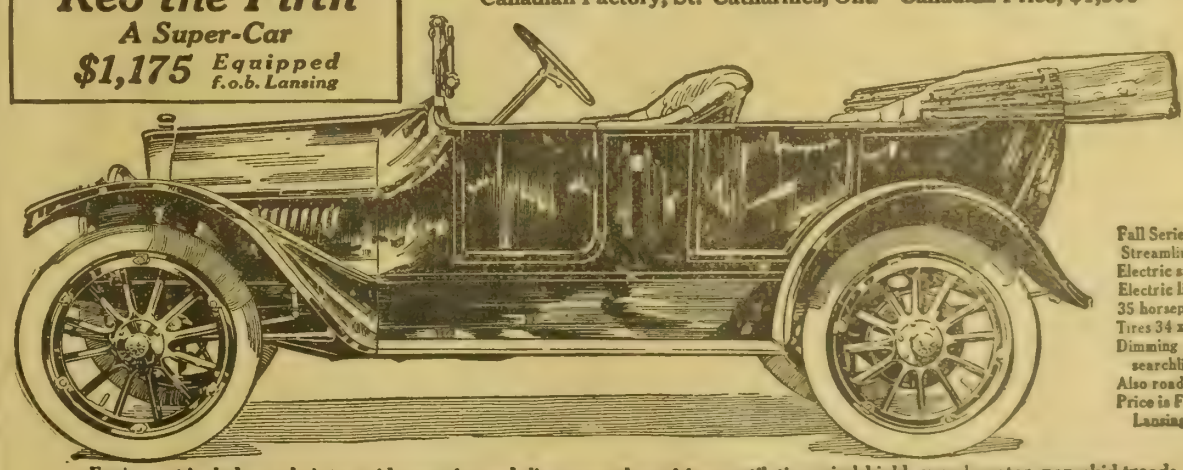

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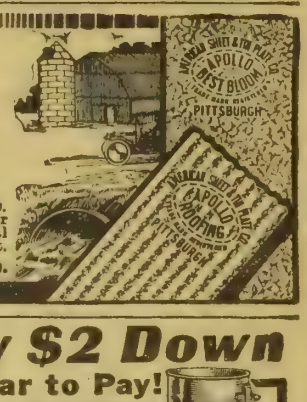

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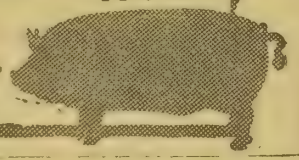

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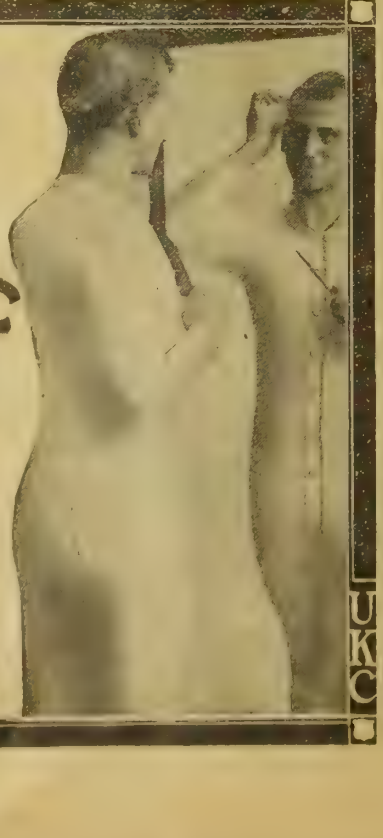

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Society and Business in Chile

By Frank G. Carpenter

SANTIAGO, Chile—Chile is having hard times and the European war adds to its woes. The people have been living beyond their means. Many of them are loaded with debt, and the foreign obligations of the nation now amount to more than $200 for every family in the republic. The internal debt is over $36,000,000 and the Chilean dollar is 50 per cent below par. Business is not good and at the same time the cost of living has jumped out of sight. Beef, which has always been cheap, has risen until some cuts now sell for 30 cents and more a pound, and bread, milk, vegetables and fruits are higher than they have ever been in the past. House rents are rising. Here in Santiago ordinary dwellings are bringing from $30 to $200 a month, and nearly every one is denouncing the greed of his landlord.

The most of the common people live in

Chilean Cowboys

what we would call two-family houses. The buildings are low on account of the earthquakes and many of them have only two floors. The first story apartments bring the most money, as from such apartments one can get out the quicker. There are no big flat buildings here. The highest houses have only four or five stories, and skyscrapers are yet to be built.

Hard Times in Chile

The very poor live in what are called cites. These are little tenements of one story, built in blocks. Each tenement has two rooms, one at the front and the other at the back. The only window is at the front. There are no heating or bathing arrangements, and the water has to be carried in from outside. Such an apartment will rent for from $5 to $7 per month, and if it is in a good location and of a little better construction it may bring $15 or $20. Many such buildings are owned by the church, and others by rich Chilenos, who get most of their incomes from these rents. The capitalists like these small houses because the rent is always paid in advance, and the interest on the investment is high. The church is one of the great real estate owners of Santiago. It has all kinds of property, from tenements to palaces, and from individual stores to great business blocks. A large part of the property on the Plaza des Armas, in the very heart of Santiago, belongs to it, and it owns buildings of all kinds scattered here and there through the city.

The prices of labor in Chile are rising, but they are still far below those of the United States. The average salary of a clerk in a store is equal to from $30 to $90 of our money. Bookkeepers get about $60 a month, stenographers $40 or $50, and if they are foreigners they may receive as high as $100. In this case they must be able to speak and write Spanish, and also be expert with the typewriter and in reading their notes.

In this connection I would say that there is no chance here for young Americans without money who have no special experience or skill of one kind or another. If they are mechanical or mining engineers, or experts in farming or fruit raising, there may be some openings; but for pure brains and pure muscle the country has an ample supply of its own, and that at wages which would not be tempting to the American.

Women in Business

As it is now, the native labor supply of Chile is being largely increased by the employment of women. They are making their way into the government offices. They clerk in the postoffices, they act as cashiers in the mercantile establishments, and they sell goods to the large department stores that have recently been established in Santiago. In the latter places female clerks are paid salaries of $20 a month with a commission on their sales, which in some cases runs the salary to as high as $100 per month. The chief objection to such positions is that the holder loses caste among her friends by taking them. Women have been so secluded in Chile that the people have not yet become accustomed to their fighting the battle of life for themselves. Nice girls never go out alone in the evenings, and even in the daytime those of the better classes are seldom seen on the street without some older woman is with them. When a young girl goes to school she is usually accompanied by a servant or by her father or mother, and some one is sent to bring her back home. The positions of secretary and cashier rank higher than those of the clerks, but most classes of the people look askance at the girl who works for a living.

I doubt whether the young business woman is as safe in Chile as she is in our country. The fact that she works out at all subjects her to the danger of liberties on the part of the other sex. The white slave trade exists to an even greater extent than in the United States, and I am told that there is a large class of girls who are by no means as good as they should be. The social evil is licensed in the cities, and everything is supposed to be under a rigid inspection. The Spanish custom of preventing the boys and girls from having anything to do with one another on the social level of purity and virtue drives the young men to the demi-monde for their social companions, and it defeats the end it hopes to gain.

Courting Has Difficulties

Moreover, if a young man calls upon a young woman a half a dozen times, and spends the evening with her in the presence of the family, he is thought to have serious intentions of marriage, and the father, uncle or aunt straightway demands how soon he expects to propose. If he then says that he does not want to get married, he is told that his further visits are not desired. The bear act, which means the standing out on the streets in front of your sweetheart's house and casting sheep's-eyes at her as she looks down from the balcony, is fast going out of use, although it is still the custom in some other of the Latin-American countries, and notably in Mexico and Central America. Nevertheless, in the aristocratic class a family would have to be in financial straits before it would think of al-

lowing its daughter to clerk in a store. For this reason the female clerks are sometimes sneered at as "rotos" by the others of their sex, who prefer to starve at home.

In order to understand the social conditions here it must be remembered that the country is one of classes. Chile has always had its arisocrats, its middle class and its common people. The last does the work of the country, and it is generally known by the term Inqupilino. The aristocrats are the descendants of the Spaniards and more especially of the patriots among them, that had to do with freeing Chile from the yoke of Spain. These men are the controlling influences of the country. They have the fat offices, and own nearly all of the property. Some have stock in the nitrate and other miles, and not a few are engaged in the various industries. Many of them are rich farmers, and it is from them that come the heads of universities and the chief doctors and lawyers. The most of the aristocrats are men of fine education. They are the progressive element of the country. They are proud of Chile and are intensely patriotic. They are not afraid to fight for their rights, and they will not submit to injustice either as individuals or as a nation.

Lower Classes Not Loafers

The middle classes are merchants and small land holders. Among them are many pure whites, and many who have more or less Indian blood mixed with that which comes down from the Spanish.

The lower class are known as the Inquilinos, or, erroneously, as rotos. The word roto is one of contempt. It conveys the idea of a drunken, good-for-nothing character. This is not the nature of the Inquilino, the Chilean peasant. He is a good, hard-working, honest man as a rule and anything but a loafer. He is a descendant of the peasant class of north Spain and of the Araucanian Indians. He is intelligent and quick to learn anything that requires handiness and craft. He can do all kinds of work, and makes an excellent mechanic, farmer or orchardist. He is a born horseman, and is skilled in the handling of stock. He is hardy and vigorous, and noted for his endurance and patience. At the same time, he is brave, he is very quick tempered and will fight upon slight provocation. He seems to care nothing for life, and very little for pain.

Indeed, the Inquilino will do all sorts of foolish things rather than be despised by his friends. The other day several peons were drinking together with a crowd of their fellows, when one man charged another with being a coward.

"You think so?" was the reply. "Well, I will prove that I am not." Would a coward do this?" And thereupon he pulled out his knife and plunged it into his bowels again and again, before the admiring eyes of the crowd.

"I will show you that I also am not a coward," rejoined the first speaker, and he began to stab himself. The two men would have committed suicide, had not a young priest rushed in and torn the knives from their hands, and called in the police to take the men to the hospital. These men were drunk, but even so, no drunken man but a Chileno would

Drunkenness is Great Problem

think of proving his courage in such a way.

Speaking of drunkenness, this is the crying evil among the Chilean peasantry. The Inquilinos drink to excess in both city and country. Their chief end seems to be to get drunk, and the majority have a spree once a week. Monday is called the roto's holiday, for he is often so drunk Sunday that he has to take Monday to recover. The liquor used is the vilest of alcohol, being often made of potatoes and rotten vegetables. It would, as one of the employers says, kill the ordinary man at a thousand yards. The stuff is gulped down in great quantities. not because it is liked, but because it makes the drunk come. There are many saloons, and a recent census showed 6,000 places in Santiago where liquor was sold, and in Valparaiso the average was one saloon for every twenty-four men. There are drinking places in all the Chilean villages, and every small town and hacienda store keeps liquors for sale. Of late, there have been some movements toward temperance, but so far but little has been accomplished.

Unsanitary Conditions Prevail

As a result of these excesses and of the poor food and unsanitary conditions of the houses, the mortality among the Inquilinos is great. They breed like Australian rabbits, and their babies die like flies. It is only the strong children who live, and for this reason perhaps the peons, as a class, are as tough and strong as any people of the world. I have seen them carrying nitrate bags weighing 300 pounds each and tossing them about like bags of feathers. Four of them will lift a piano and carry it along the roadway, and in the mines a peon will tote a bag of ore, weighing 150 pounds, up the notched stick that serves as a ladder all day long.

As to the homes of the peons, they are often little better than pigpens. Some of the large haciendados have recently been erecting model dwellings, but the most of the tenant houses are still shanties of adobe brick or huts made of reeds and sticks, woven together and plastered with mud. They are thatched with straw. The doors are rude and the windows are small. The ground is often the floor, and the furniture consists of little more than a table covered with oilcloth, a few rough chairs and a bed. These people have large families, and a hut fifteen or twenty feet square is often the home of six or eight people.

The Inquilinos pay no rent for such houses, and they have in addition small tracts of ground which they can cultivate, as well as pasture for a certain number of cattle. In return they have to provide labor for the proprietor whenever it is required, and that at wages that are often half the current rates of the neighborhood. The haciendado has the right to discharge the Inquilino, and the Inquilino has the right to leave when he pleases. As a rule the haciendados try to hold their men, and the men, if at all well treated, are not likely to move. On some of the farms there is a general store run by the landlord for his servants, and there the Inquilino makes the most of his purchases. He is supposed to give one man's work in exchange for his rent, and this means that he gets his house and garden for from $2 to $5 per week. I am told that the Inquilinos love their masters, and I know that the masters are fond of the men who work for them. The master occupies somewhat the position of a feudal lord, and the men treat him with a great deal of respect.

Army Service Good Influence

The service in the army, which is now universal, is having civilizing influence upon the lower classes. Every young man, when he arrives at the age of twenty, is supposed to spend one year in the military establishment, during which time he is whipped into shape, taught to obey and made into a soldier. The military system is that of Germany, and education is combined with the training. There are German professors in all the military academies, and the cadets who aid in handling the troops are usually well educated. The Inquilino is broadened by this service, and it tends to make him leave the farm for the city and to engage in labor there.

Another influence toward civilizing and elevating the Inquilino is the labor organizations. They are slowly making their way into the various countries of South America. The railway employes are organized and so are the stevedores, as well as the members of some of the mechanical trades. The labor element is beginning to take part in politics, and it has now two representatives in the Chilean congress. The departments of police and of the state railways are under the civil service, and positions there are in great demand among the common people, especially as the wages are high.

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

GOSLINGS can be picked when from 9 to 10 weeks of age. The number of times a goose can be picked in a year will depend on the climate. In the north and middle states this will be about three times a year; the last picking comes in the early autumn. If you do not pick the geese they will pick themselves when the feathers ripen. Be sure the feathers are ripe. To pick when there is blood in the quill is cruel; the feathers come out then with great pain. In picking geese the old-fashioned way is to fasten the wings and tie a stocking over its head. Only the small feathers are removed. Leave those under the wings, as they support the wings. To pick close under the wings means a goose going about dragging one or both wings, and these are easily broken. Ordinary sized geese should produce a pound of feathers to the goose at three pickings, but the Toulouse or Emden kept at standard size will often produce half a pound of feathers at one picking to the goose. Geese intended for market at Christmas time, if hatched this year, are better sale if plucked but once before going to market.

Turkeys as Breeders

Late turkeys should not be kept for next year's breeders. It is a costly mistake to sell all the early-bred turkeys because the market is high, forgetting the next year's hatches that you want to make good. Next year's hatches depend on this year's stock. Early yearling toms of this year mated next spring with 2-year-old hens will give you strong hatches. These 2-year-old hens may not lay so many eggs as your early-hatched year-old hens will lay, but the number of poults that will live over those of the younger hens, though the latter be mated with 2-year-old toms, may astonish you, and yet these early-hatched hens of this year's hatch should be kept over for the making of the future good 2-year-olds. Let the turkeys roost in airy quarters until the cold nights come, then give them a shelter dry and free from drafts, though they yet need plenty of air. One good tom will be sufficient to keep over with seven or eight hens, though good results are obtained by keeping ten hens with one vigorous male. When feeding up the market turkeys do not allow the breeders the same ration. Breeders must be kept only in good condition, never allowed to get too fat.

The Breeds

The hen, investment and labor considered, is the most profitable of all farm animals; every year the value of American poultry products exceeds the combined value of gold and silver mined in America. The poultry industry is increasing fast, but it is said to be making its fastest strides in the southeastern portion of our country. Chickens are classified into egg breeds, meat, general purpose and ornamental breeds. The egg breeds, generally speaking, are of the smaller breeds—Leghorns and Minorcas—though the latter is now bred much larger than the egg breeds of the Mediterranean class. These small breeds are very active and lay white-shelled eggs; they mature early. The general purpose class take in the Plymouth Rocks and all the American breeds, including the English breeds, Dorking and Orpington. These, like the smaller breeds, are good foragers and lay at 6 months of age; males mature at about that age. They are fine market birds, and now in most cases equal the smaller egg breeds in laying, though not always so dependable for all breeds the year around. The meat breeds comprise the Brahmas, Cochins and Langshans. Left to themselves, they are rather poor layers, laying a large, brown egg, but well selected from trap-nested birds, some strains show extra heavy laying power. They are slow to mature, the pullets seldom laying until over 10 months old. Cockerels mature slowly; they are lazy birds, inclined to put on fat very fast.

Feeding Troughs

The majority of poultry diseases are picked up with the food or taken from the drinking pans. It is difficult to keep food clean and dry during bad weather where it is thrown on the ground or even in litter. But this exposure is nearly overcome by using troughs with slatted sides and detachable roofs. The trough can be from six to ten feet long, with the sides five inches high; the lath slats are two inches apart and the troughs sixteen inches from the floor to roof. The roof should project two inches on the sides to protect food from the weather. The roof is easily removed by lifting one end and sliding it endwise on the opposite gable end on which it rests. The trough can then be filled and the roof drawn back in place without lifting it. This arrangement saves feed as well as keeps it clean from droppings and other filth.

More of Eggs in Water Glass

Never allow the sun to shine on vessels holding eggs in water glass, and keep all eggs submerged. Do not stir the solution after eggs are put in. Where air gets to the preservative it makes it turn white and thick, making it difficult to take out the eggs. This will not hurt the eggs, though one should guard against it. Too many people wait until eggs are very high before using the water glass eggs. The better plan is to begin using the eggs soon after the original price plus the extra expense in preserving has been reached.

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My ads paid in the Twentieth Century Farmer. When results are taken into consideration, it is the cheapest paper in which to advertise of any publication I know.

W. R. PETTY.

The cheapest is not always the best, you know, but the best is always the cheapest in the end.

LANDS—Oregon

OREGON FARM OF 904 ACRES—Well improved and located in the famous Sutherlin Valley, two miles from the progressive town of Sutherlin, without doubt the best part of western Oregon; deep, black soil, rich and productive; greater portion bottom land and under cultivation; two sets of elegant farm buildings located so the farm can be divided to good advantage. Will sell part or all. Sidetrack of Southern Pacific main line on corner of farm. There is not a better farm in Douglas county, Oregon. If you are interested write me for full particulars. Special price for quick sale, $75 per acre; one-third cash, balance long time at 6 per cent. Health conditions ideal. J. F. Luse, Owner, Sutherlin, Ore.

Texas

NEW COLONY, NEAR SAN BENITO. Ideal climate, cream of the earth; $50 per acre; easy terms; near railroad, market, churches and schools. Excursion October 20. Fare refunded to buyers. Write today for full particulars. San Dominic Colonization Co., 340 Brandeis Theater Bldg., Omaha, Neb.

Wisconsin

UPPER WISCONSIN—BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

HAVE YOU $500? THEN INVEST IN good land in Polk county, a prosperous dairying region, 60 miles from Twin Cities. See such farms as No. 564, 50 acres at $1,500; No. 679, 80 acres at $2,400, or No. 683, 65 at $1,200. All with clay loam soil. Send for list of bargains. Baker, N 67, St. Croix Falls, Wis.

ARE YOU LOOKING FOR A FARM like this? 80 acres in that prosperous Centuria-Balsam lake region, Polk county, Wisconsin, on Soo Short Line, 60 miles from Twin Cities, 35 acres in field, 3 meadow, clay loam soil, good surface. New frame house, 24x26, 2-story; frame barn, 20x34; other buildings, well, fencing, etc. A snap for only $3,500. Baker, L 67, St. Croix Falls, Wis.

OFFICIAL BULLETINS CONCERNing soil, climate and crops of Wisconsin mailed free to those addressing Wisconsin State Board of Immigration, Capitol 1000, Madison, Wis.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

FARMS WANTED—WE HAVE DIrect buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

FARMS WANTED FOR CASH BUYers, and farm bargains for sale. Write me if you want to buy or sell. Terms free. Established 1881. John B. Wright, successor to Frank P. Cleveland, Real Estate Expert, 1315 Adams Express Bldg., Chicago, Ill.

WANTED—TO HEAR FROM OWNER of good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

LANDS—Wyoming

BLACKBURN FARMS—BLACKBURN farms lie so that tractor plowing is easily and cheaply done. A farmer tends a half section there as easily as a quarter section in eastern Nebraska or Iowa. Their distance from Omaha is substantially the same as from Omaha to Denver, and only six or seven hours by auto to Denver. The Union Pacific at Laramie has scores of trains both east and west daily. The stock yards there feed in transit 10,000 cars of cattle, hogs and sheep per year. The Wyoming university and the local schools will be found a great aid in farming and stock raising aside from the education of the boys and girls of the community. The government forest reserve supplies practically free to the settlers all the timber needed for building, fencing, etc. There are various mines near, and there are promising indications of oil; in fact, boring is going on there now. With the best food, water and healthful surroundings stock raising is not only sure, but remarkably profitable. Big ranches in times gone by have made great fortunes. The water system of Blackburn Farms has been in continuous operation for over twenty years and the title to both land and water is perfect. These lands are offered by the actual owners, not agents. Settlement now is composed of farmers from Illinois, Iowa and Nebraska. Prices of land low and terms liberal. A few sections will be exchanged for Iowa and eastern Nebraska farms. Our illustrated booklet will interest you. Send for it; it's free. Laramie Development Co., Laramie, Wyo., or A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

GRAIN LANDS AND STOCK ranches in southeastern Wyoming at bargain prices and on easy terms. For particulars address Federal Land Company, Cheyenne, Wyo.

BARGAIN—IRRIGATED FARM, 160 acres under government ditch, 12 miles from county seat town of 3,000. Trading point 3 miles from land. Price, $25.00 per acre; includes permanent water right. Terms, one-fourth down, balance deferred payments if desired. This is a snap. Write owner. P. O. Box 55, Shoshoni, Wyo.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned; are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

POLAND-CHINA PIGS—BIG TYPE pedigreed. Davis Bros., Lincoln, Neb.

GOAT SALE—BILLIES AND NANnies, the Nubian milk goats. W. B. Fuerst, Battle Creek, Neb.

DOGS

SCOTCH COLLIES—WE OFFER THE choicest Scotch collies that we have ever bred. They are well marked and of excellent breding, priced right. A. A. Martin & Son, Tekamah, Neb.

FOR SALE—SCOTCH COLLIE DOGS. William Cramer, Dunlap, Ill.

FOR SALE—ENGLISH SHEPHERD pups; also Rouen ducks. James Cassell, Fremont, Neb.

SCOTCH COLLIE PUPS CHEAP. Fred Kucera Clarkson, Neb.

HELP WANTED

YOUNG MAN OR WOMAN WANTED woh desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business couse. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

WANTED—MEN AND WOMEN—18 OR over. Get government jobs. Thousands appointments this year; $65 to $150 month. Write immediately for list of positions available. Franklin Institute, Dept. L 94, Rochester, N. Y.

AGENTS—$1,200 TO $1,500 A YEAR sure; permanent position assured; exclusive territory. We teach the inexperienced how to succeed. Let's show you. Novelty Cutlery Co., 218 Bar St., Canton, O.

SALESMEN—EARN $2,000 TO $4,000 A year. New Combination, 12 tools in one; sells at sight to contractors, farmers, teamsters, fence builders, threshers, miners; weighs 24 pounds, lifts 3 tons. Stretches wire, pulls posts, hoists, etc. Chance for men who want honest money-making proposition. Harrah Manufacturing Co., Box M, Bloomfield, Ind.

MOTORMEN, CONDUCTORS! EARN $75 monthly; experience unnecessary; qualify now; state age; details free. Address Y 230, Twentieth Century Farmer, Omaha, Neb.

FREE TRIP TO SAN DIEGO EXPOsition to desirable persons who will do some advertising in their home town. No canvassing or soliciting, but some earnest and honest work required. Write for particulars at once. F. L. Norton, 806 Watts Bldg., San Diego, Cal.

MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

GOVERNMENT FARMERS WANTED—Ages 21 to 50. Make $125 monthly. Write Ozment, 39-F, St. Louis.

FIR LUMBER! RED CEDAR SHINgles! Choice. Mill direct. Save money. Write Lansdown, Drawer H, Everett, Wash.

25,000 RED CEDAR POSTS AND SEVeral hundred poles for sale. Let us quote you a delivered price to your station. Will ship subject to examination before payment. Farmers Co-Operative Co., Ltd., Clarks Fork, Idaho.

SHIPLAP, $21.50 PER THOUSAND FT. This is our delivered price on No. 1 guaranteed fir shiplap at most any station in Nebraska. Other lumber and mill work at same low prices, shipped subject to inspection. Send your lumber list for freight paid estimate, or ask for complete price list. Western Lumber & Millwork Company, Incorporated, 534 Perkins Bldg., Tacoma, Wash.

GOING TO BUILD? BUY YOUR FIR lumber, red cedar shingles, finsh and mill work of us. We are located in the lumber center of today. We saw and sell to the consumer direct. We will save you money on what you need. Send us your lumber bill for estimate. Get our figures before you buy. The Keystone Lumber Co., Dept. R, Tacoma, Wash.

VIOLIN FOR SALE CHEAP, SENT on trial. Write Miss Bertha Mardiss, Route 5, Rosedale, Kan.

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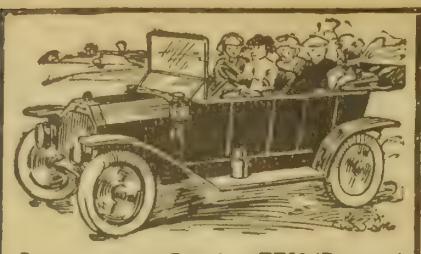
LET MOSHER-LAMPMAN COLLEGE finance your education! Get the training now, pay us when it pays you. Mosher-Lampman Business College, the well-known Nebraska institution of business training, announces that a few selected young men and young women will be admitted this year to the college and allowed to pay two-thirds of the tuition expense after being placed in a paying position by the college after graduation. The college will find places to do work outside of school hours to earn board for those students who so desire. This presents an unequalled opportunity to a reasonable number of ambitious young people to obtain, at very little actual outlay, a thorough course of business training as stenographer, bookkeeper, salesman, civil service candidate or telegrapher in one of the best known schools of the kind in this section of the country. For full details and college prospectus address Mosher-Lampman College, 1870 Farnam St., Omaha, Neb.

PATENTS

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., 808 F St., Washington, D. C. Established 1880.

IDEAS WANTED—MANUFACTURERS are writing for patents procured through me. Three books with list 200 inventions wanted sent free. Advice free. I get patent or no fee. R. B. Owen, 75 Owen Bldg., Washington, D. C.



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The only thing we ask of you is a few hours of your spare time introducing our proposition in your territory. Wouldn't you feel more than repaid to receive an auto in such an easy manner? Just think! It is now possible for you to have a car of your own. No need to worry about not being able to afford it. We give you an opportunity to earn it. No money needed. Send for full information. It is worth your investigation. A postal will do. Send it today. Address,

W. W. RHOADS, Manager
Dept. T. C., 334 Chamber of Commerce Bldg.
OMAHA, NEBRASKA

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The only *test* of roofing is the *test of time.* This label on

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Your dealer can furnish *Certain-teed* Roofing in rolls and shingles—made by the General Roofing Mfg. Co., *world's largest roofing manufacturers,* East St. Louis, Ill., Marseilles, Ill., York, Pa.

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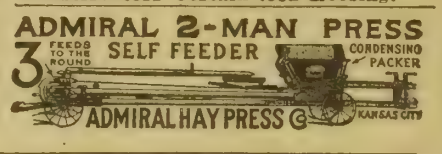

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If you will write and tell me how many hogs you have I will send you at once, all freight charges paid, as many of my New Idea Rubbing Posts as you want to try and one gallon of Medicated Oil free with each Post. You can put them up in your own hog yard and let your hogs rub against them 30 days at my risk. If you don't say my Posts are the simplest, safest, most durable and most economical Rubbing Posts on the market, and the best investment you can make for your hogs I will pay the return freight charges and not ask you to pay me a single penny either for the use of the Posts or for the Oil consumed.

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have no valves—nothing to get out of order. Stock can't break them. Dirt can't clog them. Oil can't be wasted. Rain can't wash out oil. Every drop is applied as needed **right on the itch** when the hog rubs. Pigs of all sizes and ages can rub on these Posts and keep themselves vermin-free, mange-free and healthy. Three rubbing bars on each Post. One Post accommodates 30 hogs. Uses either crude oil or Medicated Oil. **Helps prevent hog cholera.** Keeps animals comfortable, contented—and they put on flesh faster—make you more money.

SAVE $2 to $12 ON EACH POST at these CUT PRICES

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1 Post .	$ 7.75
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I'll Furnish the Posts—I'll Furnish the Oil—I'll Pay the Freight

Prove these claims at my risk on your own farm before you pay. Just write and tell me how many Posts you want to try. Send no money. Order direct from this advertisement or if you prefer write for big illustrated folder today.

Alvin V. Rowe, Pres., ROWE MFG. CO., 421 Liberty Street, Galesburg, Ill.
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Demand This Tag—

It means "satisfaction or your money back—and no questions asked," you to be the judge—not the dealer. It is quality and satisfaction insurance

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"Private" brands (of wholesaler or dealer) cover up goods too inferior for the manufacturer to acknowledge under his own brand.

Demand factory branded hardware with our Double Guarantee Tag attached. If there's no "tag" dealer in your town, write us about it.

When you buy a Wringer, see that it bears our Double Guarantee Tag and the mark of the Lovell Manufacturing Co., makers for Forty Years.

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Largest Wholesalers in the West of Factory Branded Hardware.
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QUALITY CLEAR THROUGH

Anchor Brand "Bicycle" WRINGERS Are Known For Lasting Quality. 40 Years

When writing to advertisers please mention Twentieth Century Farmer.

Interstate Fair at Sioux City

THE Interstate fair at Sioux City was a success from more than one standpoint. Barring the big rain on Monday, weather conditions were ideal; this brought the crowd, who were fully repaid for time and money spent by looking over the fine general display. The total attendance was a record-breaker, which we are pleased to note. The hustling men who manage this show deserve success.

Sioux City is surrounded by one of the best general farm and live stock countries to be found anywhere, and there is no reason why a big, successful fair could not be held here every year. In the territory tributary to Sioux City crops are as certain year after year as they are any place. There are many breeders of the different breeds of live stock living in this territory. Pure-bred live stock has done much to put wealth into Sioux City and the surrounding country.

The fair at Sioux City must depend on its own resources; it gets no aid from the state. This fact makes it necessary for the management to use every honorable means they can to make it successful financially. We hope the time will soon come when the management of this fair will feel that the "midway" is no longer a thing to be desired. We can say, however, that the "midway" at Sioux City this year appeared to be clean and up-to-date.

The races at this fair are always good and well patronized. This year was no exception. We want to congratulate the management on quality and number of free attractions given in front of the grandstand during the races. The grandstand at the race track on any fair grounds is used by many people, tired of running around, who want to take an afternoon's rest and be entertained. The management here have certainly fulfilled the desire of their patrons in this respect.

The horse show was good; while in total there were not quite as many animals on exhibition as in some former years, the quality shown was up to standard. As in practically all western shows, the Percherons led in numbers.

In the cattle division the Herefords led in numbers, and some good herds were in competition in this breed. The Shorthorn show was not quite up to standard in numbers and not quite where it should be in quality in some classes, while in other classes the winners could go in any show and make the strongest kind of competition. The other beef breeds represented were the Angus, Polled Durhams and Red Polls. The dairy cattle show was light.

The hog show was, like most all the shows this year, a little short on numbers. In this respect the Duroc-Jerseys led. The Poland-China show was good, bringing out some splendid animals in most all classes. The Chester Whites were more numerous and better than ever before. Some of the breeders of the breed, who had already shown at Des Moines and Lincoln, were here helping to make a very creditable show for this breed of hogs.

The Hampshire show was probably the strongest one ever pulled off at this fair. The numbers were there and they were of good breed quality. Roy E. Fisher of Winside, Neb., had a herd in competition that was a good winner at this fair, as well as at the Iowa and Nebraska state fairs. The Berkshires were represented by three herds and the Yorkshires by one.

The Duroc show was a good one both in numbers and quality. Some very creditable animals were shown, owned by breeders in Iowa, Minnesota, South Dakota and Nebraska. The P. P. Cedar herd from Genoa, Neb., was a good winner, after showing at Lincoln and Huron. Willard Robbins of Lyons, Neb., was winner of the grand champion ribbon on his yearling boar, Crimson King. This was a very creditable animal of good length, with a good back and foot. Some surprise was expressed at the ringside by the judge making this boar the grand champion, as he is of a larger and more stretchy type than is generally selected by Mr. West.

Wool Growers' Association Meets

It has hitherto been the custom of the National Wool Growers' association to hold its annual meetings in January. This year they will hold their fifty-first annual convention at Salt Lake City, Utah, November 12, 13 and 14. The reason for the change in date is that many of the members are in their state legislatures, and also that in January there is danger of heavy storms preventing a full meeting. Many topics of vital importance to the shepmen of the country will be taken up at this meeting and it is hoped that a large attendance will be on hand.

Immune Duroc Boar Sale

F. A. Lemmerman of Creston, Neb., will hold his regular annual sale of Duroc-Jersey boars at his farm near that place on October 27. In this offering Mr. Lemmerman will have a choice lot of spring boars and a few fall boars that should command the attention of anyone wanting something really good. Six fall boars are sired by Creston Model, a splendid son of Blue Ribbon Model. They are a strong, rugged lot, with several prospects among them that are good enough to go into any pure-bred herd. There will be thirty-four spring boars, sired largely by Crimson Critic, one of the good sons of the grand champion boar, Critic B. The dam of Crimson Critic was a daughter of Crimson Wonder 4th. So it will be seen that he has a right to be a strong breeder. Other litters besides those sired by Crimson Critic are by Golden Model 31st, Colonel Chief, King the Colonel and others. You can rest assured, if you get one of these boars, that he has not been overfed nor injured for breeding purposes. They have been fed a balanced ration and will go out and make good as breeders. Along with this, a big consideration, is the fact that these boars are immune. They have been given double treatment, thus making you safe on that score. Write Mr. Lemmerman for catalogue and arrange to be present on sale day. In case you are not able to do so, and want something in the offering, send your bids to G. E. Hall of this paper and they will be taken care of. Kindly mention the Twentieth Century Farmer when writing.

Latest Improved Rubbing Post.

By eliminating profits and expense, we are able to furnish you our POST ATTACH

HOG OILER FOR $8.50

CASH ACCOMPANYING YOUR ORDER

Medicated Vermin Oil at 15c per gallon. We guarantee our Post Attach, Acme and other varieties of Hog Oilers to rid your hogs of lice, mange and skin diseases. Order at once. Do not put it off. Your hogs cannot sleep or thrive for the lice chewing them night and day. Address

ACME SUPPLY CO.,
Dept. B, Room 304 Bromley Building, OMAHA, NEB.

Sedalia Scene of Successful State Fair

Belle of Missouri 3d, Grand Champion Sow at Missouri State Fair, 1914, Owned by C. L. Taylor, Olean, Mo.

(CONTINUED FROM PAGE FIVE.)

ter Whites were good and, excepting the Lewis herd from Illinois and the Frantz herd from Iowa, all were owned by Missouri breeders. A large proportion of the good ribbons were won by the herds outside the state. We predict that Missouri breeders will load up and give outside showmen a warm reception the next time they show.

The Poland show was made by Missouri breeders with the one exception of the herd of W. L. Willey of Steele City, Neb. This herd was the winner of all championship ribbons, as well as the winner of all firsts in the herd, produce of sow and get of sire.

With her natural advantages for stock raising, Missouri should take a higher position than it does as a state producing good stock. Generally speaking, breeders have creditable animals, but too few men are breeding good stock. The farmers are letting opportunities slip by not breeding and raising more good live stock.

S. & C's. Valley Chief, First Prize Aged Boar at Missouri State Fair, 1914, Owned by Sheely & Clatterbuck, New Bloomfield, Mo.

What is the Matter with Rural Schools?

(CONTINUED FROM PAGE THREE.)

for regret. Better sell a cow, feed fewer pigs and set fewer hens. A certain boy who had no room of his own, no buggy, no gun, no books, who seldom got a day off for the celebration, picnic or circus; whose few clothes were bought by his parents and who seldom spent a dollar himself, became discouraged, deserted his home and ran away to the city. The father thought his son very ungrateful, but the neighbors did not wonder at it. Hundreds of good, honest, industrious boys have gone seeking a job in a distant city simply because the farm home and its suroundings were not conducive to their contentment.

But the home is a private institution, and each may have one largely to his own liking, so we shall not discuss it farther here. Merely let it be said that the part the home is to play in the solution of the farm problem does not depend upon the extent of the acres upon which it is situated nor the number of hogs, sheep and cattle round about, but upon the atmosphere of cheerfulness, culture and contentment that will have its everlasting influence upon all who pass beneath its roof.

A whole volume might be written regarding the country church and its place in the solution of our problem, but a few paragraphs will do for the present.

Small membership, poor attendance and inadequate financial support in some localities would seem to indicate that farmers are not of a religious turn of mind. But anyone acquainted with country people knows this is not generally true, for as a class farmers are inclined toward church life. The boy who labors alone all day in the field has time to ponder on many things, and the little church is a dominant factor in the life of many such boys. The mothers working over the hot ranges of farm kitchens often sing hymns that make a stronger impression upon the listener than those sung by great cathedral choirs.

Country church conditions vary just as much as home conditions, and it is impossible to generalize. Every church has its influence, also its problems, which call for individual solutions, and which will have their influence in the solution of our greater problems. The Sunday schools and young people's organizations offer advantages that country people cannot afford to miss. It pays to send children, or better, to take them to such meetings, for, irrespective of sect or creed, they will absorb some things that will be factors for good in their development.

But it is with the last of these, the rural school, with which we are principally concerned. It is a public institution, organized by the state and supported by taxation. Every property owner pays his share of its running expense whether he takes advantage of it or not. Therefore, it is permissable that anyone express his views concerning the matter, criticising or commending as suits his pleasure.

With this premise, then, I shall attempt in succeeding articles to set forth a few ideas concerning our rural school system; not with the intention of forcing them upon the reader, but with the hope that he may give them his impartial consideration.

What the Name "BALL-BAND" Is Worth to You

The name "Ball-Band" on rubber footwear has the same real, relative value to you as the pedigree of a cow, or the strain in the sire of your colt.

"BALL (Red) BAND"

The Red Ball, the "Ball-Band" trade mark, stands for a record of quality running back through years. Every year, "Ball-Band" Rubber Footwear stands the test of fit and long wear on the feet of eight and one-half million wearers. These men buy "Ball-Band" again the next year, because under any working conditions it gives more days wear at a lower cost per day's wear than any other kind of rubber footwear.

Over 50,000 stores sell "Ball-Band" Rubber Footwear. Most stores keep a "Ball-Band" sign in their windows.

If your merchant doesn't sell "Ball-Band" write us and mention his name. We will see that you are supplied. Write anyway for

Free Booklet, "More Days Wear"

It tells how rubber footwear deserves to be treated.

Mishawaka Woolen Mfg. Co., 337 Water St., Mishawaka, Ind.

"Ball-Band" Arctics are made with one, two and four buckles. The Red Ball is on the sole. Look for it. The tops are best cashmerette and the linings we make ourselves from the same kind of wool that goes into the Coon Tail Knit Boot.

"The House That Pays Millions for Quality"

High Priced Wheat

Will Surely Result From the European War

There is no better winter and spring wheat country, both quality and yield considered, than the Golden Prairie district of southeastern Wyoming. We are owners—not agents—and sell direct at low prices and on easiest possible terms. Write us for detailed literature, including our celebrated CROP PAYMENT PLAN whereby both principal and interest are paid by delivery of one-half crop raised each yar.

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H. F. CADY LUMBER CO. OMAHA, NEB.

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in McHenry County. Any size tracts from 40 acres upwards on twenty annual payments. A good home, safe investment and increasing value. NORTHERN TRADING CO., Owners, Towner, N. D.

LEMMERMAN'S DUROC SALE

AT

Creston, Neb., Oct. 27, '14

40 Head-- 6 Fall Boars 34 Spring Boars --40 Head

Twenty head of these boars are sired by CRIMSON CRITIC, a son of the champion, CRITIC B. Others are by GOLDEN MODEL 31st, COLONEL CHIEF, KING THE COLONEL and others.

The fall boars are all by CRESTON MODEL by BLUE RIBBON MODEL. These boars are strong boned, strong backed individuals and have been grown with the idea of their future usefulness as breeders. They are bred in the purple. And along with all this, they are IMMUNE. Write for catalogue.

Auct.—Col. Ray Page. **F. A. LEMMERMAN,**
Fieldman—G. E. Hall. **Creston, Neb.**

GREAT SHORTHORN OFFERING

70 Head -- 20 Bulls, 20 Cows With Calf at Foot, Balance Heifers or Cows Well Along in Calf... -- 70 Head

AT

St. Edwards, Neb., October 29, 1914

This sale represents the natural increase from our herd of 200 head. They are the working kind and will go out and make good. There are a number of SCOTCH BULLS of HERD HEADING character and also a lot of big, strong RANGE BULLS. 20 cows have calves at foot and the balance of breeding age are safe in calf, mostly to our great herd bull, VILLAGE PRIDE. We have never sold a more highly useful offering.

Auct.—Col. Fred Reppert. **RAPP BROS,**
Fieldman—G. E. Hall. **St. Edwards, Neb.**

Duroc Herd Boars

35 Head of IMMUNE Duroc-Jersey Boars of March Farrow to Be Sold at

Wisner, Neb., Oct. 31, 1914

This will be strictly a herd boar sale, and one of the biggest, smoothest, growthiest, most uniform lots of boars ever offered from this herd. There are quite a number of strictly herd heading character. They are sired by CHIEF'S MODEL, MODEL GOODS, GOLDEN MODEL 31st, VALLEY KING, WONDER COLONEL, PROUD COLONEL Jr., CRIMSON WONDER 10th, WALLACE'S SENSATION, COLONEL CHIEF, COLONEL 2d and others. Their breeding is right, and they are the big, smooth, strong backed, heavy boned kind. Besides they are IMMUNE. Catalogues are ready for distribution.

Auct.—Col. N. G. Kraschel. **ROBERT LEISY,**
Fieldman—G. E. Hall. **Wisner, Neb.**

AYRSHIRES

WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. **LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb.**

PERCHERON HORSES

At ordinary prices, farm-raised registered Percheron studs—1, 2, 3 and 4 years old. Kind disposition because well cared for. You should admire their big bone first, then their immense weights, because they are developing big like their imported sires and dams. And you will receive true old-fashioned hospitality on your visit at Fred Chandler's Percheron Farm. Just east of Omaha.

FRED CHANDLER, Route 7, CHARITON, IOWA.

Review of Live Stock Market

By A. C. Davenport

HOGS are the star actors in the live stock markets of the country, and for some time back have attracted more than their rightful share of public attention. Unfortunately for the producers' peace of mind, the action of the market has not been at all to their liking, being exactly the opposite of what they had expected. The American public has been educated into believing that war means high prices, and when hostilities broke out in Europe the last of July it was hailed as the beginning of record breaking prices for farm crops and live stock.

After the first big slump in hogs, due to the temporary money squeeze, the idea that war means high prices gained the ascendency and speculators sent values upward at a rapid rate. The speculative wave expended most of its energy in August and began to recede soon after the beginning of September. Contrary to the popular view regarding war and high prices, the public was cautioned early in August through these columns not to expect too much of the market.

For a time the speculative demand put prices up to such an extent that it looked as if this warning was entirely uncalled for. But September was not very old when it became apparent to very close observers that the load was becoming too heavy for the bulls and that they could no longer maintain the market. The result was that September closed with the market $1.00 per hundred lower than it was at the opening. In other words, hogs were selling on the basis of Omaha right around $8.00 at the end of September, and it was stated in these columns that the bears were predicting that the price would be around $7.00 before the beginning of November. In view of all the expectations as to high prices to be created by the war, the prediction of a $7.00 market for hogs seemed too pessimistic to be worthy of consideration. Still the market has continued on the same down-hill track, but with increased speed as if the rails were greased. During the first ten days of the month prices have made a decline of 50@70c, and if the movement continues the $7.00 point will have been reached before this can appear in print. However, after such a sharp break a reaction for a few days might come any time, but there is no certainty of it.

Hogs Still Going Down

There is nothing in sight at the present time to give the slightest hope that there will be any permanent improvement in values. But that is not all—there is nothing in sight to stop the downward course of prices. If the decline is to be halted it will be through the influence of some force not now in evidence. At present writing the news is all bearish. Not only is the foreign and domestic consuming demand light, but the market is facing a new crop of hogs that promises to be large.

According to the estimates of the Department of Agriculture the number of stock hogs in the country is 100.8 per cent of the number in the country a year ago. The five states of Minnesota, Iowa, South Dakota, Nebraska and Kansas have less than a year ago, but others have enough more to more than make good the shortage. The condition as to health and quality of hogs is estimated as somewhat higher than either of the last two years, although slightly below the average of the last ten years.

There is certainly nothing bullish in the government figures. Only let present conditions continue, say the bears, and it would not surprise us if hogs were to go on down to $6.50 at the Missouri river. The bulls, on the other hand, are hoping for something to develop that will stop the downward rush, but what that something is to be they are not prepared to say. It is well understood that a sudden revival in the consuming demand could not fail to have a stimulating effect upon the market, but when will it come? The bulls have strained their eyes watching for it, but so far have seen nothing of it.

Slight Improvement in Cattle

Cattle have been selling a little better during the last few days, the break of the previous week being pretty well made good. Receipts at the big market centers have not been at all burdensome for this season of the year. The outlook for the cattle market is still good and there is nothing to warrant a change in the views expressed several times over in these columns to the effect that there are no apparent reasons for expecting other than a good strong market throughout the season. Prices have been high all the season, they are still high and unless all signs fail will continue high to the end of the range season. Low weeks and high weeks are to be expected, as receipts prove temporarily large or small, but there is nothing in sight right now to indicate the near aproach of any great permanent change. If feeders could get the usual credit they would be very apt to bid the market up, as hinted a week ago, but as it is they are buying with sufficient freedom to hold it up to a point high enough, perhaps, for the good of the men who make a business of fattening cattle.

Sheep have been moving along with little change in either direction. Receipts during the last week have been moderate, showing a slight decrease at leading market points as compared with corresponding weeks one and two years ago. Prices are just about as high as they were at the best time in October of last year, when the market was quoted as the highest on record for that month. Sellers as a rule have been well pleased with the condition of the trade.

Packers complain that it is hard work to move the high-priced mutton and they may be expected to bear the market as often as receipts prove large enough to admit of it. On the other hand, there is a good demand for feeders, which affords the market strong support. The immediate future of the market is likely to be controlled largely by the size of the receipts.

RED POLLED CATTLE

Both sexes; good as any in America. Call or write me your wants. W. F. Schwab, Clay Center, Neb.

Breeders' Notes

Nelson's Duroc Offering

This is the last call for the Duroc-Jersey sale of F. B. Nelson at Lindsay, Neb., on October 23. This will be one of the good Duroc sales of the season and will contain a class of stuff that will take rank with any of the other good sales. The offering will consist of fifty head, thirty-five boars and fifteen sows. Of the boars there will be five fall boars, four of these being by the twice grand champion Valley King and one by that grand old breeding sire, Red Chief Wonder. Right here we want to say that there is some herd boar material among these fall boars. There are thirty head of spring boars sired by Golden Model 4th, Invincible Chief, Melina's Wonder, Perfection Wonder, Chief Select 2d and others. There will be a choice lot of sows with litters, for right up to farrowing time, these being bred to Crimson Gano, one of the best Colonel Gano boars we have ever seen. These sows are sired by Valley King, Perfection Wonder, B. & L's. Wonder, Blue Ribbon Model and Red Chief Wonder. Everything going in this offering is immune in the strictest sense of the word. It is an exceptional opportunity to get some well-bred stuff, and we trust that those of our readers who are in the market for something in this line will arrange to attend this sale. Valley King is dead, and this will be one of the last opportunities of getting some stuff sired by him. If you cannot attend the sale, send your bids to G. E. Hall of this paper and they will be handled with care. Kindly mention the Twentieth Century Farmer when writing.

Leisy's Immune Duroc Sale

In this issue of the Twentieth Century Farmer we are starting the advertisement of Robert Leisy of Wisner, Neb., who will hold his regular annual sale of Duroc boars at Kelso's livery barn at that place on October 31. This will be one of the most uniform offerings ever made from this herd. We realize that in saying this we are making a pretty broad statement, because he has made some offerings in the past that were par excellent in this respect. Nevertheless, we believe it to be true. They have the size, bone, quality and smoothness that characterize practically every offering Mr. Leisy makes, and along with this they have

blood lines that entitle them to admittance into the best society known to the Duroc-Jersey breed. The offering will consist of thirty-four head, thirty-three spring boars and one fall boar. All the spring boars are of March farrow with the exception of two, these being of late February farrow. The fall boar is a son of King Pritchard, he by Sioux King, and is a very creditable individual all around. The spring boars are sired by Chief's Model by Chief Invincible, Model Goods, Golden Model 31st, Valley King, Wonder Colonel, Crimson Wonder 10th, Wallace's Sensation, Wonder Model, Colonel Chief and Colonel 2d. These pigs have not been overcrowded. They have been grown along for bone and size and with an idea to their future usefulness as breeders, and if we are any judge, they surely ought to go out and make good. One important feature in connection with these boars is the fact that they are immune, having been treated with the simultaneous treatment. Get in touch with Mr. Leisy at once for catalogue and arrange to attend this offering, and if you are looking for a herd boar you will not make any mistake. In case you want something in the sale and cannot attend, send your bids to G. E. Hall of this paper and they will be carefully looked after.

Great Shorthorn Offering

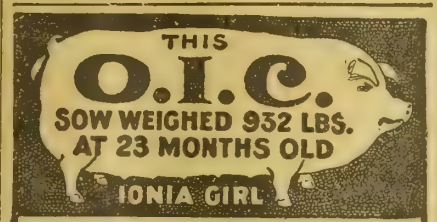
One of the leading sales to be held in the country this year will be that of Rapp Bros. at St. Edwards, Neb., on October 29. No herd of cattle in the west has progressed more rapidly in the last few years than has this one. Rapp Bros. have exercised the most discriminating care in selection, mating and breeding, and as a result have raised the standard of their herd to the point where it will take rank with any other herd, east or west. One thing that can be particularly said of this herd is that it is a working herd of Shorthorns. They are a strictly business lot from start to finish, are not pampered, and as a result the cattle offered in this sale are bound to go out and do good for those who buy them. No animal is allowed to remain in this herd unless it is a possible producer and comes up to the standard required by the owners. The individual quality of this herd may well be judged by the splendid winnings they have made at the leading shows of the country during the last few years. We believe we are safe in saying that this herd has won more ribbons at the big shows of the country than any other herd in the west, and the cattle to be offered in this sale are bred along the same lines and carry much of the quality and excellence that have marked the show herds. This offering will contain seventy head, consisting of twenty bulls, twenty cows with calves at foot, and the balance largely cows well along in calf or yearling heifers. In regard to the bull end of it we will say that there are a number here of strictly herd-heading character. Among these is Red Cumberland, a senior yearling bull by Royal Cumberland and out of a dam by the great Gladstone. He is a bull of exceptional merit, smooth, deep, well balanced, nicely covered and altogether the making of something mighty good. Another good young bull is Perfection, a son of Foxy Favorite and out of the dam Village Bloom by Ceremonious Archer. No better breeding is to be found than is evidenced in this calf's pedigree. Another splendid young bull by Foxy Favorite is Cherry Boy, his dam being Cherry Blossom, and she the dam of Herdsman's Queen. There are a number of other strong individuals that are good enough to head any pure-bred herd. Besides these there are a lot of big, strong, rugged fellows, just the kind for range or farm purposes. The females in this sale are a commendable lot of big, scaly, producing individuals. The calves at foot and those well along in calf are mostly sired by or bred to Village Pride. In conclusion, we want to say that this sale affords one of the best opportunities we have seen in a long while to get some strictly first-class cattle, either in the bull line or a few females. Write for catalogues at once and arrange to attend this sale. Kindly mention the Twentieth Century Farmer when writing.

Durocs Average $66.66

The sale of Duroc-Jersey hogs held at Tecumseh, Neb., on October 1 by W. M. Putman & Son and Lamb Bros. of that place brought out a large crowd of representative breeders. The offering put up by these gentlemen was certainly a commendable one, and the breeders who attended felt well repaid for the trouble of coming. One of the great regrets, though, of the owners, and also of everyone who was present, was the fact that they had the misfortune to lose Echo's Crimson Wonder, the grand champion boar at Nebraska this year. This was a great loss to these gentlemen, for in Echo's Crimson Wonder they had a boar that in general make-up was one of the greatest individuals ever carrying off that honor at the Nebraska State fair, and if he had lived the report of this sale would have been a different story. The top of the sale was $190, on lots 3 and 4. Gus Krueger of Beemer, Neb., bought No. 3 at this price, while P. W. Wieberg of Denison, Ia., bought No. 4 at the same price. The demand on the good boars of the offering was all that could be asked for, and several states were represented at the ringside. In this connection we cannot let the opportunity pass without mentioning the splendid arrangements these gentlemen had made for conducting their sale. They had one of the best arranged sale rings we have seen in a long time, with plenty of room and every facility that would add to the comfort and convenience of their guests. Below will be found a list of those selling for $30 and over.

No.	Price.
3—Gus Krueger, Beemer, Neb.	$190
4—P. W. Wieberg, Denison, Ia.	190
5—C. P. Dexheimer, Spencer, S. D.	180
6—John Forge & Son, Malcolm, Neb.	107
7—W. A. Duncan, Coin, Ia.	70
8—C. P. Dexheimer	62
11—D. P. O'Neil, Tamora, Neb.	102
12—O. S. Larson, Weston, Ia.	50
13—V. L. Dayton, Wayne, Neb.	105
14—E. A. Calkins, Ruthven, Ia.	92
15—C. P. Dexheimer	35
15½—C. P. Dexheimer	35
16—C. P. Dexheimer	48
24—Heershel Smith & Son, Tobias, Neb.	125
25—John C. Kotsch, Troy, Kan.	60
28—Mrs. Kirkpatrick, Lincoln, Neb.	92
29—Fred Henekamp, Hickman, Neb.	42
31—George Kerr, Sabetha, Kan.	35
32—V. L. Dayton	42
33—V. L. Dayton	57
37—E. S. Bell, Tecumseh, Neb.	55
38—George Gauley, Irwin, Ia.	37
39—Milton Swain, Malvern, Ia.	47
40—D. P. O'Neil	57
44—Dr. Still, Kirksville, Mo.	50
45—R. M. Young, Cook, Neb.	82

O. I. C. HOGS



I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." G. S. BENJAMIN, RFD 9 Portland, Mich.

HAMPSHIRE HOGS

HAMPSHIRE BOARS

Hampshire spring boars for sale; sired by De Kalb's King 100, a son of the famous Major. They are very growthy, and all priced to sell. Also have Aryshire bull calf for sale.

WILLIAM PAMP, Benson, Neb.

FISHER'S HAMPSHIRES

25 fall boars and 25 spring boars for sale. Sired by Winside Star, Fisher's King 5th, Tatro's Messenger and Paulsen's Choice. Prices reasonable.
ROY FISHER, Winside, Neb.

JERSEY CATTLE

The Jersey

comes into maturity early, is long-lived and is often found making records even to advanced age. She stands above all other breeds for *economic production.* Shall we mail you free a good book on the Jersey?
THE AMERICAN JERSEY CATTLE CLUB,
324 W. 23d St., New York City.

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and yearly milk and butter records. HAL C. YOUNG, Lincoln, Neb.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

A man in New York State owns two 10-year-old pure-bred registered Holstein cows that have recently made fine records. In seven days one gave 571 pounds of milk (average fat test of 4.44 per cent), making 31.6 pounds of butter; in thirty days she gave 2,460.4 pounds of milk (average test 4.21 per cent fat), making 129.46 pounds of butter. The other made over 29 pounds of butter in seven days and 117.17 pounds in thirty days.

Holstein-Friesian Cows milk earlier, longer, more per year and more per life than any other breed.

Send for **FREE** Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Secy., Box 179, Battleboro, Vt

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.
A few good sons of King Segis Lyons are still left.
DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

DUROC-JERSEY HOGS

NELSON'S DUROC SALE

35 Boars and 15 Sows to Be Sold at Farm Near
Lindsay, Neb., Oct. 23, '14

This is one of the best offerings I have ever made. The fall boars are by the grand champion, VALLEY KING, and one is by RED CHIEF WONDER. The spring boars are by GOLDEN MODEL 4TH, INVINCIBLE CHIEF, MELINA'S WONDER, PERFECTION WONDER, CHIEF SELECT 2D. A splendid lot of sows will be sold, well along in pig or with litters at side by CRIMSON GANO by Colonel Gano. Remember everything is immune.
Write for catalogue.

Auct., Col. N. G. Kraschel.
Fieldman, G. E. Hall.

F. B. NELSON,
Lindsay, Neb.

I HAVE THE GOODS

Boars of herd heading character by Col Chief Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

BOARS! BOARS! BOARS!

Several fall boars and a few choice spring boars for sale, sired by BELLE'S CRIMSON WONDER, COL. CHIEF, GOLDEN MODEL 4th and BELLE'S BIG WONDER, out of Crimson Wonder bred dams. I am offering these boars at bedrock prices for quick sale. **A. R. BARNES, Petersburg, Neb.**

IMMUNED DUROC BOARS.

I am offering an exceptionally strong lot of Duroc Jersey boars for sale, largely of Crimson Wonder and Golden Model breeding. They are the best lot I have ever offered and are being priced worth the money.
E. R. DANIELSON, Osceola, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

MR. DUROC BREEDER

Are you on the market for a herd boar? If so, write me just what you want. I have them sired by Lucy's Select, Proud Wonder Jr. and other top boars of the breed. **L. J. KUZEL, CLARKSON, NEB.**

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.

F. E. MERRICK, OSCEOLA, NEB.

BIG SMOOTH DUROCS

Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.
HENRY KOEHLMOOS, Pilger, Neb.

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.
GEO. W. SCHWAB, Clay Center, Neb.

CEDAR'S DUROCS

The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.
P. P. CEDAR, GENOA, NEB.

HEKRDLE'S DUROC BOARS.

I have the best lot of spring boars for sale that I have ever produced. Sired by A. A.'s Model and Beauty's Wonder. A combination of the Crimson Wonder and Golden Model blood lines. Correspondence solicited. A. A. Hekerdle, Stanton, Neb.

35 TOP BOARS

35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st, Prince Munice, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

DUROC HERD BOARS

Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd boars I have them. They are out of [illegible] and dams. **Clarence Wallace, Wisner, Neb.**

POLAND-CHINA HOGS

IMMUNE POLAND-CHINAS

A choice lot of Poland-China [illegible] for sale. Sired by Blue Valley Oak. They are the big kind, with [illegible]
[illegible]

POLAND-CHINA HOGS

McCULLOUGH'S BIG POLANDS

We have a splendid lot of Poland-China spring boars [illegible]. Sired by Smooth Big Bone, Columbus Again and Expansion Again. These boars have been grown right. They are big and smooth with lots of bone. For particulars write **O. J. McCULLOUGH, CLARKS, NEB.**

Immune Poland-China Boars

Splendid lot of big, smooth spring boars, sired by BLUE VALLEY, COLUMBUS WONDER and BLUE VALLEY ORANGE. If you want herd boars with size and quality, we have them. **THOS. F. WALKER & SON, Alexandria, Neb.**

Overland $1075

MODEL 80

f. o. b. Toledo, Ohio

IN spite of the fact that this latest Overland has a much more expensive, and entirely new and much larger full stream-line body, the finest electrical equipment, left-hand drive, demountable rims, and larger tires; *in spite of the fact* that it is made throughout of all first grade materials and first grade workmanship; *in spite of the fact* that it rides—due to its longer, improved and underslung rear springs—with the smoothness and ease of the highest priced cars—*the price has not been advanced.*

Such is the perfectly natural and economical result of manufacturing the greater volume of automobiles.

Our greatly increased 1915 production has permitted us to *again* add materially to the size, comfort, value, merit, quality and completeness of the Overland *without adding one dollar to the price.*

This is an achievement which no other automobile manufacturer is in a position to accomplish.

The newest Overland is, without question or doubt, the world's most extraordinary motor car value.

Buy an Overland and save money.

Dealers are now taking orders for immediate delivery.

Here are listed a few of the many additions, enlargements and new 1915 features

Motor; 35 h. p.
More economical
New full stream-line body
Tonneau; longer and wider
Greater comfort
Instrument board in cowl dash
Individual front seats, high backs
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Wheel base; 114 inches
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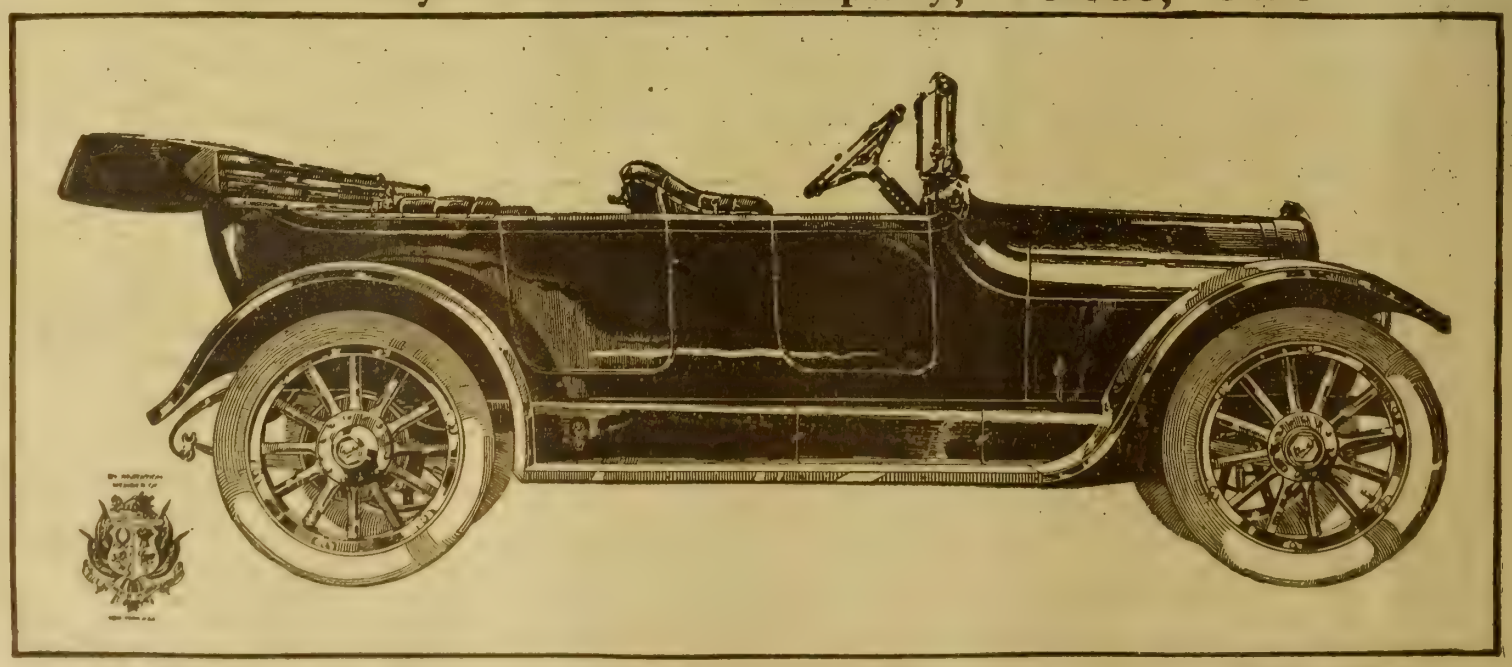
Demountable rims—one extra
Left-hand drive—center control
Body:—beautiful new Brewster green finish
Mohair top and boot
High-grade magnetic speedometer
Robe rail, foot rest and curtain box

Handsome 1915 catalogue on request. Please address Dept. 107.

The Willys-Overland Company, Toledo, Ohio



Model 81 Prices:
5 Passenger Touring Car - $850
2 Passenger Roadster - - $795

Two Passenger Roadster—$1050
Four Passenger Coupe—$1600
All prices f. o. b. Toledo, Ohio

Model 81 Prices:
Delivery Wagon with closed body - $895
Delivery Wagon with open body - $850

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, October 24, 1914 | Number 724

Light Weight Cushman Engines For All Farm Work

"I have had lots of experience with different gasoline engines," writes Dave Linton, Ransom, Ill. "We have all makes in this neighborhood. Some do what their makers claim, but it takes a team of horses and a crowbar to get them on the job. A Cushman of the same horsepower will do the same work, and a 14-year-old boy will move it from one job to another.

"Light weight, full horsepower, least vibration and great range of speed, has made the Cushman not only the farmer's best chore boy, but his wife's as well."

4 H. P. Only 190 lbs.

Easy to Move Around

This is used for all regular light jobs, and can be attached to other machines, such as grain and corn binders, etc. 8 H. P. weighs only 320 lbs., for heavier work, as grinding, sawing, etc., and can be attached to hay balers, corn pickers, etc., to save a team. **Throttle Governor** gives steady power, with extra power quickly when needed, as in sawing and grinding. Schebler Carburetor. 4-Cycle. Not a cheap engine, but built to do work no other engine will do and run without trouble. **Sizes 4 to 20 H. P.** On skid or truck. 40-page Book free.

Cushman Motor Works
951 North 21st Street
LINCOLN, NEBRASKA

You Can't Beat Galloway Prices Anywhere

You can't get Galloway quality at anywhere near my price. I get one small manufacturing profit, the rest of your dollar buys what you need. The other way your dollar pays the profit of the manufacturer, the jobber and the dealer. You have tried the old way. Now try my way and see what you save.

Five New Selling Plans
Cash, Credit, Note or Easy Payments. One of these will suit your needs. Any plan allows you 30 days for trial of Engine, Cream Separator or Manure Spreader. If not satisfied that they are as good as any you ever saw or heard of, the goods come back to me and you're nothing out.

CATALOG FREE—Write for catalog you want. Get full particulars and my special prices, extra low on Engines, Separators and Spreaders. Address

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Wm. Galloway, Pres.
Wm. Galloway Co.
267 Galloway Sta., Waterloo, Iowa

AMERICAN STEEL FENCE POST

Made by American Steel & Wire Company
High-class steel, heavily coated with zinc. Strong [illegible] Hard steel corner posts no strong that they were [illegible] ever before made.

Cheaper than Wood and More Durable
Adapted to all conditions and absolutely reliable [illegible] matter how low and the fence [illegible] is erected. Get better service and [illegible] by using the best fence post. Every post is the same size from top to base, while wood posts [illegible] vary from the start. Have been in [illegible] every section of the United States [illegible] and are now as good as when set. Adapted to all fences. [illegible] Anchor Fence Posts [illegible] between posts [illegible] a wire foundation. For sale by dealers [illegible] Send for catalog F114.

American Steel & Wire Co., Chicago, New York

Prattle of the Youngsters

Absolutely Necessary

"Tommy," said the Sunday school teacher, who had been giving a lesson on the baptismal covenant, "can you tell me the two things necessary to baptism?"

"Yes'm," said Tommy, "water and a baby.

Explained

"How does it happen," said the teacher to the new pupil, "that your name is Allen and your mother's name is Brown?"

"Well," explained the small boy, after a moment's thought, "you see, she married again and I didn't."

New Breed of Cats

Robert and little Elsie were trudging along toward home, when they spied a black and white cat in the weeds by the roadside. Elsie was determined to catch it and take it home, but Robert reminded her that they had a cat at home and no strangers would be acceptable. Little Elsie replied:

"Oh, but this is such a pretty cat, it's a Holstein!"

Had to Keep Moving

A rather stern parent recently took his little son to church, but had to be constantly repressing the natural tendency to whisper. At last the tiny lad could bear matters no longer and broke out:

"Papa, if I mustn't move or say anything, please let me take off my shoes so I can work my toes."

Shocking Situation

"You've had this sailor boy doll a long time, Annie," said a mother to her little daughter, "and the janitor's little girl is ill and hasn't any doll to play with. Don't you want to send her your sailor boy?"

"I'd rather she had any one of the others," was the surprising answer. "You see, mamma, that's the only man we have in the family, and he's married to all the other dolls."

He Thought of One

"Now, boys," said the school teacher, "I want you to bear in mind that the word 'stan' at the end of a word means 'the place of.' Thus we have Afghanistan—the place of the Afghans; also Hindustan—the place of the Hindus. Can anyone give another example?"

Nobody appeared very anxious to do so until little Johnny Snaggs said proudly:

"Yes, sir, I can. Umbrellastan—the place for umbrellas."

Bright and Breezy

Was Supplied

A farmer went into a shoe store to get footwear for his daughters.

"I want some heavy shoes for outdoor work," he explained.

"Do you want them for the girls to milk in?" asked the clerk, who thought he ought to say something and didn't know what.

"No," replied the farmer, gravely, "I have buckets for that."

Had Already Done It

"Please, sir," said the maid to the head of the house, "there's a gentleman here to see you on business."

'Tell him to take a chair."

"O, he's already taken them all and now he's after the table. He's from the installment house."

An Obliging Antagonist

A negro truck driver backed his wagon into the space allotted to a rival transfer concern at a railway freight depot in Dallas, Tex.

"Hey, dar, niggah!" yelled the driver, on whose territory the other had transgressed, "I'll knock yo' outa yo' house an' home ef yo' don't back up!"

"I's got no home," retorted the offending driver. "Now whut yo' gunna do 'bout dat?"

"I'll dig yo' one, niggah—I'll dig yo' one!"

When Scot Meets Scot

The lady was the owner of a small shop, and her squire acquired the habit of seeing her home and carrying the cash bag that contained the day's takings. It was generally heavy.

"You must be doin' weel," remarked the gentleman, frequently.

"Oh, ay," the lady would reply, "it's a guid bit business."

But she did not disclose that besides the moderate drawings the bag contained the counter weights. The canny lover only discovered that fact after marriage.

Paying Him Back

During the recent campaign Governor James F. Fielder of New Jersey was speaking from an automobile in a small town in the northern end of the state, when an excited individual rushed up to him and told him he was wasting time.

"Why, you've got every vote in this town sure," he told the governor. "I've seen to that. You once did a favor for me that I'll never forget. It was a big favor, too, and one that nobody else could do."

"Is that so?" inquired Mr. Fielder, who was somewhat curious. "Why, what was that?"

"Don't remember? Why, you paroled me from the state prison."—New York Tribune.

Like a Waffle

A politician, upon his arrival at one of the small towns in North Dakota, where he was to make a speech the following day, found that the two so-called hotels were crowded to the doors.

Not having telegraphed for accommodations, the politician discovered that he would have to make shift as best he could. He was compelled for that night to sleep on a wire cot, which had only some blankets and a sheet on it. As the statesman is a fat man, he found his improvised bed anything but comfortable.

"Well," asked a friend, when the politician appeared in the dining room in the morning, "how did you sleep?"

"Oh, fairly well," replied the statesman, nonchalantly, "but I looked like a waffle when I got up."

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The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Organized Effort to Fight Rural Credits

Bankers Hvae Gotten Together to Oppose Legislation and Farmers Should Co-operate to Secure It

IT'S A CHILLY day for the La Salle hotel when one or more of its rainbow suites is not given over to a convention. On some warm days there are three or four, and after that they spill over into the Hotel Sherman and other Chicago hostelries.

This by way of preamble for the hint to the farmers of the United States that when a set of men with mutual interests want something real bad they organize an association and hold a convention. Furthermore, it is practically certain that farmers will not be particularly interested in reading a report of the meeting in Chicago on October 7 and 8 of "The Farm Mortgage Bankers' Association of America." Therefore, do not skip these few remarks uttered by an innocent bystander who went all the way from a real farm to Chicago to have a look in.

At least the report of the resolutions committee will attract attention and it will take you less than no time to read it, for the resolutions committee didn't make any report. The saying, "Actions speak louder than words," has nothing on "Silence is more significant than speech." The explosion of this loud report that wasn't made ought to carry from Key West to Sitka. It is a delicious sample of noncommittal shrewdness. Evidently the mortgage bankers are resolved not to resolute, but don't anybody fool himself that there won't be "somethin' doin'" on their part.

Farmers Want Improved Credits

The rural community of this land has been thinking, reading and talking improved farm credits for the last year or more. In spite of their inability to get along without murdering each other by wholesale, they do some things better in Europe than we of this broad land of liberty and opportunity. For one thing they have taught us some sound lessons in co-operation. Inspired by the success with which co-operative banks have helped Danish and German farmers in the matter of credits, we have been wondering if their system may not be applicable to American soil. Legislation of some sort which will help farmers to finance themselves for legitimate expansion has been suggested, promised by the administration and doubtless will be enacted in due course of events.

In the meantime the agitation has awakened the party of the second part, as witness this enthusiasm and solidarity of the men who loan money to farmers on mortgages. This meeting is of import to the farmers of America, not in detail nor for the individual views of the speakers, but as significant of the fact that "our friends, the enemy" are not asleep at the switch, and that, as might be expected, any legislation proposed for the benefit of the borrower will be gained only at the expense of a struggle.

The parcel post law—now recognized by all as a tremendous factor for public betterment—was bitterly opposed for years by the interests who felt or imagined they would be injured by its passage. It is conceded that not only is parcels post of vast benefit to city people, but that it has not injured the express companies nor the small merchants. They have already adjusted themselves to the changes in the postal system and are still doing business at the old stand. That law was a farmer-made piece of legislation if ever there was one.

Will Have to Fight for Them

Just so will the farmers have to fight for their rural credits bill if they want one, as this newly made association of mortgage bankers will obstruct the consideration of state and national legislation which they feel or imagine is likely to put a crimp in their profits.

For hark you! The money lender is a friend of the farmer as he protests. That much is admitted. But there is every reason to believe that his love for his rural friend is tinctured by the same canny self-interest a humane farmer takes in his live stock. Let no one be deceived on this point. The farmer must prosper in order to borrow money and pay interest. Therefore is the farmer's welfare of much concern to the money lender.

Human nature is much the same the world over, and sometimes more so. It is human nature to look out for Number One, and that is precisely what this honorable body of farm mortgage bankers is doing now. They are united for their mutual advantage and they are going to do things.

The fact of their organizing shows that opposition will be made to any proposed change in existing conditions.

The farmer wants cheaper money on long time loans, with privilege of paying off his debt in ways that will not cripple him. Low rates of interest and interference with vested interests do not look good to the men who make a business of loaning money on farm mortgages. The association states officially that "ill advised legislation would prove harmful to our business, and congress and the state legislatures should have the benefit of testimony such as can be gathered and disseminated through our organization." Legislative bodies will get plenty of testimony on behalf of the defendant, never fear. And this is all right, too, only we want to know about it.

Farmers Must Get Together

The two impressions I get from this meeting are, first, that the propaganda for improved rural credits has reached the stage where its opponents have organized to fight it, and, second, that only by a a nation-wide movement on behalf of the agricultural classes will any legislation be effected.

President Wilson declared on October 8 that he is not pressing congress to establish a rural credit system to meet the demands of farmers for loans on easier terms, because of a lack of a definite plan.

The first thing is to get a definite plan, and before one can be formulated upon which all can unite for action, each farmer will have to take this problem home to himself as it affects his individual affairs, and after working out from study, reading and discussion something like a positive program indicating what he wants and what farmers generally need, there will be small difficulty in getting action on it, provided they will speak up in no uncertain terms as they did for parcels post.

In the meantime forget not that to every move for changing present conditions there will be opposition—intelligent, powerful, united.

Lenders are organized, borrowers are not. What do you make of it, gentlemen?

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Warm Winter Quarters for Sow and Litter

GOOD, comfortable quarters for wintering hogs or pigs and good farrowing houses are something that concern every hog grower. There are many different kinds of hog houses, both for housing hogs and for farrowing purposes.

The accompanying cut shows several of what is known as "A" houses. Many of our most successful hogmen are using this kind of house both for winter quarters and for farrowing houses. They are handy, convenient and very serviceable.

They should be made of seven-foot lumber, both sides and floor. Batten the sides or roof with ⅜-batts. We prefer putting a floor into them; some, however, prefer no floor. If they are made of seven-foot lumber use a 4x6, eight feet long, for a sill under each side; this will leave six inches to extend out on each end. Slope this off, making it sled-runner fashion; a stiff wire or small chain can then be attached. A team can be hitched to the house from either end, and it may be drawn any place desired.

Good Arrangement of Practical Farrowing Houses

We have been preaching sanitation as a means of keeping down cholera and getting better returns from the feed used. These hog houses can be readily kept in a very sanitary condition. They can easily be removed from where they have been standing, letting the sunlight clean up the ground. The house itself can be easily turned over, letting the sun get to the floor and bottom of the house thoroughly to dry and disinfect the boards.

Another advantage of this house is that inside there is a minimum amount of air space, making it warm. Generally, if cracks are well battened, the heat from a sow and pigs, or from three or four hogs, will make it comfortable in the coldest of weather. If the weather is too severe, hang a lantern from the ridgepole.

The houses shown in the cut could easily be lined up three or four feet from the tight board fence and then straw be packed behind and between them. If this is done there need be no fear of cold weather. We found this arrangement on one farm we visited and never saw in the spring a better or more uniform bunch of fall pigs. These pigs had wintered in these houses and practically never knew it was cold or stormy. At the time of our visit to this farm the houses were being used for farrowing houses and the owner was meeting with splendid success in saving good, strong litters.

The matter of providing good winter quarters for our hogs is one of importance, especially so when prices for feed and live animals are where they are. Next spring we will need good quarters at farrowing time. It is mighty poor business not to have the right kind of quarters for our brood sows. It will surely be money well spent to make this provision ahead of time.

Putting High-Priced Stallions to Work

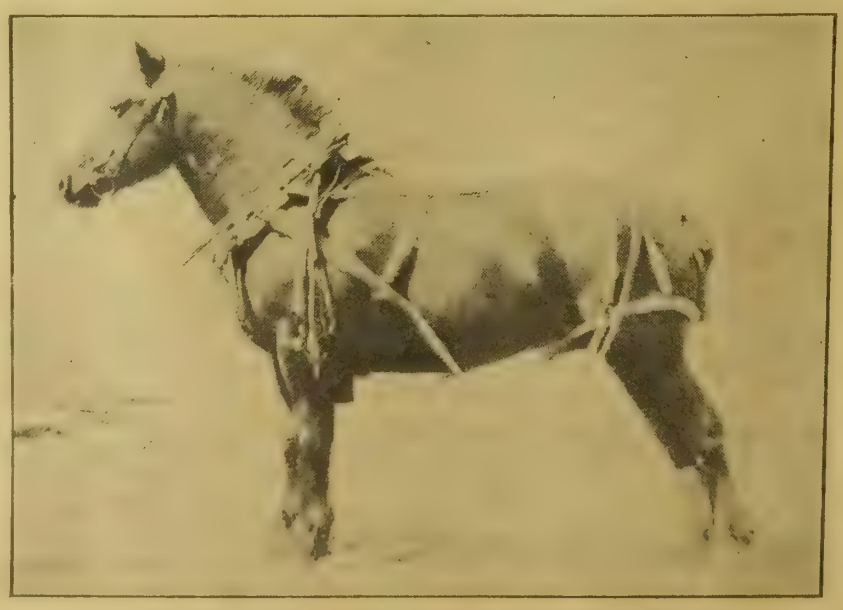
By H. J. Gramlich

EVERY draft stallion should be broke to work and kept in the harness when he is not on the stand. This is a rather broad statement; however, facts verify the truthfulness of it. Why should we expect big, rugged, powerful colts from a sire that has never done a day's work in his life? That has done nothing more than to stand in a box stall and been kept stuffed full of grain and hay constantly? Records show that where stallions are treated in this manner for several generations the horse stock tends to deteriorate; also the potency is bound to be upon the wane. If we are to breed colts which will develop into big, powerful horses, subject to standing unlimited endurance tests, we must use sires possessed of these same characteristics.

There is a very small percentage of the draft stallions in the country, but what would become very tractable and easily handled when once properly broke; in fact, most of them can be hitched right up beside mares, geldings and even other stallions and give no bother whatsoever. A few stallions would be mean and hard to handle, but they are in the minority.

A stallion which is broke to work when young and is kept used to hard work will stand almost an unlimited amount of it. Many men make a practice of giving the stallion the short end of the doubletree when working him beside mares, or geldings even, though they be as large as he is. Most stallions possess ample ginger and will walk along freely in doing any kind of heavy work.

When hitching the stallion up for the first time, especially when hooked with a mare, it is well to use a jockey stick. This should be run from the outside bit ring of the stallion to the hame of the mare. A stay chain should be put from the mare's side of the doubletree in order that she may not have an opportunity to get ahead of the stallion and thereby allow him to swing his head around and get next to her body.



Four-Year-Old Percheron That Does Farm Work

It is rather difficult to work imported stallions during fly time, owing to the fact that their tails being docked gives the flies a splendid opportunity to annoy them. This is especially true of Belgians, because of the fact that they are docked so much shorter than other breeds. If a docked stallion is worked during the hot weather it is well to have a cloth net with head stall and neck piece attached to protect them.

The enclosed photograph is one taken upon the farm of Straub Bros. at Avoca, Neb. This Percheron stallion is 4 years old and works any place that he is needed. He has been found to be especially useful upon the manure spreader. He takes a twenty-four-inch half-sweeny collar, fitted with an extra pad at the top and an extra long strap, in order to widen it there. Some large stallions which one has trouble fitting a collar upon can be worked successfully with the humane collar. Canvas collars work quite well on many stallions. The excuse that it is impossible to find a collar to work

(CONTINUED ON PAGE SEVENTEEN.)

Selection of the Sire for the Farm Flock

Ram is Half the Flock and Should Be Chosen for Constitution, Vigor and Masculinity

THE starting of the farm flock, in order to secure the best results, depends largely on the quality of the ram that is selected to commence this breeding venture. It always pays to start right, and especially in the breeding of any line of live stock. The saying that the sire is half the flock or herd is true from the general principle of breeding. The sire is the source from which the owner of a breeding herd or flock expects to derive improvement. It is the quickest and cheapest way to get improvement, and every person in the business of handling and breeding stock knows this.

In buying a breeding ram it is practically impossible to get one of too high quality for your flock of ewes. The better the quality in the ram, the better the quality you will get in his produce. This is true regardless of the quality of the ewes. The better the quality of the ewes, however, the greater advantage you will secure in the produce. Consequently, in starting the flock aim to get the best possible quality of both ewes and ram.

In the selection of the ram choose for constitution, vigor and masculine characteristics generally. It is always desirable to avoid certain physical defects, such as what is commonly called a bad back, low back of the shoulders, or sharp-withered, steep-rumped, narrow over the heart girth and flat-ribbed. All these undesirable properties go with the poor-backed sheep. Not necessarily all combined in the same sheep, but too frequently they are all lacking to some degree.

A broad-backed ram, straight from where his neck couples onto his shoulders back to his rump or tail, is what you should require; a round barrel or well sprung rib, especially full over the heart girth. The present-day stylish ram does not need a neck. If you can get one with his head coupled onto his shoulders, never mind the neck; he will be able to get his head down to graze. A short-legged sheep is desirable and the sheep well down to the ground on a good set of strong legs is just that much in his favor. The nearer the ram is to a good mutton carcass, the better. He should have and will have a strong, broad head, broad and wrinkled nose when he is equipped as previously described.

The above described sheep will answer for the ram, be he of the mutton breed or fine wool breed. The covering or wool feature should be just as good as you can get it. It is desirable to get a fleece on the ram with the longest growth of staple or wool fiber possible, and as dense and compact on his skin and of as fine quality as possible. It is hard to get length, density, fineness of fiber, freeness from yellow, gummy, discolored oil, all in the same animal, but you can approximate this by keeping all the desirable features of fleece and carcass in mind when you are selecting a ram. These qualities are more or less transmissable to the offspring and, therefore, should be considered carefully in selecting a ram for breeding purposes.

It might be said at this point of the discussion of the breeding ram that no grade rams are admissable in good flocks. There can be no real improvement secured from the use of a grade in any kind of a breeding venture that is worth talking about; consequently the pure-bred sire is the only animal under consideration. The importance of making an early selection of the breeding ram should be emphasized, as the best are usually selected first, and the chances for quality are against delay in buying a ram.

The ram should have the very best of care during the breeding season. It is important to keep this animal in good flesh, strong and vigorous. This may be done by keeping him in a large box stall and breed the ewes as they come, not giving the ram the run of the flock. Some turn him out at night and keep him confined during the day. Where it is desired to get considerable service from a very valuable ram it is advisable to keep him confined and carefully fed, provided with such a ration as a little grain, vegetables, alfalfa hay, and a consistent variety that will encourage an appetite and yet temperate to avoid founder or overfeeding.

The Proper Care of Season's Seed Corn

By M. Coverdell

QUITE likely many of our folks have gone into the fields and selected their next season's supply of seed corn; if not, they should, before any hard frosts fall, saving not only what will be required to plant all the corn land, but making provisions for replanting or furnishing the neighbors with seed.

The care of seed corn may be considered almost as important (if not more so) as selecting it, since it will not retain its germinating powers if improperly handled or stored; or, at least, will not propagate plants with sufficient strength and vigor to produce a good yield of first-class corn under normal conditions.

Curing Seed Corn

Never hang seed corn where the direct rays of the sun will strike it while curing.

Don't put seed corn in a damp, dark place during the curing process, nor in a spot where artificial heat will reach it.

Hang the seed corn in some cool, well ventilated shed or building. Piling seed corn in a heap, or in barrels or boxes, also is to be avoided, as it would heat and mold.

A hay mow is a good place for seed corn storage, as here it will be where the birds and poultry cannot reach and destroy it, and it can be left here till needed in the spring, provided temperature conditions are correct.

Seed corn may be tied in long strings with binder twine or baling wire, so the ears will not come in contact with each other. Or, one can drive No. 8 finishing nails into studdings and rafters, sticking the ears onto these nails by running them into the pith at the butt ends.

Seed Corn Storage

Avoiding damp, cold places, seed corn should be stored where the temperature will be as nearly uniform as possible throughout the winter.

The hay mow, well sheltered crib or granary will be found suitable for seed corn storage, as the temperature is not apt to drop low enough to cause serious damage and the air is dry enough not to induce mold.

The cellar or basement usually is a satisfactory place for storing seed corn, but all dampness must be guarded against and care must be taken that the seed is not crowded together in such a way as to induce heat and subsequent mold.

Sometimes, too, a heating system in the cellar will create conditions unsuitable to proper seed corn storage, as the temperature is apt to be raised too high; then the air allowed to cool till the freezing point is reached, which damages the germinating powers of the seed.

An attic probably is the nearest ideal spot about the farm for the storage of seed corn, one being sure that the ears do not hang close enough to the chimney to get warm, as continual drying finally will destroy the life germ. With the seed corn hung away from the chimney in the attic, a uniform temperature is assured throughout the winter months. There will be no dampness, no alternate freezing and thawing of the seed. Rats, mice, birds and poultry cannot reach it. But even in the attic the seed should be carefully hung so there will be no danger of inducing heat and subsequent mold, as the process of curing will continue in a modified form throughout the winter.

A Day Will Come

A day will come when the only battlefield will be the market open to commerce and the mind open to new ideas. A day will come when bullets and bombshells will be replaced by votes, by the universal suffrage of nations, by the venerable arbitration of a great sovereign senate, which will be to Europe what the Parliament is to England, what the Diet is to Germany, what the Legislative Assembly is to France. A day will come when a cannon will be exhibited in public museums, just as an instrument of torture is now, and people will be astonished how such a thing could have been. A day will come when these two immense groups, the United States of America and the united states of Europe, shall be seen placed in presence of each other, extending the hand of fellowship across the ocean.—Victor Hugo.

Wintering the Bees

IT WILL require about twenty-five pounds of honey to carry a colony of average size through the winter and assist them to begin early spring breeding.

If bees are to be wintered outdoors, it is absolutely necessary that the hives be well protected from the wind and snow on the north side. The hives should be from four to six inches off the ground, to avoid possible dampness, and the opening in front should be arranged so the mice cannot enter the hive and eat the honey.

The hives must have ample ventilation, however, so that it is not advisable to cover the hives completely with hay or straw. If either of these are used care must be taken that they do not block the entrance to the hive. Ordinary corn fodder forms the ideal protection for the bees during the winter months, as it can be set up around the hives and tied securely in position with binding twine or smooth wire.

Where cellar storage of bees is practiced it is essential that there be no dampness whatever; the air should be dry, clear and of uniform temperature. One should, if possi-

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TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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G. W. HERVEY - - Associate Editor
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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

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May Rilma, the Guernsey cow that holds the world's record for production, was recently sold to John P. Crozier of Upland, Pa., for $5,010.

Just last week we saw a bunch of hogs covered with lice. That farmer will probably have a hard fight all winter to keep his hogs in anything like the condition they should be.

A careful noting of the quality and quantity of crops produced by each individual field this season will prove about as good an index to the needs of that soil as any test made by a government expert in soils.

Silos, it seems, are not as common in California as they are in our part of the country, but those Californians who visit the Panama-Pacific exposition will see them in use. The live stock on exhibition there will be fed from six immense silos that have been erected on the grounds and are now being filled.

Missouri is a great poultry state, and intends to remain so if the efforts of its State Board of Agriculture can accomplish this. They have recently issued a little book on "Farm Poultry in Missouri," and they call such activities "boosting Ma Chicken." She is certainly a lady worth boosting.

Prices for some live stock are not what some of us expected they would be. Just remember, however, that when the European war is over all these countries must look elsewhere for their meat. The American farmer who has it to sell will be in position to get profitable prices. Don't let the number of your breeding animals run down.

Methods of Short-Sighted Breeders

Does the average American breeder of pure-bred live stock fully realize the possible far-reaching effect that his selling poor individuals for breeding purposes may have? How many of these breeders consider their own financial welfare, let alone the welfare of the party to whom the animal is sold, when they knowingly sell an inferior animal for breeding purposes? These are questions we feel sure the average breeder of pure-bred live stock does not consider as carefully as he should.

No one can deny the fact that everyone is directly or indirectly benefited by the farmers, in general, raising better live stock of all kinds. Better bred live stock on the farm means more dollars in the farmer's pocket. When the farmer prospers all other business prospers accordingly.

The breeder of pure-bred live stock is one to whom many farmers go for breeding animals with which they may improve the animals they already have on their farms. Many of these buyers are just beginning their operations and are not posted as they should be on individual merit, depending to a considerable extent on the judgment and integrity of the breeder.

The man starting in the business who gets "stung" by buying a pedigreed scrub will not make a success. He will be inclined to the belief that there is nothing in the cry about bettering his condition by using pure-bred animals. In cases of this kind the seller is surely the loser, for not only he, but probably no one else, will again sell this man a good animal. Not only that, but the seller will lose the good will and influence of the buyer, which may be of great value. No one can tell how far-reaching the influence of the sale of a poor individual may be.

Nothing looks better to us than to go to any breeder's place and find a fair per cent of the animals he raises in the feed yard being fed for the market. The man who advertises that he "raises every animal good enough to go into any herd" is doing both himself and the country at large a positive injury. Herein lies the responsibility of the breeder of pure-bred live stock. He should have the good business judgment and the nerve to send the inferior animal to the block. Especially now, with market prices where they are, the difference between the amount he may receive for the animal when sold for slaughter and as a breeder will be very little, as the inferior animal cannot bring a good price as a breeder.

The public sales are now on and will be for some months. The combination sale is too often the clearing house for inferior animals. We hope for a careful consideration of this subject by the breeders and to see each year a material advance made in the quality of the animals offered at both private treaty and public auction.

Fighting Rural Credits

American bankers are organized to oppose the improved rural credit system which American farmers know to be necessary to their future prosperity. The Twentieth Century Farmer had a representative at the meeting of the Farm Mortgage Bankers' association at Chicago. On page 3 of this issue we publish his report. Do not fail to read it. He does not burden you with a long story compiled from this or that banker's speech or with committee reports. He tells what these bankers did and what you should do.

The present administration is pledged to further the interests of the farmers as to improved rural credits. The bankers are going to start a "campaign of education," showing the administration why they should not interefere with things as they are. They will offer clear, apparently logical reasons why "ill advised legislation would prove harmful to business."

What the farmers of this country need to do is, first, to understand clearly what the bankers want to do and how powerful they are; second, to formulate plans as to what sort of legislation should be passed to make needed improvements in rural credits, and third, to see that such legislation is put through. As a first step read the report of our representative on page 3 of this issue.

The question of rural credits is one of the subjects that will be discussed at the Nebraska Farmers' Congress, which will be held in Omaha December 8, 9 and 10.

Commission Market Reform

The cities of this country that depend upon the produce commission markets for their food supplies, or a portion of them, are gradually being forced to adopt laws and regulations for the control of the commission agent or dealer, who is the middleman between the shipper of the produce and the retail dealer or consumer. Chicago is among the latest making complaint that produce shipments that should come to its trade are going elsewhere, resulting in a scarcity and consequent higher prices than should prevail.

The purpose of the new law is to license all commission men and dealers in foodstuffs. By doing this it is argued that the city will protect the producer and cause more shipments to be made to Chicago, thus influencing for a cheaper supply for the consumer. It was asserted by the city commissionmen that a lack of confidence among shippers toward the Chicago market had caused a scarcity of foodstuffs, especially farm produce.

The ordinance or law requires all commissionmen and dealers to keep records of the goods consigned to them, the price at which they are sold and the amount paid the shipper. This is a blow at the dishonest dealer or commission agent, but does not in the least interfere with the legitimate transactions of any agent or commission firm.

Such restrictions should be in force in every city or town where the commission form of trade supply enters into the transaction of the shipper and commission agent. It always pays to protect trade and reduce to the lowest margin of profit between producer and consumer, having due regard, however, for honest reward for the labor that is necessary in the distribution. This system of safeguarding the interests of the shipper who supplies the city market through the medium of the produce commission agent is a feature of trade security that business principles demand and must sooner or later go into force all over the country.

Cow Hair for Camel Hair

We Americans are learning a number of lessons since the beginning of the European war. In the field of art and science we have been even more dependent on foreign countries than in any other lines. For instance, artists have always thought that the very finest work could only be done by the use of camel's hair-brushes, which hair was supposed to be the softest and finest known. Since the war began we have been unable to secure camel's hair in America, and the artists would have been forced to go out of business, at least temporarily, had not someone discovered that the hair from the inside of the cow's ear was just as good as camel's hair, and perhaps even a little better. Two years ago no one would have thought of such a thing as using cow's hair for painting. Now they have to or stop making paint-brushes. Thus we have another source of profit from the stock shipped to market that will in time be a by-product worth consideration. And thus, little by little, we lessen the bonds of economic dependence that have held us to the Old World for centuries.

Farm Credit Fakirs

Uncle Sam has sent out a warning to farmers to be on their guard against farm credit fakirs. Since the agitation for farm credits has made this subject so familiar to all rural readers of the newspapers, a number of confidence men have seized the opportunity to inaugurate a clever plan. You sign an application, which has a joker in it whereby it becomes a contract upon acceptance by the company, which is prompt. You then pay $10 at given periods for an indefinite time and get nothing in return unless the men forming the "loan company" take pity on you and give it to you out of the goodness of their hearts. Now is th time to b on the lookout and avoid people who want to loan you money on easy terms, unless you know the people.

Don't neglect giving all the farm animals plenty of bedding now. These cold fall rains chill them through and through. Your bedding will do you as much, if not more, good now than at any other season.

Danger of Overfeeding

There is not enough system, care and attention paid to the feeding of stock. This applies to the general run of stock owners and employed stock handlers. It shows a lack of interest in the welfare of the animal. The person who is intensely interested in the growth, development and ultimate outcome of an animal or lot of animals is quite sure that his charge is not overfed or underfed.

The danger of overfeeding is most generally in the beginning of the grain-feeding season. It is always necessary to observe caution in getting a bunch of animals started on feed. Feeders who are fattening cattle, sheep or hogs exert care in starting the stock on feed. They do not commence on full feed right at the first, but begin with a comparatively low ration and gradually increase until they attain a full feed. This is the work of a careful, thoughtful feeder, who has the welfare of the stock in mind, and who desires to see his work prosper and be a success.

Many persons are now starting in with the silo. Hundreds and thousands of acres of corn have been cut up within the last few weeks and stored in the silo by farmers and feeders who have never fed silage. It is important to observe caution with this feed, the same as with all other feeds, in starting in with its use. It is necessary to commence gradually. Do not give the stock all they will eat; proceed cautiously until they get used to it, until there is every evidence of a perfect digestion of this new ration. A slow process of bringing animals onto a full feed is advocated by the best feeders. The digestive organs must be educated up to an ability to handle the increased demand of a full feed.

There is such a thing as overfeeding stock, not intended to be more than carried through in good stocker condition. System in feeding can be and should be practiced in the feeding and care of all classes of animals. It is an injury to give any animal a gorge feed of any fodder, hay or grain. Provide the allowance intended for the animal upon a basis of its needs for certain purposes and add to or decrease as the demands seem to warrant, but keep clear of sudden changes in feeds and radical changes in increases or decreases in amounts to be consumed. In other words, feed cautiously, increase or decrease with system and judgment, and the evils of overfeeding will be done away with.

Holding Growth Acquired

The time has come when feeding for profit is recognized as the proper thing for the owner of all classes of live stock.

There was a time in the history of this country when only animals of the meat-producing class, intended for slaughter, were fed to fatten. Horses and mules were not put into feed lots and fattened for market as at the present time. On the contrary, they were given only the run of pasture fields from which to gather the feed for their growth and development. All kinds of farm animals were wintered as cheaply as possible, the purpose being to cut down in the expense of prepared feeds as useless. No advantage seemed to accrue from maintaining the flesh of the animal which it had acquired from the previous grazing season. Young growing animals fleshened up through the pasture season and were then permitted to shrink and starve off this flesh until the next season's grass was again sufficient to influence thrift and growth. Thus the building up and starving-off system seemed to prevail among stock growers.

The range cattle only a few years ago were employed in growing 200 or 300 pounds of flesh, bones and hide during the green grass season of the year, to be starved off during the winter and cold season. This, with the death rate that this system carried with it, proved very hazardous to the business.

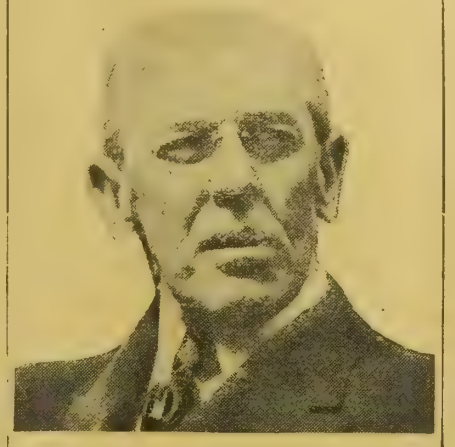
The present generation of stock breeders, stock growers and stock handlers has profited by keeping the young animal on a ration that encourages a constant development through all the varied seasons and conditions of feed supply. The holding of every pound of flesh and growth gained is reckoned at its cost of production, and when once acquired is not intentionally sacrificed. This is true, measurably, with all progressive live stock owners. Even on the western range the preparation of hay and winter feed is now practiced that the summer acquired gain in flesh be preserved and carried through the winter season. This is estimated not only a saving, but an actual profit in the feeding. Every pound of flesh saved on the animal is equivalent to a pound of gain.

The lesson to be taught the careless stock owner is gain, and that a retrograde movement in the growing and development of any kind of stock is disastrous from a business point of view. Profit is derived from the results of a progressive campaign in live stock management. It is the fat, sleek, well-kept animal that sells best in the market. It always sells for what it is worth, but the thin, impoverished animal is obliged to seek an undervalued buyer and becomes a factor of loss, or at most a greatly depreciated profit.

Wilson and Roosevelt Agree

on the principle of the

Nebraska Workmen's Compensation Law



Father of New Jersey's compensation law—the first and most successful in the United States—on which this Nebraska law is patterned.

Endorsed also by La Follette, Bryan, Taft, Gompers, Mitchell and every "Big Man" of the day; Pledged by all National Party Platforms

Champion, as President of the United States and in the "Outlook," of Workmen's Compensation laws for every state in the Union.

"Workmen's compensation is a measure of humanity, right and justice. I hope to see the principle established in every state."—Woodrow Wilson.

"No injured man should be obliged to sue his employer for damages. The employer should be his best friend in time of disability—and workmen's compensation brings this about by providing automatic relief for every injury."—Theodore Roosevelt.

As showing that both organized labor and the owners of our mills and factories (the only ones affected) wish to accord the new system a fair trial, read these resolutions:

RESOLVED—That this convention urge the members of Trades Unions and friends of the wage earners to vote for the Workmen's Compensation Law of 1913 to the end that Nebraska may enact into law the principle of compensation, and be in the van of progressive states in eliminating a vast economic waste which falls wholly under the present system on the wage earner, the one who can least afford to carry the burden.

Adopted at Lincoln, Neb., September 18th, 1914, at the Annual Convention of the NEBRASKA FEDERATION OF LABOR.

Recognizing the unfairness of the present Employer's Liability Law and the necessity for a system which will award fixed and prompt payments for all injuries to employes, without litigation or deduction of attorney's fees or court expenses, and believing further that such a system will tend to reduce the number of accidents in our mills and factories, be it

RESOLVED, That this Association urges the voters of Nebraska to vote "YES" on the Workmen's Compensation Law at the General Election to be held November 3d.

NEBRASKA MANUFACTURERS' ASS'N

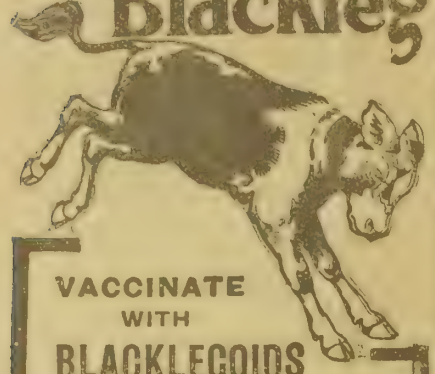
The Compensation Law does not apply to farmers, to employers having less than five employes, to householders—nor to the employes of any of them.

Every voter—whether affected by the law or not—is urged to

Vote "YES" on the Workmen's Compensation Law

at the General Election, November 3d.

No More Blackleg



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Price $1.00 a bottle or 6 for $5.00. Get our Book, "Treatise on the Horse"—Free at druggists or write us.
Dr. B. J. Kendall, Enosburg Falls, Vermont, U. S. A.

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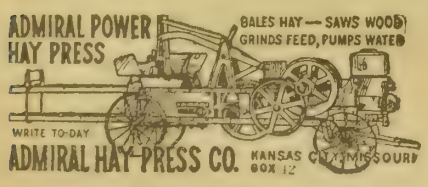

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Twentieth Century Farmer advertisers are reliable. They could not use these columns if they were not. When you write to them be sure your name and address is written clearly, and mention this paper.

World's Record Endurance Test

Pinto, the Pack Horse that Bids Fair to Win Big Purse

Pinto, the Horse, and Nip, the Dog, Who Have Traveled Fifteen Thousand Five Hundred Miles Together.

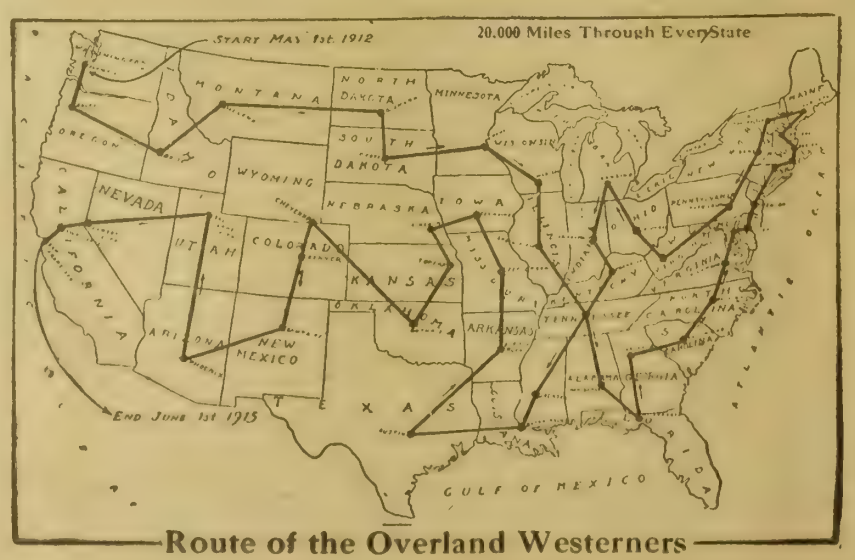
Pinto is a western pack horse. He is half Morgan and half Arabian, and he holds the world's record in a most wonderful endurance test. On May 1, 1912, he left Olympia, the capital of Washington, on a trip through every state in the United States. The accompanying map shows the route taken, and the party left Nebraska a few days ago, with only nine more states to cover.

The object of this trip is to test the endurance of the horses bred on the western coast, and if the party succeeds in reaching San Francisco with Pinto on June 1, 1915, they are to receive $1 for every mile, or $20,000 altogether. They must have Pinto, however, or they will receive nothing for all their labor. The money is to be paid by prominent stockmen of the northwest.

Four men, five horses and Nip, the dog, composed the original party. The men have all made changes in their mounts, but Pinto, the pack horse, has made the entire trip, and Nip, the dog, has followed along. Pinto is now being used as a saddle horse and is in perfect condition in spite of his hard trip, as the picture, taken while he was in Omaha, shows.

Pinto's record is the more remarkable when all the difficulties are taken into consideration. Bred in Washington, he has stood the climates of the eastern coast, of the gulf states, the corn belt and all the various climatic conditions between, summer and winter. He has necessarily had to encounter changes in feed. The party has had many adventures with heat, storm and floods. Pinto ate too much grain at one time and had a severe attack of indigestion, during which he lost nearly seventy pounds in a week, but this weight was rapidly regained.

The party passes through the capital of every state, where they receive certificates from the governors, and both Pinto and Nip are to be on exhibition at the Panama-Pacific exposition when the trip is completed and the $20,000 purse won.



Route of the Overland Westerners

Calf Market Soaring

There are constantly coming into publication reports of calf sales out in the cattle-raising districts at what seem extravagant prices. Yet, these prices are within the bounds of possible values. It does not take such a very great difference in the breeding and condition of two bunches of calves to make $5 or $10 difference in their selling value per head.

When we read a report of 100 calves, heifers and steers selling at $38 per head it sounds high; we at once picture in our mind a medium sized, last spring's calf of medium quality and condition, and it looks big, measured by this imaginary picture. But when we ascertain that this bunch of calves were a very even lot of last March, heavyweight Hereford calves the picture changes, and the price bears the evidences of possibly a better bargain than the small calf at a much lower price. Thus the market quotations on these extra high-priced calves represent invariably the best quality of calves. The lower prices are not out of the ordinary in sales, and consequently are not given special mention.

It is true that calf prices are high with anything well bred and in good, thrifty condition. There is a treble or threefold market for such calves. They are just such as the feeders and the packers are wanting, and they are just the kind that the farmer wants who has decided that he would like to stock up with some nice, well-bred, growing young animals that would be a credit to own and a pleasure to have around. The calf of today is usually a much better animal than the calf of ten years ago.

There is a quality of the calf that the older animal does not possess to the same degree. The calf has all its years of growth and usefulness before it and will soon develop into increased value if given a chance. A wise cattleman has said, "You cannot pay too much for a well-bred, well-proportioned, thrifty calf."

FOUND OUT

A Trained Nurse Discovered Its Effect.

No one is in better position to know the value of food and drink than a trained nurse. Speaking of coffee, a nurse in Pa. writes:

"I used to drink strong coffee myself, and suffered greatly from headaches and indigestion.

"While on a visit to my brothers I had a good chance to try Postum, for they drank it altogether in place of coffee. After using Postum two weeks I found I was much benefited and finally my headaches disappeared and also the indigestion.

"Naturally, I have since used Postum among my patients, and have noticed a marked benefit where coffee has been left off off and Postum used.

"I observe a curious fact about Postum when used by mothers. It greatly helps the flow of milk in cases where coffee is inclined to dry it up, and where tea causes nervousness.

"I find trouble in getting servants to make Postum properly. But when it is prepared according to directions on package and served hot with cream, it is certainly a delicious beverage."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum comes in two forms:

Regular Postum—must be well boiled. 15c and 25c packages.

Instant Postum—is a soluble powder. A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage **instantly.** 30c and 50c tins.

The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.

—sold by Grocers.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Only One Mother

Hundreds of stars in the pretty sky;
Hundreds of shells on the shore together;
Hundreds of birds that go singing by;
Hundreds of bees in the sunny weather.

Hundreds of dewdrops to greet the dawn;
Hundreds of lambs in the purple clover;
Hundreds of butterflies on the lawn;
But only one mother the wide world over.

—George Cooper.

Gifts for European Children

Have you heard what the American children are going to do for the poor little European children who would otherwise not have any Christmas this year? The United States is going to loan us a ship, and the American children are going to fill it full of gifts to make these poor children as happy as they can be made this coming Christmas.

Over there in Europe, as you, of course, know, they are having a terrible war. Homes are being destroyed and all they contain burned or trampled under the feet of the enemy's armies. The children's fathers are going to war and thousands of them are killed. Even the money they have put in the banks is being taken by the governments to help carry on the war.

So it does not look as if there would be very many presents for these unfortunate little children next year, does it? But the American children are determined that the European children shall not be without some Christmas cheer, so they have asked the government to help, and our president has promised us a ship to carry our presents. The large newspapers have several of them offered to assist in collecting the presents and sending them to the ship. And all the children of America are going to help, each one sending something to brighten the Christmas of some European child. Do you want to help?

You can send a doll or some toy, or clothing, or money. Don't send a broken or worn-out toy, but something you would enjoy having yourself if Santa Claus forgot you this year. Wrap your packages well so they will not break, as they will have to take a long ocean voyage. Address them to the Christmas Ship Editor, Omaha Bee, Omaha, Neb., and be sure to pay the postage or express to Omaha. The paper will take care of it after that and see that it gets to the ship safely. Send it soon, for it is a long trip the ship will have to take, and the presents must get here promptly. Put your name and address on the outside of the package so they can tell where it comes from in case anything goes wrong.

Isn't it a splendid thing to think that we are to have an opportunity of making Christmas a happier time for some poor child across the sea?

HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

The Matsuyama Mirror

I.

Long ago there lived, in a quiet spot in far-away Japan, a young man and his wife. They had one child, a little daughter, whom they loved dearly. Their names have been long since forgotten, but the name of the place where they lived was Matsuyama.

It happened once, while the litle girl was still a baby, that the father had to go to the great city, the capital of Japan, upon some business. It was too far for the mother and her little baby to go, so he set out alone, after bidding them goodby and promising to bring them home some pretty presents.

The mother had never been farther from home than the next village, and she could not help being a little frightened at the thought of her husband taking such a long journey, and yet she was a little proud, too, for he was the first man in all the countryside who had been to the big town where the king and his great lords lived, and where there were so many beautiful and curious things to be seen.

At last the time came when she might expect her husband back, so she dressed the baby in its best clothes, and herself put on a pretty blue dress which she knew her husband liked.

You may fancy how glad this good wife was to see him come home safe and sound, and how the little girl clapped her hands, and laughed with delight, when she saw the pretty toys her father had brought for her. He had much to tell of all the wonderful things he had seen upon the journey, and in the town itself.

"I have brought you a very pretty thing," said he to his wife. "It is called a mirror. Look and tell me what you see inside." He gave to her a plain, white, wooden box, in which, when she had opened it, she found a round piece of metal. One side was white like frosted silver and ornamented with raised figures of birds and flowers; the other was bright as the clearest crystal. Into it the young mother looked with delight and astonishment, for from its depths was looking at her a smiling, happy face.

"What do you see?" again asked the husband, pleased at her astonishment, and glad to show that he had learned something while he had been away.

"I see a pretty woman looking at me, and she moves her lips as if she was speaking, and—dear me, how odd; she has on a blue dress just like mine!"

"Why, you silly woman! it is your own face that you see," said the husband, proud of knowing something that his wife didn't know. "That round piece of metal is called a mirror; in the town everybody has one, although we have not seen them in this country place before."

The wife was charmed with her present, and for a few days could not look into the mirror often enough, for you must remember that, as this was the first time she had seen a mirror, so, of course, it was the first time she had ever seen the reflection of her own pretty face. But she considered such a wonderful thing far too precious for every-day use, and soon shut it up in its box again and put it away carefully among her most valued treasures.

II.

Years passed on, and the husband and wife still lived happily. The joy of their life was their litttle daughter, who grew up the very image of her mother, and who was so dutiful and affectionate that everybody loved her. Mindful of her own little passing vanity on finding herself so lovely, the mother kept the mirror carefully hidden away, fearing that the use of it might breed a spirit of pride in her little girl.

She never spoke of it; and for the father, he had forgotten all about it. So the daughter grew up as simple as the mother had been, and knew nothing of her own good looks, or of the mirror which would have reflected them.

But by and by a sad misfortune

(CONTINUED ON PAGE THIRTEEN.)

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More brilliant and many times cheaper than gas or electricity. Guaranteed five years. Everyone a possible customer. No experience necessary. Exclusive territory free. Write today.

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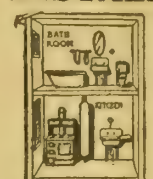

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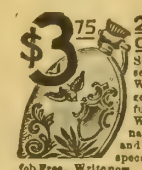
$3.75 **25 YEAR GOLD WATCH** $3.75



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Of Interest to Our Women Readers

Let Us Smile

The thing that goes the farthest toward making life worth while,
That costs the least and does the most, is just a pleasant smile.
The smile that bubbles from the heart that loves its fellow-men
Will drive away the clouds of gloom and coax the sun again.
It's full of worth and goodness, too, with many a kindness blent,
It's worth a million dollars, and it doesn't cost a cent.

There is no room for sadness when we see a cheery smile;
It always has the same good look; it's never out of style;
It nerves us on to try again, when failure makes us blue;
The dimples of encouragement are good for me and you.
It pays the highest interest—for it is merely lent—
It's worth a million dollars, and it doesn't cost a cent.

A smile comes very easy—you can wrinkle with a cheer.
A hundred times before you can squeeze out a salty tear;
It ripples out, moreover, in the heart-strings that will tug,
And always leaves an echo that is very like a hug.
So, smile away! Folks understand what by a smile is meant—
It's worth a million dollars, and it doesn't cost a cent.

In Grandmother's Girlhood

"No, I cannot say I like it, Marian," said grandmother, looking severely at the girl as she turned slowly about to display her new suit. "The styles nowadays are ridiculous. We would not have worn such silly looking garments in my young days." And grandmother returned serenely to her knitting, no doubt without in the least realizing that she had hurt the pride and taken much of the zest out of the happiness of her young granddaughter.

"Grandmother always says unkind things about my clothes whenever I get anything new," Marian confided to her mother in the kitchen, when the door was closed between that room and the dining room, where grandmother sat knitting all day long beside the sunny windows. "I don't believe it would be possible for me to get anything she liked. What is there silly looking about this suit?"

"Nothing, dear. It is a very sensible and becoming suit," answered her mother. "Wait until after dinner and you and I will go upstairs together. I think I can show you why grandmother disapproves of our clothes."

After dinner was over and the dishes washed, and grandmother settled for her afternoon nap, mother and daughter climbed the stairs to the attic. There from an old trunk, the contents of which had been the delight of the children on rainy days for many years, mother pulled a pile of old bound magazines.

"Why, those are the fashion books we used to look at the funny ladies in," exclaimed Marian.

Mother turned the books until she came to a volume issued when grandmother was a girl. Foolish looking ladies with tiny waists, impossibly small feet and in many cases in distressingly low-necked gowns, were pictured in its pages.

"How we children used to love to look at those old pictures!" said Marian, who forgot the object of the trip in looking at the pictures, dear to her and her brothers in their childhood, so recently gone by. "I used to wonder if women ever could have looked like that."

"These," said her mother, "are the styles worn in mother's young days. We have at last learned that cramping our waists and toes does not give us real beauty. We wear dresses in which we can move about with at least as much freedom as they could in those voluminous skirts of former times. We are no more immodest than our mothers and grandmothers, with their lacy gowns falling off at the shoulders."

"Then grandmother has no right to complain of my dresses, has she, mother?" asked Marian.

"No," said her mother, "but we will not tell her so. Remember that it is one of the privileges of old age to forget everything about their youth except what is good and beautiful. The evil and the sad things slip from their memories and only the pleasant things remain. That is why, to them, our modern life seems to compare unfavorably with the life of long ago. So we will let grandmother criticise our clothes and our ways and say nothing, remembering that however foolish the styles in women's clothes may be, they are slowly improving as the years go on."

Marian closed the old book lingeringly. "Perhaps this suit will look as silly to my grandchildren as grandmother's clothes do to me," she said. "Anyhow, I am glad to think that when I am old only the beautiful things will stay with me. But I don't see how grandmother ever lived if she has such a little waist as that." HOME EDITOR.

Our Weekly Recipe

BAKING POWDER BISCUITS—One quart sifted flour, four teaspoonsful baking powder, one teaspoonful salt, two rounding tablespoonsful lard, a scant cup of milk. Sift the flour, salt and baking powder together, mixing thoroughly. Stir the milk in carefully; then carefully turn out on board and knead into a smooth dough. Punch out with fist, cut with small biscuit cutter, brush the tops with fresh milk and bake fifteen minutes in a very hot oven. Served hot with good butter and honey, these biscuits are delicious.

Are You Shut in a Shell?

"There were once five peas in one shell; they were green, the shell was green, and so they believed that the whole world must be green also. The shell grew and the peas grew, and as the weeks passed by the peas became yellow, and the shell became yellow—'All the world is turning yellow, I suppose,' said they."

Styles for the Home Dressmaker

6594—Ladies' Shirtwaist. Linen, madras or China silk can be used to make this shirtwaist. The waist closes at the front and can be made with either the removable or turndown collar. The pattern, No. 6594, is cut in sizes 34 to 44 inches bust measure. Medium size requires 1⅞ yards of 44-inch material.

6513—Ladies' Skirt. From a tailor-made suit or for a separate skirt this is an excellent style. It requires wide material or else must be seamed in the back. The closing is in the front and the back forms a wide, flat panel. Serge, cheviot, gabardine and other twilled materials are suitable for a skirt of this design. The pattern, No. 6513, is cut in sizes 22 to 32 inches waist measure. Medium size requires 2⅝ yards of 44-inch material.

6644—Ladies' Dressing Sack. In this pretty model we have the body and half the sleeve in one, a single seam running down from the neck edge to the wrist along the outer arm. The neck is trimmed with a handsome collar and a cuff to correspond completes the sleeve. The pattern, No. 6644, is cut in sizes 34 to 44 inches bust measure. Medium size requires 3⅜ yards of 36-inch material.

6605—Ladies' Apron. For the woman who works this apron will be satisfactory without being too much of a covering. The front panel is shaped in a little to the figure and continues in a bib and shoulder straps. The sides end at the belt and are gathered at the top and attached to a straight band. The pattern, No. 6605, is cut in sizes 34, 38 and 42 inches bust measure. Medium size requires 4¼ yards of 27 or 36-inch material.

6451—Boys' Russian Suit. Linen or serge can be used to make this suit. The suit closes at the right side of the front and has a separate collar. Bloomer trousers complete the suit. The pattern, No. 6451, is cut in sizes 2, 4 and 6 years. Age 4 years requires 2⅝ yards of 36-inch material.

6020—Children's Night Drawers. Quite an ornamental design for children's night drawers is here offered. The garment is made with a square yoke at the front to which the body portion is gathered. There is a seam at front and a band accommodates the fastening at the back. The pattern, No. 6020, is cut in sizes 1 to 9 years. Medium size requires 3⅛ yards of 27-inch material, or 2¼ yards of goods 36 inches wide.

6606—Ladies' House Dress. A simple model which looks well made in gingham, linen, chambray, cotton crepe and other wash materials, as well as in challie, cashmere, brilliantine and the like. The blouse has a tuck at each shoulder in front and back and a side front closing. The skirt is cut in seven gores. The pattern, No. 6606, is cut in sizes 34 to 44 inches bust measure. Medium size requires 5⅞ yards of 36-inch material.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

A Talk With President of Chile

By Frank G. Carpenter

SANTIAGO, Chile, Oct. 18.—I have just had an audience with the grand old man of the Chilean republic. His name is Don Ramon Barros Luco, and he has been connected with the official management of the country for many years. He has been at the head of nearly every government department, has been minister to Paris, and four years ago was almost unanimously elected president, which office he now holds.

Don Ramon is noted as a patriot and a statesman. He was one of the leading figures in the war against Balmaceda, and at that time had a narrow escape. It was when the battleship Blanco was torpedoed and sunk by the enemy at some distance off the coast. Don Ramon was one of the officers on board and he saved his life by catching hold of the tail of a bull that had been on the ship. The bull swam to the shore and it carried Don Ramon with it.

That was twenty-three years ago, when Don Ramon was then in his 50's. He is now past three score and ten, and is still full of life, although he is criticised as taking frequent naps during the day. Indeed, one of the wits of Santiago has made a bon mot in reference to him that to me seems more sarcastic than just: "The king of England reigns, but does not rule. The president of the United States rules but does not reign. The president of France neither rules nor reigns. The president of Chile—sleeps."

New Nitrate Fields Discovered

I found Don Ramon far from sleeping during my interview. The talk was arranged through Mr. Roland B. Harvey, who, in the absence of the American minister, was charge d'affaires of our legation in Santiago, and my audience was given in the Moneda, or Chilean white house. The Moneda is also the state department, and before going in to the president, I had a short talk with the secretary of state as to the growth of Chile and the great development now going on in the south. I asked him as to the nitrate fields, and whether our farmers are to continue to have their best fertilizers from this part of the world. The secretary replied that we need not worry. "We are finding new nitrate deposits right along," said he, "and the industry is spreading north and south. If the present demand only were to be satisfied, we could supply it for a hundred years, but new markets are coming up and the continent of Asia promises to be one of our chief consumers. We are already sending a great deal of nitrate to Japan, and also to southern Europe, including Russia and the Balkan states. Germany is one of our chief customers, and the Austro-Hungarians are steadily increasing their demand."

At this point I was told that the president was ready to see me, and Senor Castro, one of the secretaries; Mr. Harvey and myself were taken into the audience room. This is more like a large parlor than like the offices of our White House. The floor is heavily carpeted and historical paintings hang from the walls. The room is luxuriously furnished, but it has none of the soft couches or sofas upon which the aged president is said to sleep. Indeed, his excellency looked more like an active American business man than a sleeper. He is short and straight and inclined to be fleshy. He has a big head, a rosy face and bright eyes. He asked me to sit down beside him, and for half an hour or so we chatted together as to his country, its government and its relations to the United States.

Thankful for Panama Canal

The president spoke of the completion of the Panama canal, and thanked the United States for the great work it had done there for the world. He told me he hoped to come northward to visit us at the close of this year. His term of office will then be over, and he expects to visit the opening of the San Francisco exposition if congress will free him from the provision that the president remain in the country for one year after the close of his term. Don Ramon told me that his plan is to travel to Panama, examine the canal and thence proceed by ship to San Francisco. After seeing the fair he will go across the mountains and plains to Chicago, and thence on to Washington and New York. He will return to Chile by the Caribbean sea and the Pacific, passing through the canal.

I asked the president as to the effect of the Panama canal upon our trade with his country. He replied that it will undoubtedly better the relations between the two republics, and that the United States will be able to sell more goods along the whole western coast of this continent. He expects an immediate increase from now on in the exports of Chile to the United States, and that not only from its mines, but also from its farms and orchards. He spoke kindly of Colonel Theodore Roosevelt, who has made a host of friends during his visit to Chile, and also referred to the convention of the Pan-American union at Santiago and to the fact that our secretary of state, Mr. Bryan, and Mr. John Barrett, the director of the union, are to be present. The president believes in a closer union of the pan-American republics, and thinks that they should co-operate in maintaining the peace of this hemisphere.

Constitution Modeled On Ours

During the interview I asked Don Ramon several questions as to his executive powers, and as to the points of difference between the republic of Chile and ours. The Chilean constitution is modeled upon that of the United States, but there are striking differences, and in some of these Chile has the advantage. President Don Barros Luco, for instance, was elected for a five-year term instead of four years, as was President Wilson, and he cannot succeed himself, although he may have a second term if another president intervenes. This takes him out of politics as far as using the civil service is concerned.

Another point of difference is in the conduct of the administration. The president of the United States is assisted by a cabinet of secretaries appointed by himself, although their appointments must be confirmed by the senate. The president of Chile appoints his own cabinet, but he has also a council of state of eleven members, five of whom are nominated by him and the other six chosen by congress. This council has advisory functions, and its approval is required in many of the executive acts and appointments. In case our president dies the vice president succeeds, and if he passes away the secretary of state becomes president for the remainder of the term. Chile has no vice president, but if the president dies the secretary of the interior becomes the vice president and acts as president until a new president can be legally elected.

The president of the United States is

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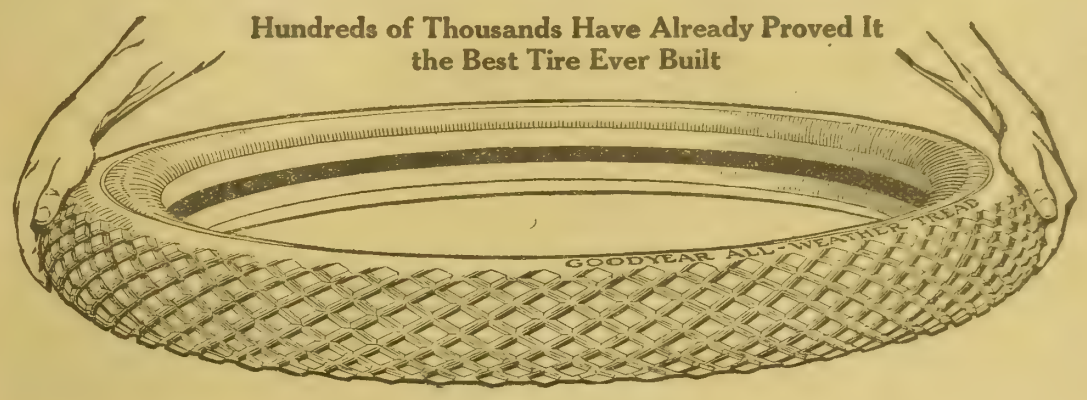

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You want to minimize blow-outs. We do that, at an extra cost of $1,500 daily, by our exclusive "On-Air" cure.

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The way to get Goodyears is to say that you want them. Any dealer will supply you. These are the ruling tires. They have won more users than any other tire. It is time that you know them. And now—when your tires face the year's hardest usage—is the time to find them out.

For your own sake, do it.

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You also want a tire that can't rim-cut. That means the Goodyear No-Rim-Cut tire.

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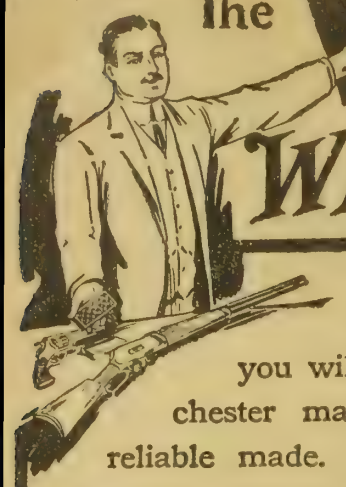

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Down South there are wonderful openings for ambitious men. Farming offers exceptional opportunities. Cheap lands, fine climate, ample rain, big crops and good markets. Business and industrial openings everywhere. "Southern Field" magazine, "Business Openings" folder and State booklets on request.

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Blatchford's Calf Meal

has been known since the year 1800 as the complete milk substitute. Costs less than half as much as milk — prevents scouring — promotes early maturity. Sold by dealers or direct from the makers.

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WHY are International Harvester manure spreaders so popular? Because:

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International manure spreaders are built in several styles and sizes, low or high, endless or return apron, for small farms and large. Repairs, when needed, may always be had promptly of the local dealer.

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far better paid than the president of Chile. President Wilson has a salary of $75,000 a year and an allowance of $25,000 for traveling expenses. Besides, he has his house rent free and lots of requisites. Don Ramon Barros has a salary of less than $7,000, and in the neighborhood of $5,000 for expenses. His total official income is just about $12,000, and, notwithstanding this, he lives in good style and has a limousine.

Moneda Covers Four Acres

The moneda, or Chilean white house, is much larger than our executive mansion. It covers almost four acres and consists of a three-story building running around patios or courts, filled with flowers and in which fountains play. The building is large for a country the size of Chile, and, as the story goes, it was made so through a mistake. It was built in the old Spanish times, the plans being made in Madrid and sent to Santiago. The Spanish architect had been told by the king to construct two sets of drawings, one for a large building in Mexico City, then also a part of the Spanish dominion, and a smaller building for Chile. He followed his directions, but in forwarding the plans Santiago got the Mexican drawings and Mexico got those for Santiago. The result was this enormous moneda, which is today the largest presidential residence on this hemisphere.

Snapshot Outside Cathedral—The Church Owns $100,000,000 Worth of Real Estate in Santiago.

Returning to the government of Chile, the country is one of the best managed of all South America. Its people are noted for their patriotism. They are for Chile first, last and all the time, and although they will fight each other during the presidential campaigns, they are peaceful enough once the president is elected. The country is not one of revolutions. It has had only thirteen presidents since 1830, and one of these was elected but did not act. Since the beginning of the republic in 1810 there have been twenty-five presidents, and the only revolutionary period was between 1823 and 1830, when there were ten different executives. During the first years of the republic several of the presidents had terms of ten years, and it was not until 1871 that the five-year period, without re-election, which now prevails, began. The president has the right of veto, but congress can, by a two-thirds vote, override his objections, and make its bills laws. When a presidential measure fails, it is the custom of the cabinet to resign, and there have been times when Chile has had a new cabinet on the average about once a month.

Illiterates Not Allowed to Vote

The congress of Chile differs from ours as to its elections, its times of meeting, and in several other features. The members of both senate and house are elected by the males of the country, but no one can vote without he can read and write. There is a difference in the voting age as to whether a man is married or single. The bachelor has to wait until he is 25, but the married man can vote at the age of 21. Members of the house of deputies must be at least 21 at the time of their election, and senators must be 36 or more. All candidates for congress must have a specified income, and a member of the lower house cannot serve without he has at least $500 per year. Every senator must have at least $2,000 a year, and members of both houses must serve without salaries. There is supposed to be no finanical profit in the position, and the place is one of honor alone. As to graft, I have no doubt but that more or less exists. Indeed, I have yet to find a legislative body on earth where each and all of the members are saints.

The provisions for educational qualifications for suffrage and the requirement of a specified income makes the government of Chile an oligarchy. It practically confines the administration to the richer classes, and the great families control the country. This is so not only in Chile, but in all of the Latin American republics. It has always been so in Mexico, and the supposition that the Mexicans can have free and fair elections under the present conditions is absurd to any one who knows Latin America. The government of these countries has always been in the hands of the few, and it is only by education and gradual uplift that the masses can be fitted to take part in the legislature and the government.

Public Buildings Are Beautiful

The Chilean congress meets in the winter, its sessions running from June 1 to September 1. This country, as you know, is south of the equator and it therefore has its winter when we have our summer. In addition to this regular meeting, the president can call an extra session whenever he chooses, and during the recess a permanent committee of members of both houses presides over certain public business.

The houses of congress are situated in the heart of the city. The capitol building is of two stories. Its material is white stone, and the porticos, which form the entrance to the chamber of deputies and the senate, are each upheld by six Corinthian columns. The building is surrounded by a beautiful garden filled with semi-tropical trees. There are palms as big around as a hogshead, which are nevertheless not more than thirty feet high. There are also beds of beautiful flowers. At one corner of the grounds is a fountain, and at the other a statue standing on the site of the Jesuit church, which was burned while the congregation was at worship, resulting in the death of more than 2,000 women. The doors of the church opened inward, and when the fire occurred the audience pressed against the doors, holding them shut, and causing this enormous loss of life. The monument is a beautiful marble Madonna in the attitude of mourning, with four kneeling angels at her feet.

I passed this monument in going into the Chamber of Deputies. This chamber is entered by a beautiful hall in the shape of a half moon.

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The Matsuyama Mirror

(CONTINUTD FROM PAGE NINE.)

came to this happy little family. The kind mother fell sick, and, although her daughter waited upon her day and night, with loving care, she got worse and worse, until at last there was no hope but that she must die.

When she found that she must so soon leave her husband and child, the poor woman felt very sorrowful, grieving for those she was going to leave behind, and most of all for her little daughter.

She called the girl to her and said, "My darling child, you know that I am very sick; soon I must die, and leave your dear father and you alone. When I am gone, promise me that you will look into this mirror every night and every morning; there you will see me, and know that I am still watching over you." With these words she took the mirror from its hiding place and gave it to her daughter. The child promised, with many tears, and so the mother, seeming now calm and resigned, died a short time after.

Now this obedient and dutiful daughter never forgot her mother's last request, but each morning and evening took the mirror from its hiding place and looked in it long and earnestly. There she saw the bright and smiling vision of her lost mother; not pale and sickly as in her last days, but the beautiful young mother of long ago. To her, at night, she told the story of the trials and difficulties of the day; to her, in the morning, she looked for sympathy and encouragement in whatever might be in store for her.

So day by day she lived as in her mother's sight, striving still to please her as she had done in her lifetime, and careful always to avoid whatever might pain or grieve her.

Her greatest joy was to be able to look in the mirror and say, "Mother, I have been today what you would have me to be."

Seeing her every night and morning, without fail, look into the mirror, and seem to hold converse with it, her father at length asked her the reason of her strange behavior.

"Father," she said, "I look in the mirror every day to see my dear mother and to talk with her.' Then she told him of her mother's dying wish and how she had never failed to fulfill it. Touched by so much simplicity, and such faithful, loving obedience, the father shed tears of pity and affection. Nor could he find it in his heart to tell the child that the image she saw in the mirror was but the reflection of her own sweet face, becoming more and more like her dead mother's, day by day. —From the Japanese.

A Reminder

There is one unfortunate thing about the production of immense crops of wheat, corn or any other product in favorable years. We begin to think it is so easy that no particular care need be taken to obtain these big yields. Then we sow our wheat without proper preparation of the seedbed or neglect to cultivate the corn or harrow the alfalfa seedbed, and that year turns out to be a dry one, and we kick about our luck.

HUDSON Six-40-$1550

The Winning Class Car

For several years, among leading designers, a new-type car has been rapidly evolving. It came in response to motorists' demands. It began with the trend toward Sixes.

The aim was to remedy crudities and to end all over-tax.

That meant light weight. It meant economy of fuel. It meant artistic lines, ideal equipment. And it meant a reduction in quality prices. Most late-year efforts among high-grade designers have been bent in those directions.

Howard E. Coffin Started in 1910

Four years ago, Howard E. Coffin, the great Hudson designer, began to develop this Hudson Six-40 as the ideal coming type. During all those years he has had working with him 47 other engineers.

Part by part, detail by detail, they worked out their final refinements. Now this Hudson Six-40 for 1915 shows their finished conception of the new-day car.

They have saved about 1000 pounds in weight, by better materials and better designing. They have saved about 30 per cent in fuel by a new-type, small-bore motor. They have devised and adopted countless new attractions in beauty and comfort, in equipment and convenience. Their car of today represents the last word in modern motor car engineering.

Last year, by efficiency, they brought the price down to $1750. That broke every record on a quality car. This year, with a trebled output, they brought it to $1550. Now, at this price, which once denoted a low-grade car, you can buy this prince of class cars.

$3,875,000 Last Month

Note what a welcome men have accorded this masterpiece of Howard E. Coffin.

In June, when our first-year Six-40 was all sold out, we had 3000 unfilled orders. On August 1, 30 days after the new model appeared, we had 4000 buyers waiting. Yet our output had been trebled.

In September, motorists paid for this Hudson Six-40 $3,875,000. We built five times as many cars as in September a year ago. Yet we could not keep up with orders.

Now this model outsells any car in the world with a price above $1200.

Thus the Hudson Six-40 has become the leader among all the new-type class cars. The verdict of buyers, as shown by sales, is that no rival compares with it. Men waited weeks for this model when other cars were plentiful. It has multiplied Hudson popularity five-fold inside of a single year.

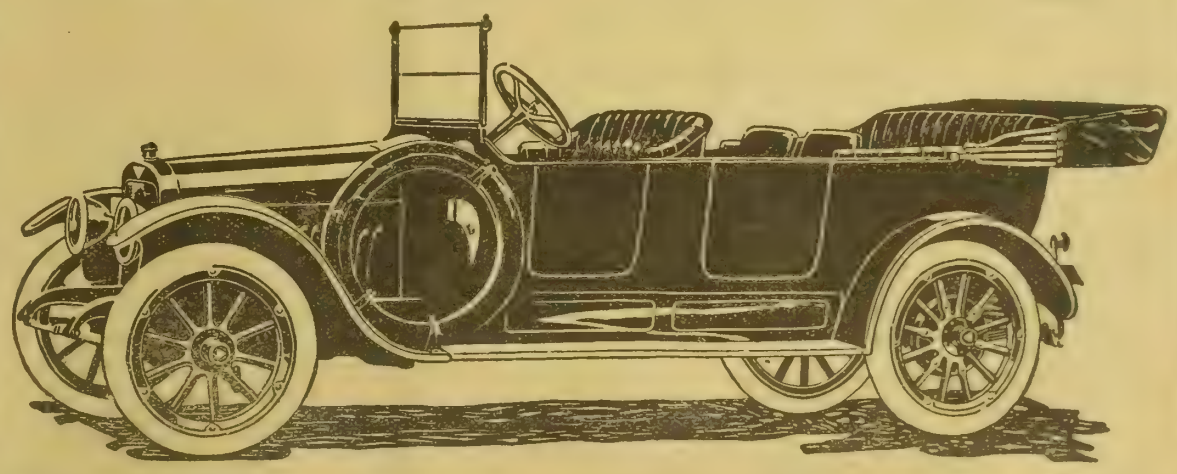
Go see this car now. Next year's models of all makes are out now, and this is the time to choose. Get your new car for fall driving; for the best motoring months of the year. Your dealer will see that you get prompt delivery, if we have to ship by express.

Phaeton, with two extra disappearing seats, $1550 f. o. b. Detroit.

Canadian price, $2100 f. o. b. Detroit, duty paid.

Hudson dealers are everywhere.

HUDSON MOTOR CAR COMPANY
8171 Jefferson Avenue, DETROIT, MICH.



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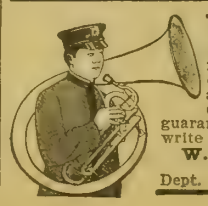

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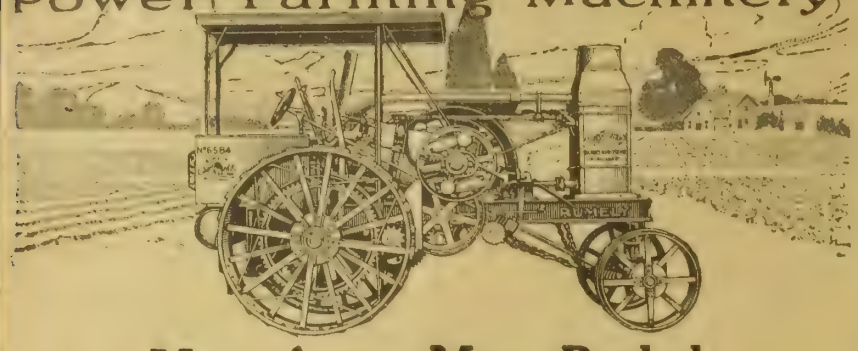

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Each is possible when an OilPull is used. Plow as deep as you like, and plant at the right time to get the bumper crops—it's easy to do both, with the

15-30 Horsepower — RUMELY OILPULL TRACTOR — 30-60 Horsepower

The OilPull is easy to start and easy to operate. It burns cheapest kerosene or distillate at all loads. After plowing, it will furnish you steady reliable power for hauling, roadmaking, threshing, husking and dozens of other jobs. Wheels conform to every highway restriction. The 15-30 has two speeds for road work.

Get the OilPull catalog HA11. It gives interesting information.

In gasoline tractors the GasPull is a leader, and there are no better stationary engines than the Rumely-Falk for kerosene, and the Rumely-Olds for gasoline. Every Rumely machine is backed by Rumely service — 49 branches and 11,000 dealers. No waiting for supplies or parts.

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is worth a hundred pounds of any cure, especially in case of Chickens or Pigeons, where it is easy to treat the flock, but "some task" to doctor each individual.

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As a remedial agent, Germozone is always a good first choice in cases of Roup, Colds, Bowel complaint, Cholera, White diarrhoea, Canker, Distemper, Sore throat, mouth and eyes, Chicken pox, Eruptions, Burns, Swellings, Sprains, Sores, Cuts, Wounds, Loss of hair or feathers, etc.

For Chicks, Chickens, Pigeons, Birds, Dogs and all Pet or Domestic Stock, Germozone is a whole medicine chest. It does the work of a dozen antiseptics, remedies and liniments, at one-tenth the cost and with no need of expert diagnosis.

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Sold by most Druggists and Poultry Supply Dealers

One-dollar and three-dollar sizes delivered prepaid to any express office in the U. S. Sample and book free by mail on request.

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All Steel, Triple Power Stump Puller

Biggest stump pulled in five minutes or less. Clear an acre of land a day. Makes your stump land **money** land. 30 days' free trial—3 year guarantee. Get our new book and special low price offer **now.**

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The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his item for adjustment or collection.

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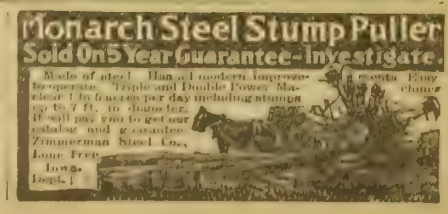
Sold On 5 Year Guarantee—Investigate.



Made of steel. Has all modern improvements. Triple and Double Power. Easy to operate. Clears 1 to 6 acres per day including stumps up to 7 ft. in diameter. It will pay you to get our catalog and guarantee. Zimmerman Steel Co., Lone Tree, Iowa. Dept. 1

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

Experiences of Poultry Keepers

ONE extensive poultry keeper has this to say: "The cost of unnecessary labor is one of the greatest leaks in the poultry industry. So much time is required to carry water to 500 or 1,000 hens, especially if they are in colony houses, and where it is heated twice a day in winter, labor is doubled. As the analysis of eggs shows they are 65 per cent water, it is natural to think that water is an important factor in their diet, and yet cases have been known where hens have lived merely on water furnished by dew and laid a reasonable number of eggs.

"We made some experiments in this line in several colony houses. In five colony houses, containing S. C. White Leghorns and Rhode Island Reds, the hens were on free range and given no water except what they found in the brook or eating snow. Other pens were given cold water once a day, others warm water twice a day. Results ran as follows: Old hens were affected by the snow, egg production being low on snowy days and running to almost nothing when the ground was frozen. Where the pens of pullets were fed heavily snow did not lessen the egg production, but pens of young hens fed a reasonable ration would shut off laying to some degree when snow was the only drinking ration in that line. The greatest difference lay between the pens of young hens. The yield of eggs for certain breeds for lack of other water than snow was much less than the yield from other breeds, no difference what the amount of feed."

Experience with Roup

The experience as given by Mrs. J. M. Baugher, an eastern poultry keeper, with roup:

"The roup began in my flock by a sneezing, next a whistling in the throat, and an unnatural appearance of comb and wattle. In some the eyelids became swollen and matter began to ooze out. All roup is diphtherietic, so I got all sick from the well and allowed no children with them. I used a tight wagon box for a hospital, well bedded with chaff. Every chicken showing signs of roup was treated and put in this wagon bed. It was well covered, though good ventilation was given. I swabbed throat, nose and eyes with a feather dipped in zenoleum, then burned that feather. I used an insect bellows blower and blew sulphur down their throats. I kept pure water in with them, but no feed for twenty-four hours. If they would not eat I gave them another treatment. I gave the food soft and put a poultry tonic in it. I saved the majority. Last winter it broke out again in my flock of 250 hens. I was frightened, but resorted to the same treatment. Sometimes I had twenty in the hospital at one time, and yet I saved every one. A draft through the poultry house I thought brought on last attack."

The Poultry Show

Mrs. F., Burnett, Ia., writes of the poultry show: "The fancier should show his birds. It is the big part of his business. The educational and advertising features are most important. Those who attend the shows become interested and buy right at once, as I find the show birds thus getting first chance. Farmers should attend all local shows. I prepare my birds in time. First is selection. They should come from healthy stock and be strong and vigorous; they must have style and size. Watch the male that swaggers and struts. All things else being right, this is the one to show. Never make choice of a timid bird; this kind loses you a prize too often. Select hens all of one type. Show birds must be kept apart, males and females, for several weeks before show time. If I find mine under weight I feed up, but one must not feed too fast. The birds must be handled much and made very tame. A wild, easily frightened bird loses points fast in a show. White fowls must be carefully washed before show time and kept on clean straw until needed. All birds must be given some care in getting ready for show rooms. You cannot catch up fowls the day before the show begins and find them all in fit order."

North Platte Valley

is rich in crop raising soil—irrigated and non-irrigated. Large or small tracts. Easy payments. If you are preparing to go to a new country you will certainly investigate the rich and productive lands of the North Platte Valley, Nebraska. I have complete and authentic information and will gladly send it to you free.

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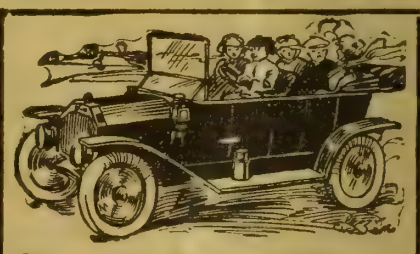
OMAHA, NEB.



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LITTLE RIVER VALLEY LANDS—Rich and cheap, on railroad. Sessions Co., Winthrop, Ark.

FOR SALE OR EXCHANGE—160 acres Mississippi river delta land in southeastern Arkansas; not subject to overflow; no levee tax; drainage ditch touches corner of land; lays level; very deep alluvial soil; very productive; no better corn land anywhere; two miles from town and railroad; surrounding improved farms from $45 to $65 per acre. My price for thirty days, $25 per acre; no encumbrance. A. W. Augspurger, Owner, 548 Bee Bldg., Omaha, Neb.

California

SACRAMENTO VALLEY LAND, highly improved and irrigated locality, with frequent trains, at low prices, on easy terms. Buyers this year get free trip to Panama-Pacific Exposition in 1915. Free literature. W. T. Smith Co., 1111 City National Bank, Omaha.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

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FOR SALE OR EXCHANGE—IOWA farm 837 acres; $10,000 worth of improvements; 500 acres in cultivation, balance pasture and timber. Price, $125 per acre. Encumbrance, $40,000. Take $10,000 cash and clear western irrigated land for equity. A. W. Augspurger, 548 Bee Bldg., Omaha.

Kansas

SOUTHEASTERN KANSAS—320 acres in Moran valley, Allen county, 100 miles from Kansas City; in corn belt. A snap. Send for views of the farm. Address Owner, Lock Box 367, Iola, Kan.

Minnesota

WARNING! INTENDING PURCHASers, don't wait; buyers picking up the best bargains; Chisago and Pine, world's corn growers' prize counties; nearby markets; land lists free. St. Croix Valley Land and Loan Co., Drawer G, Rush City, Minn.

BETTER THAN HOMESTEADS—Write us for information regarding our "Half Earnings" plan and get a farm home of your own. Flax crop on first breaking will make you a lot of money the first year. We have about 1,000 quarter sections to select from, part under cultivation. No cash payment required. Address Hackney Land Credit Co., Hackney Bldg., St. Paul, Minn. * * * The European war means high prices for all American farm and factory products. The result will be a big increase in the value of farm lands.

Nebraska

GOOD PARTLY DEVELOPED 800-acre ranch; plenty of good, free outside range; 4-room house, stable and corrals; about 400 acres under ditch; all remainder but 8 acres can be irrigated. Land lies almost perfectly level; 22 miles of good county seat town; price, $15 if taken soon; part cash, rest long time at 6 per cent. J. J. Carey, Petersburg, Neb.

SNAP—320 GOOD HAY LAND, HOLT county. Will cut average 180 tons—less than two-thirds value. Address W. P. O'Brien, 410 Bee Bldg., Omaha, Neb.

CATTLE RANCH, 1,108½ ACRES, $5,000. Snap. Box 201, Bridgeport, Neb.

SACRIFICE SALES—320 ACRES 7 miles from Wallace, Perkins county, Neb. Fine farm land, all level, no sand; school on land, in a good farm settlement; land is selling from $25 to $30 per acre. Price, $17.50 per acre. Fred Blake, Jr., Hastings, Neb.

THIS FARM WILL SURELY SUIT you. It is well improved and all in crop, hay land and pasture. It makes big money every year. Notice the location—12 miles from O'Neil, 4 miles from Emmet, 7 miles from Atkinson, in the Elkhorn valley, on the river; railroad runs through it and school house on the farm; good five-room house, new barn 26x40 and lean-to whole length double corncrib. Price only $75 per acre. Terms, $5,000 cash, $15,000 at 1½ per cent and $4,000 6 per cent. Call or write W. P. O'Brien 410 Bee Bldg., Omaha, Neb.

Oregon

OREGON STATE PUBLICATIONS free. Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions—they will have painstaking answers. We have nothing to sell. Address Room 110, Portland Commercial Club, Portland, Ore.

LANDS—Oregon

TWO SPLENDID FRUIT-BEARING orchards. I own two 40-acre fruit orchards right on the edge of Medford, Ore.; one 40 with trees nearly five years old and one 40 with trees about four years old; they are all in fine condition and should come into bearing next year. These orchards are made up very largely of Bartlett pears and Newton Pippin apples, and are in a splendid position, both for horticultural development, and so far as the value of the property is concerned, as the orchards are right on the edge of Medford; as a matter of fact, the outer line of the city limits of Medford is a street which runs along the edge of the property. The state highway, cement paved, running from Seattle, Wash., to San Diego, Cal., passes through one portion of the first 40, separating four or five acres; property in back of us, with more matured trees, has brought as high as a thousand dollars an acre; one 16-acre orchard produced $19,000 in returns last year. This is considered one of the finest sections in all Oregon for fruit growing, but it is too far away for me to handle. Will sell or trade for Minnesota, Iowa or Wisconsin farm. W. T. Kester, Vice President. Lord & Thomas, Mallers' Bldg., Chicago, Ill.

Texas

SPECIAL INDUCEMENT TO ALL purchasers joining us November 3 to our new Catholic colony near San Benito, endorsed by Catholic Colonization society of United States; strictly first-class; price low; terms easy. Write for full particulars; good agents wanted. San Dominic Colonization Co. (Owners), 340 Brandeis Theater Bldg., Omaha.

Wisconsin

UPPER WISCONSIN—BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

Wyoming

BLACKBURN FARMS—BLACKBURN farms lie so that tractor plowing is easily and cheaply done. A farmer tends a half section there as easily as a quarter section in eastern Nebraska or Iowa. Their distance from Omaha is substantially the same as from Omaha to Denver, and only six or seven hours by auto to Denver. The Union Pacific at Laramie has scores of trains both east and west daily. The stock yards there feed in transit 10,000 cars of cattle, hogs and sheep per year. The Wyoming university and the local schools will be found a great aid in farming and stock raising aside from the education of the boys and girls of the community. The government forest reserve supplies practically free to the settlers all the timber needed for building, fencing, etc. There are various mines near, and there are promising indications of oil; in fact, boring is going on there now. With the best food, water and healthful surroundings stock raising is not only sure, but remarkably profitable. Big ranches in times gone by have made great fortunes. The water system of Blackburn Farms has been in continuous operation for over twenty years and the title to both land and water is perfect. These lands are offered by the actual owners, not agents. Settlement now is composed of farmers from Illinois, Iowa and Nebraska. Prices of land low and terms liberal. A few sections will be exchanged for Iowa and eastern Nebraska farms. Our illustrated booklet will interest you. Send for it; it's free. Laramie Development Co., Laramie, Wyo., or A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

GRAIN LANDS AND STOCK ranches in southeastern Wyoming at bargain prices and on easy terms. For particulars address Federal Land Company, Cheyenne, Wyo.

BARGAIN—IRRIGATED FARM, 160 acres under government ditch, 12 miles from county seat town of 3,000. Trading point 3 miles from land. Price, $25.00 per acre; includes permanent water right. Terms, one-fourth down, balance deferred payments if desired. This is a snap. Write owner, P. O. Box 55, Shoshoni, Wyo.

MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

GOVERNMENT FARMERS WANTED—Ages 21 to 50. Make $125 monthly. Write Ozment, 39-F, St. Louis.

25,000 RED CEDAR POSTS AND SEVeral hundred poles for sale. Let us quote you a delivered price to your station. Will ship subject to examination before payment. Farmers Co-Operative Co., Ltd., Clarks Fork, Idaho.

VIOLIN FOR SALE CHEAP, SENT on trial. Write Miss Bertha Mardiss, Route 5, Rosedale, Kan.

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YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business couse. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

U. S. GOVERNMENT USES RICHmond Chemical Extinguishers that kill gasoline fires; auto and factory sizes. District managers make 500 per cent profit; auto free. Richmond Chemical Co., Desk 39, Wheeling, W. Va.

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WE WILL PAY YOU $120 TO DIStribute religious literature in your community; sixty days' work; experience not required; man or woman; opportunity for promotion; spare time may be used. International Bible Press, 210 Winston Bldg., Philadelphia.

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FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned; are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

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PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., 808 F St., Washington, D. C. Established 1880.

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BLACK LANGSHAN COCKERELS. Write Jake Hetrick, Wahoo, Neb.

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SINGLE COMB WHITE LEGHORN cockerels, Young's strain, $1 to $6. Will Henderson, Central City, Neb.

ROSE COMB BUFF LEGHORN COCKerels. Clyde Freeman, Craig, Neb.

RIDGEDALE WHITE LEGHORN Farm—Cocks, cockerels, pullets, reasonable. Lee Schureman, R. 4, Lincoln, Neb.

BUFF LEGHORN COCKERELS, 5c. Mrs. Albert Nagengast, Howells, Neb.

SINGLE COMB, WHITE, BUFF, Brown, Leghorn cockerels from prize-winning strains. Prices reasonable; satisfaction guaranteed. Dr. J. C. Fraser, College View, Neb.

FOR SALE—COCKERELS, SINGLE Comb White Leghorns, March and April hatched. Ivar Johnson, Fremont, Neb.

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PRICE LIST FREE—SINGLE COMB Buff Orpington Toulouse geese, Indian Runner ducks. Peter Brehm, Harvard, Neb.

ORPINGTONS—BUFF OR WHITE. Stock for sale. Price list free. Frank Lewis, Gibbon, Neb.

BUFF ORPINGTON CHICKENS, $1 to $5. Mrs. Belle Merrick, Osceola, Neb.

SALE—ENTIRE STOCK KELLERstrass White Orpingtons. John McPherson, Geneva, Neb.

CRYSTAL WHITE ORPINGTON cockerels for sale; big stock. Send to J. Christensen, Colon, Neb.

S. C. BUFF ORPINGTON COCKERels from good stock. Write me for prices and guarantee. E. L. Woodcox, Willow Island, Neb.

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500 WHITE PLYMOUTH ROCK COCKerels, early hatched, large-boned, from high scoring stock, $1.50 each, or $12 a dozen. Charles A. Gabelman, Tilden, Neb.

BARRED ROCK COCKERELS AT farmer prices; none better; entire flock of White Wyandotte. Big bargain. Clarinda Duck Farm, Clarinda, Ia.

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FINE SINGLE COMB RED COCKerels; White Pekin ducks, $1 each. Amos D. Birky, Bancroft, Neb.

FINE, LARGE SINGLE COMB RHODE Island Red cockerels, $1.50 to $3.00. Mrs. Ed M. Kern, Stanton, Neb.

SINGLE COMB RHODE ISLAND RED cockerls, $1.25 each. Henry Barjenbruch, Leigh, Neb.

FULL BLOOD R. C. RED PULLETS, $10 per dozen; cockerels $2 each; guaranteed. Highland Farm, Hedrick, Ia.

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ROSE COMB WHITE WYANDOTTE cockerels, $1 each until December 1. Don't delay. Mrs. E. G. Witt, Campbell, Neb.

WHITE WYANDOTTE COCKERELS, early hatch; fine specimens; price cheap. Write your wants. L. Brown, Fairmont, Neb.

WHITE WYANDOTTE COCKERELS from prolific layers, $1 each. Mrs. Henry Wehling, Ewing, Neb.

Ducks

INDIAN RUNNER DUCKS. MRS. Derrick, Battle Creek, Neb.

INDIAN RUNNER DRAKES, FAWN and White, $1.50 each; trio, $4. Theo. B. Tiedje, Route 4, Orleans, Neb.

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BRONZE TURKEYS, $5 EACH. Write to Dewey Jameson, Amherst, Neb.

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EGGS! EGGS! EGGS! PARTRIDGE three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

FOR SALE—THOROUGHBRED TURkeys, geese, ducks, chickens, white and pearl guineas, bantams, dogs, hares, rabbits, cavies, pigeons. Wells wants. Free circular. D. L. Bruce, Platte Center, Neb.

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BIG BARGAINS IN ALL LEADING varieties chickens, ducks, geese, turkeys and guineas. Progressive Poultry Farm, Box 750, Hamilton, Ia.

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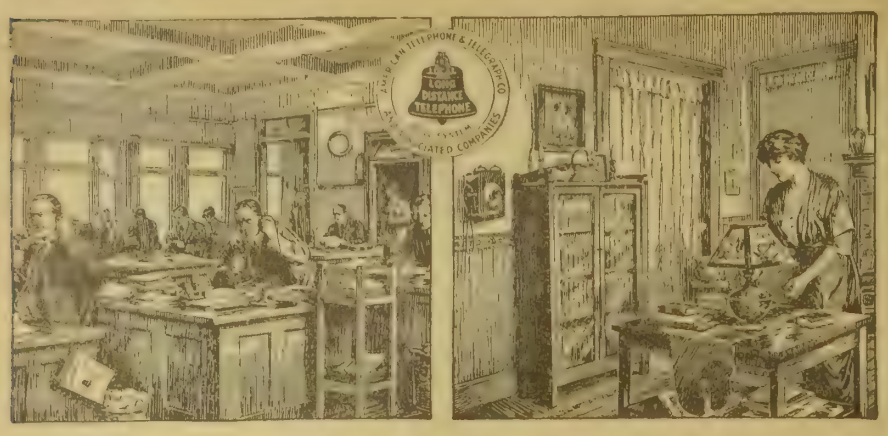
FERRETS—GOOD HUNTERS, RATters. F. Breman Co., Danville, Ill.



Fair Play in Telephone Rates

IT is human nature to resent paying more than any one else and to demand cheap telephone service regardless of the cost of providing it.

But service at a uniform rate wouldn't be cheap.

It would simply mean that those making a few calls a day were paying for the service of the merchant or corporation handling hundreds of calls.

That wouldn't be fair, would it? No more so than that you should pay the same charge for a quart of milk as another pays for a gallon.

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This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Swollen Udder

E. B., Nebraska: I have a Jersey cow that is a heavy milker. She came in the first of October and for three months averaged twenty-four quarts per day. I commenced to dry her August 1 and in about three weeks she was dry. In the evening I drew what little remained in her bag out and got up early in the morning to take her out to a pasture for a month's rest. I found one hindquarter swollen up badly, so I bathed it with hot water and then rubbed it with goose grease. I continued that treatment for a week, then a neighbor suggested I dock her on her feed and instead of greasing her udder use soap after the bathing. I used soap for a week and now I am using lard and turpentine. From the first I have given her a tablespoonful of saltpeter in a few handfuls of wet bran, both night and morning, nearly two pounds altogether. Twice during the three weeks her udder has been almost normal at night, but in the morning has been as hard as ever. There seems to be a hard substance from the top of the udder to the teat about as thick as my wrist, and all around the teat is hard and callous. I draw a few teaspoonfuls of yellow, watery fluid out every day. I went to our veterinary and he said he did not know of anything better than I was doing. I give her small heads of cabbage and green alfalfa, but she is bawling for more food. Can you tell me how to get rid of this swelling, as she is due to come in the first week in November? When I rope her in the barn I fancy it is worse than when I turn her in the orchard at night. Occasionally, when in full milk, one or other of her quarters will be very hard, but after milking I apply goose grease, and then in the morning it is all right, but the milk for that time is stringy.

Answer—There are two lines of treatment for these cases. One is to apply camphorated oil, giving the udder good massage at the time and keeping it milked out as thoroughly as possible. The other treatment consists of the injection of a solution of boracic acid, a teasponful to a quart of warm water and milking out in about two or three hours. Where there is much inflammation it is well to use a return flow teat tube and continue the injection for some considerable time.

Second Growth Cane

H. S., Nebraska: Have seen in your paper that farmers are asking questions, so I will ask regarding second growth of cane. I have five acres of sugarcane which I had cut before the rains and it has grown up a heavy second crop. Could I pasture this down, or would it hurt my cattle? I have been told by one man that it was the worst poison there was before it was killed by frost, so I wish you would inform me on the matter.

Answer—Pasturing cattle on second growth cane is a very dangerous thing to do, and the chances are if you try it you will lose some of your cattle. The reason is that there is often a poison in the second growth of cane. This poison is not always there, but it is so frequently that pasturing this crop is exceedingly dangerous.

Co-operative Associations

R. L. M., Nebraska: I am looking for a little information and can think of no better place to go than to you. The farmers around here wish to organize into a company for the purpose of buying and selling grain, and anything else they may see fit to do, such as hogs, flour, coal, produce, etc.

I thought I would ask your opinion as to whether it would be better for us to organize independently or to join one of the co-operative associations, and what is the best way to go about it? Where can we get copies of by-laws of other organizations?

I have read your paper for several years and like your articles very much, especially those on traction engines. I like the way you have backed the show at Fremont.

Answer—We are glad to receive this letter and to know that you are in sympathy with us. Such letters make our work a pleasure. We are sending copies of the constitution and by-laws of the Farmers' Educational and Co-operative Union of Nebraska. We believe this to be the strongest organization of its kind in the state, as the national association of which it is a part is the strongest of its kind in the United States.

In regard to independent organizations, we consider them only a little more effective than individuals. By organizing into large and well managed associations the farmers of this country will be able to hold their own in the economic struggle, and only in this way. If you want any assistance from the Farmers' Union in organizing, address their secretary, D. R. Ellis, Bee Building, Omaha. He will be able to give you any information or assistance you may require, and if there is anything further we can do for you let us know and we will be glad to be of service.

Sudan Grass in Texas

E. C. R., Texas: The negro, the diamond and certain grains introduced into this country from the Dark Continent may have proven to be of great value, but what promises to be the most valuable thing for the American farmer coming from Africa is a plant supposed to be the parent of the sorghum family, and a native of the Sudan country. It was discovered by the experts sent out by the United States Department of Agriculture searching all parts of the world for plants of value to the American farmer.

In 1909 a few seeds were sent to Texas and distributed among the several experimental stations under the general direction of the A. and M. college. The reports uniformly placed this new grass at the head of the list, and after being subjected to all sorts of severe tests it was pronounced superior to anything among the grasses. The Farmers' congress next passed upon it with enthusiastic favor, and soon every progressive farmer in the southwest was wanting the seed, which became so scarce that last year it sold for from $2 to $4 per pound. It is cheaper this season, with probably 1,500,000 pounds of seed grown in Texas. Everyone who grew it last season expects to sow it the next, so the demand is still on the increase in this and other parts of the country. Wherever tried it produces more and better hay to the acre than any other grass known, and it is expected to cover the entire country as no other grass has ever done. This year experiments have been made by agricultural stations from Maryland to Oregon with astonishing success. While it is presumed to grow more luxuriantly with a larger number of cuttings each season in the southern states.

Some of the best results have come from the northwestern states. It grows from four to ten feet high and yields from four to eight tons of dried hay per acre, making it very desirable for the stock raiser, and under ordinary conditions produces from 400 to 1,000 pounds of seed per acre.

This Sudan grass resembles the old-time Johnson grass in general appearance as well as the sorghums, but possesses all of their merits, with none of the objectionable features. Being an annual, it dies down every year, so does not become a pest, but may be grown where most desired. It matures in from sixty-five to eighty days from sowing and makes an abundant supply of excellent forage, silage and hay. All kinds of live stock prefer it to alfalfa hay and poultry like the seed. It is well adapted to the arid regions, does fine in the rain belt, prairie and hill country; in fact, seems to grow reasonably well in all kinds of soil in the south, east, north and west. It is indeed a wonderful grass and worthy of a trial by everyone, who can procure the seed. It is the grass that laughs at drouth and smiles at rain.

Wintering the Bees

(CONTINUED FROM PAGE FIVE.)

ble, keep the temperature at from 40 to 45 degrees. For this reason a garret or other indoor place where the temperature varies greatly and often is unfit to store bees in during the winter. For best results keep the place of storage quiet and dark.

It is best to allow bees a little exercise during the wnter months, when the weather will permit, but this is, of course, not practical with cellar storage, as the bees would not find the way back to the hives after leaving the cellar. But this question of plenty of sunlight and fresh air on warm days is an important one, and with a little watchfulness by the bee keeper he can choose those days which are best adapted to letting the bees out.

Unless great care is taken the bees will venture forth on some days that will prove disastrous to the colonies by many of the bees being frozen. I have seen them, on days that appeared very warm and bright, fly around a few minutes and perish before they could get back to the hive. Simply close the hives securely with a little strip of screen wire, removing this for the bees to come forth on days that are unusually warm and bright for winter. Because of the desirability of letting the bees out occasionally during the winter months proper storage outdoors would seem all the more desirable.

Other details must be given close attention in connection with the storage of bees. The hives should be examined once or twice a month to see that no mice or other pests can get into the honey. One also should ascertain about what amount of honey each individual colony is carrying, as it may become necessary to feed some of the smaller and weaker ones that have run out of honey. In doing this, however, great care must be exercised that the feeding is not done at a time and in such a place that it will not induce other colonies to rob the hives where the feed is placed. Merely close all hives at the time of feeding, and clean up any surplus feed left at the entrance after the feeding is done. M. COVERDELL.

Putting Stallions to Work

(CONTINUED FROM PAGE FOUR.)

upon a stallion is not sufficient to justify allowing him to stand in a hot box stall or in a little corral, rather than taking him out and putting him at hard work.

Just because a stallion costs a thousand dollars is no reason why he should be kept penned up and pampered. In fact, it should be all the more reason why he should be put right out and made to work. He will be less apt to contract sickness and will be a much surer breeder if he is put into the harness and kept there, with a careful driver every day that the weather is fit. A great deal of the popularity of grade stallions may be attributed to the fact that they are very sure as a class, and this sureness is at least partially due to the fact that they are worked in harness much more than the higher-priced registered horses.

Review of Live Stock Market

By A. C. Davenport

CONDITIONS surrounding the trade at the present time do not promise well for the immediate future of the cattle business.

A short time ago conditions all seemed to be favorable. Prices advanced under the influence of the decreased supply of available cattle in the country, and the upward movement of values continued even after the removal of the tariff on cattle and beef. High prices acted as a stimulant to increase production and farmers and range men began conserving their calves and breeding stock.

The present year started out under the most favorable conditions, cattle of all kinds selling on an average at exceptionally high prices, many kinds higher than ever before. The outlook for the future of the industry was most encouraging. During the last two months conditions have undergone a most decided change. Prices are still high, some kinds of cattle averaging higher than ever before at this season of the year, and still producers are losing their enthusiasm and their confidence.

The one great underlying cause is the foreign war which has brought about abnormal conditions disturbing and disorganizing business to an extent that is being felt all along the line clear back to the man who raises and fattens the cattle.

It seems like an anomaly that cornfed cattle are actually selling at a loss to the farmer at a time when prices are exceptionally high, but such is actually the case in many instances. Scarcity of money has of late been forcing a good many short-fed and half-fed cattle prematurely to market and these cattle, which were bought as feeders on a high market and fed high-priced corn, are not paying out in many cases. Such examples are highly discouraging to the men who would under other conditions feed cattle. After a man has sold out without a profit, neither he nor his neighbors are likely in the near future to try feeding more cattle. Other would-be feeders who have the required amount of confidence to feed cannot secure the money to buy the cattle.

Decreased Demand for Feeders

After these two classes, the men who lack the confidence and the men who lack the money, are eliminated, it is not surprising that a greatly diminished demand for feeders is noted at most market points. This in its turn has weakened the feeder market and is contributing toward a weaker beef market. However,

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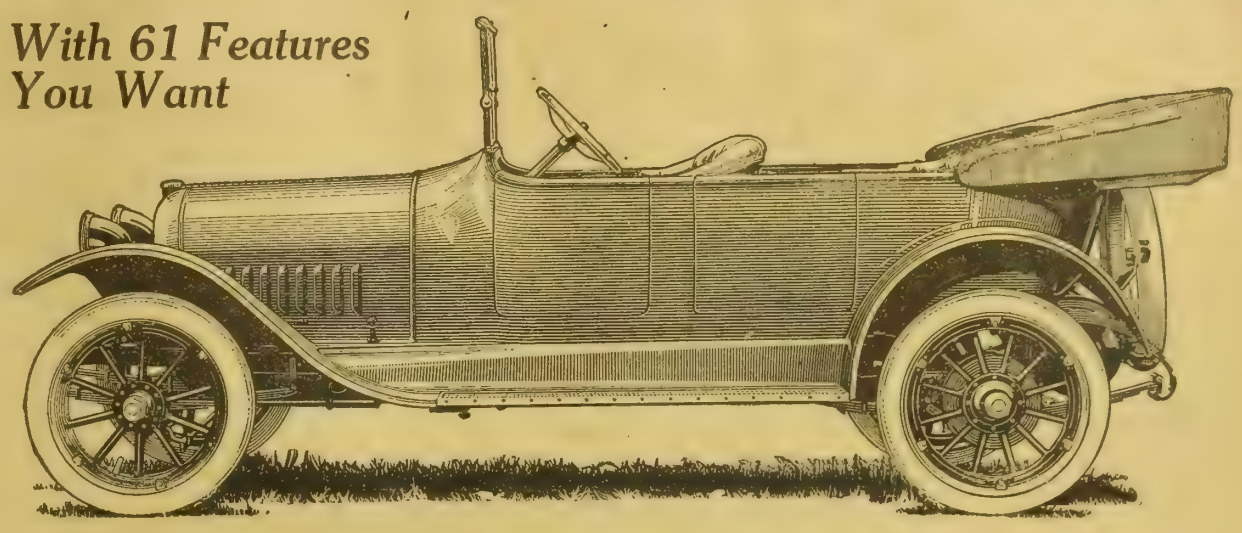

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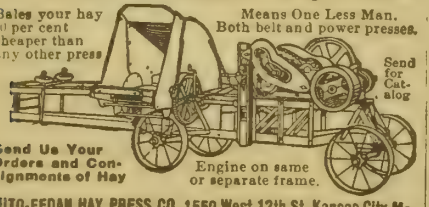

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Schultz' Duroc Boars

Spring boars for sale, sired by Golden Model 31st, King Cleatham and Gold Dust Jim. They are the big litter, big boned kind. Prices reasonable. GEO. W. SCHULTZ, Yutan, Neb.

HAMPSHIRE HOGS

Fisher's Hampshire Sale

AT WAYNE, NEB., NOVEMBER, 7, 1914

Forty boars and ten sows and gilts will be offered in this sale. Sired by Messenger Boy, High Roller, De Kalb's King 60th, Tatro's Messenger and Winside Star. My herd won sixteen champions and grand champions, fifty-four firsts, ninety-five second and twenty-six third prizes this year. If you are looking for forty five second and twenty-six third prizes this year. If you are looking for

ROY FISHER, Winside, Neb.

the packers are having their troubles to account for most of the weakness in fat stock. They are contending with a diminished consuming demand for beef and are also feeling the money pinch the same as the producer, being forced to pay higher rates than ever before for money with which to carry the product

There is no mistaking the fact that weakness has been the dominant note of late in the cattle trade and has been of a kind, and has come at a time to discourage the men who must be depended upon to produce the fat beeves for the late winter, spring and early summer. Right here is where the assertion made at the beginning comes true, that present conditions do not promise well for the immediate future of the cattle business.

The near future of the market is enveloped in uncertainty. Range cattle are coming forward quite rapidly and in the course of the next four or five weeks will be pretty well out of the way. As they become less plentiful it would only be reasonable to expect a better market for the cornfeds. On the other hand, should the scarcity of money force feeders to hurry their cattle to market prematurely, as is the tendency at the present time, prices might not show the desired strength. With conditions the country over normal, one might confidently predict a better market as soon as the rangers let up, but with world-wide conditions abnormal it is impossible to venture even a guess.

One thing is practically certain and that is that there is bound to be a shortage of beef next spring as compared with previous years. Whether there will be a shortage as compared with the consuming demand must depend very largely upon the general business conditions of the country. If business is good and the people well employed and prosperous, with money reasonably plentiful, it would be only reasonable to expect a consuming demand large enough to make any possible supply of beef cattle look small, but there is that big "if" that no one at the present time can remove.

Downward Trend of Hogs Continues

The situation as regards the hog market has shown little or no change from what was outlined in these columns a week ago. The downward movement in values has continued, although the drop has not been as rapid as has been the case some weeks. There is still a feeling that the same lack of support that caused the market to decline $1 per hundred during September and an additional 75 cents during the first half of October might bring about a still further decline. This is made more likely by the fact that all indications seem to point to largely increased receipts of live hogs at leading market points within the near future. As pointed out a week ago, any change in the general situation that would bring about an increased consuming demand in the south or an increased export demand would naturally have a large influence in the way of checking the downward movement in values. Up to the present time the something that sellers have been hoping for has failed to come to their relief. Usually at this season of the year the packers are swinging the big club and putting forth every effort to break the market down before the opening of the winter packing season. This year it has apparently required very little if any effort on the part of the packers, as the market has simply fallen from its own weight and from lack of buying support.

The sheep trade has been in a good, healthy condition all the week, there having been comparatively little change either in prices or in the general condition of the market for some little time back. That is not all, operators as a rule are not anticipating any great change for the near future. There is a fair demand on the part of packers for fat stuff. Buyers on feeding account seem willing to pay around $6.75@7.00 for lambs on the basis of Omaha, but do not show any inclination to go much above those figures. On the other hand, any movement of the market below these figures brings increased orders that restore prices speedily, thus tending to hold the market very nearly stationary.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

International Entries

Breeders who expect to enter animals in the International Live Stock show at Chicago will do well to remember that all entries close on November 1. Make your entries before that time.

Our Cover Design

Our cover design this week represents one of the splendid stallions imported last year by Wolf Bros. of Albion, Neb. This horse weighed a ton at 2½ years of age and is an outstanding individual. He was sold to Charles Smith at Edholm, Neb., for $2,500.

Fisher's Hampshire Sale

On November 7, at Wayne, Neb., Roy Fisher of Winside, Neb., will hold his annual fall sale of Hampshire hogs and will put up one of the best offerings he has ever made. The offering will consist of forty boars and ten sows and gilts. These are sired by Messenger Boy, High Roller, De Kalb King 60th, Tatro's Messenger, Winside Star, grand champion boar at Sioux City and other places. Mr. Fisher has one of the best Hampshire herds in the west. We can cite no better evidence of this fact than the magnificent winnings he has made at the different live stock shows of the country. During this year alone he has won sixteen championships and grand championships, fifty-four firsts, forty-five seconds and twenty-six thirds, or a grand total of 198 ribbons in all. Guess this looks as if he had just about cleared the platter. If you are looking for Hampshires of the right kind, here is an opportunity to get what you want. Write Mr. Fisher for catalogue, mentioning the Twentieth Century Farmer.

Lemmerman's Immune Durocs

Parties who are in the market for a Duroc-Jersey boar will do well to get in touch with F. A. Lemmerman at Creston, Neb., for a catalogue of his sale of immune Durocs, which will be held at his farm near that place on October 27. The value of buying an immune boar or an immune sow is recognized by nearly everyone at this time, and the fact that every animal in this sale is immune should be one feature that should recommend it to prospective buyers. Not only is this true, but the line of breeding represented in this herd is good enough to stand right up alongside of the very best herds in the country. The offering will consist of thirty-four spring boars and six fall boars. Twenty head of the spring boars are sired by Mr. Lemmerman's splendid breeding boar, Crimson Critic, son of the grand champion, Critic B. Besides these, there are litters sired by Golden Model 31st, Colonel Chief, King the Colonel and others. Fall boars are a strong, rugged lot and are sired by Creston Model. Mr. Lemmerman has one of the best arranged hog farms in northern Nebraska and has ample facilities for taking care of his hogs and growing them out in the manner best suited to enhance their future usefulness as breeders. In writing Mr. Lemmerman kindly mention the Twentieth Century Farmer. If you are unable to attend this sale, send your bids to G. E. Hall of this paper and they will be carefully looked after.

Rapp Bros.' Shorthorns

Twenty bulls, twenty cows with calves at foot, twelve yearling heifers and the balance cows well along in calf, enough in all to make seventy head, is the quota of Shorthorn cattle to be offered in the sale of Rapp Bros. at St. Edward, Neb., on October 29. This will be one of the most important Shorthorn sales to be held in this locality this season. It will contain a class of cattle that are meritorious, not only from the viewpoint of breeding and individuality, but also from the fact that they are a working lot of cattle. The remarkable winnings this herd has made at the leading shows of the country within the last few years is ample evidence of the class of cattle Rapp Bros. are producing. We wish to place stress on the word "producing," because the cattle that they have been showing are the actual products of their own herd, and we believe we are safe in saying that this herd has won more ribbos at the leading shows of the country than any other herd in the west. Among the twenty head of bulls there are several of herd-heading character; in fact, good enough to go to the head of any pure bred herd. Besides these, there are also a splendid lot of big, strong, rugged farm and range bulls. The cows with calves at foot and those well along with calf are a big, strong, scaly lot of individuals, representing the very best Scotch families of the breed. The cows are mostly in calf to their splendid breeding bull, Village Pride. Space will not admit at this time of any extended mention, but we want to say that if you attend this sale you will not be disappointed. When you buy anything from Rapp Bros. you can figure that you are going to get just exactly what you buy, for an animal has got to be right in every way before he will be offered for sale by this firm. Catalogues are now ready and may be had by writing Messrs. Rapp Bros. of St. Edward. Kindly mention the Twentieth Century Farmer when writing.

Schultz Offers Durocs

George W. Schultz of Yutan, Neb., is starting an advertisement in this issue in which he is offering Duroc-Jersey males for sale. We saw these boars some time ago, and must say that we consider them to be the best lot of boars we have ever seen on this farm, and this means something, because Mr. Schultz has produced some very good ones in the past. They are big, growthy individuals, carrying the very top lines of the breed. There is one litter sired by the champion, Golden Model 31st, that are just simply good. There are ten pigs raised in this litter, and among them are several boars of exceptional merit. Another extra good litter of ten raised is sired by Gold Dust Jim. There are also some mighty good boar prospects in this litter. The larger part of his pigs, however, are sired by King Cleatham, a splendid breeding son of Cleatham's Pride. Look up Mr. Schultz's ad and write him for further particulars, mentioning the Twentieth Century Farmer.

Immune Duroc Offering

This is the last call for the sale of Duroc-Jersey boars to be held at Wisner, Neb., on October 31 by Robert Leisy of that place. This will be one of the top boar offerings to be made in Nebraska this year. With very few exceptions it is one of the most uniform lots of boars we have seen sold in a long, long time. Mr. Leisy in this offering again, by the stuff he is putting up, asserts his right to be classed as one of the genuinely constructive breeders of the west. His offerings for the last several years would take rank with almost any in the country for size, bone, stretch, quality and smoothness. His offering at this time consists of four boars by Golden Model 31st, four by Chief Model, two by Wallace's Sensation, one by Van Patton's Chief, eight by Colonel 2d, the boar that sired the second prize male pig and the fourth prize sow pig at the Nebraska State fair this year, and was also a strong winner himself at he different fairs this fall. There is also one boar by Model Colonel, second prize boar at Lincoln last year; four by Colonel Chief, one by Model Goods 2d, two by Valley King, one by Select 2d, three by Crimson Wonder 10th and two by Goldenrod Hero. These boars are out of dams sired by such boars as Uneeda Crimson Wonder, Model Boy, Crimson Wonder Sensation, Golden Model 15th, Invincible Chief, Prince Muncie Colonel, Queen's Wonder, Crimson Wonder Select, Belle's Echo and Valley King. If you want a herd boar, here is a mighty good place to go. We will guarantee that the offering will speak for itself on sale day. The catalogues are now ready and may be had by writing Mr. Leisy. G. E. Hall will represent this paper and will be glad to take care of any bids for parties who cannot attend. Kindly mention the Twenfieth Century Farmer when writing.

Wille's Immune Polands

With this issue of the Twentieth Century Farmer we are starting an advertisement for Fred Wille, the well known breeder of Poland-China hogs at Columbus, Neb. Mr. Wille's herd is well known for the class of big, smooth, heavy boned Poland-Chinas of quality that have come from it and gone into other herds. He has a splendid lot of spring boars to offer for sale at this time that certainly ought to attract the attention of anyone wanting something in this line. These boars are not overloaded with fat, but are in just good breeding condition. He has five good litters sired by Long Wonder 2d. In this connection we want to say that we consider Long Wonder 2d to be one of the best young boars in service in Nebraska today. He is 18 months old now and weighs 1,700 pounds, with a length, heart girth and flank measurement of thirty inches. This boar is a comer, and anything sired by him is going to be a mighty valuable asset in the future. Mr. Wille also has a number of litters by Wayside Jumbo and Wayside Jumbo 2d. Among those sired by Wayside Jumbo is one litter of twelve pigs, ten boars raised. They are full brothers in blood to Wayside Jumbo 2d and will make just such boars. They are long, wide-backed fellows with heavy bone. They are out of the dam, Wilkes 1st, she by Exception Look, he by old First Look. Besides the spring boars, Mr. Wille also has four big, smooth fall boars left sired by Wayside Jumbo 2d, and he is pricing them worth the money. Remember these boars are all immune. Write Mr. Wille for further information, mentioning the Twentieth Century Farmer.

DUROC-JERSEY HOGS

I HAVE THE GOODS

Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

BOARS! BOARS! BOARS!

Several fall boars and a few choice spring boars for sale, sired by BELLE'S CRIMSON WONDER, COL. CHIEF, GOLDEN MODEL 4th and BELLE'S BIG WONDER, out of Crimson Wonder bred dams. I am offering these boars at bedrock prices for quick sale. **A. E. BARNES, Petersburg, Neb.**

IMMUNED DUROC BOARS.

I am offering an exceptionally strong lot of Duroc Jersey boars for sale, largely of Crimson Wonder and Golden Model breeding. They are the best lot I have ever offered and are being priced worth the money.
E. R. DANIELSON, Osceola, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

MR. DUROC BREEDER

Are you on the market for a herd boar? If so, write me just what you want. I have them sired by Lucy's Select, Proud Wonder Jr. and other top boars of the breed. **L. J. KUZEL, CLARKSON, NEB.**

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.

F. E. MERRICK, OSCEOLA, NEB.

BIG SMOOTH DUROCS

Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.
HENRY KOEHLMOOS, Pilger, Neb.

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.

GEO. W. SCHWAB, Clay Center, Neb.

CEDAR'S DUROCS

The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.

P. P. CEDAR, GENOA, NEB.

HEKRDLE'S DUROC BOARS.

I have the best lot of spring boars for sale that I have ever produced. Sired by A. A.'s Model and Beauty's Wonder. A combination of the Crimson Wonder and Golden Model blood lines. Correspondence solicited. A. A. Hekerdle, Stanton, Neb.

35 TOP BOARS

35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st. Prince Munice, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

DUROC HERD BOARS

Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd headers I have them. They are out of prize-winning sires and dams. **Clarence Wallace, Wisner, Neb.**

POLAND-CHINA HOGS

McCULLOUGH'S BIG POLANDS

We have a splendid lot of Poland-China spring boars for sale. Sired by Smooth Big Bone, Columbus Again and Expansion Again. These boars have been grown right. They are big and smooth with lots of bone. For particulars write **O. J. McCULLOUGH, CLARKS, NEB.**

POLAND-CHINA HOGS

IMMUNE POLAND-CHINAS

A choice lot of Poland-China spring males for sale. Sired by Blue Valley Oak. They are the big kind, with quality. Everything immune. Prices reasonable. JOHN NAIMAN, Alexandria, Neb.

Immune Poland-China Boars

Splendid lot of big, smooth spring boars, sired by BLUE VALLEY, COLUMBUS WONDER and BLUE VALLEY ORANGE. If you want herd headers with size and quality, we have them. **THOS. F. WALKER & SON, Alexandria, Neb.**

JERSEY CATTLE

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and yearly milk and butter records. HAL C. YOUNG, Lincoln, Neb.

RED POLLED CATTLE

Both sexes; good as any in America. Call or write me your wants. W. F. Schwab, Clay Center, Neb.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

In Holland the average yield of milk per cow is 10,000 pounds; in this country it is under 4,000 pounds. That's why dairying is more profitable there than anywhere else in the world, despite the high cost of land and feed and the fact that prices received for dairy products are no greater than in America.

The Hollanders depend upon the Holstein-Friesian cow. Does the experience of this nation of dairymen mean anything to you? Get more reasons why you should use pure-bred registered Holsteins.

Send for **FREE** Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Secy., Box 179, Battleboro, Vt.

O. I. C. HOGS

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN RFD 19 Portland, Mich.**

HAMPSHIRE HOGS

HAMPSHIRE BOARS

Hampshire spring boars for sale; sired by De Kalb's King 100, a son of the famous Major. They are very growthy, and all priced to sell. Also have Aryshire bull calf for sale.
WILLIAM PAMP, Benson, Neb.

FISHER'S HAMPSHIRES

25 fall boars and 25 spring boars for sale. Sired by Winside Star, Fisher's King 5th, Tatro's Messenger and Paulsen's Choice. Prices reasonable.
ROY FISHER, Winside, Neb.

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.
A few good sons of King Segis Lyons are still left.
DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

LEMMERMAN'S DUROC SALE

AT

Creston, Neb., Oct. 27, '14

40 Head-- 6 Fall Boars 34 Spring Boars --40 Head

Twenty head of these boars are sired by CRIMSON CRITIC, a son of the champion, CRITIC B. Others are by GOLDEN MODEL 31st, COLONEL CHIEF, KING THE COLONEL and others.

The fall boars are all by CRESTON MODEL by BLUE RIBBON MODEL. These boars are strong boned, strong backed individuals and have been grown with the idea of their future usefulness as breeders. They are bred in the purple. And along with all this, they are IMMUNE. Write for catalogue.

Auct.—Col. Ray Page.
Fieldman—G. E. Hall.

F. A. LEMMERMAN, Creston, Neb.

GREAT SHORTHORN OFFERING

70 Head-- 20 Bulls, 20 Cows With Calf at Foot, Balance Heifers or Cows Well Along in Calf... --70 Head

AT

St. Edwards, Neb., October, 29, 1914

This sale represents the natural increase from our herd of 200 head. They are the working kind and will go out and make good. There are a number of SCOTCH BULLS of HERD HEADING character and also a lot of big, strong RANGE BULLS. 20 cows have calves at foot and the balance of breeding age are safe in calf, mostly to our great herd bull, VILLAGE PRIDE. We have never sold a more highly useful offering.

Auct.—Col. Fred Reppert.
Fieldman—G. E. Hall.

RAPP BROS, St. Edwards, Neb.

Duroc Herd Boars

35 Head of IMMUNE Duroc-Jersey Boars of March Farrow to Be Sold at

Wisner, Neb., Oct. 31, 1914

This will be strictly a herd boar sale, and one of the biggest, smoothest, growthiest, most uniform lots of boars ever offered from this herd. There are quite a number of strictly herd heading character. They are sired by CHIEF'S MODEL, MODEL GOODS, GOLDEN MODEL 31st, VALLEY KING, WONDER COLONEL, PROUD COLONEL Jr., CRIMSON WONDER 10th, WALLACE'S SENSATION, COLONEL CHIEF, COLONEL 2d and others. Their breeding is right, and they are the big, smooth, strong backed, heavy boned kind. Besides they are IMMUNE. Catalogues are ready for distribution.

Auct.—Col. N. G. Kraschel.
Fieldman—G. E. Hall.

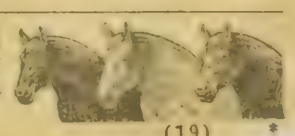
ROBERT LEISY, Wisner, Neb.

AYRSHIRES

WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. **LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb.**

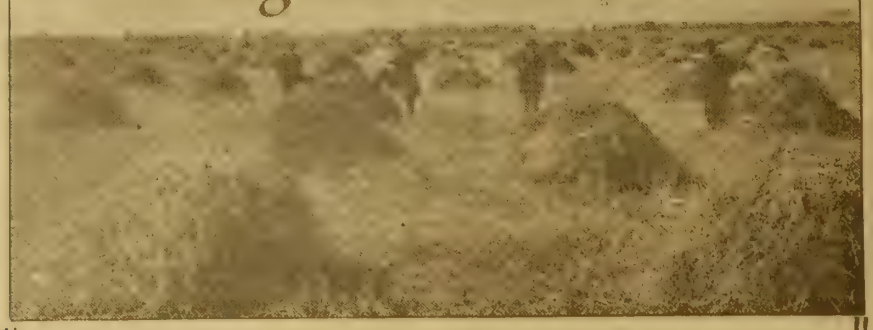
PERCHERON HORSES

At ordinary prices, farm-raised registered Percheron studs—1, 2, 3 and 4 years old. Kind disposition because well cared for. You would admire their big bone first, then their immense weights, because they are developing big like their imported sires and dams. And you will receive true old-fashioned hospitality on your visit at Fred Chandler's Percheron Farm. Just east of Omaha.



FRED CHANDLER, Route 7, CHARITON, IOWA.

Our $60 land pays big interest on $200!



OATS AND PEAS ON LAND NEWLY SEEDED TO ALFALFA. THIS ALFALFA WILL PAY BIG INTEREST ON $200 PER ACRE.

The above is a picture taken on land sold by us to Wm. Taylor of Howells, Neb. It was raw land in 1912. Mr. Taylor expected to improve this land himself when the purchase was made, but unexpectedly he was prevented from doing so and hired the land brushed and plowed, which cost $4.50 per acre, after which he leased the farm on shares and seeded it to alfalfa. Mr. Taylor visited the farm this fall and this picture was taken at that time. (Mr. Taylor is the third man from the left.) We always feel at liberty to refer to any one who has bought land of us as to the merits of our proposition. Mr. Taylor owns a large farm near Howells, Neb., and is one of the most substantial and reliable citizens of that community.

The results obtained by Mr. Taylor show what can be done by any one if they do not live on the land. It also proves how easily the raw land can be made into a highly productive farm before the purchaser moves on to it for a home.

REMEMBER, the San Luis Valley produces the largest crops of Wheat, Oats, Barley, Peas, Potatoes, and all root crops of any land in the United States; also alfalfa from 4 to 6 tons per acre. HOGS are raised for half what they cost in the middle west and are free from sickness. CATTLE are also raised cheap and need no shelter in the winter season.

Buy a farm of us and you will be near a GOOD TOWN; among GOOD NEIGHBORS, in a HEALTHY CLIMATE, and drink pure ARTESIAN WATER, and you will MAKE MONEY. We even GUARANTEE that you will MAKE MONEY.

GUARANTEE

Any purchaser of our land who will put it in cultivation, and should for any reason become dissatisfed within three years, we will guarantee that he can sell the land for at least $15.00 per acre more than the purchase price.

PRICE from $50 to $60 per acre, including sufficient water for irrigation, water paid for in full. A small payment down, balance on long time.

Excursion rates the first and third Tuesdays of each month.

Write at once for any further particulars.

San Luis Valley Irrigated Land Co.

712 Omaha Nat'l Bank Bldg. Omaha, Neb.

(201)

Ship Your Cream to the Blue Valley Creamery Co.

And Cut Out the Useless and Expensive Middleman

The farmer who sells his cream to a midleman pockets a loss that is wholly unnecessary. You farmers who raise cows and produce cream and who operate dairy farms, are entitled to a steady and reliable market which pays you every penny of profit possible for the work you and your cows do.

The Blue Valley Creamery Company pays the **highest prices for butter fat twelve months in the year.** It can afford to do so because it makes the best butter in the world, sells it to the highest class and most discriminating trade in America and gets the highest prices for it.

The original value of a can of cream suffers no shrinkage when shipped to the **Blue Valley Creamery Company.** There are no commissions to be deducted. There are absolutely no risks to run. You have a firm of world-wide fame to deal with and your transactions are always direct and safe.

The Middleman is a perishable institution. He lives off your labor. He is irresponsible because he adds nothing to the value of your product and you keep him alive by sacrificing **a certain fixed portion of your profits** on every can of cream you produce. He sits around waiting for you to do your work, then he buys your cream at a reduced price and makes the difference when he sells it to some one else. **This difference belongs to you** and you let go of it for no sane reason under the sun.

If your business is worth following at all, it is worth following right. You ought to follow it in a business way. You—and you alone—are entitled to all the profit there is in it. And you know as well as we do that it isn't good business to sell cream at a loss to a non-producing Middleman when it is easier and safer to sell to a high-grade and reliable market like the **Blue Valley Creamery Company** which is able and willing to pay you every penny of profit you are entitled to.

The irresponsible Middleman can't pay you the prices that we do. He's got to have something for himself. **And it's got to come out of your profit.** You go to a lot of trouble to serve him and he doesn't do one earthly thing to earn his money. He simply lives off of you and your cows. Don't you think you pay a mighty high price for a luxury like the idle Middleman?

Ship a can of cream to the Blue Valley Creamery Company today and try it out as a market. Pay particular attention to the money you save and the extra profit you make. And always remember that you are shipping to a reliable firm that has the highest standing possible in business circles. You have nothing to lose by such a trial. You have everything to gain. And it is the very simplest thing in the world to do. All you have to do is to direct the can to us and ship it on any passenger or express train that stops at your station.

***Remember this, farmers and dairymen*—the smart** business man always seeks the most reliable and profitable market. You farmers are business men and you ought to follow the teachings of good business. Quit fooling with the Middleman and ship your cream to us. Begin today and start at once reckoning your increased profits.

How to Ship Your Cream to a Blue Valley Creamery
OUR GUARANTEE

You take no risk in shipping your can of cream to a Blue Valley Creamery. You are sure of the money for your cream and our binding guarantee insures the return of your empty can. No farmer has ever failed to get his pay for his can of cream during all the years we have been in business. We are proud, and we think justly so, of this record and it is worth a great deal to the farmer who is looking for a high price cream market and one that is at the same time reliable.

We have thousands of letters on file in our offices from shippers. We'll send you copies on application. Each is a glowing recommendation of the Blue Valley System.

Cream is always shipped by baggage or express and low shipping rates have been fixed for 5, 8 and 10 gallon cans. The shipping charge includes the return of your empty can. Ask your local express or railroad agent about rates to our nearest creamery. If he can't give you the rates just drop us a postal card and we will see that he is informed. Our wagons meet all trains. Ship on any train that carries express or baggage.

Write for printed shipping tags or use an ordinary shipping tag and address it to the nearest Blue Valley Creamery. Be sure your name and address is on the tag and turn the can over to the transportation company. We will do the rest.

Write today, for our handsomely illustrated and interesting short story, entitled, "The Fable of the Cow." It is free for the asking. **Ship a can of cream to us today and try the Blue Valley System. Address our nearest creamery.**

Blue Valley creameries are located in wholesale market centers where there are a number of railroads, thus enabling each creamery to get a large volume of cream within a reasonable shipping distance and serve a large number of cream producers. Creameries are located at Chicago, Ill.; St. Joseph, Mo.; Indianapolis, Ind.; Sioux City, Ia.; Detroit, Mich.; Grand Rapids, Mich.; Hastings, Neb.; Parsons, Kan.; Springfield, Ill.; Clinton, Ill.; Cedar Rapids, Ia. Ours is a business creamery system built up to meet hand separator conditions, thereby paying highest prices for cream.

Yours truly,

BLUE VALLEY CREAMERY CO.

BLUE VALLEY CREAMERY CO. X-31

Gentlemen:—Send me FREE, copy of "The Fable of the Cow."

Name.....

Address.....

Rural F. D. Route.....

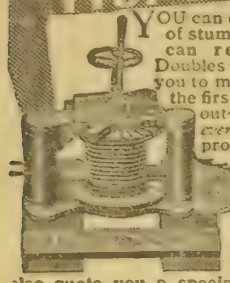
1914

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, October 31, 1914 | Number 725

Pull 100 Stumps A Day—With The Hercules

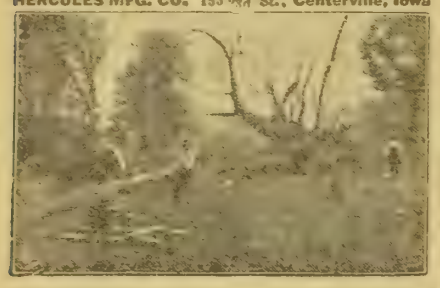


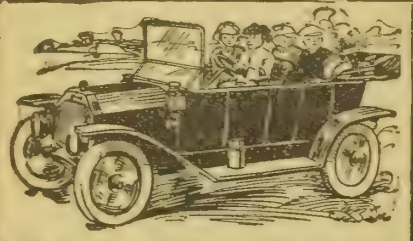
YOU can clear an acre or more of stumps a day No stumps can resist the Hercules. Doubles land value—enables you to make $1200.00 on 40 acres the first year after stumps are out—and $750.00 in crops *every* year after. Get the proof. Why not

Write Us Now

Book tells all the facts—shows many photos and letters from owners—tells all about the many Hercules features. We'll also quote you a special money-saving price proposition that *will interest you.* Address

HERCULES MFG. CO. 155 9th St., Centerville, Iowa





Own an Auto Without One Cent of Cost

Easy Plan — No Money

Your name and address will bring you full information about the most wonderful offer you have ever received. You can actually become the owner of a fine 1915 model touring car without having to spend one cent for it. We send it FREE of all cost FREIGHT PREPAID.

The only thing we ask of you is a few hours of your spare time introducing our proposition in your territory. Wouldn't you feel more than repaid to receive an auto in such an easy manner? Just think! It is now possible for you to have a car of your own. No need to worry about not being able to afford it. We give you an opportunity to earn it. No money needed. Send for full information. It is worth your investigation. A postal will do. Send it today. Address,

W. W. RHOADS, Manager
Dept. T. C., 334 Chamber of Commerce Bldg.
OMAHA, NEBRASKA

Long Life Fence

Square Deal Fence is made from wire we draw in our own mills, galvanized heavily to prevent rust, built for long life from start to finish. Stay wires one-piece, tied to strand wires with the lock you see below—

SQUARE DEAL

FENCE—

always stands trim and taut—is easier to put up—costs less and lasts longest.

Landowners should write for our free farm book and receive Free a 160-page [illegible] proposition. Also free. Write

Keystone Steel & Wire Co., 1664 Industrial St., Peoria

PATENT YOUR IDEAS

$9,000 offered for certain inventions. Send "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. Patents advertised for sale at our expense in Manufacturers' Journals.

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Est. 15 Years
958 F. Street, Washington, D. C.

When writing to advertisers please mention Twentieth Century Farmer.

Prattle of the Youngsters

Where It Works

A teacher asked a little girl:

"What is the office of the gastric juice?"

"The stomach," she said.

Help Needed

A little girl went out on her back porch one morning and found that a chunk of ice left by the iceman was nearly all melted.

"The ice is about all drowned," she told her mother.

Carefully Counted

Father and the three children were to give mother a birthday gift in combination. The youngest child was selected to make the presentation address. She prepared for it carefully, and thus delivered it in due season:

"Dear mamma, this gift 's presented to you by your three children and your one husband."

Voice of Experience

The Sunday school teacher was talking to her pupils on patience. She explained her topic carefully and, as an aid to understanding, she gave each pupil a card bearing the picture of a boy fishing.

"Even pleasure," she said, "requires the exercise of patience. See the boy fishing; he must sit and wait and wait. He must be patient."

Having treated the subject very fully, she began with the simplest, most practical question:

"And now can any little boy tell me what we need most when we go fishing?"

The answer was quickly shouted with one voice:

"Bait."

Dangerous

"You'd better not eat any of that red pepper, Aunt Mary," said small Alice. "Grandmother says red pepper kills ants."

His Noble Ambition

"And what, my dear boy," asked the minister, "do you intend to be when you grow up?"

"A farmer, sir."

"Very good, indeed—to supply the natural food—most good."

"And you?" turning to the second.

"Please, sir, a schoolmaster."

"Even better. Filling the mind of the rising generation with mental food—yes, even better."

"And you?" turnng to the third.

"A preacher, sir."

"The best of all, my dear little boy; for filling the soul with spiritual food is far worthier than either filling the mind or body. And why do you wish to become a minister?"

"'Cos we always have duck for dinner when the parson comes," replied the boy.

Bright and Breezy

Selected Material

"Why should we not expect a teacher to make good 100 per cent of the products she turns out as much as a glove manufacturer?" asked a superintendent.

"Because," replied a teacher, "he can select his kids."

Probably True

Two Pullman porters, representing different railroads, met off duty and progressed from friendly gossip to heated argument. Their quarrel centered about which one worked for the better road. At last the tall, thin porter settled the dispute with these classic words:

"Go on, niggah; we kills mo' people den you fellahs tote."

She Sure Was

The two oldest inhabitants were very ignorant, neither of them being able even to tell the time of day. A friend of Uncle Ben's gave him a watch, of which he was very proud. One day, before the crowd at the corner store, old Pete, being slightly jealous of such wealth and wishing to embarrass his rival, said:

"Say, Ben, what time have you got?"

The other old fellow drew out his watch and turned its face toward his inquisitor.

"There she be!" he exclaimed.

Pete was almost at a loss, but he made a magnificent effort and retorted:

"Blame if she ain't!"

She Was Wise

A student took a lovely young woman to the theater the other night. He busted himself buying the tickets and he didn't enjoy the show much, because he kept thinking that maybe she would expect him to take her into the drug store and buy her something before they took the car for home. So soon as the performance was over he said:

"Have you been reading all these dreadful exposures of drug store beverages in the Home Muckraker? It's awfully interesting. Dr. Wiley tells of how a young woman went to a soda fountain, drank a popular drink and dropped dead."

"How tragic!" murmured the girl, with shining eyes. "Let's you and I go in and take a drink and die together! Won't that be romantic?"

Poor Teacher

A county superintendent in the state of Washington set her heart upon having a decent place for every rural teacher to board or live. The director would do nothing about it. The place where the teacher boarded was "good enough for her." The teacher was a worthy and attractive lady.

"Take her to your home."

"What! Do you think we want a stranger sitting round the fire with us every evening?"

"You can give her a warm room and I will guarantee that she will stay in her room and not bother you at all."

"Too good to sit with us, is she? I'll never have a woman teach in this district who is to stuck up to sit with my family."—Journal of Education.

KRESO DIP No. 1

STANDARDIZED.

EASY AND SAFE TO USE INEXPENSIVE

KILLS LICE

ON ALL LIVE STOCK

DISINFECTS.
CLEANSES.
PURIFIES.

It has so many uses that it is a necessity on every farm.

USED IN THE TREATMENT OF MANGE, SCAB, RINGWORM, SCRATCHES, ETC.

Destroys Disease Germs

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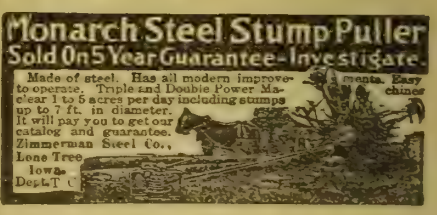

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The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Nebraska Voters Must Decide Big Question

By George Goupland and F. L. Haller, Regents of University of Nebraska

VOTERS of Nebraska in a few days will be called upon to decide the question as to whether the State university is to be permanently developed upon the city campus in Lincoln by the acquirement of more land adjacent thereto, or whether the whole institution shall be consolidated with the Agricultural college upon the state farm.

As the law now stands, which provides the money in the event of consolidation, all of the tax which has been voted by the legislature will be used for the purpose of building up a unified university upon the state farm.

Should the voters, however, decide to separate the Agricultural college and develop it as a separate institution upon the state farm, then one-third of the tax is to be used for that purpose and two-thirds will be used for the purchase of more property contiguous to the city campus and the erection of new buildings thereon. It is estimated that the tax voted will yield $2,500,000.

Element of Personal Gain

During the last few months there has been a very determined effort made by a committee having its headquarters in Lincoln and largely financed by Lincoln business interests to make the taxpayers of the state believe that it would be wasteful of the public money to consolidate the university with the agricultural college at the state farm. Large sums of money have been spent for that purpose, mostly subscribed by those who think it would be detrimental to their private interests for the state to consolidate the university at the state farm. Statements which misrepresent the facts have been printed and scattered broadcast over the state and the boast made that university removal is defeated.

We are very certain that the average voter in the state is anxious to do the wise thing when he comes to vote upon this question and that the element of personal gain or advantage shall not be permitted to take prior right over the public good.

Private Interests at Work

It is a notorious fact that if it had not been for the selfish interference of certain Lincoln interests the two last legislatures would have voted to consolidate the university at the state farm. Insidiously and continuously these interests have labored, and are laboring, to defeat what they consider to be detrimental to their private interests. If the history of the inner workings of this opposition to consolidation were written and made public it would be a startling revelation to the people of the state.

In view of these facts, we deem it our solemn duty to make this last appeal to the voters. We have no personal interests to subserve. When we took our oath of office as regents we promised to give the state our best service and to do the state's business with the same prudence we would do our own. Personally, we are firmly convinced that it would be absolutely wasteful of the public funds to develop the university apart from the agricultural college and to purchase high-priced property adjacent to the city campus. Six blocks, comprising about fourteen acres, which it is contemplated purchasing, having a value of about a half million dollars, nearly as much as the value of all the good buildings upon the city campus, which would go into a permanent scheme.

At the behest of the Lincoln interests there was rushed through the last legislature a provision to enable the city council to vote money for park purposes, the understanding being that the money was to be used to help defray the cost of these six blocks of land, together with the houses thereon, and a new charter for the city containing the same provision was formulated. This charter, however, was voted down by the people of Lincoln and the validity of the levy made by the city council is now being tested in the courts, and there is a very grave question as to its legality.

There has also been a purported bond given and signed by a great many of the property owners and business people in the downtown district of Lincoln guaranteeing the purchase of these six blocks for $300,000. This bond as it now stands is not legally enforcible.

However, the people of the state have a right to ask this question, Is it the result of an altruistic spirit that this money is offered, or do the business interests expect it to be a good investment for them personally?

History of Consolidation

What is the history of this movement for consolidation? Governor Shallenberger, the outgoing governor, strongly recommended consolidation at the state farm in his message to the legislature of 1911, and Governor Aldrich, his successor, also favored it. That legislature appointed a special committee to investigate the matter, four members from the senate and seven from the house. Senator Ollis was its chairman. After two months' of deliberation the committee unanimously recommended consolidation at the state farm and brought in a bill for that purpose. The senate adopted the report of the committee and the house in committee of the whole did likewise.

This was on Friday, but between that time and the meeting of the house on the following Monday the Lincoln interests got busy and the measure was defeated on third reading, and so passed over to the legislature of 1913.

As is well known, at this session the senate stood firmly for removal, and at the early part of the session the house would doubtless have passed it, but there had been a delegation from Lancaster county selected for the purpose of defeating the movement and they succeeded, and as a compromise the question was submitted to a referendum vote of the people. The tax, however, being voted as we have before stated.

Prior to the meeting of the legislature of 1913 five members of the Board of Regents visited a number of state universities for the purpose of informing themselves as to the wisdom of consolidation. The result was that the board unanimously signed a report recommending to the legislature consolidation at the state farm and specifically asking for $2,500,000 to do it, which money has been voted.

This report was also endorsed by the chancellor, Dr. Avery, and Dr. Bessey, head dean, as being "educationally wise and economically prudent."

The Nebraska Farmers' Congress at its last

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Shorthorns as Factors in Beef Production

First Pure-Bred Beef Cattle Introduced Into America and Still Leading in Numbers

IT WOULD seem that there is no need of apology in saying something commendatory of the Shorthorn breed of cattle, so very old has the breed become in the cattle history of this country. For more than a century the Shorthorns have been persistently urging their claims for recognition as beef producers and milk producers before the cattle-feeding and cattle-grazing interests of the United States, until at the present time there is not a neighborhood, village or hamlet in any state in all this broad America that is not familiar with the general breed characteristics of the Shorthorn, the common every-day cattle of the farm, ranch, range and home. It has long since ceased to be a question of where are the Shorthorns in the cattle world, but where are they not?

The origin of this breed of cattle has always been a subject of great interest with their ardent admirers and a matter of more or less speculation with some investigators who have attempted to trace it to a beginning, the former claiming an almost unbroken line of ancestry, while the latter have suggested probable out-crosses on other breeds as a basis of their claims for excellence in the early history of these cattle.

The probable beginning, however, of this breed commences with the cattle of the mainland of Europe, in the provinces on the Baltic and North seas. These cattle possessed many of the qualities now claimed by Shorthorns, including color and size, but there was a general disposition toward excellence in milking qualities rather than the full, rounded, symmetrical beef outline of a majority of modern Shorthorns as now bred for beef cattle improvement and found throughout the corn belt and the range country of the western half of the United States.

Early Importations

As early as 1740 permanent records were kept by the more careful breeders and, according to Mr. Bates, there were five Shorthrons upon the estate of the earl of Northumberland as early as the year 1600.

It is probable that there were importations made into the United States very soon after the close of the revolutionary war with England, as cattle answering the description of Shorthorns were found in Virginia as early as 1799. Some of these cattle were taken across the line to Kentucky by Mr. Patton, soon becoming quite well known. Authentic importations were made direct from England by Mr. Cox in 1816, by Colonel Lewis Saunders and B. J. Clay, both of Kentucky, in 1817, and from this time on importations on a small scale were quite frequent. In 1834, '35 and '36 Shorthorns were brought over in considerable numbers by a company made up for this purpose among the breeders in the Sciota valley, in Ohio.

The first introduction of the celebrated Dutchess strain was made about 1840 by a Mr. Vail of Troy, N. Y., who secured a bull and a heifer direct from the herd of Thomas Bates. Among the earlier noted breeders in America may be mentioned Samuel Thorne of New York and R. J. Alexander of Kentucky, the latter a Scotch nobleman who purchased the Woodburn estate of 3,000 acres and used his annual income of $80,000 to establish and maintain a model American herd of Shorthorns. There can be no dispute as to the value of the Shorthorns, and it is now immaterial who made the beginning, how he made it or what he made it out of; it is sufficient to know that it has been made and that it answered the purpose admirably for which it is now used, and that it has the endorsement of a very large portion of all the people interested in the breeding of cattle and the production of beef.

Pioneer Beef Animals in America

It is true the Shorthorns had the advantage in the United States by being the pioneer pure-bred beef animal. They were introduced into the United States at a time when cattle were in demand for laying the foundation of the cattle stock of the country.

The cow that accompanied the pioneer settler and his family as he hewed his way through the forests of Pennsylvania and Ohio bore unmistakable evidence of being related to the cattle of the Baltic and Northern seas, where the origin of the Shorthorn is said to have taken place. And still later the cow that followed the covered wagon on its westward course to the prairie districts of Illinois, Iowa, Missouri, Kansas and Nebraska brought with her the same physical characteristics in form, color and liberal milking habit that indicated the trademark so impressively stamped by heredity upon the original Shorthorns of this country. At a later date and within thirty and thirty-five years ago, the unsettled districts of north and western Nebraska were populated by the same process of pioneer cattle settlement with good Shorthorn grades from the country directly east, being brought in by the homestead settler.

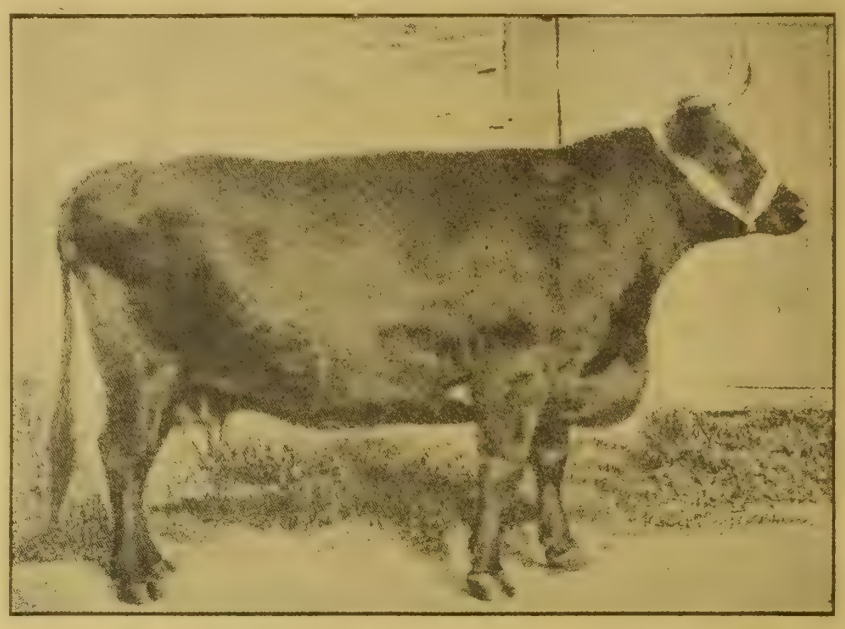
These evidences of the pioneering of the Shorthorn breed of cattle only illustrate what was going on all along the line of American civilization and settlement. In the south and among the Mexican and Texas cattle the work was also aggressive, but owing to climatic disadvantages the progress was comparatively slow. Yet the great body of the cattle throughout the southern cattle-breeding districts carry a preponderance of Shorthorn blood, distinct above that of other pure-bred types.

Our Cattle Fifty Per Cent Shorthorn

The Shorthorn may be criticised as a breed of many colors—reds, roans, whites and red and white, while other breeds by their distinct and fixed markings carry their color impress, completely covering up, in their crosses, all hereditary traces of breed that may have gone before. Thus there is annually being wiped out of existence by the fixed one-color breed one or the other of the many colors of the Shorthorn, thereby cancelling the real credit of improvement that is due to this breed upon large numbers of the grade cattle of the country. The extent of such loss of breed credit can never be approximately estimated and is of no material interest to the country so long as it is taken up by one of the other standard beef breeds of fixed color. It has been said by authorities, unbiased, conservative and observing, that an estimate of 50 per cent of all the cattle blood in America credited to the Shorthorns should not be considered extravagant or prejudicial to other breeds.

It is also stated by other equally good authority that fully 75 per cent of all the unregistered or grade cattle of the country have Shorthorn blood in some degree. On the ranges where other breeds of pure-bred bulls have been used so extensively they were crossed on grade Shorthorn cows, the produce of Shorthorn bulls that had preceded these bulls of other breeds, and thus the Shorthorn blood, while not in evidence in color of the animal, is a factor in the creation of many more animals than is credited to it.

In order to get a more comprehensive idea of the preponderance numerically of the Shorthorns over the other beef breeds it is found that since the organization of the Shorthorn herd book in 1846 there has been registered 934,895 cattle in round numbers, while the Herefords, Angus and Galloways have but 532,500 registered. This would carry out the former statements of the preponderance in Shorthorn blood in the cattle stock of the whole country, without taking into account the fifty years' advantage this breed had in advance of the other beef breeds in the start of distribution of their blood and breeding among the common cattle. It is but fair, then, to say that the Shorthorns, through their opportunities of commencing early in the cattle improvement work of the United States, and the means of distribution afforded in their spread to all parts of the country, are the basis of more good beef animals than all other breeds, and that their record on the farm and on the range is the brightest page in the cattle history of America.



Bates Shorthorn Cow, Duchess of Leicester 2d

Shorthorn Cow of the Present Day, Winner at One of the Recent Live Stock Shows

What is the Matter With Our Rural Schools?

III---Good Schools Require Good School Houses; Do You Know the Conditions in Your District?

By Ben F. Robinson

WE HAVE declared this to be an age of progress, an age of improvement along almost every conceivable line. It is generally conceded that education, which is the matter of training the youth of our country to meet the demands of life, deserves and demands the closest attention. Improvements in methods of education should keep pace with those in other lines. Let us consider briefly and see whether or not they have done so.

No one doubts that there has been some improvement in our educational system since the days of the immortal Ichabod Crane, when school houses were poorly built, when text books were few and carelessly written and when the essential things in a teacher's qualifications were a knowledge of the three "R's," and a goodly amount of physical ability. The last consideration was most important of all, for the old adage of "lickin' and l'arnin' " was thought to be as infallible as holy writ. Well, there may have been some merit in the process; there may be some yet, but we shall not discuss the matter now, for it is with the building that we are now concerned.

Schools of a Century Ago

The historian of Ichabod says that his school house was a low building of one large room rudely constructed of logs, the windows partly glazed and partly patched with the leaves of old copybooks. He does not describe the furniture in detail, but one may well imagine that it consisted of a crude desk at one end of the room, a few clapboard benches and a long shelf on either side of the room, made by laying boards upon wooden pins driven into the wall. The writer does say, however, that the building was kept secure at vacant hours by a withe twisted in the handle of the door and stakes set against the shutters, so that while a thief could get in with perfect ease, he would have considerable trouble in getting out.

Now it is not to be concluded that there were no better school houses than this, neither is it to be said that there were no worse, so that, all things considered, the one described is probably typical of the time of which Washington Irving wrote. Of course, this was a century and more ago. Let us look at the time when Ralph Hartstook, "The Hoosier Schoolmaster," held sway over Flat Creek, in Hoopole county, in southern Indiana. What do we find? Very similar conditions. They may have made some changes in the matter of windows and benches, but the changes are not very noticeable, for the fact that Hank Banta stepped upon a loose board and fell into a pit beneath the floor indicates that there was still room for improvements.

Real Conditions Pictured in Fiction

But, you say, these are only ficticious cases. They are not, for the school described by Edward Eggleston is typical of the rural school of his boyhood. Come down to more recent times, say from a half to a quarter of a century ago. How much did the school house of your childhood differ from these, and in what respects? It may have had three windows on a side; it may have had a stove in the center rather than a fireplace in one corner; it likely had seats that could be raised and lowered, and probably a slate blackboard. A little advance, it is true, but no very marked reformation.

It would be interesting to dwell at length upon conditions of the times just mentioned, for they are familiar to many and well worth remembering. More than one good man and prominent citizen received the rudiments of his education in a building such as we have described. So we are willing that the old log school house, or the little red school house, should live in legend, for they served their purpose, inasmuch as there was nothing better.

It is with present conditions that we want to deal now. Break away from your work for a day and inspect several rural schools; or, if you are really interested, which you ought to be, and can spare the time, which you can do, for you find time for the picnic, the circus, the chautauqua and the campaign speaker, take another day and inspect as many more schools, keeping both eyes open for what you can see.

Weeds and Dirt Not Wholesome

You find the ordinary building at the crossroads, and situated upon an acre of ground. This acre of ground may or may not be fenced. There are more school grounds that are not fenced—many more. In such cases there is little encouragement for the teacher and pupils to plant flowers and set out trees and shrubs, for who knows when a drove of fat steers or a stray critter of some sort will come along and destroy in a few minutes what has taken months of patient care to produce. Just as long as school yards are unfenced, weeds and thistles will continue to thrive. And weeds and thistles are no inspiration to the love of beautiful things; they do not afford a wholesome environment for the little folks that may be with them for 180 days of the year. Notice, I have not said that all school grounds are unfenced and adorned with weeds; I have said that many are. How is yours?

You find the ordinary building constructed in the form of a rectangle, some 18x26 feet, with three windows on a side, the door in one end and the chimney in the other. In too many the walls are bare of pictures and the ceilings low and dingy. It may even be that the plaster has fallen and the wind whistles through the cracks. In such a case it is impossible to keep an even temperature and the children nearest the wall are shivering and those nearest the stove are sweating. But someone says, "Our school has a heating and ventilating plant." But many schools have not, and in many the stove smokes like fury when the wind varies.

Instances are on record where schools have been dismissed and the children sent home time and again because the stove smoked. Now this same stove had smoked at certain intervals for years and no effort had been made to fix it. We are not placing the blame. How is the heating apparatus in your school?

Health and Morals Important

Before leaving examine the seating of each room. See whether it is adapted to pupils. Are the seats of such a height that the feet rest comfortably upon the floor, or do they touch at all? Are the desks suited to the pupils, or are some little chaps writing with arms higher than their chins, while the big boy who has come in after corn "shuckin' " has difficulty to get his knees under the desk?

"Oh," you say, "our teacher, or our county superintendent, will look after that." It may be that your teacher is still in her 'teens and has never taught before, and your superintendent has not got around yet. I don't know what kind of seat your child has at school; perhaps you had better visit some afternoon of next week and incidentally take note of this.

While there it would be all right to inspect the outbuildings. Are they hidden, or partly hidden, from view by vines growing upon frames erected near them? If not, they could be, and ought to be. Not that they are anything to be ashamed of, but rather that the vines will make them less conspicuous and add to general appearances of the premises. Are they on separate corners and as far apart as they can conveniently be? Or are the two united in one small structure, with only rough board partitions between them? Make sure. Having done these things, you will have made a fair inventory and will be better acquainted with conditions than you were before. Remember that it is the business of the school to contribute to the physical as well as the moral and intellectual welfare of your own and your neighbors' children, and if it is not doing this it is not measuring up to its possibilities.

Report of the Nebraska Live Stock Sanitary Board

THE TWENTIETH CENTURY FARMER has called attention to the fact that the Nebraska Live Stock Sanitary board ordered all serum offered for sale in the state, not made by a plant after obtaining a government license, to be tested under the direction of the board.

At a meeting of the board a report was made of the results of the tests, which we publish herewith. Hog men and farmers should read this report carefully. It is both interesting and instructive.

A reading of the report will disclose the fact that one manufacturer whose serum failed to pass disregarded the orders of the board and sold the product just the same. We are sorry the board did not see fit to give the farmers of the state the full information and say what manuacturer is doing this crooked work. As a protection to themselves it might be well for interested parties to make inquiry from the board and get the name of the party shipping out this serum that has been shown by test to be absolutely worthless. Someone is using it.

We want to call your attention to the last part of the report, showing the amount of money saved by the board stopping the sale of the poor serum. We wonder how much has been lost by farmers using the poor serum that was shipped in direct violation of the orders of the board? How many thousands of hogs have probably died on this account?

We have urged our readers to be careful to know they are getting a good product. Inform yourself and see to it that you not only get a good product, but that you buy it from a firm known to be reliable and honest in its dealings.

The paper now has some investigations under way on the poor serum proposition and hopes soon to be able to give its readers some further information that will be of benefit to them.

SOUTH OMAHA, Neb., Oct. 7, 1914.—To the Nebraska Live Stock Sanitary Board: Gentlemen—The following is a report which I respectfully submit to you on the testing of anti-hog cholera serum, in accordance with rules and regulations passed by your honorable body at a called meeting of the board May 29, 1914.

In co-operation with Dr. J. H. Gain of the Nebraska state farm, who furnished a veterinarian, Dr. John Schmella, and two assistants, who performed most of the testing under my directions, the work of testing all of the serum that had been produced before a United States veterinary license had been procured by a serum company, was begun on June 16 at the Union Stock

(CONTINUED ON PAGE SIXTEEN.)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
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The ground will soon be frozen. Don't delay too long filling the little water and mud holes around the tanks and wells; they are hard to fill after the ground is once frozen.

The cornstalk disease is becoming too common for comfort in Iowa. Farmers of that state who find diseased stalks in their fields are urged to send them to Dr. L. H. Pammel, at the Agricultural college at Ames. The stalks are usually broken at the node, the roots decayed and pinkish, and where stalk is broken there is a pinkish or brownish color, and often a little mould at the outside of the leaf sheath.

James J. Hill is devoting some of his millions to the improvement of cattle throughout the middle west. As a first step thousands of copies of "Profitable Stock Feeding" are being distributed through the St. Paul First National bank. This little book is written by Prof. Howard R. Smith of the Minnesota Agricultural college, formerly of the Nebraska Agricultural college and well known to the stockmen of this part of the country.

Cream producers of the middle west have some things for which to be thankful, notwithstanding the fact that there are many reforms that might profitably be made in our creamery system. At least, we sell our cream on a cash basis, so that such things as the failure of the Interstate Milk and Creamery company of New York City could not happen here. It is said that this company failed owing cream producers of that section in the neighborhood of $40,000. There must be some New York farmers who have not found dairying very profitable.

Serum Users Should Be Licensed

Numerous letters are received at this office from farmers who report poor results from vaccination of hogs. Some of these reports show clearly that the poor results come from the use of impotent serum, while others indicate that the party administering the serum did not understand his business.

Three things are absolutely necessary for the successful treatment of hogs with serum—potent serum, proper administration and the proper handling of the herd after treatment.

We believe that many of our states are lame in that they allow anyone to administer serum and virus without any requirement whatever as to qualifications.

The administration of hog cholera serum is comparatively new. This work was not taught in school to a very large proportion of our veterinarians now in practice; consequently we believe they are not qualified to do this work unless they have special training in this line.

The Twentieth Century Farmer in former issues has urged the necessity of a license to parties who administer this product, such license to be granted by a board after an examination of the applicant; such board to satisfy themselves, before license is granted, that the applicant is sufficiently acquainted with hog cholera, knows how to administer serum properly and knows how to disinfect, that he may give the owner of the herd proper instructions for caring for the hogs after vaccination.

Far too many hogs are lost every year on account of improper administration of good serum and improper care of the herd after the serum is administered. We believe a large part of this loss will not be prevented until more stringent rules are laid down for administering serum and virus.

A system of reports to state authorities should be provided for. A report should be made by the man who administers the product, giving the owner's name, address, number of hogs treated, the amount of serum used and from whom the serum was obtained. The hog owner should also be required to make reports showing how the herd fared after the treatment.

Reports such as these will give the authorities a good opportunity to find out the names of the operators who are not doing good work, that their licenses may be revoked. We must have a system if we are going to have satisfactory results.

Out of Date Selling Methods

In reporting the recent tractor show at Fremont, Neb., the Twentieth Century Farmer said that if the 160-acre farmer made general use of a tractor it must be a machine that would do other things than plow. The farmer can't afford to buy a tractor to be used for plowing alone.

The American Thresherman in the September issue says on this subject: "There is a demand among farmers for a small two or three-plow tractor, that can be bought for $500 or $600." Comparing prices of tractors and automobiles, they say, "Automobiles are sold for cash, but tractors are sold on long time. The lightweight tractor before it comes fully to its own must be sold for cash on delivery or cash within six months."

We suppose that a large part of the tractors sold are put out on long time. Probably this system of selling tractors is in use because the first use of the gas tractor was for power for a threshing machine, and the threshing machine has always been sold on long time.

We believe, however, that the system is entirely wrong and should be abolished. If on account of the manufacturer being compelled to give this long time an additional per cent is added to the selling price, the man who buys a tractor and pays cash for it is compelled to pay a greater price than he should.

Probably three-fourths of the farmers who will buy a tractor own an automobile, for which they have paid cash. If they can pay cash for the automobile, they can pay cash for the tractor. We believe the system of selling these machines on long time is largely the fault of the manufacturer. He holds out this long time as an inducement for the farmer to buy. Naturally, the farmers will take this time if he cannot get a material reduction in the price by paying cash.

There is absolutely no question but that there must be a larger margin of profit on any goods sold on time than for the same goods sold for cash. There is an expense for collections, a certain per cent never will be collected, all of which is added to the selling price.

The farmers' financial condition is by no means what it was twenty-five years ago, yet practically the same system of selling implements is now being used as was used then. It is not fair to the manufacturer to ask him to give this time, and it is not fair to the farmer to ask him to pay this added price, necessary on account of the system, when he can just as well pay cash.

We believe the manufacturer of the tractor will meet the demand of the small farmer by manufacturing a two or three-plow tractor, and will be able to place it on the market at a price the farmer can afford to pay, if they will get together on a more cash basis for doing business.

One of the principles of the Farmers' Educational and Co-operative Union is the payment of cash by its members for all products and machinery bought. This is certainly commendable, and we hope the influence of this movement will be far-reaching and extend not only to its members, but to all farmers.

Syrup an Apple Product

The utilization of the waste of the apple orchard has been one of the perplexing questions that has troubled the fruit growers of this country for a satisfactory solution. In fact, this feature of the apple orchard has presented an embarrassing proposition with the orchardist, since it represents such a large per cent of waste that does not under present conditions pay for handling as a sales product to the cider factory. Cider and vinegar, the uses to which the refuse appels have been turned, would not demand the whole of this classification of the orchard product, and the demands of the cider and vinegar trade are satisfied with a very small per cent of this waste.

The utilization of the fallen and refuse apple as a hog feed, or feed for any kind of stock, has not proven satisactory, and is no longer considered by the orchard owner. The improved plan of marketing the apples, adopted now by all fruit growers' associations who value the crop as a commercial feature of the farm, demands a sorting and grading of the fruit, a culling out of the undersized and imperfect. This class of apples have a cider value, which under the present proposition of syrup manufacture means a greatly increased revenue from the orchard.

A commercial test of the apple syrup is now being conducted in the Hood river valley of Oregon, where the government chemists are endeavoring to have manufactured a thousand gallons of this new product, which will be sent out as test samples to the retail trade over a limited area. The completion of this enterprise will come as a source of increased interest in orcharding and a gift to the appetites of humanity, since the distinct fruity aroma of the apple is enjoyed by practically everyone. We welcome the coming of the apple syrup as rival and competitor of the popular and far-famed maple syrup.

Demonstration Booklet

Since the tractor demonstration the Twentieth Century Farmer put on at Fremont last August we have received an avalanche of inquiries from farmers all over the country who were not able to attend but who want one or more copies of the issue of the Farmer containing a report of the demonstration. These we are no longer able to supply, for the reason that we have sent out all the copies printed. We have, however, had printed in booklet form a short description of all the tractors and accessories that were demonstrated at Fremont, with photographs of each machine. From this booklet the man interested in tractors can get a short, unprejudiced description of the principal machines now on the market. This we are offering for exact cost to us, 15 cents per copy.

Practically every state in the union has increased its number of silos greatly during the last year. Texas, however, holds the palm, with an average of fifteen silos a day from September, 1913, to September, 1914.

Provide Winter Quarters

Winter quarters for all the stock to be kept on the farm should be provided in advance of cold weather. Winter usually comes with a rush, a lowering of temperature and a sudden burst from sunshine into storm. This is not an unusual thing in the month of November. It is a comforting feeling, however, to have all the feed lots, sheds and stables fixed up ready to bring the stock from the pasture to their winter quarters on short notice.

The beginning of cold weather often does great damage, as it usually is accompanied with snow and storm. It is especially important that the weanlings of all kinds be provided for, as they are more sensitive to the sudden change from mild to cold weather. They need a little closer shedding from storm; they need a little finer quality of hay provided for their use; they need a little more attention in the matter of allowance of the grain feed that they are to have. Take it all around, this class of farm animals demand special attention in order that they be kept on a steady and upward tendency in growth.

It is very damaging to permit the weanlings to drop into a condition of unthriftiness at any period of their development. The winter and feeding season is the critical time with youngsters. The grazing season offers but little resistance.

Pasturing Winter Wheat

The question of whether or not it damages winter wheat to be pastured is brought up each recurring season by some persons who have not had experience, or who have had reason to believe their wheat crop suffered damage from this cause. In answering this question it can truthfully be answered "yes" or "no," for the damage in pasturing wheat depends upon how and when it is pastured and the kind of animals used in pasturing.

It is not usual to allow animals on the wheat fields until the wheat has acquired a good, strong growth, at least four inches high, and the ground well settled by rains. When the ground is well firmed about the plant there is but little liability of destroying by pulling out or by tramping into the soil to its permanent injury. Again, there is increased or decreased liability of injury depending on the kind of animals used in pasturing the wheat. Sheep are regarded by some as the least liable to pull out the plants; as they nip off close to the ground and do not pull, owing to the formation of their teeth. The horse is another close nipper of his pasture feed, while the cow depends on pulling more or less in gathering her pasture.

The sheep is also commended, owing to its tendency to travel a great deal in its grazing, and its packing of the soil around the wheat plant is of advantage, while not in the least damaging. The sheep being the closest grazer, is suggested also as a possible destroyer of a very large per cent of the eggs of the Hessian fly during the autumn season of grazing on the wheat field; again, after the wheat has made some growth in the spring, it may be pastured sufficient to help remedy this wheat plant nuisance. Horses and cattle by their weight and large feet must necessarily destroy considerable wheat plants by their traveling over the wheat fields. This is especially noticeable during wet weather, during any season they are given the run of the wheat field—autumn, winter or spring. For this reason alone good farmers in many winter wheat districts will not permit horses or cattle to pasture on the wheat.

It is quite apparent that conditions of growth of the wheat plant, the condition of the weather when pasturing, etc., must be taken into consideration in determining whether there will or will not result damage in pasturing wheat. Last fall it will be remembered that there was a very large fall growth of winter wheat over the winter wheat districts of the south and southwest, and that this feed practically saved the owners of cattle in those districts from heavy winter loss. Wheat grew right along and cattle were not only benefited, but the rank growth of wheat pastured off benefited the crop.

Let's Get Our Share

The territory covered by the Twentieth Century Farmer is an agricultural and live stock country, depending almost entirely on these two industries for its income. In consideration of this fact, do the farmers and stock raisers get the help and support they should from our national government?

There was appropriated for hog cholera work this year $500,000. Some of our farmers have looked upon this as an enormous fund, yet at the same time do not think anything of reading of an appropriation of $20,000,000 for rivers and harbors. For what purpose is this rivers and harbors appropriation used? We can rest assured the appropriation for hog cholera work will be put to good use.

The bill for this appropriation was first introduced by Congressman Sloan of Nebraska, who worked hard for the bill until it was passed, realizing the importance of the movement to the farmers of the United States. The work in getting bills of this kind passed would be much easier if our farmers and stockmen would write to their congressmen showing them the importance of having such bills enacted into laws.

Men in other lines of business are not slow in telling their representatives in congress and the legislature what they want. If farmers would get what they want and should have they should wake up to the necessity of doing these things. Not only that, but they should know how the man for whom they are voting stands on the things in which they are interested.

We are not urging farmers to mix too much in partisan politics, but we are urging them to look to their own interests by taking a more active part in seeing that good men are elected to office, irrespective to what political party they may belong.

In boring for water in western Texas and southwestern Oklahoma, the Rock Island railroad has discovered large deposits of potash, which, it is believed, if developed, will supply this country with potash for fertilizing material, for which we have hitherto been dependent on Germany. The United States geological department has become interested in the development of this discovery.

Money Saved First and Last

This is for you who may not know that Firestone Tires are no more expensive than the average kind. Their quality is proved by remarkable records in every kind of tire service and they have the added endorsement of only ordinary price.

Firestone
Non-Skid and Smooth Tread Tires

are built by specialists who have made no mistake through 15 years of leadership. At the Firestone Factory are thousands of experts who make nothing but tires—in tremendous quantities. This brings the price down for you.

But the first saving is not what makes so many car owners strong for Firestone. Even if Firestones cost much more, they would have them for comfort, safety and economy.

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Non-Skid in Fact as well as Name.

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Ask for Book No. 31

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SOUTHERN RAILWAY — Mobile & Ohio — Gt. Southern

Big Profits for Boys in Trapping

Preparations for Trapping

Considerable preparation is necessary before beginning to trap, the first being to locate the most desirable route for a line of traps.

The route having been located, one will find it time well spent to put out baits at several points where baited traps will be set, which will get the animals accustomed to visiting these places regularly, thus falling an easy capture to the trapper at an early date after he begins trapping.

Where dead-falls are made it is especially advisable to make them a week or so in advance of the time at which they will be set, so that animals will become accustomed to them and make an effort to secure the bait whenever it is put in the trap. Desirable spots under roots, in runways and among rocks also can be loc ted and arranged so it will be an easy matter to place the traps when the proper time comes.

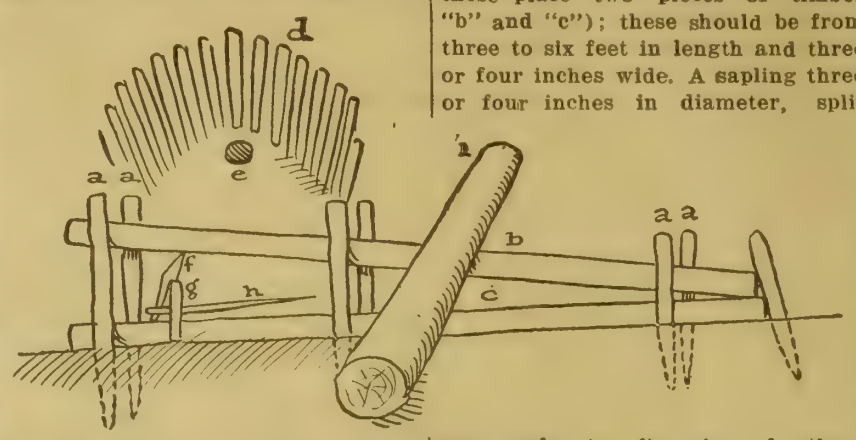
Traps should be secured early and the scent of fresh steel removed as much as possible by smoking them in a smouldering fire, on which partly green leaves are spread to smother the flames and give the traps a sort of outdoor or forest scent. All points of friction in traps should be well oiled, each trap being tried and tested till it is in prime working order. Attention to these little details before beginning to trap means more than is suspected by most trappers.

The size of traps will depend upon the animals one is seeking to capture. For most of our ordinary fur-bearing animals we use a No. 1 trap. Skunk, mink, opossum and civit cat (polecat) can be easily held by this size trap. For raccoon, beaver, otter and fox one should secure No. 1½ size traps. In a few sections it will, of course, be necessary for one to obtain a few traps of even larger size for wolf, bear, lynx, etc., but for general purposes the No. 1 and 1½ size traps will meet the trapper's requirements.

Constructing the Deadfall

While the writer long ago discarded the deadfall trap as too cumbersome and inefficient, its cheapness will recommend it to many trappers, and directions for making one are herewith given:

Firmly drive six stakes (marked "a") into the ground. Between these place two pieces of timber "b" and "c"); these should be from three to six feet in length and three or four inches wide. A sapling three or four inches in diameter, split once, makes two fine pieces for these "jaws."



A pen ("d") is about a foot wide at the front, next to the "jaws," runs back twelve or fifteen inches and is somewhat narrower at the rear end, where the bait ("e") is placed. This enclosure is shown without covering, but should have pieces of driftwood, bark, etc., over the top to prevent animals from reaching the bait.

The pieces marked "f, g, h" constitute what is known as the "Figure-Four" trigger. These are shown in position when trap is set, "f" and "g" being of a height sufficent for an animal to start into the pen after the bait. The treadle ("h") should be so arranged that the animal must push it down or step on it in trying to reach the bait.

A heavy pole ("i") rests on the upper "jaw" of the deadfall and serves as a weight. When an animal steps on or pushes against the treadle ("h") this trips the "Figure-Four" support, which lets the upper "jaw" drop down on the animal, the weight of the pole preventing its escape. This pole should be of sufficient weight to kill and retain the animal, but care should be taken that it is not heavy enough to split out the "Figure-Four" trigger or bend and warp the "jaw."

After a deadfall trap is finished all chips, shavings, etc., should be carefully gathered up and removed. Freshly cut wood about the trap should be smeared with mud. Water should be dashed about over one's tracks and wherever the earth has been disturbed, which not only washes out the marks, but destroys human scent. Everything should be left as natural as possible. A covering of grass, leaves, weeds, driftwood, etc., should be given the trap after setting, especially the pen part, where the bait is placed.

As before stated, we have discontinued the use of the deadfall; yet it has some commendable features. It is cheaply constructed, and by making it substantial one often can use the same traps more than one season. It kills the animal almost instantly and minimizes the risk of escape, as the hold usually is by the head and shoulders, which permits of no gnawing out, as sometimes is the case with steel traps. This is offset, however, by the fact that the close confinement of a captured animal between the "jaws" of a deadfall, if it is not removed from the trap, will cause putrefaction and a discoloring of the skin in a short time, especially where the day turns somewhat warm.

Progressive Nebraska Farmers' Meeting

The plan of bringing together the farmer and his neighbor for the discussion of what they have each learned during the year cannot be improved upon. The experience-meeting method of discussion of topics draws out an expression from many very practical persons who could not be persuaded to believe that they could under any circumstances write a paper or deliver an address on any subject. Yet when they are induced to tell how they performed the work in growing a certain crop they have delivered a very interesting talk or address and imparted just the information desired.

It is the practical things from practical people that prove most interesting in agricultural study and demonstration. The present opportunity of getting around to as many farmers' institutes, live stock conventions and other meetings of a kindred character as possible should be taken advantage of by those who wantto know what others are doing.

The week of organized agriculture for the state of Nebraska to be held at Lincoln January 18 to 23, 1914, demands a large representation from all parts of the state. This is a concentration of effort on the part of all state associations of allied agricultural and live stock interests and will afford great opportunities for all industries to be represented in institute form. Send for programs and line up the progressive farmers of your community for these meetings. The Western Nebraska Cattle Growers' Association will have a representative on the program this year; also the Live Stock Feeders' Association.

The "Meat" of Corn

—the sweet centers of choice Indian corn; cooked, seasoned just right, rolled thin as paper and toasted until they become golden brown flakes — crisp and delicious!

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Post Toasties

are better than ordinary "corn flakes."

Toasties are packed in an inner container inside the tight-sealed, familiar, yellow carton—keeps the food fresh and crisp for your appetite—

Superior Corn Flakes

—sold by Grocers.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Hallowe'en

Fairies, fairies in the air,
Fairies, fairies everywhere;
Every lass and laddie, too,
Knows what tiny fairies do
With the sparkling drops of dew;
How they hang the meadow grass
With the dewdrops as they pass;
How they decorate the flowers
In the early morning hours;
How they kiss the fuzzy peach,
Ope the hazel and the beech;
Fairies, fairies in the air,
Fairies, fairies everywhere.

Fairies, fairies everywhere.
Fairies, fairies in the air;
Some are bad, but most are good;
The bad ones would be if they could;
The good ones take the summer green
And change it to an autumn sheen;
They take the maiden's heart away,
And give it to her lover gay;
And change the tassels on the corn
And make the fields look bleak and lorn
Oh, what freaks the fairies play!
Let us ask them all to stay.

Fairies, fairies in the air,
Fairies, fairies everywhere;
They northward point the weather vanes
And paint frost pictures on the panes;
Then with the sun brush from our sight
All the fancies of the night.
And I am glad those Druid priests
Once celebrated Celtic feasts,
And from the history I ween
That's how we get our Hallowe'en.
So welcome, fairies of the air,
Welcome fairies everywhere.

—Jane A. Stewart.

The Editor's Corner

This week we have a new picture contest and by the time you read this all the answers will be received for the last one, and your editor will be busy reading them and picking out the best ones, from which the prize verses will be selected by the people chosen to help decide. You cannot imagine what hard work it often is to choose the best verses, and some of you would be very much surprised if you knew how close you come to getting the prize sometimes.

The answers did not come in to the last contest very fast, so we gave you an extra week and are getting plenty of replies. All of you write about this one. Remember, it does not do any harm to try, even if you do not succeed, and we judge the interest taken in the contests by the number of replies received, although we know that many of you like to read the other children's answers who never think of sendng in verses yourselves. So if you like the contests and wish to have them continue, send in your verses and get the other children in your school or neighborhood to do so.

Same with stories. We have been receiving very good ones lately, but not a great many of them. Instead of getting twenty-five or thirty or more each week, as usual, we have only had four or five. The reason has been, of course, that school was starting and you were most of you busy. Well, now tell us all about it and the experiences you have been having. They will many of them make good stories.

HOME EDITOR.

Making the Jack O'Lantern

You can paint the features on the big pumpkin and try it out on little brother and sister. If it looks fierce enough almost to frighten them, even in the broad daylight, then you are safe in following the lines with a sharp knife, knowing that when the holes are made in the shell and a candle lighted inside you will have a very terrifying Jack O'Lantern that will be envied by all the other boys.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

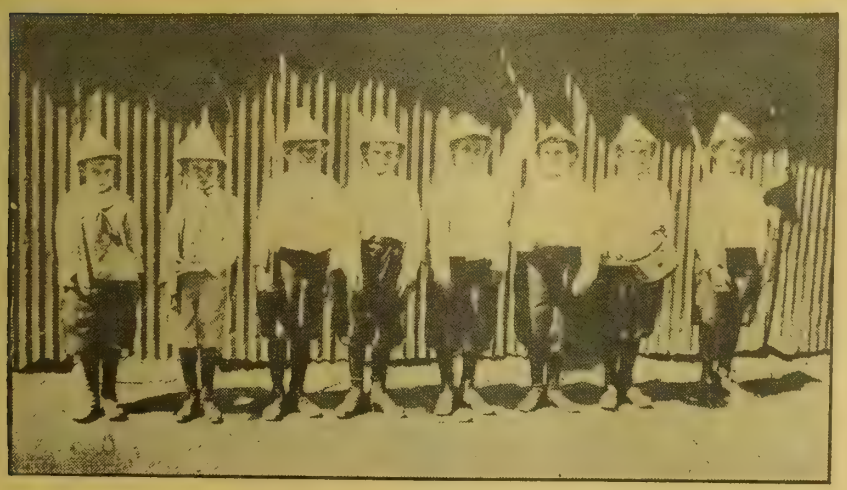
Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

Picture Contest No. 18



What do you suppose these boys are doing? Why are they doing it? What is it all about, anyhow? Answer some of the questions this picture suggests to you, putting your answer in the shape of a verse of four lines. Each of the two children writing the best verse will receive a book as a prize. In awarding the prizes, quality of verse, neatness, punctuation and spelling will be considered. Give your name, age and address and send your verses to Picture Contest Editor, Twentieth Century Farmer, Omaha, Neb. Verses must reach this office by November 28 or they cannot be considered. Awards in Contest No. 17 will be announced in the next issue.

(Prize Story.)

A Fine Ride

By Helena Kleinjan, Aged 12, Bruce, S. D.

While visiting in Iowa last summer a friend of mine gave a whole lot of girls a ride in a truck which her father owns. She came after me while I was eating supper. We had ridden several blocks and were turning a corner, when the auto stopped. We got out and examined it and found we were out of gasoline.

Four girls went after a gallon. As we were between the church and the minister's house we got out and pushed the truck, for we didn't want the minister to see us. One girl stayed in and steered. After pushing it a block it started to go, with all the girls running on behind.

Finally, the other girls came with the gasoline and we finished our ride by going two or three miles into the country. We had a fine ride and lots of fun, but when we got home everybody ridiculed us.

(Honorable Mention.)

No Use Trying

By Ella Erdmann, Aged 11, Britton, S. D.

Last night I went after the cows. One of them had a little calf way out in the field all alone. I saw the calf and rode up there, and the cow came up to her calf, too. The calf stood up, but it would not move. I tried to make it move, but the cow came after me. Then I got off and tried to chase her without the horse, but she chased me. I tried to make the dog go after her, but she chased the dog and he ran away as hard as he could.

After trying awhile, Otto, my brother, came with another horse and he tried to chase her, but he could not, so we both went after the other cows and left her and her calf in the field.

(Honor Department Story.)

A Wise Collie

By Walter Cheney, Aged 14, Turlock, Cal.

With the exception of the last three years I have lived at Bodega, Sonoma county, California. There my father ran a chicken hatchery. It was called "The Twentieth Century Hatchery." We had four incubators, which held 2,000 eggs apiece, hatching about 1,600 baby chicks. About 6,000 chicks were hatched every three weeks, and there were about 16,000 young pullets and roosters on the place all the time. For one man we raised 10,000 young pullets ready to lay.

The hawks and blue jays were bad for the young chicks, so we kept them in covered wire pens. If a few should get through a hole, which they sometimes did, Fannie, our Scotch collie dog, would drive them around to the gate of the yard and keep them there until we opened the gate and put them in. Then she would go and show us the hole.

(CONTINUED ON PAGE SEVENTEEN.)

THINK HARD

It Pays to Think About Food.

The unthinking life some people lead often causes trouble and sickness, illustrated in the experience of a lady over in Wisconsin:

"About four years ago I suffered dreadfully from indigestion, always having eaten whatever I liked, not thinking of the digestible qualities. This indigestion caused palpitation of the heart so badly I could scarcely walk up a flight of stairs without stopping to regain breath and strength.

"I became alarmed and tried dieting, wore my clothes very loose and used other remedies, but found no relief.

"Hearing of the virtues of Grape-Nuts and Postum, I commenced using them in place of my usual breakfast of coffee, cakes or hot biscuit, and in one week's time I was relieved of sour stomach and other ills attending indigestion. In a month's time my heart was performing its functions naturally and I could climb stairs and hills and walk long distances.

"I gained ten pounds in this short time, and my skin became clear and I completely regained my health and strength. I continue to use Grape-Nuts and Postum, for I feel that I owe my good health entirely to their use.

"I like the delicious flavor of Grape-Nuts and by making Postum according to directions it tastes similar to mild high-grade coffee." Name given by Postum Co., Battle Creek, Mich.

The most perfect food in the world. Trial of Grape-Nuts and cream 10 days proves. "There's a Reason."

Look in pkgs. for the litlte book, "The Road to Wellville."

Ever read the above letter? A new one appears from time to time. They are genuine, true and full of human interest.

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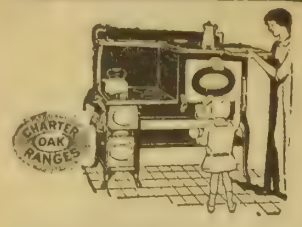

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100 Candle Power Incandescent pure white light from (kerosene) coal oil. Beats either gas or electricity. **COSTS ONLY 1 CENT FOR 6 HOURS** We want one person in each locality to whom we can refer new customers. Take advantage of our Special Offer to secure a Beacon Burner **FREE.** Write today. AGENTS WANTED.

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Of Interest to Our Women Readers

Our Lecture Course

We've got our lecture course arranged,
The talent has been hired;
Of course the program can be changed
If that should be desired.
But the attractions we have booked
Are full of vim and force,
When we were done we vowed it looked
Like a great lecture course.

It opens with the Prize Quartet
Which filled a date last year—
Most of our folks are talking yet
About when they were here.
Then we will have the Tuneful Tots,
A troupe of girls and boys
Who play on brooms and pans and pots
And add unto our joys.

And after them we'll have the Marrs,
Who give a song and dance
Upon the horizontal bars—
We've billed them in advance.
We've booked Professor Blimm's Trained Seals,
Dame Nature's Own Display—
They fire off guns and ride on wheels
In quite a wondrous way.

We've also got Magoogin's Band
With moving pictures, too.
Their music is just simply grand,
The pictures are all new.
What else? Well, we've The Missing Link,
A marvellous baboon
That tries to talk and seems to think
And almost hums a tune.

And yet some folks ain't satisfied
With such a splendid list—
Some of the kicking ones have tried
To show us where we've missed.
Our lecture board has had a row
That made an awful breach—
One member urged that we, somehow,
Have someone make a speech!

—Wilbur D. Nesbit.

Our Home Chat

The poem we have used this week is primarily a humerous one, but it contains food for thought. We were reading something almost like it the other day in a small town paper. The "lecture course" was arranged and they were announcing it. There was just one lecture on the course, and the rest was merely light vaudeville. If the people prefer vaudeville to lectures, we suppose they must have it, but it is a pity to degrade the name of the good old-fashioned lecture course to cover such things as parlor magic and fancy dancing.

* * *

The National Congress of Mothers has started a movement which has already got a good foothold called the Parent-Teacher association. In general it is an organization of the mothers of the school children and their teachers, meeting in the school houses on Saturdays, evenings or after school, and the purpose is to discuss the welfare of the children, school problems and the co-operation of home and school. Every community should have a parent-teacher association, for they are doing a great deal of good wherever they have been started. If you are interested write to the National Congress of Mothers, 910 Loan and Trust building, Washington, D. C., and they will send you an interesting little booklet giving suggestions for bylaws and constitution to be adopted and questions to be discussed.

* * *

We were told by a housekeeper the other day that she was making a scrapbook of our "weekly recipes." We are glad to know it, as these are recipes that have been tried and proved successful, and we believe they will prove of value to any housekeeper, whether young and inexperienced or a homemaker of so many years' standing that she has tired of the old standbys.

* * *

Although the fairs have long been over, every now and then something brings to mind interesting things we saw there. We wonder how many of our readers attended fairs at which Uncle Sam had parcel post exhibits. This, to us, was one of the most interesting things we saw. Piles and piles of unusual things were on display, and the polite young official was ready and willing to offer explanations. The main thought the heap of packages brought to us was that a poorly packed, fragile article would have little chance with all that weight piled above it. In sending out parcels in the future we are going to be sure they are so wrapped and protected that they will stand heavyweights piled on top of them. Be sure to visit this department at the next state fair. You will find much that will be useful to you.

* * *

We have furnished lists of books suitable for children of almost all ages, since we offered to do so in this corner a few weeks ago. It is as we thought. Mothers do want to supply their children with good, clean reading matter, instead of allowing them to read whatever happens to come into their hands, good and bad. The trouble is very often that the busy mother has not time and opportunity to read children's books and choose suitable material.

HOME EDITOR.

When Days Are Cool

When the young lad or lassie teases for peanuts these days it is but the natural craving of the system for just those elements required; for now that the warm days of summer have given place to brisk, chilly ones, nature is sending out her call for heat-producing, fat-forming foods, and peanuts are particularly rich in just those qualities, thus being an ideal winter food. The only trouble is that children swallow them before they are properly masticated and so trouble ensues because the digestive organs are overtaxed, but if the child be instructed to chew them thoroughly they are just what is needed by the vigorous young life.

Raisins, also, together with sweet chocolate and popcorn, are natural winter foods and of great nutritive value; so don't be afraid to let the boys and girls fill their lunch boxes or their pockets when starting off to school in the morning.

LOU D. STEARNS.

Our Weekly Recipe

APPLE SAUCE CAKE—This is the time when apples are at their best, and as a matter of health and economy it is well to make use of them. Here is a splendid cake in which they are used: One and one-half cups sugar, one cup apple sauce, one-half teaspoonful soda, mixed with the apple sauce; one egg, one-half cup melted lard, one teaspoonful cinnamon, one-half teaspoonful cloves, one cup chopped English walnuts, one cup raisins, two cups flour, one-half teaspoonful baking powder, mixed with flour. For a fruit cake this is very cheap.

Reading for Children

A Reader, Nebraska: In the September 19 issue of the Twentieth Century Farmer, in the woman's corner, I read an article about reading matter for children that set me thinking that perhaps my way would help others, although I had never thought it any out of the ordinary. Still, in looking back I do think that perhaps my management of their reading has had a great deal to do with their character, and what has often been called good common sense. No boy is born with a taste for the "Daredevil Dick" style of literature, and it should be the mother's lookout that he doesn't acquire that taste. This is done, not by weeding out undesirable reading matter, and not supplying anything else in its place, for we certainly don't want our children's minds to be void spaces. If we did, they wouldn't be, for there would be something there, and it behooves us to see that it is what we want there.

Just as soon as I saw that our children were beginning to notice reading matter I sacrificed our own wishes for a few light stories, and weeded them out entirely. While I do not consider the reading of love stories a sin, still I want the children to acquire a taste for deeper reading. I never warned them against that class of reading, for it wasn't necessary when it wasn't there for them to read. With my own farther developed mind, I sometimes read some light stories, and do not think it does any harm, but now all this class of stories mysteriously disappeared and so the taste was not created.

We always had more reading matter than they could devour, so they never though of choosing any reading matter but what was here for them.

The writer of this excellent letter mentions a number of magazines that she considers indispensible for herself and for the children. While we are not able to give their names here, we will be glad to give the names of these magazines by mail to any who care to ask concerning them. There are a number of other excellent publications for the mother and for the children which we will gladly recommend to anyone who is in doubt as to what she should take. The suggestions contained in this letter are so practical that they will doubtless prove of value to many of our readers. We are always glad to hear from our readers in this way. HOME EDITOR.

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OMAHA, NRBRASKA

Styles for Home Dressmaker

6655—Ladies' Dressing Sacque. Any of the pretty check materials can be used to make this sacque. The sacque closes at the front and can be made with either the permanent or removable collar. The long or short sleeves can be used. The pattern, No. 6655, is cut in sizes 34 to 44 inches bust measure. Medium size requires 3¼ yards of 30-inch material.

6436—Ladies' Skirt. This is one of the high waistline skirts which depend for their effect upon the long folds of the draped material and therefore cannot be made with the normal waist. The skirt is in three pieces and closes at the left side of the front. The pattern, No. 6436, is cut in sizes 22 to 30 inches waist measure. Medium size requires 2⅝ yards of 36-inch material.

6302—Ladies' Waist. Linen or madras can be used to make this shirtwaist. The waist is made with the body and long sleeves in one, or it can be made with the drop shoulder and short sleeves. The pattern, No. 6302, is cut in sizes 34 to 42 inches bust measure. Medium size requires 1⅝ yards of 44-inch material and 2½ yards of frilling for the neck.

5994—Ladies' Wrapper. This is the simplest possible form of wrapper. It has the plain sacque cut, with seamless back and center front opening. The sleeves are wide and roomy and are trimmed with a band. The pattern, No. 5994, is cut in sizes 30, 32, 36, 40 and 44 inches bust measure. Medium size requires for long kimone 4⅝ yards of 36-inch material, with 1 yard of 27-inch contrasting material for trimming.

6148—Children's Coat. Developed in heavy material, this coat will be just the thing for winter wear. It can be made with either the straight or circular fronts. It is made in the box-plaited style. Either of two styles of collar can be used. The pattern, No. 6148, is cut in sizes 2 to 10 years. Medium size requires 3 yards of 36-inch material, with 2⅝ yards of braid.

6460—Child's Sacque Apron. This apron may be used as a dress or to protect the dress. It is plain and comes from the neck to the hem of the skirt. There is a small turnover collar and full length bishop sleeves. Patch pockets are placed in front and tie strings are fastened in at the underarm seams and form a bow in the back. The pattern, No. 6460, is cut in sizes 2, 4, 6, 8, 10 and 12 years. Medium size requires 2⅝ yards of 36-inch material.

6912—Ladies' Apron. This apron is just the thing for wearing around the house when working, as it covers the entire dress. It fastens in the back and has a three-gored skirt. The pattern, No. 6912, is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 3 yards of 36-inch material.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

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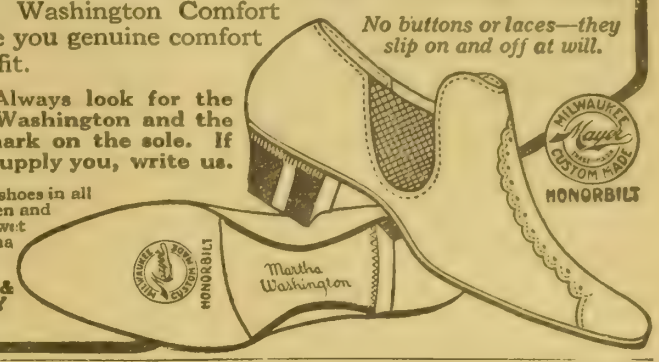

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

Feeding for Eggs

Mrs. M. A. B., Nebraska: I am a reader of the Twentieth Century Farmer and would like to know how to feed and care for hens to get the most eggs. We have cracked corn, wheat screenings and oats, and can get all kinds of mill feed. We have Rhode Island Reds and Barred Rocks.

Answer—With such a good array of feed you should have no trouble in getting winter eggs if the hens be well chosen as to age, or of the right age, and start as pullets. If the wheat screenings be good, these will make an ideal scratching feed as a first meal in the morning, mixing them half with oats. To every ten hens feed a quart of this mixture, and as the weather gets colder and they cannot get much exercise, make them scratch for it, and if they scratch in clover hay or alfalfa you will have right with this morning ration another that will take the place of lots of green stuff, for alfalfa or clover hay will do this. I like corn for an evening meal, but prefer it in the whole grain, as the finer you crack corn the greater its tendency to add quick weight to the hens in too much fat. This you will not want pullets to do, for it may stop off early laying. I like some cracked corn in the noon mash. If you want the hens to lay as the weather gets cool and forage disappears, you will want a noon mash for your laying hens. This you can make up of any of two of the mill feeds; middlings, cornmeal and bran are good as a mixture, or one mill feed and boiled vegetables, fed warm. If you would feed plentifully and regularly of just what you have at hand you should get a reasonable number of winter eggs, but if you will add beef scrap to this ration in any way you will be feeding the real egg ration. From 5 to 15 per cent beef scrap to the other 100 per cent bulk is considered enough animal matter, fed either at morning or noon, but is best fed if placed in the noon mash. On the farm milk is often substituted for beef scrap. It does not contain the protein contained in beef scrap, but there is little danger of feeding too much milk, while there might be in feeding beef scrap.

Plenty of water, reasonably warm quarters, kept clean and free from vermin; some charcoal, grit and a box of oyster shell close by, and if you do not get plenty of eggs, then the fault lies in the hens and not the feed. One large ear of corn is considered sufficient for five or six hens at one feed, and of mash a heaping tablespoonful for one hen. Plymouth Rocks may need a slight addition to this. The full crop will tell you when they have had enough; especially at night should you notice this.

Boiled Corn for Turkeys

A noted turkey keeper of Illinois has this to say of feeding up the fall turkeys: "Our largest task is seeing that they come home at night regularly. This accomplished, we can get enough feed into them to round them out. If some are too small and not sufficiently fattened for Thanksgiving, they are kept over for the Christmas market. I finish off my turkeys by feeding boiled corn; this gives me my nicest, heaviest turkeys. I begin this feeding the last of October; it takes the new corn from morning until noon to boil tender enough for the turkeys. I boil in a large kettle out of doors. They never sicken on the boiled corn and make fast gains.

Laying Ages

In the milder climates we may expect the larger number of winter eggs from the pullets come into early winter laying, but in the colder climates our main early winter outlay must come from the 18 months' old hens. A well known breeder of Barred Rocks thinks the Barred Rock pullets best among the general utility breeds as winter layers, but notices that his pullets of light color and long body lay earliest and longest, while the dark, prize-colored birds, of compact body, come on slow as pullet layers. The strain, he declares, counts for more in the Barred Rocks than any breed he has worked with. The Barred Rock is primarily a breed that inclines to rest up in cold weather under ordinary farm conditions. Yet, wisely selected, bred in time, fed fairly well, and there are strains of Barred Rocks that pay largely as winter layers.

Feeding Cottonseed Meal

Poultry keepers using cottonseed meal often produce bad results in their flocks. Because they can feed considerable quantities of linseed meal without harm they argue the same for cottonseed meal. This last is very fattening and causes eggs to be laid without shells, besides producing inflammation finally. One teaspoonful of cottonseed meal every other day is sufficient for any hen. Linseed meal can be fed every day to a hen in small quantities and is invigorating. Bone meal used with it gives growthy strength to any fowl, but especially the young.

* * *

In the high altitude states, where fermentation takes place slowly, eggs can be kept fresh for a long time if greased well directly after they are laid, then placed on a shelf in a cool room, but not cool enough to freeze. Turn once a week. Eggs treated in this manner are declared to have kept fresh for a year.

Notes

The trouble with many plans for poultry houses is that they mean too much expense to the average man. We too often build poultry houses to suit ourselves and not the hens. We build them too high, too tight; they should be tight to keep out drafts at back and sides, but open in great part in front to let in air, using protected screen or curtains on stormy days.

* * *

A frequent cause of the spread of disease is the practice of throwing dead fowls along the roadside. Huxsters pitch all fowls that die in their wagons along the ways they travel, thus bringing disease to farm chickens and great loss to their owners. Another source of disease is throwing dead chickens in streams. Many a nice drove of geese and ducks has been lost for this reason, to say nothing of chickens that drink from streams. Every state should enact a law against this practice. Burn all dead fowls, or bury them deep.

* * *

In the poultry business procrastination is the thief of success, neglecting sanitary conditions, proper housing, necessary feed, etc. Poultry raising for profit is not for lazy people. The hen carries her wealth certificate right on top of her head. Her comb tells the story. Some flocks are naturally weak—bred to weakness.

* * *

The poultry fanciers, as well as all keepers of the pure-bred who make a specialty of showing their best specimens at fairs and poultry shows, and many of these read these columns, should write to D. O. Lively, Superintendent of the Live Stock Department, Panama-Pacific Exposition, San Francisco, and ask for a premium list for fowls. There will be no entry fee, though a small nominal charge will be asked for care, feed and coop rent. The premiums are very liberal.

Voters Must Decide

(CONTINUED FROM PAGE THREE.)

meeting invited a commission of eminent state university and agricultural college presidents to advise the voters of the state in regard to the question. After a very careful investigation their report and advice to the people of Nebraska was to consolidate at the state farm, and several members of governing boards of the states supplemented their advice.

Farmers' Congress Report

It has also been strongly emphasized by these most competent advisers that it would be greatly to the detriment of the agricultural college to be separated from the main part of the university.

The extra cost in duplication of buildings, administration and operation, which of necessity must be continuous in the event of separation, would many times overbalance the value of the good buildings now upon the city campus, and in adidtion to this there would be the cost of the six blocks adjacent to the city campus.

Uses for Old Buildings

It is foolish to say that the buildings upon the city campus would be "junked" as the Lincoln committee states. The state would undoubtedly have use for them and save a good deal of money in other ways.

The votes of you men who live upon the farms of the state will figure largely in the settlement of the question whether the State university belongs to the people of Nebraska or whether it is to be looked upon as the personal perquisite of a few local transcient business interests. The yearly cost of the university's activities are creeping up to be nearly one-third of the total taxes of the state, and we should be glad of it, because the university has the ability to give you value received for all the money put into it, but its business must be judiciously managed with the public good absolutely in mind.

The university is to endure as long as our state endures. Your vote is, therefore, of tremendous importance. A mistake now will be far-reaching in its effect.

The best thought and advice obtainable say to you: For the best financial interests of the state, which are your interests, and for the best educational interests of all the students of the university, especially the Agricultural college, vote for consolidation at the state farm; and we say, also, and that advisedly, for the best moral interests of the student body it is wise to vote to go to the state farm. Vote so that the future will commend and not condemn you.

MARKET PLACE

POULTRY—Langshans

BLACK LANGSHAN COCKERELS. Write Jake Hetrick, Wahoo, Neb.

Leghorns

FOR SALE—S. C. W. LEGHORN AND S. C. B. Minorca cockerels. Prices right. Mrs. Emma Duerr, Dorchester, Neb.

Orpingtons

PRICE LIST FREE—SINGLE COMB Buff Orpington, Toulouse geese, Indian Runner ducks. Peter Brehm, Harvard, Neb.

ORPINGTONS— BUFF OR WHITE— Stock for sale. Price list free. Frank Lewis, Gibbon, Neb.

BUFF ORPINGTON CHICKENS, $1 to $5. Mrs. Belle Merrick, Osceola, Neb.

CRYSTAL WHITE ORPINGTON cockerels for sale; big stock. Send to J. Christensen, Colon, Neb.

S. C. BUFF ORPINGTON COCKERels from good stock. Write me for prices and guarantee. E. L. Woodcox, Willow Island, Neb.

S. C. BUFF ORPINGTON COCKERels for sale, both utility and show birds. George F. Hahn, Octavia, Neb.

THOROUGHBRED, FINE, LARGE Buff Orpington cockerels, $1. Fawn White Runner ducks, laying now, $1; drakes, $1.25. G. Stewart, Henderson, Ia.

Plymouth Rocks

500 WHITE PLYMOUTH ROCK COCKerels, early hatched, large-boned, from high scoring stock, $1.50 each, or $12 a dozen. Charles A. Gabelman, Tilden, Neb.

BARRED ROCK COCKERELS AT farmer prices; none better; entire flock of White Wyandotte. Big bargain. Clarinda Duck Farm, Clarinda, Ia.

Rhode Island Reds

FINE SINGLE COMB RED COCKerels; White Pekin ducks, $1 each. Amos D. Birky, Bancroft, Neb.

FULL BLOOD R. C. RED PULLETS, $10 per dozen; cockerels, $2 each; guaranteed. Highland Farm, Hedrick, Ia.

RHODE ISLAND REDS, BOTH combs, 200 for sale. Cockerels, 75c to $2; pullets, $1 each. D. A. Berck, Dannebrog, Neb.

BARRED PLYMOUTH ROCK COCKerels. A. F. Hansen, North Platte, Neb.

ROSE COMB RED COCKERELS, $1.50 to $2 each. F. M. Shaver, Bruning, Neb.

Wyandottes

SILVER-LACED WYANDOTTES AND S. C. Black Minorcas; the best I have ever raised. Correspondence cheerfully received. Write your wants to O. J. Cotton Poultry Farm, 1410 South 18th St., Omaha, Neb.

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SNOW BALL WHITE WYANDOTTES —First premium hen, second premium pen, Big Four fair, Fremont. Prices right. Robert Frahm, Snyder, Neb.

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Ducks

INDIAN RUNNER DUCKS, MRS. Derrick, Battle Creek, Neb.

Turkeys

BOURBON RED TURKEYS FOR sale. Clinton Myers, R. 4, Fairbury, Neb.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

BARGAIN SALE—CAMPINES, Orpingtons, Leghorns, Anconas, Rocks, Wyandottes, Minorcas, ducks, $1 up. Mrs. Sophia Bensen, Washta, Ia.

CHOICE STOCK FOR SALE—English Runners, Buff Orpingtons, White guineas. Jennie Sloan, Boicourt, Kan.

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Arkansas

LITTLE RIVER VALLEY LANDS—Rich and cheap, on railroad. Sessions Co., Winthrop, Ark.

Canada

FOR SALE—640 ACRES NEAR GOOD town, well improved, Alberta; 320 acres fair improvements, near good market, Saskatchewan. Good opportunity for well equipped renter. Price right; easy terms to good man who wants home farm. Address Owner, Box 164, Independence, Ia.

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Kansas

SOUTHEASTERN KANSAS—320 acres in Moran valley, Allen county, 100 miles from Kansas City; in corn belt. A snap. Send for views of the farm. Address Owner, Lock Box 367, Iola, Kan.

Minnesota

BETTER THAN HOMESTEADS—Write us for information regarding our "Half Earnings" plan and get a farm home of your own. Flax crop on first breaking will make you a lot of money the first year. We have about 1,000 quarter sections to select from, part under cultivation. No cash payment required. Address Hackney Land Credit Co., Hackney Bldg., St. Paul, Minn. * * * The European war means high prices for all American farm and factory products. The result will be a big increase in the value of farm lands.

FOR SALE—WELL IMPROVED 80, central Minnesota. Price, $5,000. Address Y 258, Twentieth Century Farmer.

FARM FOR RENT—A FINE DAIRY farm, good buildings, 10 or more; cattle, horses, sheep, poultry, farm machinery, pastures, all fenced, woven wire; water in each; A-1 land, about 175 miles west of Minneapolis. Will be rented very cheap for cash rent. Don't apply unless have some means and very best of references. Address Y 257, Twentieth Century Farmer.

IT'S SO EASY TO BUY AND PAY for splendid stock or dairy farms in Chisago or Pine counties. Let us tell you why and how. Lists free. St. Croix Valley Land and Loan Co., Drawer G, Rush City, Minn.

Nebraska

NEBRASKA — THIS FARM WILL make you rich—320 level acres, good, black soil; 50 acres fine rye; 20 in alfalfa, small grove and balance hay land; 35 feet to fine, soft water; 11 miles from Atkinson (Holt Co.), Neb. Price only $40 per acre; very easy terms. This farm is clear and is remarkably well adapted to grain, stock and dairying. On good auto road. For particulars write or call on the owner. W. P. O'Brien, 410 Bee Bldg., Omaha, Neb.

FERRETS

FERRETS—GOOD HUNTERS. RATters. F. Breman Co., Danville, Ill.

LANDS—Oregon

OREGON STATE PUBLICATIONS free. Oregon Almanac and other official books published by State Immigration Commission, telling of resources, climate and agricultural opportunities for the man of moderate means. Ask questions—they will have painstaking answers. We have nothing to sell. Address Room 110, Portland Commercial Club, Portland, Ore.

TWO SPLENDID FRUIT-BEARING orchards. I own two 40-acre fruit orchards right on the edge of Medford, Ore.; one 40 with trees nearly five years old and one 40 with trees about four years old; they are all in fine condition and should come into bearing next year. These orchards are made up very largely of Bartlett pears and Newton Pippin apples, and are in a splendid position, both for horticultural deevlopment, and so far as the value of the property is concerned, as the orchards are right on the edge of Medford; as a matter of fact, the outer line of the city limits of Medford is a street which runs along the edge of the property. The state highway, cement paved, running from Seattle, Wash., to San Diego, Cal., passes through one portion of the first 40, separating four or five acres; property in back of us, with more matured trees, has brought as high as a thousand dollars an acre; one 16-acre orchard produced $19,000 in returns last year. This is considered one of the finest sections in all Oregon for fruit growing, but it is too far away for me to handle. Will sell or trade for Minnesota, Iowa or Wisconsin farm. W. T. Kester, Vice President. Lord & Thomas, Mallers' Bldg., Chicago, Ill.

Wyoming

GRAIN LANDS AND STOCK ranches in southeastern Wyoming at bargain prices and on easy terms. For particulars address Federal Land Company, Cheyenne, Wyo.

Wisconsin

UPPER WISCONSIN—BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices, on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

FARMS WANTED—WE HAVE DIrect buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

LANDS—Wyoming

BLACKBURN FARMS—BLACKBURN farms lie so that tractor plowing is easily and cheaply done. A farmer tends a half section there as easily as a quarter section in eastern Nebraska or Iowa. Their distance from Omaha is substantially the same as from Omaha to Denver, and only six or seven hours by auto to Denver. The Union Pacific at Laramie has scores of trains both east and west daily. The stock yards there feed in transit 10,000 cars of cattle, hogs and sheep per year. The Wyoming university and the local schools will be found a great aid in farming and stock raising aside from the education of the boys and girls of the community. The government forest reserve supplies practically free to the settlers all the timber needed for building, fencing, etc. There are various mines near, and there are promising indications of oil; in fact, boring is going on there now. With the best food, water and healthful surroundings stock raising is not only sure, but remarkably profitable. Big ranches in times gone by have made great fortunes. The water system of Blackburn Farms has been in continuous operation for over twenty years and the title to both land and water is perfect. These lands are offered by the actual owners, not agents. Settlement now is composed of farmers from Illinois, Iowa and Nebraska. Prices of land low and terms liberal. A few sections will be exchanged for Iowa and eastern Nebraska farms. Our illustrated booklet will interest you. Send for it; it's free. Laramie Development Co., Laramie, Wyo., or A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

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LET MOSHER-LAMPMAN COLLEGE finance your education! Get the training now, pay us when it pays you. Mosher-Lampman Business College, the well-known Nebraska institution of business training, announces that a few selected young men and young women will be admitted this year to the college and allowed to pay two-thirds of the tuition expense after being placed in a paying position by the college after graduation. The college will find places to do work outside of school hours to earn board for those students who so desire. This presents an unequalled opportunity to a reasonable number of ambitious young people to obtain, at very little actual outlay, a thorough course of business training as stenographer, bookkeeper, salesman, civil service candidate or telegrapher in one of the best known schools of the kind in this section of the country. For full details and college prospectus address Mosher-Lampman College, 1870 Farnam St., Omaha, Neb.

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T. C. F. sold them all---
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Stratton, Neb., Sept. 11, 1914.

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My ad in your paper last spring was a business getter, in fact, it did all my business. At the same time I ran the same ad in two other poultry papers but they did nothing for me whatever. I consider Twentieth Century Farmer my only friend.

O. H. HUDSON.

Mr. Hudson raises Barred Rocks and has been successful. He attributes this, in part, to his selection of advertising mediums.

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FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned; are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

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MULE-FOOT HOGS, SPRING GILTS, fall pigs, either sex. Prices reasonable. Henry Jorgensen, Minden, Neb.

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FOR SALE—ENGLISH SHEPHERD pups; also Rouen ducks. James Cassell, Fremont, Neb.

SCOTCH COLLIE PUPS CHEAP. Fred Kucera Clarkson, Neb.

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PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., 808 F St., Washington, D. C. Established 1880.

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ALFALFA SEED—NORTHWEST NEbraska high land seed, white blossom sweet clover seed; alfalfa hay, all cuttings; prices and samples free. Schwabe Bros., Chadron, Neb.

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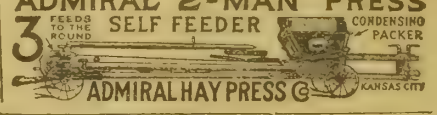

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Address **TWENTIETH CENTURY FARMER**

OMAHA, NEBRASKA

Queer Features of Life and Business in Chilean Capital

SANTIAGO, Chile.—I want to give you some pictures of Santiago. It is the social, political and business heart of this country. It is the pulse of the nation, and the people move as it beats fast or slow. It contains all of the statesmen and most of the money. It is the center of all great movements, and, in fact, it might be called Chile itself. The Santiago of 1914 contains fully one-sixth of all the people inside the republic. It has a population of over 500,000 and has doubled in size in the last fifteen years. It has grown in beauty and modern improvements. It has widened its streets and paved them with asphalt. The Alameda has become a grand boulevard, with a garden running through the center and driveways on each side. The Cousino park, the gift of the millionaire family that owns the coal mines, has sprung up on one side of the city and a forest park has been created, skirting both of the banks of the Mapocho river. The Quinta Normal has been greatly improved and Santa Lucia, the table mountain that rises straight up out of the heart of the city, has developed into a creation more wonderful than the Hanging Gardens of Babylon.

At the Chilean Races

Best Public Park

I wish I could show you Santa Lucia! No city of the world has a public park to compare with it. If you could drop down into the very center of Philadelphia, Baltimore or Boston a mighty rock with almost precipitous walls 300 feet high and with a base of 100 acres or more you might have the park as it was at the beginning. To make it what it is now you would have to cover the walls with vines, plants and trees until the whole became one mass of green. This mass would include eucalyptus and palms, oak trees and pines and semi-tropical plants and flowers of every description. The rock is so rough that natural grottoes are formed in its walls, and as you climb your way up you go past fountain after fountain and waterfall after waterfall. You walk through paths shaded by gigantic fern trees and flowers of many colors, the names of which are unknown in North America. Every step upward gives a different view of the city, and at the top a beautiful little park at the height of a thirty-story flat overhangs the capital of the Chilean republic. In the center of this park, right on the top, is a level space floored with tiles, where the city band plays of an evening, and there on a curtain stretched across the rock is an open-air moving picture show, where the people sit out under the clear sky of the Andes, as the doings of other parts of the world pass before them.

Surrounded by Mountains

The view from Santa Lucia shows the magnificent location of Santiago. The town lies in a flat basin or valley surrounded by ragged blue mountains. It is 1,700 feet above the Pacific ocean and in plain sight of the Andes. Around one side of it flows the Mapocho river, further down is the Maipo, and beyond them are the rich farms, orchards and vineyards of the great central valley. The city is right under and all around you. It is a vast expanse of gray roofs, cut here and there by wide streets that cross one another at right angles. In its center is the Plaza des Armas, on which stand the cathedral, the city hall and other great buildings, and a little further over, taking up a whole square, is the Chilean capitol or house, of congress, one of the finest buildings in all South America. The capitol building is surrounded by gardens filled with tropical trees, including great palms, the trunks of which are as large around as a hogshead, although they are not more than thirty feet high.

Now look down over your feet! Right under you begins the Alameda, the Pennsylvania avenue or Commonwealth avenue of Santiago. It is lined with magnificent buildings and here and there over the whole city you can see the spires of churches rising above the roofs of the buildings. You can also see trees apparently growing right out of the houses. Those trees are in the patios. Many of the buildings are of Spanish style, running about gardens, filled with roses and palms and other tropical trees.

Plenty of Street Cars

But let us go down from Santa Lucia and take a ride through the city. There are plenty of street cars with woman conductors, who will give us a seat on the roof for 5 or 6 cents, or we can get an automobile quite as cheap as in any town in North America. We choose the motor car, and fly this way and that through the town. How big the houses are and how low! The older ones cover acres and but few of them have more than two stories. They are made of brick, plastered with stucco and painted in the brightest of colors. In the best parts of the city the architecture is Greek. The doors are upheld by pillars and I venture there are more Corinthian and Doric columns in Santiago than in Athens. Others of the residences are like Italian palaces, and not a few have each cost $100,000 and upward. Nearly every great house has some legend connected with it. There is a magnificent one on the Alameda whose plans were drawn in Paris and sent out to the builders. In some way they got the plans mixed and put the back of the house to the street, and so it is to this day.

Now we are in the business part of Santiago. Here there are many fine buildings that have grown up within the last few years. There are magnificent stores with the goods of the latest

patterns from Europe. The town is noted for its fine window displays and its many arcades. The business blocks are large, and the fact that they are not skyscrapers makes it possible to cut these covered passageways through them, roofing the arcades with glass. Often a block containing several acres will have arcades that cross one another at right angles. Each is a favorite promenade, for the opaque roof shuts out the heat of the sun and at the same time gives plenty of light. The stores in the arcades bring good rents.

Stores Have Improved

I find a great difference in the stores of Santiago over those that I saw here about fifteen years ago. At that time there was no attempt at display. The prices were not marked on the goods, and nearly all dealing was a matter of bargain and sale. Now every large store has its plate glass windows and the price marks are changed from day to day. This revolution was caused about four years ago by the inauguration of a department store. This was a branch of a big Buenos Ayres establishment. It sold goods at fixed prices and had expert window dressers who changed the display every night. The people took to it and forsook the old stores in such numbers that many of them failed. Today a new class of business estblishments is going up. The buildings are of several stories, with a more regular sky line than that of our American cities. They are more like the shops of Germany and France than those of North America, and, indeed, in many respects the town is a miniature Paris.

The street scenes of Santiago are a combination of the old and the new. You still see the donkeys and mules carrying their panniers of vegetables and fruits around from door to door. You still see horses close to the sidewalks hobbled by rope around their front legs, and the ox-cart still creaks its way through the town. At the same time there are cabs and automobiles everywhere. The street cars have great numbers on them, indicating their routes, and there are motor cars that carry the heavier merchandise and all kinds of building materials.

Paris Bonnets Here

The people have changed and the characteristic costumes of the past are tramped upon by the heels of the present. There are Paris bonnets and slit skirts everywhere, and also women and girls clad in black with mantas or black shawls covering their heads, necks and shoulders, so that only the faces show out of the black. This costume used to be common with the rich and poor. It is now dying out among those who can afford the more costly modern clothing, and the rich and fashionable now confine its use almost altogether for going to church. The laws of the church here provide that no woman can come into a religious service wearing a bonnet, and the only acceptable costume is dead black with a manta of black crepe wrapped around the face close under the chin and fastened there with a brooch. Or it may be pinned at the back of the neck with a black pin. Some of the young women are now wearing black veils instead of these mantas and not a few of them have black dresses that are cut rather low at the neck. I have seen girls in mantas wearing shoes of white kid and light colored gowns, but this is not considered good taste.

Shop in the Morning

The manta is often used for shopping during the morning, the better clothes being reserved for the promenade between 5 and 7 in the afternoon, the hours when everyone goes along the chief business streets to see and be seen. The manta has the advantage that it can be thrown on quickly, and also that it hides any slovenly dressing beneath. To my mind it is far better than the headgear of our women and it makes many a homely face almost beautiful, throwing it out, as it were, against the black crepe. It has the disadvantage, however, that it is the common street garb of the Santiago girls who are not so good as they should be. So dressed these little sinners have the appearance of saints, and no stranger would imagine the class to which they belong until a look from the tail of their eyes gave him the wink.

I would say, however, that the Chileans are usually well dressed. The richer women import many of their gowns and hats from Paris, and the men of the same class look as though they had just come out of a bandbox. There are fine gents' furnishing stores and dressmaking establishments with the latest models from Paris. The soldiers wear fine uniforms and the policemen have suits of white duck with white helmets. Altogether the people are as well clad as those of similar classes in the United States, and the business and professional men are more particular as to their dress than we are.

Not a Cheap City

Santiago is not a cheap city in which to live. It is a town of the very rich and the very poor. Many of the citizens own large estates out in the country and live at the capital, where they have magnificent houses and entertain in grand style. The city has a municipal theater subsidized by the government. This gives a season of Italian opera which lasts for eighty nights. The companies are brought from Italy and nearly every person of prominence has his own box that costs $400 or $500 in gold. On such fashionable occasions full dress is always worn and the ladies are resplendent with diamonds. The men keep their heads bare during the acting and as soon as the curtain falls every man puts on his hat. He may stand up in his seat and sweep the house with his opera glass, staring at such of the ladies as interest him. There is a great deal of visiting among the friends in the boxes during the intermissions and the opera is more of a social occasion than a musical one.

Races on Sunday

Another social feature is the races, which are usually held upon Sundays. Santiago has one of the finest race tracks in the world. It is outside the city on a plain surrounded by mountains which rise up against the horizon like walls of snow. Above these white walls is stretched a sky of the bluest blue, and in winter, when the best races take place, the weather is as mild as June in Virginia. The ladies come out in their summer dresses and they walk about through the parks and gardens not far from the grandstand. The race track is owned by the Club Hipico de Santiago. This club has done much to improve the breeding of horses in Chile and has made the Chilean horse one of the best in the world. The Chilean horse is a cross between the Flammand and the Arabian horse brought here by the Spanish conquerors, which through the temperate climate and the cold snow has grown into what is an entirely new type. It has great staying qualities, with an extraordinary courage and spirit. Like the Arabian horse, it eats but little, and it has all the endurance of the Arab and the strength of the Flammand.

City of Many Churches

Santiago is a city of many churches and schools. Full religious tolerance is granted and the Protestants have their missions and churches and schools in different parts of the republic. Roman Catholicism is the state religion and the church receives a large subsidy from the government. The most of the people are Catholics, and that church is extraordinarily rich. It owns in Santiago alone property to the amount of $100,000,000 in gold. It has some of the best business blocks, and the whole of one side of the plaza, which is the center of the business section, belongs to it. It has thousands of rented houses and acres of stores. It owns haciendas outside the city upon which wines and other products are manufactured and offered for sale. Nearly all of the church property is controlled by the archbishop, although some of it is held by the different church organizations, male and female. The Carmelite nuns of this city are said to be the richest body of women in the world.

(Copyright, 1914, by Frank G. Carpenter.)

An acre of potatoes pays for three acres of land in San Luis Valley - Colo.

Eugene H. Grubb, the most noted authority on potato culture in the world, says in his book, "The Potato," page 17: "The potato grew wild and now grows to perfection in Southwestern Colorado."

WE are glad to be able to quote so able and disinterested authority as Mr. Grubb, who has a world wide reputation, to show that the San Luis Valley, Colorado, is the natural home of the potato and must possess certain natural advantages which allows this favored district to surpass all others in the raising of potatoes.

This Valley produced the greatest yield on a measured acre of ground ever recorded — OVER 700 BUSHELS—was raised in 1902 in competition for a prize offered by the AMERICAN FARMER.

The average yield per acre is about 300 bushels and the quality is the very highest. The market for potatoes is in Texas and other Southern points where the home grown potatoes can not be kept for any length of time, making a good market with good prices. The freight rates from this Valley south are favorable.

1021 cars of potatoes shipped from this valley in 1911.

It is not unusual to see fields of potatoes of from 40 to 80 acres in extent which bring in returns of over $100 per acre.

There is no other place where a farmer can buy land that is adapted to such a wide range of staple crops as the San Luis Valley, Colorado. The man who wants a farm where a large increase in value is sure to reward him should not neglect the opportunity we offer. It can not be duplicated elsewhere and will not remain open here long.

We guarantee that should the purchaser at any time within three years becomes dissatisfied with land purchased from us that we will re-purchase it at $15 per acre advance over the price paid, providing the land has been put in cultivation, mostly in alfalfa.

Price of land with water for irrigating already brought down to the land and fully paid runs from $50 to $60 per acre. Cash payment from $10 to $12 per acre, balance divided into 8 equal annual payments.

For further information address,

The San Luis Valley Irrigated Land Co., 712 Omaha National Bank Bldg. Omaha, - Nebraska

Direct Sunlight Means More Hog Profits for You.

You can't raise winter pigs without sunshine. Side windows can't give it. Young pigs must not be exposed to cold. You need sunshine direct on floor of the pens.

CHIEF Sunshine Hog House Windows

Solve the problem and increase your hog profits. Endorsed by practical farmers and leading farm papers. Only window of its kind. Cost little, worth much. Keeps pigs healthy, pens sanitary and reduces your feed bill.

Easily Installed in Any Hog House New or Old

Shingle over flashing, top and sides and job is done. Three big features: 1—Perforated trough lets water run off, prevents leaking. 2—Galvanized screen protects glass. 3—Copper clips hold glass without putty. The only modern, scientifically correct hog house windows on the market.

"CHIEF" Capolas

Keep fresh air in hog houses, barns and other buildings. Rain, snow and bird proof. Galvanized steel, last lifetime.

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The best, strongest, longest lasting, most improved roof on the market. Made of heavy galvanized steel, self-supporting, no rafters or beams necessary. Made in sections that interlock. Easy to install.

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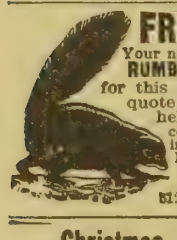

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Report of the Nebraska Live Stock Sanitary Board

(CONTINUED FROM PAGE FIVE.)

Yards at South Omaha and discontinued on September 14, 1914:

Grain Belt Supply Company—On June 16, tested twelve and one-half gallons of serum serial No. 4, source of virus, State No. 9. One pig was given serum by mistake, but the other one died in twelve days. One pig that received 15 c. c. of serum died in fifteen days. Judgment: Serum fair.

Mayes Serum Company, No. 1—On June 16, tested twenty gallons of serum, serial No. G, source of virus, State No. 9. Two checks were killed for virus in thirteen days. One pig that had received 15 c. c. of serum also died in fifteen days. Judgment: Serum fair.

Mayes Serum Company, No. 2—On August 8, tested twenty gallons of serum, serial No. H; source of virus, Grain Belt Supply company, No. 806. Both checks died, one on the sixth and the other on the seventh day. All pigs died that received serum; the last pig died on September 4. Judgment: Serum showed no degree of potency.

Hevenor Serum Company, Franklin, Neb.—On July 6 tested twenty gallons serum, serial No. 65; source of virus, Omaha Serum company, No. 8154. Two checks died in seven days and one pig that received 20 c. c. of serum.

On August 17 tested twelve gallons of serum, serial No. 66; source of virus, Grain Belt Supply company, No. 2. Two check pigs were killed for virus in seven days. One pig died that received 15 c. c. serum. Judgment: Serum fair.

Nebraska Serum Company, Lincoln, Neb.—On July 3 tested twenty gallons serum serial No. 18; source of virus, Grain Belt Supply company, No. 443. The two check pigs were killed for virus, one in eight days and the other in nine days. All the pigs that received serum died. Test completed July 17, or seventeen days from time of start. Judgment: Serum shows no degree of potency.

Nebraska Serum Company, No. 2—On August 12 tested twenty gallons of serum, serial No. 27. (It is now claimed by Mr. Joers the serum tested was serial No. 25). Source of virus, Grain Belt Supply company, serial No. 810. The two checks died, one in ten days and one in fourteen. None of the pigs receiving serum died. Judgment: Serum very good.

Corn States Serum Company, No. 1—On July 23 tested twelve gallons of serum, serial No. 51; source of virus, Corn States Serum company, No. 51. The two check pigs were killed for virus, one on the seventh day and the other on the eighth. None of the pigs that received serum died. Judgment: Serum good.

Corn States Serum Company, No. 2—August 7 tested twenty gallons of serum, serial No. 5; source of virus, Corn States Serum company, No. 804. Two check pigs died on the sixth day. None of the pigs that received serum died. Judgment: Serum good.

Corn States Serum Company, No. 3—August 15 tested twenty gallons of serum, serial No. 53; source of virus, Corn States Serum company, No. 39. Two checks were killed for virus in six days. None of the pigs that received serum died. Judgment: Serum good.

Corn States Serum Company, No. 4—August 21 tested twelve gallons of serum, serial No. 54; source of virus, Omaha Serum company, No. 8184. Two checks died in six days. None of the pigs that received serum died. Judgment: Serum good.

O. K. Serum Company—July 30 tested twelve and one-half gallons of serum, serial No. 208; source of virus, test No. 8. Two check pigs died, one in six days and the other in eight. One pig died that received 20 c. c. serum on August 21, after a period of twenty-two days. Judgment: Serum fair.

Omaha Serum Company, No. 1—July 25 tested twenty gallons of serum, serial No H; source of virus, No. x2. The two check pigs became sick, one killed for virus in seven days and the other died in six days. Two pigs died that received serum; one received 15 c. c., the other 20 c. c. Judgment: Serum did not test satisfactorily, so another test was granted for the same lot of serum.

Omaha Serum Company, No. 2—August 7 tested twenty gallons of serum, serial No. J; source of virus, No. 804. Grain Belt test completed August 25. Two check pigs died, one in seven and the other in eight days. None of the pigs died that received serum. Judgment: Serum good.

Omaha Serum Company, No. 3—August 12 tested twenty gallons of serum, serial No. H. (retest); virus, Grain Belt Serum company, No. 810. Two checks died, one in eight days and the other in ten days. No pigs died that had received serum. Judgment: Serum good.

Mid-West Serum Company, No. 1—August 7 tested twenty gallons of serum, serial No. 10; virus, No. 83, Grain Belt Supply company. The two checks died, one in five days, the other in six days. All but one of the pigs that received serum died; one pig that received 25 c. c. of serum lived. Judgment: Serum shows slight degree of potency.

Mid-West Serum Company, No. 2—August 7 tested twenty gallons of serum, serial No. 13; virus, No. A3, Grain Belt Supply company. Two checks became sick; one died in six days and the other in seven days. All the pigs that received serum took sick and died, the last one to die, died August 25, or eighteen days from time of injection. Judgment: Serum shows no degree of potency.

State Plant, Lincoln, Neb., No. 1—June 26 tested forty gallons of serum, serial Nos. 78 and 79, tested on sixteen pigs; source of virus, No. 2, Grain Belt Supply company. The four check pigs became sick; one died in ten days, one in eleven and two in fourteen days. None of the twelve pigs that received serum became sick. Judgment: Serum good.

State Plant, No. 2—July 3 tested twenty gallons of serum, serial No. 81; source of virus, Omaha Serum company, No. 443. The two check pigs took sick and were killed for virus, one in six, the other in eight days. Two pigs that received 20 c. c. each of serum both sickened and one died in seven and the other in eight days. Judgment: Serum does not have full degree of potency.

State Plant, No. 3—July 17 tested sixty gallons of serum, serial Nos. 83, 84 and 85; twenty-four pigs were used for the test; source of virus, Grain Belt Supply company, No. 32. All six of the check pigs became sick and were killed for virus, one in seven and five in eight days. None of the pigs that received virus became sick. Judgment: Serum good.

State Plant, No. 4—July 3 tested twenty gallons of serum, serial No. 82; source of virus, Omaha Serum company, No. 243; tested on eight pigs; the two check pigs became sick—one was killed for virus—in eight days, the other in nine days; one pig got sick and died in seven days that received 20 c. c. of serum. Judgment: Serum fair.

State Plant, No. 5—July 23 tested twenty gallons of serum, serial No. 80; source of virus, Nebraska Serum company, No. 18. The two check pigs took sick and both were killed for virus in eight days. Two pigs that received serum took sick and died; one that received 20 c. c. died in nine days; the other, that received 25 c. c., died in nine days. Judgment: Serum not very potent.

State Plant, No. 6—June 26 tested forty gallons of serum, serial Nos. 76 and 77; source of virus, Grain Belt Supply company, No. 2. This test was made on sixteen pigs; the four checks all became sick and were killed for virus, one in thirteen and five in fifteen days. None of the pigs that received serum became sick. Judgment: Serum good.

State Plant, No. 7—July 23 tested 140 gallons of serum, serial Nos. 86, 88, 89, 90, 91, 92 and 93; source of virus, No. 2U-84, Grain Belt Supply company. This test was made on fifty-six pigs, fourteen of them checks, which all sickened and were killed for virus, thirteen in eight days and one in nine days. There were eight pigs died in this test that had received serum, three pigs that had received 15 c. c., four that received 20 c. c. and one that received 25 c. c. Serum serial, Nos. 86 and 93, none lost that received it. Judgment: Serial Nos. 86 and 93, serum very good; Nos. 86, 89, 90, 91 and 92 showed only a fair degree of potency.

C. H. Miner Serum Company, Red Cloud, Neb.—August 24 tested five gallons of serum, serial No. 10; source of virus, Omaha Serum company, No. 8184. Only one check pig became sick and died in eight days; the other check pig became sick and had a high degree of temperature (105.8), but did not die. None of the pigs that received serum got sick. Judgment: Serum good.

The serum produced by ten companies was tested. Thirty-five tests in all were made; 658½ gallons of serum was tested; 280 pigs were used in the thirty-five tests. The 280 pigs used in the test cost $2,380. Seventy pigs were used as checks on the test and sixty-nine received virus only; one received serum by mistake; sixty-eight of the check pigs died; one got sick, but did not die; one that received serum by mistake did not get sick. The sixty-eight check pigs that died cost $578. Forty-four pigs that had received various sized doses of serum died, at a loss of $374, making a total loss of 112 pigs that cost $952. There were eighty gallons of serum tested, in thirty-five tests. In four tests the serum showed no degree of potency and the companies were notified in writing to not sell or offer for sale any of the serum that failed to come up to the test. Two of the companies complied with the notice and withheld their serum from the market, but one company sold its serum just the same. However, the bad serum that was withheld from the market was valued at $3,200, and there was enough of it to vaccinate 5,333 head of shoats weighing 100 pounds apiece. Each animal was valued at $8, making a total saving of $42,664 to the farmers because they were saved from using that much bad serum.

The above amount of work was accomplished at a cost to the Nebraska Live Stock Sanitary board of $205.50. Very truly,

C. M. DAY, D. V. M.,
State Field Veterinarian.
JOHN SCHMELA, D. V. S., Veterinarian.

This offer should touch the heart of any banker or ranchman: My income from feeding cattle on

Springdale Ranch

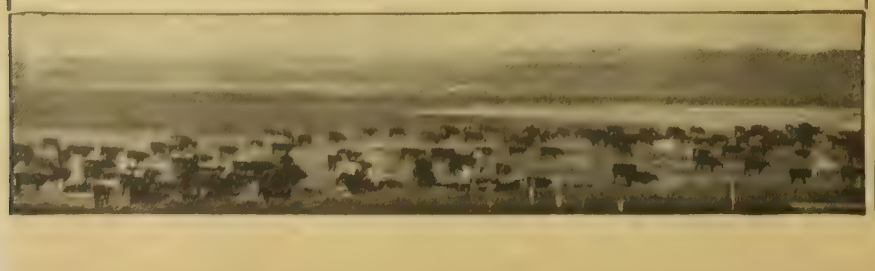
is $30,000 a year. Better management and war prices would make it yield $50,000. It's only 26 miles from Springfield on a fine auto road to the $3,000,000 Power Site Dam. Farms surrounding this ranch sell at $50 per acre. The hardwood timber on it marketed would pay for it. Railroad station within a mile. Six sets of buildings. Fifty-six living springs and one stream. It will grow any crop of grain, grass, fruit or vegetables that will grow in Missouri. Cut up into small tracts it could be sold for fruit land at $100 per acre. I offer this notable Springdale property for

$15 Per Acre

for quick sale. Half cash and balance 4½%. I am overloaded with property is the only reason. My 700 three and four-year-old steers are also for sale. Surely no one else will make so great a sacrifice to get the ready money. You have a fortune right within your grasp. Come and let me show you. It means an enjoyable day in the auto only. This paper will tell you I am reliable. For particulars write,

A. J. JOHNSTON

Woodruff Building, Springfield, Mo.



Serum Treatment Statistics

We publish herewith some interesting figures on hog cholera compiled by Dr. M. H. Reynolds, chief veterinarian of the Minnesota Agricultural college. Some very interesting facts are brought out in this report.

The Twentieth Century Farmer has repeatedly called attention to the necessity of prompt action being taken when one or more hogs in the herd are noticed to be off. This report shows that 10 per cent were too far advanced in the disease for treatment, that 48 per cent had temperatures of 104 or over when treated. This clearly shows that the owner was careless or tardy in getting the hogs treated after they showed signs of sickness.

The figures given on results in treating pregnant sows are particularly interesting, bearing out the conclusions given in our series of hog cholera articles, that we would not hesitate to treat a pregnant sow at any time it become necessary. This report shows that 10 per cent aborted. Without doubt quite a proportion of this 10 per cent were roughly handled, causing the abortion. Don't forget when treating pregnant sows that much of your success depends on the manner in which they are handled.

Hog Cholera Probabilities

Study of recent official reports (Fischer) relating to hog cholera and hog cholera serum work brings out the following interesting information, based on observation of about 140,000 hogs. Total number given either serum only or serum virus treatment and total number left untreated account of supposed infection. In this grand total there are nearly 101,000 hogs:

Serum only was given to about 7,500 on account of presence of disease in the herd; serum virus treatment was given 72,401.

(CONTINUED ON PAGE EIGHTEEN.)

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Water and Ventilation

G. B. F., Iowa: Your readers must be very much impressed with the beautiful picture on the front cover page of your issue of October 3, "The Greatest Blessing—Water." Of course, no one will question the importance of water, yet this title impresses us more than ever that a subject of more importance is frequently neglected. What can water accomplish, or what can food accomplish, without air? Air is so common and so indispensable that we hardly give it a thought, yet we believe you will agree with us that this is a most important element and that methods of providing pure air are most sadly neglected. Certainly the subject of ventilation deserves as much attention at the hands of the press as do food rations and the water supply.

Answer—We are pleased to receive letters of this kind. We aim to have every cover page illustration tell some story or convey an idea that will interest, entertain or instruct. We agree that the subject of ventilation is one that should receive more attention. There is nothing more important than pure air in its influence on the health of animals as well as human beings.

What is Feterita?

J. C. E., Washington: I ask to have you describe the plant you call feterita, as it is a new plant to me. Will it thrive here on the west coast? We are in need of just such a plant as I infer it to be.

Answer—Feterita is a plant that was imported into this country from Egypt in 1906 and has grown greatly in favor with farmers in the semi-arid section since that date. It belongs to the same family as kafir, milo and Egyptian wheat, bearing seed in clusters and having long, corn-like leaf blades. It is not probable that this crop would be a good one on the northwest coast, as it is primarily a dry weather or drouth-resistant crop. However, your experiment station can tell you whether they have tried it and whether it proved successful. If you will address the director of the Washington experiment station at Pullman they will be glad to tell you whether or not it has been found a good crop for Washington.

May Be Chronic Hog Cholera

J. O., Nebraska: I have taken your paper a number of years, but never asked any advice before. I think the Twentieth Century Farmer is the best and most up-to-date farm paper in the west.

Can you tell me through your Readers' Exchange what is the matter with my shoats? They did well when they were pigs, but of late they seem to have diarrhea. They get thin and weak and two have died. I feed them good, sound ear corn and they also have the run of the alfalfa pasture. I have given them vegetable hog potash and a worm expeller, thinking they had worms. I will greatly appreciate any advice you may be able to give me.

Answer—It is hard to say what is the trouble with your hogs. From the treatment given them it is almost sure that the cause is not worms. It is possible that your hogs are affected with chronic hog cholera. This disease sometimes takes the slow or chronic form, and the hogs die slowly, acting as yours have. We would suggest that you get someone who knows hog cholera to look at them and hold a post mortem on one of your pigs. If you find hog cholera is the trouble we should not delay another day in vaccinating the herd with good potent serum, having this work done by someone that knows how.

Milo and Kafir

E. S., Nebraska: We have been readers of your valuable paper, the Twentieth Century Farmer, for many years, but we have not very often noticed a write-up from this part, southeastern Nebraska.

We herewith enclose you a postal card from a field of kafir taken September 20. This kafir was planted in drills May 15, about one-half-acre. At the time the picture was taken this seed was ripe. Now, while the heads do not show large in the picture, we took the trouble to count the number of seeds in one of the average heads, and to our surprise there were 5,525 seeds, or over one pint of seed by measure, from just one head. You will note the heads on the card do not appear large, especially the tall heads. The cause is the sparrows' demand for the same.

And now about milo maize. The same day we sowed the kafir we also sowed one-half-acre of milo maize, and we can safely say, had the sparrows not molested, we would have harvested fifty bushels or more per acre. However, we harvested the maize fifteen days earlier than the kafir. So, in other words, all things being equal as to feeding value, it would perhaps be best to sow milo maize for fear frost might hit the kafir before it was mature. Allow us to say to the farmer friends, especially those who live in localities where they are subject to drouth, try milo maize or kafir, or a little of both, next spring. Once tried, you will plant more, for it will yield you bushels in dry seasons, especially when corn won't yield a kernel, and the feeding value is nearly the same. All stock likes it, the horses whine for it, the pigs squeal for it, the chickens cackle for it, and that is not all, they fill the egg basket also.

Three Generations in Their Kafir Field

The supreme court of Pennsylvania has decided that the amount of damage collectable on growing timber set on fire through negligence is not only the value of the wood destroyed, but also the injury to the property as a whole through the destruction of the young growth.

A Wise Collie

(CONTINUED FROM PAGE NINE.)

She can shake hands standing on her hind legs and using her right paw; bark for something to eat, and is a fine cow dog.

Additional Stories

Mabel Johnson, Brunwick, Neb.; Loretta Riely, Emerson, Neb.; Annie Eggers, Yutan, Neb.; Bertha Pugh, Oakdale, Neb.

The Next Time You See THIS in Your Hog-Lot Send for THIS

SEND NO MONEY

When your hogs rub against fence posts, buildings, trees, etc., look out for lice. It's a pretty good sign these blood-sucking parasites are at work in your herd. If neglected they will multiply by the thousands—soon infest the whole herd—keep your animals thin—stunt their growth—sap their vitality and invite cholera and other contagious diseases on to your farm. Dips are helpful but expensive—often dangerous and always troublesome.

Why not let your hogs rid themselves of lice, mange and other skin diseases in the **natural way.** Let them rub against a *Rowe New Idea Rubbing Post* 30 days at my risk. **I'll furnish the Posts and the Oil and pay the freight.** The trial won't cost you a cent. You simply watch results and pay if pleased.

Rowe's New Idea Rubbing Posts

are simpler, safer, more durable and more economical than any other—use any kind of oil, crude or medicated. **Have no valves,** nothing to get out of order, work in all kinds of weather the year round. Dirt can't clog them as it does valve and cylinder machines. Rain can't wash out oil. No oil wasted. Every drop is applied as needed **right on the itch** when the hog rubs. Pigs of all sizes and ages can rub on these posts and keep vermin-free and healthy. Three rubbing bars to each Post. One Post accommodates 30 hogs.

Try Them 30 Days FREE—Pay if Pleased

Just write and tell me how many Posts you want to try 30 days at my risk. I'll furnish the Machines, Oil, everything and even **pay the freight** to prove my claims. Send no money. Order direct from this advertisement or if you prefer write for big illustrated folder today.

Save $2 to $12 on EACH Post at these Cut Prices—Pay if Pleased

1 Post $ 7.75 | 3 Posts $21.75
2 Posts 15.00 | 4 Posts 28.00
1 Gal. of Medicated Oil FREE with each Post. Freight charges paid.

Alvin V. Rowe, Pres., ROWE MFG. CO., 422 Liberty St., GALESBURG, ILL.
Also Makers of famous Can't-Sag Gates (2)

Some of the Big, Smooth Duroc-Jersey Boars Being Offered for Sale by Ed M. Kerns of Stanton, Neb. He is Pricing Them Worth the Money

10 APPLE TREES GIVEN AWAY

Fruit Grower & Farmer, published twice a month shows you all the newest and best ways of growing fruit at a profit and will help you make big success with these 10 trees. These trees will supply you with luscious apples all through the year from time the earliest apples ripen until they ripen again next year. By planting this fall they become established, ready to start into growth early next Spring.

Yes! Ten strong, healthy, well-grown, one-year-old apple trees given away absolutely FREE! It certainly is a remarkable offer, but we are determined to get 50,000 more subscribers in 30 days, and to create further interest in orcharding. Every city and country home needs more fruit trees. Well, here's your chance, and you never had one like it offered you before. Send us $1 for one year's subscription to Fruit Grower & Farmer, and we will at once send you this

Ideal Family Apple Orchard

for fall planting consisting of 10 fine apple trees—2 each of Yellow Transparent, Wealthy, Johnathan, the famous Delicious and Winesap—all transportation charges prepaid to your door. The paper, alone, is worth $1 of anybody's money and once you subscribe for it you will always want it—that's why we are willing to start you with this remarkable Free Offer. The dollars are flowing in from every direction, so send in yours today. Such opportunities as this never last long. Send your dollar and address mail to

FRUIT GROWER & FARMER, Desk. 3 St. Joseph, Mo.

Fruit Grower & Farmer,
Desk. 3 St. Joseph, Mo.
Enclosed find $1.00 for one year's subscription. Send me, prepaid, 10 apple trees Free, as described.
NAME _____
Address _____

Review of Live Stock Market

By A. C. Davenport

CATTLE during the last week have suffered the severest reverse experienced since the beginning of the season. From Chicago to Fort Worth, from St. Louis to St. Paul, every market, east and west, has gone down hill at a rate so rapid as to almost take away the breath of sellers. Everywhere receipts at the beginning of the week were very large, at some points breaking all previous records. Later on there was a falling off in receipts, so that totals for the week were not so large that they ought to have been burdensome, but the market having once been started downward, kept going, the brakes refusing to work.

Cattle values had already been easing off and the less-sought-after kinds gradually working to a lower basis, so that the decline of the last week, amounting to 25@50c or more, has made quite an inroad upon prices. To be sure, little change has taken place as regards the more favored kinds. For example, choice to fancy long-fed yearling beeves have declined very little, for the reason that most markets are not receiving on an average one car a week of that class of cattle. Such cattle sold recently at Omaha at $10.50 and at $10.85 in Chicago. While such sales are always reported in the papers and frequently commented upon, they do not constitute one-quarter of 1 per cent of the receipts. The most of the decline has fallen upon the rank and file of the fair to pretty good kinds of cattle, both killers and feeders, and they are in many cases $1.00 per hundred lower than the extreme high point of the season.

The explanation for the large receipts is to be found in the fact that this is the season of the year when range men are hurring in their cattle so as to have them out of the way before winter settles down. There has also been a great rush of native grass and half-fat cornfeds to market. Thousands of cattle have been prematurely marketed, forced in by the panicky fears of holders, or by pressure from banks having loans upon them. These latter cattle, which under ordinary circumstances were not due to arrive on the market until November or December, after the range cattle had ceased to come, are really responsible for the break in the market.

The immediate future of the market is uncertain, being dependent in great degree upon the size of the receipts. Packers have recently reduced wholesale prices of meats to encourage freer consumption and they may be depended upon to do everything in their power to keep the cattle market down. It follows that continued large receipts would be taken advantage of by them to force the market still lower. On the other hand, a light run could hardly fail to have a strengthening effect. Before this can appear in print market prices may already have been considerably revised.

Future Supply Will Be Short.

One thing may be regarded as pretty definitely settled and that is that the future supply of cattle will fall short of last year. The free liquidation of cattle that has been taking place has already made considerable inroads upon future supplies of beef and there is no certainty that the country is through cashing in. Some very well informed cattlemen believe that with corn and all kinds of feed high the country will continue selling cattle instead of holding for a long feed and a late market. Such a policy, if followed to any great extent, while it might for a time keep the market well supplied and prices down on the common to medium grades, in the end would result in a short supply, especially of good beeves.

Under normal conditions it would be a very safe proposition to predict a higher market later on in the season, but in times of war all signs may fail. Closeness of money and unsatisfactory industrial conditions might prevent even a scant supply of cattle from selling high. On the other hand, any improvement in the export demand for meat products and for southern cotton could hardly fail to create a marked improvement in the cattle situation. What an export demand will do has been very well illustrated by the effect of the foreign demand for canned beef on the market for so-called canner cattle. In spite of lower prices and slow movement for all kinds of killing cattle and feeders, common canner stock has shown very little change during the last few weeks and is selling better relatively than any other class of stock coming to market. There never has been a time in the history of the trade when canner stock has sold as high as during the early part of October.

It begins to look a little as if Argentina would not cut such a big figure in the American markets as it did last year, when the shipments from South America had a marked effect in holding down the price on American cattle. Indications are now that more of this beef will be needed in Europe than was the case last year. The fact that France has removed the duty on meats would indicate that that country expects to buy freely in foreign markets. All these little influences, which look small at the present time, may become realities of much greater importance in the not distant future.

While the present situation in the cattle market is not what sellers had expected, it is very evident that every move thus far has tended toward the still further reduction of cattle supplies. Even if the market right now is unsatisfactory and should continue that way for some time to come, the war cannot last forever, and there must come a time when cattle will be the best property that a man can have. It would seem as if every man who has the money and the feed ought to accumulate more cattle.

Hog Demand Still Poor.

Conditions governing the hog trade have not shown the slightest change during the last week, the situation continuing practically the same as has been outlined several times before in these columns. The market is still moving downward, due to a lack of sufficient buying support to maintain it. The reasons for the slack demand have been explained so many times in this connection that it would be a needless repetition to again enumerate them. The future of the market is still uncertain, but there is no reason for expecting any decided change for the better until the causes for the decline are removed. There must be a better demand for the product, and when that comes there is no reason why the market should not respond with an advance in prices on live hogs, but where the improved demand is to come from, and when, no one at the present time can say.

Sheep Suffer Least.

Sheep have been selling very well during the last week, the market continuing quite satisfactory to the selling interests, the same as it has been pretty much all the season. Sheep and lambs have really suffered less from war time conditions than any other class of stock, the demand having been remarkably good through the entire season. There never has been a time in the history of the trade when range lambs sold as high during October as they have this year, and the same thing has been true of old sheep. It looks now as if receipts from the range would begin to decrease very soon, and operators on the market are rather inclined to anticipate somewhat better prices for fat stock in the not distant future. On the other hand, feeders are so high that it would hardly seem reasonable to expect them to advance, as it is generally considered that they are already plenty high enough for the good of the market. Sheep men have really had very little cause to complain of the market and, as a matter of fact, are not doing any complaining.

Serum Treatment Statistics

(CONTINUED FROM PAGE SIXTEEN.)

Of the total number (140,000) coming under observation about 120,000 were in infected herds, i. e., approximately 86 per cent of the total coming under observation were in infected herds.

This actual experience on a very large scale shows that about 11 per cent of the total number die before treatment, 10 per cent are too far advanced for treatment at the time of inspection, 22 per cent had temperatures of 104 or over and are to be considered as probably infected; 48 per cent of the hogs that had temperatures over 104, or that were evidently "off" when treated, were lost; 13 per cent of the total number treated died and 87 per cent of the total number treated were saved; 64 per cent of about 10,000 hogs left untreated on account of apparent infection died.

Pregnant Sows

A total of 2,816 pregnant sows were treated in all herds, of which 75 per cent of all sows treated and reported farrowed healthy litters, 25 per cent of sows treated and reported aborted and 32 per cent were not reported.

Of 616 healthy pregnant sows treated in healthy herds about 90 per cent of treated and reported farrowed healthy litters, 10 per cent aborted and 17 per cent not reported.

These figures bring out some rather important suggestions. For instance, a total of over 20 per cent are lost on account of tardy diagnosis or loss of time in applying treatment, and that risk of abortion is slight (10 per cent) for healthy herds and moderate (25 per cent) for infected herds.

These figures emphasize what is well known among veterinarians engaged in cholera work, namely, that in any cholera neighborhood there are at any one time a rather large percentage of hogs already infected and infectious and unsuspected. These figures indicate that we may expect on a large average to lose of hogs treated about one-half of those that show some rise of temperature, or that appear slightly "off" at time of treatment. They also show the same as our Minnesota figures, that on a large average we may expect to save about from 85 to 87 per cent of hogs treated in infected herds.

The probability of safety for a treated healthy, pregnant sow in a healthy herd is about 90 per cent in favor of healthy pigs at farrowing time.

M. H. REYNOLDS.

Simple Silo Hoist

When the silage in a pit or semi-pit silo is used down far enough to need hoisting it is a problem with many farmers to find a convenient hoist. A simple, inexpensive, automatic dumping hand hoist may easily be made, according to the information in the bulletin on "Handling Silage" of the Nebraska Experiment Station. The device is so made that after the operator is in the silo he may fill the dump, raise it to the top, unload it down a chute and into a cart or wagon or on the ground without climbing out of the silo. This same bulletin also tells of many other devices for hoisting silage.

Still Another Hog Cholera Day

Still another hog cholera day is to be held at the Nebraska university farm—the last of the season—on November 11. Throughout the summer and fall it has been the policy to set aside the second Wednesday in each month for the instruction of farmers in the prevention and eradication of hog cholera, including a vaccination demonstration. Large numbers of farmers have responded to this invitation. Instruction begins at 9 o'clock and lasts throughout the day. No charges are made for the instruction.

Nebraska Hogs Give Best Profits

The North Platte (Neb.) experimental farm, where three carloads of hogs are raised each year for the market, has shown a greater profit upon the investment in growing pork than in any other farm operation. Grain purchased at the market price has frequently shown a profit of 100 per cent by feeding to hogs, either upon alfalfa pasture or with alfalfa hay fed in racks to supplement the corn ration. Wheat and rye used as a winter pasture with alfalfa hay and a very small grain ration has proved a most economical method of wintering brood sows, and approaches in cost a full year pasture season, but it can only be used where wheat or rye makes a satisfactory growth in the fall months.

Breeders' Notes

Blue Ribbon Polands

In this issue of the Twentieth Century Farmer we are starting an advertisement for W. J. Eavey, breeder of big type Poland-China hogs at Geneva, Neb. Mr. Eavey is offering for sale at this time big, growthy boars sired by Blue Ribbon Hastings, Big Iowa, Big King, Nebraska Mouw and High Mogul. They are all immuned and Mr. Eavey is selling every animal with his personal guarantee back of it. At the Fillmore county fair this year Mr. Eavey won all the Poland-China ribbons except one. Anyone interested in Poland-China boars of the right kind and quality wil do well to write him at once. Kindly mention the Twentieth Century Farmer when writing.

Good Hampshire Hogs

The Hampshire breed of hogs is to many people a new one. We want to say, however, that they are rapidly coming to the front. For large litters they are excelled by no breed. Mothers are good suckers and raise a good per cent of the pigs farrowed. Farmers of the corn belt are using grass more and more each year for hogs, and we feel that anyone wanting to change the breed of hogs they are now raising will be well pleased by investigating the Hampshires. They are splendid rustlers and will put on as many pounds of pork with grass as any breed in existence.

A representative of the Twentieth Century Farmer recently visited the farm of William Pamp at Benson, Neb. Mr. Pamp maintains a herd of Hampshire hogs and has a few pure-bred Ayrshire cattle. At the present time he is offering for sale in the hog line some good, strong, husky March and April boars and would spare a couple of brood sows if taken soon. In looking over this herd one thing in particular impressed us, and that is the strong footing and good bone found under practically all his hogs. This is one of the things the Hampshire people are rapidly improving on. If you want a good, strong boar with a good bone, good footing and a good back it will pay you to write or visit Mr. Pamp's farm and make your own selection. We feel perfectly safe in saying that if you order a pig from this herd you will be well pleased with what you receive. Mr. Pamp is located very conveniently for prospective buyers to visit his herd. Benson is on the street car line from Omaha. When you are in Omaha call Mr. Pamp over the 'phone, Benson 228 and he will be pleased to meet you at the street car and take you to his farm and show you what he has. When writing kindly mention the Twentieth Century Farmer.

Nelson Makes $37 Average

Fred B. Nelson of Lindsey, Neb., held his fall sale of Duroc-Jersey boars and sows on Friday, October 23. Mr. Nelson ran through the ring a splendid offering and made an average on the animals sold of $37. The sale was held on one of the days of the big Genoa corn show, and two funerals were held in the neighborhood of Mr. Nelson's farm, all of which detracted materially from the attendance at the sale. It was a bargain day, and those who were there to buy some of the animals were certainly fortunate. Below we give a list of sales of $30 and over:

No.		Price.
2	Jake Getzfried, Albion, Neb.	$38
4	Joe Kutenbach, Linsey, Neb.	34
5	O. E. Hasselbalch, St. Edwards, Neb.	48
6	Carl Becker, Belgrade, Neb.	30
7	C. E. Peterson, Genoa, Neb.	49
8	August Swanson, St. Edwards, Neb.	67
14	Frank Trojan, Leigh, Neb.	30
18	Bert Peterson, Lindsay, Neb.	31
26	R. Widle & Son, Genoa, Neb.	40
27	P. P. Cedar, Genoa, Neb.	35
28	N. D. Peterson, Lindsay, Neb.	37
37	A. E. Berg, Albion, Neb.	61
38	N. D. Peterson	49
29	A. E. Berg	60
Sub	N. D. Peterson	50

North Platte Valley

is rich in crop raising soil—irrigated and non-irrigated. Large or small tracts. Easy payments. If you are preparing to go to a new country you will certainly investigate the rich and productive lands of the North Platte Valley, Nebraska. I have complete and authentic information and will gladly send it to you free.

R. A. SMITH,

Colonization and Industrial Agent, Union Pacific R. R. Co., Room 364 Union Pacific Building,

OMAHA, NEB.

CORN STEEL BIN

Soon pays for itself

in saving from rats and insurance. Portable, Perforated, Shoveling Board, Ventilators. If your dealer does not handle, write for circular and special introductory price.

BUTLER MANUFACTURING CO.,
1253 W. 10th St., Kansas City, Mo.

Poland-China Boars

Blue Ribbon boars with great length and bone; some weigh 325 lbs. Sired by Blue Ribbon Hastings, Big Iowa, Big King Nebraska Mouw and High Mogul. All immuned. W. J. Eavey, Geneva, Neb.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Live Stock Sales

Stuthman Makes $40 Average

The sale of Duroc-Jersey hogs held at Pilger, Neb., on October 17 by Henry Stuthman of that place brought out a splendid crowd of breeders, as well as good local support. The average on forty head was $40, with a top of $67. The offering was a good one, and the demand was very good from start to finish. Below will be found a list of those selling for $30 and over:

Lot	Price.
1—A. R. Barr, Stanton, Neb.	$67
2—Henry Hockins, Pilger, Neb.	60
3—Emil Shear, Pierce, Neb.	50
4—R. P. McGuire, Wisner, Neb.	39
5—M. D. Coleman, Wayne, Neb.	45
6—C. W. Anderson, Hoskins, Neb.	34
7—M. D. Coleman	47
8—M. D. Coleman	56
9—Hans Hansen, Hoskins, Neb.	50
10—A. W. Dolph, Wayne, Neb.	39
11—M. D. Coleman	51
12—Howell Reese, Wisner, Neb.	38
13—Chris Rohl, Stanton, Neb.	55
14—Robert Pritchard, Carroll, Neb.	60
15—Henry Pullman, Stanton, Neb.	48
16—J. Walde, Winside, Neb.	45
17—J. N. Kern, Stanton, Neb.	43
18—George Buskirk	50
19—C. W. Anderson	50
20—C. E. King, Hoskins, Neb.	31
24—John Hanson, Herman, Neb.	55
25—Robert Rogenbaugh, Wisner, Neb.	30
26—William Schellpepper, Stanton, Neb.	47
28—Walter Taylor, Wayne, Neb.	31
33—A. R. Barr, Stanton, Neb.	40
42—Joe Josa, Wahoo, Neb.	30
43—M. H. Christianson & Son, Plainview, Neb.	40
46—Otto Miller, Hoskins, Neb.	30

Widle Makes $50 Average

The sale of Duroc-Jersey hogs held at Geneva, Neb., October 13, by Widle & Sons of that place brought out a nice crowd of breeders, and also a very good local crowd, and resulted in an average of $50 on forty head. The offering was a very commendable one and some real bargains were sold. The real facts in the matter are that some of the better stuff did not sell for as much money as it should have done. F. B. Nelson of Lindsey, Neb., topped the sale on lot 1, I Am A Critic, a splendid son of Critic B. The offering was largely sired by Critic B, and certainly showed that this boar, as well as being a champion, is a splendid breeder, and also a sire of winners. Below will be found a list of those selling for $30 or over:

Lot	Price.
1—F. B. Nelson, Lindsay, Neb.	$160
1½—Gus Schwink, Madison, Neb.	115
2—Genoa Indian School, Genoa, Neb.	110
3—J. O. Bayne & Son, Aurora, Neb.	65
4—George Hodge & Son, Genoa, Neb.	67
5—Tom Ogden, Genoa, Neb.	37
6—Herman Toelle, West Point, Neb.	70
7—A. W. Lamb, Albion, Neb.	37
8—Chris McCormick, Llewellen, Neb.	57
9—H. Christman, Genoa, Neb.	40
10—Cal McCormick, Llewellen, Neb.	40
11—Cal McCormick	40
12—Cal McCormick	40
13—W. D. Stombaugh, Richfield, Mo.	45
14—O. S. Larson, Logan, Ia.	50
15½—Hy Anderson, Genoa, Neb.	35
16—W. C. Cameron, Herman, Neb.	62
17—O. S. Larson	40
18—W. D. Stombaugh	40
19—G. W. Price, Osceola, Neb.	112
20—George Conklin, Silver Creek, Neb.	32
21—J. T. Armstrong & Sons, Clarks, Neb.	115
22—E. H. Carpenter & Son, Fontanelle, Neb.	65
23—Fred Cotton, Silver Creek, Neb.	30
29—Frank Widle, Waco, Neb.	30
46—Genoa Indian School	52
49—O. S. Larson	40
Robert Leisy, Wisner, Neb.	42

Sale Dates

Poland-China Hogs

November 5—Harry Tidrick, Winside, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb.

Duroc-Jersey Hogs

November 5—Harry Tidrick, Winside, Neb.
November 11—F. A. Lemmerman, Creston, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday, Rising City, Neb.
March 1—Harry Tidrick, Windside, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt,

GRAIN BELT BRAND
Vegetable Hog Potash

The Perfect Worm Expeller, Appetizer, Conditioner and Bone Builder.

Send $2.50 today for trial 125-pound bag. Your money back if not entirely satisfactory.

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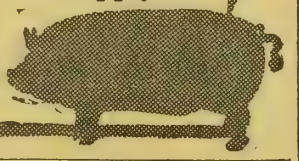

For Sale High Grade Calves

Bulls, $8; Heifers, $8.50; f. o. b. Omaha

I have for sale high grade beef calves old enough to ship safely. Out of tuberculin tested cows. For specified breed or color, 50c extra. Send check with order. **J. J. GRABOW, 55th and Center Sts., Omaha, Neb.**

HAMPSHIRE HOGS

HAMPSHIRE BOARS

Hampshire spring boars for sale; sired by De Kalb's King 100, a son of the famous Major. They are very growthy, and all priced to sell. Also have Aryshire bull calf for sale.
WILLIAM PAMP, Benson, Neb.

PUBLIC SALE

Will sell at St. Paul, Neb., November 10, 25 Hampshire boars, 10 gilts and 80 fall pigs. Registered. **H. P. BERCK, Dannebrog or St. Paul, Neb.**

BECKENDORF'S HAMPSHIRES

Fall and spring boars for sale. Also my herd boar, De Kalb King No. 53. For prices write **IRA BECKENDORF, Walnut, Iowa.**

HAMPSHIRE HOGS

Fisher's Hampshire Sale

AT WAYNE, NEB., NOVEMBER, 7, 1914

Forty boars and ten sows and gilts will be offered in this sale. Sired by Messenger Boy, High Roller, De Kalb's King 60th, Tatro's Messenger and Winside Star. My herd won sixteen champions and grand champions, fifty-four firsts, ninety-five second and twenty-six third prizes this year. If you are looking for the right kind arrange to attend this sale. Catalogues are now ready.
ROY FISHER, Winside, Neb.

AYRSHIRES

WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. **LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb.**

PERCHERON HORSES

At ordinary prices, farm-raised registered Percheron studs—1, 2, 3 and 4 years old. Kind disposition because well cared for. You would admire their big bone first, then their immense weights, because they are developing big like their imported sires and dams. And you will receive true old-fashioned hospitality on your visit at Fred Chandler's Percheron Farm. Just east of Omaha.
FRED CHANDLER, Route 7, CHARITON, IOWA.

DUROC-JERSEY HOGS

I HAVE THE GOODS

Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. **GUS KRUEGER, Beemer, Neb.**

BOARS! BOARS! BOARS!

Several fall boars and a few choice spring boars for sale, sired by BELLE'S CRIMSON WONDER, COL. CHIEF, GOLDEN MODEL 4th and BELLE'S BIG WONDER, out of Crimson Wonder bred dams. I am offering these boars at bedrock prices for quick sale. **A. R. BARNES, Petersburg, Neb.**

IMMUNED DUROC BOARS.

I am offering an exceptionally strong lot of Duroc Jersey boars for sale, largely of Crimson Wonder and Golden Model breeding. They are the best lot I have ever offered and are being priced worth the money.
E. R. DANIELSON, Osceola, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

MR. DUROC BREEDER

Are you on the market for a herd boar? If so, write me just what you want. I have them sired by Lucy's Select, Proud Wonder Jr. and other top boars of the breed. **L. J. KUZEL, CLARKSON, NEB.**

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. **C. E. PETERSON, Genoa, Neb.**

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.
F. E. MERRICK, OSCEOLA, NEB.

BIG SMOOTH DUROCS

Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.
HENRY KOEHLMOOS, Pilger, Neb.

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.
GEO. W. SCHWAB, Clay Center, Neb.

CEDAR'S DUROCS

The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.
P. P. CEDAR, GENOA, NEB.

HEKRDLE'S DUROC BOARS.

I have the best lot of spring boars for sale that I have ever produced. Sired by A. A.'s Model and Beauty's Wonder. A combination of the Crimson Wonder and Golden Model blood lines. Correspondence solicited. A. A. Hekerdle, Stanton, Neb.

35 TOP BOARS

35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st, Prince Munice, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

DUROC HERD BOARS

Several outstanding fall boars and a choice lot of spring boars for sale. If you are looking for herd headers I have them. They are out of prize-winning sires and dams. **Clarence Wallace, Wisner, Neb.**

Schultz' Duroc Boars

Spring boars for sale, sired by Golden Model 31st, King Cleathem and Gold Dust Jim. They are the big litter, big boned kind. Prices reasonable. GEO. W. SCHULTZ, Yutan, Neb.

POLAND-CHINA HOGS

McCULLOUGH'S BIG POLANDS

We have a splendid lot of Poland-China spring boars for sale. Sired by Smooth Big Bone, Columbus Again and Expansion Again. These boars have been grown right. They are big and smooth with lots of bone. For particulars write **O. J. McCULLOUGH, CLARKS, NEB.**

Immune Poland-China Boars

Splendid lot of big, smooth spring boars, sired by BLUE VALLEY, COLUMBUS WONDER and BLUE VALLEY ORANGE. If you want herd headers with size and quality, we have them. **THOS. P. WALKER & SON, Alexandria, Neb.**

Immune Poland Chinas

Big, smooth, heavy boned Poland China boars for sale. Sired by Long Wonder 2d, Wayside Jumbo 2d and Wayside Jim. Write me your wants. FRED WILLE, Columbus, Neb.

IMMUNE POLAND-CHINAS

A choice lot of Poland-China spring males for sale. Sired by Blue Valley Oak. They are the big kind, with quality. Everything immune. Prices reasonable. JOHN NAIMAN, Alexandria, Neb.

RED POLLED CATTLE

Both sexes; good as any in America. Call or write me your wants. W. F. Schwab, Clay Center, Neb.

POLAND CHINAS

BIG type, long bodied, smooth, prolific, pedigreed, all ages. Satisfaction guaranteed.
DAVIS BROS., Box 6, Lincoln, Neb.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

With thirty common cows, each giving 3,000 pounds of milk per year, introduce a pure-bred registered Holstein bull. In two years you'll be milking grade Holsteins yielding 4,000 to 5,000 pounds. In five years you'll have 6,000-pound cows and will need to keep only fifteen cows to get the same amount of milk. In ten years you'll have 8,000 to 9,000-pound cows and a ten-cow herd will produce as much milk as your thirty cows do now.

Quite a saving in labor, feed and equipment, to say nothing of the increased value of your cows and calves.

Send for **FREE** Illustrated Descriptive Booklets.
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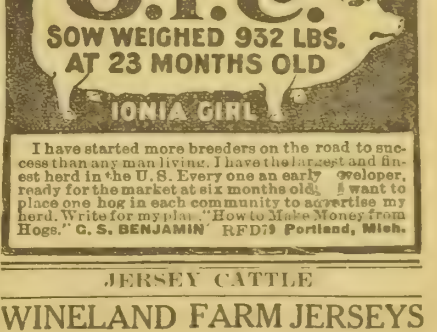

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN** RFD 79 **Portland, Mich.**

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WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and yearly milk and butter records. HAL C. YOUNG, Lincoln, Neb.

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.
A few good sons of King Segis Lyons are still left.
DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

"Not the *Cure*, But the *Prevention* of Hog Disease, Is Your Big Problem"

GILBERT HESS,
Doctor of Veterinary Science. Doctor of Medicine.

You'd scarcely believe the figures if you knew the tremendous money losses that hog diseases are causing the farmers of America. It runs into millions of dollars. Swine epidemics are constantly playing havoc in different parts of the country. Be on your guard. It's bad policy to wait until your hogs are stricken with disease—it's a mighty expensive job to **cure** a herd—it takes very little effort and trifling cost to keep a herd sound and healthy. My message to you is **Prevention.** And almost the whole secret of prevention lies in proper feeding and sanitation. Keep your hogs toned up and free from worms—keep your animals, pens, troughs and runs clean and disinfected and you'll have very little trouble raising healthy, weighty stock.

DR. HESS STOCK TONIC

Makes Stock Healthy and Expels Worms.

Dr. Hess Dip and Disinfectant

Destroys Germs—Deodorizes—Cures Skin Diseases.

These two preparations are the result of my lifetime experience as a doctor of veterinary science, a doctor of medicine and successful stock raiser. Dr. Hess Stock Tonic will put your animals in a thriving condition, make the ailing ones healthy and expel the worms. Contains tonics to aid digestion and appetite; blood builders to enrich and tone up the blood; laxatives for regulating the bowels and vermifuges to expel worms. My Stock Tonic will not only rid your stock of worms, but put your animals in such a clean healthy, toned-up condition as to make worm development impossible. My Stock Tonic is good alike for hogs, horses, sheep and cattle.

I want to insist, however, that sanitation is of prime importance in dealing with hog and general stock diseases. In this I am supported by the leading veterinaries, scientists and government experimental stations throughout the country. Sanitation has been my constant message to you for many, many years, through the agricultural press, as being an absolute necessity for the prevention of disease.

Dr. Hess Dip and Disinfectant destroys disease germs, foul odors, and is an effective remedy for parasitic skin diseases. For prevention of hog diseases I certainly recommend the use of Dr. Hess Dip and Disinfectant. Sprinkle or spray around the premises, on the floors, bedding, feeding places and troughs. Put it in the hog wallow. Dip the hogs occasionally if possible. Where this cannot be done, sprinkle or spray them. It will not only kill the germs of disease, but the lice as well.

Bear this in mind: whenever an outbreak of disease strikes a locality only the fittest survive; the strong, healthy, toned-up animal housed in clean, germ-free quarters will weather the storm. The use of Dr. Hess Stock Tonic and Dr. Hess Dip and Disinfectant will put your stock in this class.

Now read every word of this broad statement:

Be sure as I that Dr. Hess Stock Tonic will put your animals in a thriving condition, make the ailing ones healthy and expel the worms—that Dr. Hess Dip and Disinfectant will destroy foul odors and disease germs, prevent and cure skin ailments and keep your premises clean and sweet smelling—that I have authorized my dealer in your town to supply you with enough for your stock, and if these preparations do not do as I claim, return the empty packages and my dealer will refund your money.

The above dependable and scientific preparations are never peddled—sold only by reputable dealers whom you know. I save you peddler's wagon, team and traveling expenses, as these prices prove: Dr. Hess Stock Tonic, 25-lb. pail $1.60; 100-lb. sack $5.00. Smaller packages as low as 50c. Except in Canada, the far West and the South. Dr. Hess Dip and Disinfectant is sold in pint bottles, quart and gallon cans, also in barrels.

I have a book about Dr. Hess Stock Tonic and Dr. Hess Dip and Disinfectant that you may have for the asking.

DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Poultry Pan-a-ce-a

A splendid poultry tonic that shortens the moulting period. It gives the moulting hen vitality to force out the old quills, grow new feathers and get back on the job laying eggs all winter. It tones up the dormant egg organs and makes hens lay. Also helps chicks grow. Economical to use—a penny's worth is enough for 30 fowl per day. 1½ lbs. 25c, 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West. Guaranteed.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks and dust bath. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans. 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. I guarantee it.

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, November 7, 1914 | Number 726

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RUSSIAN

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Every map in this new atlas is made from new plates just engraved and are guaranteed correct in every detail. The coloring in the maps is clear and beautiful and each map shows five colors. Most maps are 15x20 inches in size; some are 9x13 inches and others 7x9 inches. We have absolutely the best and most complete set of map plates in print.

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(shows Russian Empire complete in one stretch).

2--PAGE MAP OF CENTRAL EUROPE (The War Zone).
This map was made especially to show the theatre of war. All fortified towns are marked in red. Even the smallest towns are shown. This map is 21x14 inches and is the only one of its kind in print.

Large clear colored maps of Germany, Austria, Servia, Romania, Montenegro, Turky, Albania, England, Belgium, Holland, France.

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The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Time to Invest in Good Breeding Stock

Keep Up Your Breeding Herds When Prices Are Low, So You Can Profit When the Reaction Comes

WHEN the present war broke out it was freely predicted by many that prices on everything the farmer had to sell would go skyward, and many farmers felt secure in the fact that they were at once going to see a very material advance in prices for all their grains and live stock.

Predicting just what trend prices of any product will take is a mighty risky business, and often the fellow who knows all about these things gets so badly fooled he wishes he had not been so free in giving out what he knows.

Everyone having anything to sell is always glad to hear that the price for the article is going up. Far too often for their own good they lend a listening ear to these stories of big advances in prices and hang on for the expected big advance, only to find in the end that the fellow who thought he knew all about this big advance, really did not know anything about it.

The results of these false predictions are often much further reaching in effect than the loss the farmer may sustain on the particular article he has for sale. If the price goes down instead of up, the beginner especially is inclined to sell short, and when the reaction in price comes is not in position to take advantage of it, even in a normal way.

Many predictions were made at the beginning of the war that meat prices were sure to make rapid advances, conclusions being based on the fact that the large armies in Europe would have to be fed. They had to be fed and they are being fed, but events now show that these countries were prepared in advance for this very thing and did not have to draw on America for supplies at once.

Why Meat Demand is Slow

In consequence of all this the price on cattle and hogs has been very disappointing to many of our farmers. If one will but investigate and study a little, the reason for the present market conditions is very plain. Europe is a large buyer of meat products, particularly some of the countries at war; on account of the war and the closing of many European ports this market has been closed to the American farmer.

This paper has pointed out in former issues that the southern farmer in the United States was too much a one-crop farmer. That crop is cotton. The cotton crop this year is a good one, but the cotton raiser cannot realize anything out of his crop for the reason that Europe takes a very large per cent of this crop in ordinary years and on account of the war this market is closed; consequently the southern farmer has not the money with which to buy products from other parts which he wants. This is true of others as well, for if the farmer has no money, the other fellow has but little.

The southern farmer does not by any means raise all the pork he eats, but buys it from his northern brother. On account of the conditions stated this great market for the northern farmers' pork is cut off. Is it any wonder the price is where it is? But what of the future?

Big Demand to Come

The war won't last always; in fact, reports are true, it cannot be a long-drawn-out war the way they are going at it. European countries cannot get along for any great length of time without supplies from this country. It is certainly fair to presume that when Europe does begin to buy meat the demand will necessarily be in excess of what it has been, for the reason that practically all their supply over there has been wiped out and they will have to depend almost entirely on America for their total supply for some time to come.

One who is watching reports of the fall sales closely sees that farmers are not buying breeding animals as freely as they do when prices are higher. We cannot understand it, but it is a fact that many live stock raisers seem to feel that when they will have anything to sell the price is going to be about what it is now; consequently when prices are not to suit them they don't buy, or even keep up the normal number of animals in the herd, and when prices are high they stock up and figure that when they want to sell the price will be equally as high, or higher.

Now, what is the common sense, business-like thing to do? The Twentieth Century Farmer has always urged farmers to not be swayed in their farming operations by some prediction of high or low prices on this or that kind of live stock or grain, but to keep up the crop rotation best suited to their particular conditions and to raise the usual number of the different kinds of live stock.

Buy When Prices Are Low

If the farmer is in position and wants to deviate from this method, wouldn't it be good common sense to stock up a little when prices for live stock are below what they normally should be and go a little slow and be careful in stocking up when the price is unusually high?

We have stated some of the conditions regarding the present live stock market. There are others. The cold-blooded facts are that the population in the United States is increasing and the number of live stock is decreasing. The United States census of 1910 showed some startling facts in this connection. It showed that our population in ten years had increased 21 per cent, that our total number of cattle on hand had decreased 8 per cent, our hogs 6 per cent and our sheep 14 per cent in the same period.

The best figures obtainable by the government up to 1914 showed a still greater difference between our population and our live stock production. The official figures for five western markets, giving comparisons of receipts for the first nine months in 1913 and 1914, show that there was a decrease in the number of cattle of 773,100; in hogs, 1,560,900, and an increase in sheep of 56,200. Doesn't this show pretty clearly that the live stock is not in the country?

Now, what can we naturally expect when normal market conditions again return, when Europe again buys, when the southern farmer can sell his cotton and buy the northern farmers' pork? Can there be any other conclusion but that the man who has anything in the way of meat-producing animals to sell is going to get better prices? We are not in the predicting business, but want to call attention to the facts just as they are and let each man figure out for himself the best thing for him to do under the circumstances.

It seems to us that if there ever was a time

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Get Your Boy Interested in Your Business

Home and Financial Problems Both Solved by Arousing the Boy's Pride in His Stock

HOW many fathers of farm boys, wanting these boys to stay on the farm, are giving them any inducement to stay? We have seen dozens of boys raised on the farm, stay right there and work faithfully, yet at the age of 22 or 23 years are never given an opportunity to do any business of any kind. They are never allowed to buy an animal or a tool to be used on the farm; they are never allowed to sell anything off the farm or have anything to say about the selling of any of the products. As far as business is concerned they are treated like babies.

Farm boys, like all other boys, want to do things; they want to be making some money they can call their own and not have to go to "dad" for every dime or quarter they want to spend. The man who expects to keep his boy with him, who expects to have him take an interest in the stock and crops, must let that boy know he has confidence in him; must let him know he is a part, and a very important part, of the institution.

Boys Love Animals

We believe that every boy, more particularly a farm boy, loves some animal. The animal the boy likes best may be a cat, dog, horse, cow, pig or a sheep. If the right method is pursued we believe that, generally speaking, the boy's mind may be trained to want a good horse, a good cow or a good pig. These animals are all money-makers, and if the boy does take a liking to any one or more of them he should be encouraged in that line. The father of a boy is making a serious mistake if he doesn't accept the opportunity and get his boy a good animal of the kind he likes and assist him in every way he can in making that particular animal better and in breeding more and better ones of the breed.

Some people think their children have no pride. Do not fool yourself. Many a child's pride is never allowed to develop for the good and sufficient reason that the child is never given anything of which it may be proud. On far too many farms there is not a single good animal of any kind, be it a horse, cow, sheep or hog. Can you expect your boy or girl to be proud of a bunch of scrub stuff when your next neighbor has the best to be had? The man who figures that his boy is going to take the time and care feeding and caring for a scrub that he does for a good animal is badly mistaken.

You Can Afford Good Stock

Now what are we going to do? Here comes the farmer who says he cannot afford to buy a pure-bred animal; he is too hard up. Is this an actual fact? We believe not. We believe in reality the opposite is true. He cannot afford to buy anything but a pure-bred. He may not have the ready cash, but it's a long chance, if he is honest and a good worker, that he can get the money to buy a good pure-bred animal. Bankers are fast finding out that the salvation of the country, the rock on which substantial business must be built in the farming districts, is better live stock and more of it.

The pure-bred animal costs more than the grade. It is worth very much more. Your boy may want a good mare or a good cow; either of these cost more than a good sow. Explain to him the difference in the cost and say, "Let us get a pure-bred sow this winter that will farrow in the spring and do the best we can with her, and if all goes well we can soon have enough money from this investment to buy a mare or a cow."

Make your calculations to buy this sow this winter. Tell your boy you are going to buy this sow and turn her over to him to care for; tell him you will keep approximate account of the feed the sow and her pigs eat, and when the pigs are sold, after expenses are deducted, you will divide the money with him. When the pigs

Children Naturally Love Animals

are sold be sure and divide the money and don't keep his part as well as your own. Let him put the money in the bank subject to his check. Teach him how to use this money and do not growl if he wants to use some of it for something that looks foolish to you.

How One Boy Started

The experience of a neighbor of ours best illustrates our views in this matter. Some twelve years ago the older of the two boys in the family was 12 years of age. He had a Shetland pony and wanted to take this pony to the state fair. We met the father in town one day and he told us about the boy wanting to take the pony to the state fair, saying of course he could not do it. We told him he was making a mistake; that he should let the boy go. We were showing the hogs and would gladly take him along with us. The boy took his pony to the state fair that year and was successful in winning the blue ribbon. You may be sure that boy wanted to go next year, which he did, again winning with his pony.

This boy was of a practical turn of mind and after coming home from the fair the first year said, "Papa, there is no money for us in this pony; let us sell it and buy a good sow." The pony was sold for $125. The next winter that father was at our bred sow sale, a bidder on many of the best sows, finally buying a gilt for $70. This sow raised them a good litter and from that time on nothing but pure-bred hogs were kept on this farm. Today they have one of the best Duroc-Jersey herds in the state as well as a splendid herd of Shorthorn cattle. Both the boys are at home, happy and contented. It is needless for us to say that they are a part of the business; they are consulted when a purchase is made. If a buyer comes to the place either of them are ready to talk business to him. Financial success has crowned the efforts of this family, and largely because the father was wise enough to encourage boys in having good stock.

Father and Son as Partners

Every year at the state and other fairs we find boys of from 12 years and up, proudly showing animals they have had a part in producing. Personally, we know quite a number of young men now growing and showing hogs and cattle, whom we knew as boys some twelve to fifteen years ago, making their first show. These men are making a success in the world. Though young in years, they have taken a very important part in making agriculture what it is, for general agriculture could never have taken the position it has without good live stock.

Where is the father who does not think his boy would be a better boy if he had some good pure-bred live stock to fit and show at the fair? Where is the father who would not be proud of the boy who grew, fitted and showed a good animal? Where is the father who does not think he would materially assist in solving the problem of doing the best he could to keep his boy on the farm if he would get him a good sow or cow and let him take them to the state fair? If you will try to get your boy interested in better stock you will not only please him, but you will materially assist yourself in a financial way.

These are questions worth thinking about. The opportunity for doing something along this line is presented to every farmer. Will he accept it, or will he go on keeping the old scrub stuff and keeping his boy and girl ashamed of the horse they drive and the cattle and hogs they have to feed and care for?

Boys Exhibiting Swine at the 1914 Nebraska State Fair

Retired Farmers and Why They Retire

Old People Enjoy City Conveniences, While Their Children Run the Farm

By Lillian S. Loveland

FORTY-THREE years ago Mr. and Mrs. Reddish, then young married people, sold their farm, 102 acres, in "York State," and came to Nebraska, near Rokeby, buying a homesteader's right on 80 acres for $325. They bought a couple of ponies right out of the herd and drove from Plattsmouth in a lumber wagon; they lived in a dug-out at first, then built a little frame shack 12 by 18, just rough boards, but it cost $150; the lumber was hauled from Nebraska City. They were too poor to have a well dug, so caught rainwater as best they could.

They and Mr. Reddish's brother, who lived close by, had one cow in common, one drag, one plow and the like. Mrs. Reddish would have the cow one week, and make her butter, etc., and then her sister-in-law would have it the next week.

Then winter was coming on and they had nothing to heat the shack with but a little cooking stove; Mr. Reddish took sick with quinzy and nearly choked to death before they could get him to a doctor in Lincoln. He was very much discouraged and wanted to give up and go back home, but Mrs. Reddish had too much pride; she wouldn't even write home how desperate conditions were, but Mr. Reddish's father heard about it and sent them $25. That proved a God-send, and they fixed up the little house, making it tight and warm. That winter the men worked on the new railroad that was being built from Lincoln to Crete, and so got some cash for the start next spring.

Enjoy Modern Conveniences

The Reddish home now is a good deal of a contrast to that rough 12 by 18 shack of forty-three years ago. It is a new house; has a furnace, electric lights, gas stove, the finest plumbing, hardwood floors, beautiful decorations and handsome furniture, and is situated on one of the best residence streets in the city of Lincoln.

"Yes," said motherly, wholesouled Mrs. Reddish, when I called a few days ago, "we have lived in town five years now, and I do enjoy it. It's pleasant to have all the conveniences and be near things, and it isn't as if we had sold our farms and couldn't spend a day in the country whenever we wanted to. Mr. Reddish is out there now. The boys were going to paint the big barn, and he wanted to have a hand in it. He is 72, but he is just as spry and well as anybody, and he wants to keep up with the rest of 'em. He was a little too spry one day last fall when they were butchering, for he got pretty badly scalded."

"If you didn't have your two sons to stay on the farms, would you sell them?" I asked.

Farms Were Good for Sons

"Yes, indeed. It doesn't pay to rent. We'd sell—and we can get $125 an acre for our land—and then put the money out at interest, but of course, when the boys got married it was nice to have the farms for them. Some, though, wouldn't be happy if they sold. I know of a man—a retired farmer—who had a good income and plenty of everything, but he was so restless and unhappy. He walked and walked the streets One day a friend asked him how long he was going to keep that up, and he said so pathetically, 'I guess I'll keep on walking till I die,' and he did. It wasn't mor'n a few months after he left the farm till he was dead.

"There's the Wilmers, a few doors from here; they own a good farm near Weeping Water, but rent it for cash; it's less trouble. Then Mr Hendry down on P street, owns half a section out near our place that he rents. He did have a whole section, but sold half of it because he got so much more for it than it cost him, and I guess he wishes he'd sold it all. He had a poor tenant on it, and it was a lot of bother to him, but his brother is going to run it now. This other man had a lot of young boys, and he'd start them out plowing, but they'd just scratch up the ground a little; they didn't know what deep plowing was. He paid Mr. Hendry two-fifths grain rent, but Mr. Hendry was always suspicious of him; he'd watch every load; come out to the elevator at Rokeby and see it weighed and then get his share of the money it brought. And Mrs. Hunter, a rich widow in Lincoln, perhaps you know her, owns 160 near us that she gets $800 cash rent out of every year, whether the tenant has a poor crop or a good one.

"My oldest boy didn't marry till late, but I was getting rheumatic, and it was hard to stand on my feet and work the butter by hand—I always made lots of butter to sell, now the farmers sell milk. My daughters-in-law have it easier than I did. And the country is the best place to raise children, too. It seems dreadful to me the way even small children run the streets here at night. There is a gang of them under the electric light there on the corner every evening."

Comfortable Modern Home in Town to Which Mr. and Mrs. Reddish Retired

"Tell me the story of how you sold your farm and then bought it back again. Mrs. Angelo was telling me about it."

"Oh, that; well, that little experience cost us a thousand dollars. It was about fourteen years ago. Mr. Reddish and I went to the G. A R. encampment in California, and on the way home visited his sister in Tacoma. We were very much taken with the country out there, and decided to go back home, sell our land and move out. We had even picked out the property we expected to buy. I suppose it's silly, but I have always been afraid of thunderstorms and lightning, and thought it would be nice to live where there wasn't any. Well, we came back and soon sold the farm for $55 an acre. But we hadn't counted on the boys; they thought so much of that land, they made an awful fuss over the idea of parting with it, and big as they were—my youngest was 21—they actually cried about it. Our friends said the boys would follow us in time, but it didn't look like it to me."

"This is about the first case I ever heard of where the old people wanted to go west and leave the young folks behind. It's usually the other way."

Well, the boys kept taking on so about not wanting to leave, that I couldn't stand it to go way out there and not have them with us, so four days later we bought the farm back. We had to give Mr. Bailey $600 more than he paid, aand then there was the commission coming and going. But we never regretted buying it back."

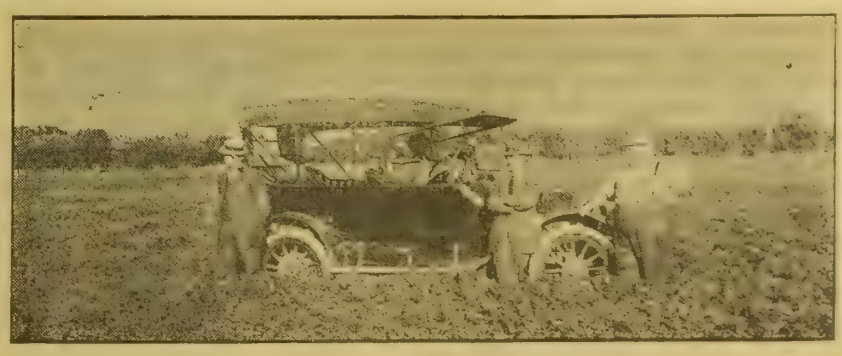
(This is the last of a series of interviews with retired farmers.)

What Farmers Are Doing with Alfalfa

THERE is not a state in the middle west that is not successfully raising alfalfa, and where the acreage is not each year rapidly spreading. Alfalfa grows almost as readily in this part of the country as weeds, and with very little more consideration and attention in the matter of cultivation. Its ideal conditions, however, for big yields depend largely upon the moisture supply. This is especially true in the matter of stand following the sowing of seed. Ten days of favorable growing weather following the sowing of the seed guarantees a successful stand.

Like all other crops, the best results are had by careful preparation of the seed bed, and where this is observed, with the attendant moisture immediately following, the results are immense and big yields follow for many years. Alfalfa cannot produce its heaviest crops without a liberal supply of moisture. It will, however, produce some crops, and quite frequently the largest seed crops are the result of dry weather, weather too dry for growing a good crop of hay.

The picture showing the automobile standing in the uncut alfalfa is a very good example of what alfalfa is doing in northern Nebraska. This represents a field of alfalfa near Tilden, in Antelope county, owned by D. W. Bliss, a farmer and feeder who has recently introduced alfalfa onto his land. This 30-acre field was sown May 24, 1912, during a very dry season, but succeeded in getting a good stand and a good start. It was well handled in preparation of the land, seeding and after care of mowing through the first season's growth. It was cut every fifteen days after it got six inches high. The season of 1913, it was cut twice for hay, yielding fairly well under dry



Scene in Nebraska Alfalfa Field in October

(Continued on Page 14)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Reading matter, $1 per brevier line. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 105,000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

The fall pigs are money makers if they are handled right. You cannot make a dollar out of a mangy, lousy pig. Be sure to have them clean and thrifty to go into the winter.

The Independent Harvester company has discontinued the direct-to-the-customer method of selling machinery and is now selling through dealers. This does away with the offer of any special inducements to stockholders in the form of discount prices.

One farmer reports to us that he vaccinated 101 hogs for protection, losing all but seven—not much protection. If he had used good, clean, potent serum this loss would not have happened. You can't be too careful to know the serum is right and the firm that sells it is absolutely reliable.

Proper distribution of labor throughout harvest season is the subject that is now interesting the United States commission on industrial relations. They have called a meeting of farmers and others who may be interested in grain growing in the Missouri valley to meet at Kansas City during December for discussion.

The industrial and commercial changes incident on the European war make the letters Frank G. Carpenter writes from South America of double interest at this time. Our relations with South America are undergoing a great change, owing to their dependence upon us since the cutting off of their supplies from Europe. The insight Mr. Carpenter gives the readers of the Twentieth Century Farmer into the lives and business of these neighbors of ours is therefore of particular value.

Farmers and Speculators

Farmers are often urged to hold their wheat, corn, oats, hogs or cattle for a certain price. Oftentimes farmers are depending on their crops to meet an obligation; perhaps this obligation is a debt on the farm.

Whenever a farmer has any product of his farm ready for sale, and he is ready to sell and don't sell, he at once becomes a speculator. Is it wise to bet the market will advance? Particularly so if you owe the money you would receive for such product.

Suppose the farmer does want to become a speculator, is it the best policy to speculate with your grain or live stock by holding it? We don't believe it wise for a farmer or anyone else to speculate on the board of trade, but if he is bound to speculate, wouldn't it be better for him to sell his produce, no matter what kind it may be, and buy the same article on the board of trade? Let us see.

If the farmer has grain of any kind to sell and wants a better price, wouldn't it be better to sell and bet the market will go higher by buying on the board of trade? For grain of any kind can be burned, destroyed to some extent by rats, the roof might leak and the grain get wet, etc. The facts are, your total number of bushels can't increase, but they can decrease. If you speculate on the board of trade your number of bushels remains exactly the same.

How about live stock? If they are ready for market they may yet gain in weight, but the chances are that the gain in weight will be put on at very little, if any, profit. An animal of any kind may die or get injured in some way, making it sell at a reduced price, and probably a reduced weight. This applies in particular to hogs on account of the danger of hog sickness. If you are bound to bet the market will go up, why not sell the live stock and buy dressed beef, mess pork, lard, etc.? This stuff won't die or deteriorate in any way.

This proposition undoubtedly looks foolish to many, but isn't it a fact that when a farmer has anything ready for market and holds for a better price he that way becomes a speculator, and isn't it a fact that if he is holding grain his number of bushels can't increase, but will decrease? And if he is holding live stock, the number of pounds he will sell may on account of injury or death materially decrease; and if the number of pounds he sells does increase, there is little, if any, profit in this increase over the cost of the grain consumed.

Does It Pay to Raise Wheat?

There are many things to take into account in estimating profits on the wheat crop, besides the cost of producing the crop and the selling price of the grain. It is variously estimated that the cost of producing wheat varies from 55 cents to 60 cents per bushel, according to location and influences affecting labor and expense. The cost of farm labor has no fixed price, as the putting in and handling of crop work varies with different farmers and in different localities. Some farmers are more exacting and systematic than others and, therefore, devote more time and labor to this work. The investment in machinery has something to do in the cost of the crop. The yield per acre, of course, as it increases lessens the cost of the crop. It costs less per bushel to produce a wheat crop with a yield of thirty bushels than one with a yield of fifteen bushels.

In districts of country where wheat is uniformly successful, and where the yield is large and the land comparatively new, and where conditions favor small grain raising, the profit is greater and the expense of growing the crop less than in districts with reverse conditions. It never pays to grow wheat or any other crop where yields are small. The present-day farmer pretty generally knows when it will pay him to raise wheat, and on what fields. Wheat is used in the rotation process on well managed farms and, exclusive of weather damage, might be said to be a paying crop generally, even on the higher-priced lands.

Saskatchewan appointed a commission in 1909 to conduct an investigation on the cost of wheat production on the farm and determined in their report that 55 cents per bushel was a fair estimate. This report also represents that the cost of production has increased 12.15 per cent from that date to 1913. The changing conditions in cost of labor are governed to some extent by increased cost of living. While improved machinery may tend to lessen the manual labor in crop-growing and quicken the operation, it is not probable that the cost of production will vary much from the present estimates.

Kansas has been conducting some investigations on cost of growing wheat and so far as observed they find it about 60 cents per bushel. Missouri gives some individual examples which about tally with Kansas, 56 cents to 60 cents per bushel. It is a very safe estimate to place the cost of the wheat crop of the Missouri valley states at from 55 cents to 62 cents per bushel.

If the pumpkins are not all fed, cover them with some straw or coarse manure to protect them from the freeze. They are fine for the milk cows and pigs in winter. We have kept them until the middle of January in this way.

Farmers Are Represented

In making up the board of directors for the Federal Reserve bank for the Chicago district President Wilson has seen fit to recognize the farming interests and agriculture in general by appointing E. T. Meridith of Des Moines, Ia., as a member of that board.

Mr. Meridith has long been identified with agriculture and agricultural interests in the west, making him peculiarly fitted to fill this important position as it should be filled.

The district covered by the Chicago bank is so thoroughly agricultural that at least one man on the board should be in close touch with agricultural and live stock interests.

We believe that the general farming and live stock interests in this country are such that many appointments made by our federal government could be better filled by men closely connected with agriculture than are many of the appointments now made. Agriculture in this territory is supreme. A more general recognition of this fact would be beneficial.

Who Should Keep Sheep?

In these times of great profits in the live stock business the people should not all be reckoned accountable for their extravagant expressions. One authority recently said, "Every farmer should keep sheep." This would be a great calamity on both the sheep and farmers. Everybody is not adapted to sheep industry, and many would have no taste or inclination to handle or care for sheep properly, and the results in such cases would be disastrous both to sheep and farm.

A farm flock of sheep can be made very profitable when used to take up the waste about the farm; grass, weeds and out-of-place volunteer growth along the fences, about the lots, in stubble fields, second growth on meadows, etc. It is the service of the small farm flock to convert these waste products into wool and mutton, thereby contributing generously to what the farmer is pleased to call the profit in keeping sheep. Sheep can be used more economically in the gathering of this form of waste on the farm than any other animal. It is their nature and inclination to do this kind of scavenger work. When this feature of growth is utilized as a pasture it requires but very little prepared feed to carry the sheep through the feeding season. Where mutton production is the object, a little grain fed in conjunction with what is gathered by a winter range of the farm soon grows and fattens the flock.

Do not be deceived into going into the sheep business or farm flock industry unless you have some knowledge of how sheep should be handled and have some sympathy and interest in the care of sheep. They cannot be turned loose to run at will any place and every place for their living without being looked after and provided a safe place to rest at night, free from the intrusion of dogs, wolves and other animals that may disturb or injure them. Too many persons are too careless to own or care for sheep properly; such persons will fail in the business. All farmers should not have sheep.

Uniform Shipping Rules

The meeting of live stock officials having charge of the making of shipment and inspection rules, called to meet in Omaha October 29, was postponed until immediately following the meeting of the United States Live Stock Sanitary Association in Chicago December 3, during the International Live Stock Show.

Dr. L. C. Kigin, secretary of the Nebraska Live Stock Sanitary board, who issued the call for this meeting, reports a very general reply and a good endorsement.

The movement for the passing of more uniform rules and regulations for interstate shipment of live stock is certainly a good one. The live stock shippers, particularly shippers of pure-bred live stock, are vitally interested.

The lack of uniformity in these rules is very confusing to shippers and to railway companies. It is nothing uncommon to have stock held up at the state line because the proper certificate does not accompany the shipment, the rules in the different states being so different in many cases.

We believe this matter of sufficient importance to justify both national and state associations having representatives at the meeting. The authorities want to know what the breeders and shippers want, and these interests should let them know. We feel sure that if live stock men would more generally take these matters up with authorities in their state a big improvement along this line would be noted.

Tuberculin Tests in Nebraska

Dr. L. C. Kigin, state veterinarian of Nebraska, recently tested the cows owned by the state and kept at the insane asylum at Hastings. There were 101 head of cattle tested. Twenty-seven gave a typical reaction and eight were suspicious. These cattle were all slaughtered. The twenty-seven reactors all show lesions. Further than this, fifteen of these cows showed traces of tubercular germs in the milk.

Last year at this institution there were 119 cows tested and forty-seven reacted. All these forty-seven cows were slaughtered and all but two showed lesions; some of them showed a generalized form of tuberculosis.

The cattle at the Norfolk asylum were tested, and of the fifty-two head only one reacted. Last year only one animal reacted to the test at Norfolk. Dr. Kigin attributes the small per cent of reactors at Norfolk to the sanitary methods used in handling the herd at this institution.

The Norfolk officials realized that their barn was not sufficiently ventilated and lighted, so they built an outside shed and kept the cows outdoors night and day, except in extreme or stormy weather.

At the Lincoln asylum sixty-nine cattle were tested; eight gave positive reaction and twelve were suspicious. The eight head of cattle will be slaughtered and the twelve segregated and tested again in six weeks. The dairy barn at this institution is anything but modern, and it is probable they will resort to the yard and open shed.

The officials at Hastings are thoroughly disinfecting their barns and yards and expect with the use of the new dairy barn to be able to clean up the disease at this place. Results next year will be watched with interest.

The Twentieth Century Farmer believes tuberculosis in cattle a serious matter and one which should receive much more attention than it now does. We find men who are absolutely opposed to the test, saying it is not reliable. True, it is not absolutely reliable. What test is always reliable under all conditions? Some people seem to want perfection under any condition before they will accept of anything that was not done twenty-five or forty years ago.

The results of the tests given above surely show that there is some reliability to this test. In numerous other tests we have reported cattle that react show lesions under post mortem examination. How many of these men who don't believe in any test would drink the milk from one of these tubercular cows or want it given to some member of their family? How many of them would want to eat the meat of hogs picking up the droppings from affected cows? If they think this meat all right, we believe a visit to some of the big packing houses and an inspection of these diseased carcasses would materially reduce their desire for this kind of meat.

The tuberculin test is the best known way to know when a cow is affected with this disease. Science in time may work out some manner of detecting the disease that will be absolutely infallible. In the meantime let us make use of the best means we now have and do what we ca· to wipe out this terrible disease.

I Want You to Know the Value of Sal-Vet

—I want you to feed it at my risk

—I want to prove to you on your own farm that SAL-VET will rid your stock of worms, put them in healthy condition, easier to keep on no more feed—more profitable in every way — and less liable to disease. I don't want you to send me a penny in advance — just mail the coupon. I'll ship the SAL-VET just as agreed, let you feed it 60 days — and if it does not do what I claim, then I'll cancel the charge. Is not this a fair, open offer?

READ!

"Before I started to feed SAL-VET my hogs were sick, and I lost six of them; since feeding SAL-VET I have lost none, although some of them were pretty sick before they had access to SAL-VET and had lost their hair. However, they pulled through all right and now have good appetites and are thriving."
ERNEST TRIEBEL,
Route 2,
Clearwater, Minn.

"My hogs are doing finely; have kept SAL-VET before them for two months and while there has been lots of disease amongst hogs in this section, none of mine has been sick."
GEO. A. ELINE,
Route No. 20,
St. Matthews, Ky.

"I enclose check in payment of the SAL-VET sent recently. Four times this sum would not begin to pay for the benefit I derived from feeding SAL-VET."
W. H. WALLACE,
Franktown, Va.

(217)

Look For This Label on all SAL-VET packages. Don't be deceived by imitations. Don't buy "Sal" this or "Sal" that. Get the original genuine SAL-VET

TRADE MARK

SAL-VET

The Great Worm Destroyer REG. U.S. PAT. OFF. The Great Live Stock Conditioner

—is the medicated salt which contains no antimony, fed just as you would feed common salt. There is no dosing—no drenching—no trouble—all animals need it—take it readily—and so doctor themselves. You will find animals that you do not suspect of having worms, just full of them. Stock that have been run-down will take on new vigor, grow thrifty and profitable. Stock kept free from worms will be healthier; will do better, act better, and be in better condition to resist dangerous diseases. As proof of this read a few of the thousands of letters from stockman who feed SAL-VET—who depend on SAL-VET to help them make greater profits — and to prevent loss.

READ!

"SAL-VET is certainly a great medicine. I have been feeding it all winter so far and since I started, my stock are better than ever before."
ALBERT MEANS,
Walthill, Nebr.

"Have been feeding SAL-VET to some of my horses which were very thin and in a run-down condition. They have now picked up in flesh and spirits in spite of the heavy work incident to this time of year."
ELI FURLAND,
Artesian, S. D.

"The more I use SAL-VET the better I find it. My sheep and hogs were never so thrifty and healthy as now. We butchered this week and did not find a single worm, while our neighbors' hogs are wormy and dying. I have been recommending SAL-VET to them and they are now ready to use it too."
WESLEY CHAMBERS,
Bussey, Iowa

Now Fill Out the Coupon Below

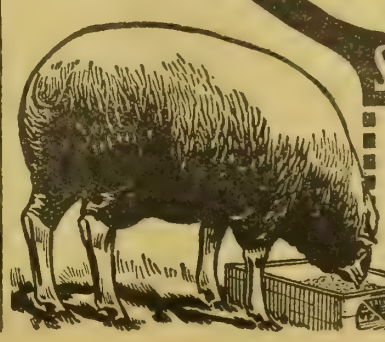
You take no risk whatever in accepting this no-money down offer. Just fill out the coupon, tell me how many head of stock you have, and I'll ship enough SAL-VET to last them 60 days. You simply pay the freight charges on arrival, and when the 60 days are up, report results. If SAL-VET has not done all I claim, then I'll cancel the charge, and you won't owe me one penny. Address

Sidney R. Feil, President
The Feil Mfg. Co., Chemists
Dept. TF CLEVELAND, OHIO

PRICES

40 lbs.	$ 7.75
100 lbs.	15.00
200 lbs.	25.00
300 lbs.	34.00
600 lbs.	65.00

No orders filled for less than 40 lbs. on this 60 day trial offer. Never sold in bulk; only in Trade Marked SAL-VET packages. Shipments for 60 days' trial are based on 1 lb. of SAL-VET for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular sized packages.



Send No Money—Just the Coupon

THE FEIL M'f'g. CO., Dept. TF 11-7-14 Cleveland, O.

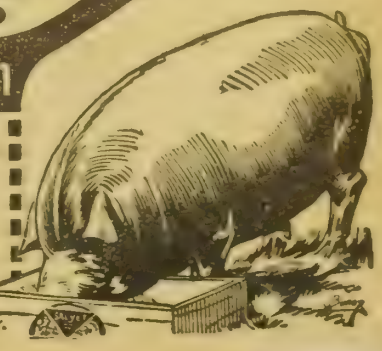
Ship me enough SAL-VET to last my stock 60 days. I will pay the freight charges when it arrives, agree to report results promptly in 60 days and at that time pay for it if it does what you claim. If it does not you are to cancel the charge.

Name.....

P. O. .....

Shipping Station.....State.....

Number of Sheep.....Hogs.....Cattle.....Horses.....



Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Autumn Leaves

"Come, little leaves," said the wind one day,
"Come over the meadows with me and play;
Put on your dresses of red and gold;
Summer is gone and the days grow old."

Soon as the leaves heard the wind's loud call,
Down they came fluttering, one and all;
Over the brown fields they danced and flew,
Singing the soft little songs they knew.

"Cricket, good-bye, we've been friends so long;
Little brook, sing us your farewell song—
Say you're sorry to see us go;
Ah! you are sorry, right well we know.

"Dear little lambs, in your fleecy fold,
Mother will keep you from harm and cold;
Fondly we've watched you in vale and glade;
Say, will you dream of our loving shade?"

Dancing and whirling the little leaves went,
Winter had called them and they were content—
Soon fast asleep in the earthy beds,
The snow laid a soft mantle over their heads. —Selected.

The Editor's Corner

The prize story is so long, and there were so many verses that were so good they just had to be printed this week, that there is not much room for anything else. We tell you to keep your stories under 200 words, and ordinarily prefer them so, but when a story is especially good, as often happens, we want you all to be able to read it, no matter if it does take more room than that. It seems that we have some very good poets among our friends, as well as interesting story writers, and are very glad to hear from them and proud that our Twentieth Century Farmer children do such good work. Keep it up. Did you have a good time Hallowe'en?

HOME EDITOR.

(Prize Story.)

Robert and Rosalind

By Frances E. Lux, Aged 10, Logansport, Ind.

Robert and Rosalind were two city children. They had never been to the country; they only knew it was a green place and the houses were not close together like those in the city. The only way they found that out was through a kind servant who had lived there when a boy.

Robert and Rosalind hardly knew their mother. Whenever they did get to see her was when they got a glimpse of her coming or going from a dinner or dance or something else of the kind.

But now I must tell you of the time this story is about. One of Mr. Best s friends was not so rich as h mself and had moved to the country. There were two children in the family besides his wife and himself, but he thought they would be lonesome, with no neighbors living very near, so he asked Mr. Best if he wouldn't let Robert and Rosalind come and spend the three months of vacation with them in the country, and Mr. Best consented, thinking that it would be a change and an event for his children.

At first Robert and Rosalind could hardly think of leaving their fashionable homes to go to a quiet place like the country. Mr. Best had lived there when he was a boy and had often gone fishing, so he thought Robert and Rosalind would too. At first they wouldn't be persuaded to do such a thing, but at last they consented to please him.

The children took all their good clothes, and when the time came a servant went out with them. Their mother, Mrs. Best, thought the servant ought to stay with them, but their father said:

"No, they will have more fun without a servant watching every move they make."

When Robert and Rosalind got there they were shocked by Mary's and Alfred's (the country children) ways. Robert and Rosalind dressed up fine and wouldn't romp or anything else like that, so Mary and Alfred hardly knew what to do.

The first evening Mrs. Blossom, the country children's mother, came to ask them what prayers they said. They were puzzled. Their mother had never taken time to teach them things like that. Of course, they went to Sunday school, though.

After awhile they dropped their citified manners. Then the fun began. Every day they would go on hay rides and have romps in the fields. At evening they would go after the cows and horses and ride the horses home. One day Alfred proposed a fishing party. They often went fishing after that and Robert and Rosalind were glad they had brought their fishing things.

At the end of the summer they went home, happier, healthier and brighter children, and none the worse for it. In fact, they had enjoyed it.

(Honorable Mention.)

My Adventure

By Donald Mackenzie, Aged 12, Buford, Wyo.

One night last autumn as I was riding home from Buford on my pony, Chub, I came to a small valley full of sagebrush. When I was about half way across it a coyote jumped up. Chub, who is always looking for trouble, jumped and threw me in the sagebrush. When I sat up the coyote was running over one hill and Chub over the other.

Additional Stories

Julia Rhyno, Jamestown, Colo.; Martha Lux, Logansport, Ind.; Irma Mae Heath, Riverdale, Cal.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

Awards in Picture Contest No. 17

Our extra week brought in a number of replies to this contest. There is one thing we like about not having quite so many replies, and that is that there are fewer of the contestants who do not receive prizes or have their verses printed. There were two contestants sending in their verses this time to whom we were especially sorry that we were unable to award prizes, as they sent such a nice letter with their verses. They were twin boys 8 years old, and we feel sure if they will note carefully the verses we are printing they will see why they are better than those they sent in, and by trying again a time or two will be able at last to win one of the prizes. Remember that in awarding the prizes we consider age, neatness, spelling, punctuation and writing, as well as the quality of the verse. And now, altogether, for the next contest.

(First Prize.)

By Marjorie Davis, Aged 9, Plains, Kan.

Susie does the mending,
Robert reads the news,
Fido's in the hammock,
Ready for a snooze.

(Second Prize.)

By Dwight Olds, Aged 10, Junction City, Kan.

We're playing house beneath the trees,
And Bob, as father, takes his ease;
Kitty, as mamma, busy knits;
Towser in the hammock sits.

By Joseph Messmer, Jr., Aged 11, Omaha, Neb.

Out in the woods the children would play;
Rover, the dog, was pleased he could stay,
'Till the sky grew dim and the night drew near.
"We must leave," said Ruth, "or be punished, I fear."

By Dorothy Mouser, Aged 11, Red Oak, Ia.

These two little people are having lunch,
While dear old dog Rover is with the bunch;
They are having cake and pie to eat,
And I'm sure that lunch cannot be beat.

By Marie Shea, Aged 12, Denton, Neb.

The children by the table
Read the good old story;
The dog is in the hammock,
Barking in his glory.

By Erma Morgan, Aged 8, Bethany, Neb.

We're playing be grandpa and grandma today,
Just reading and knitting the old-fashioned way;
While Jack, our dog, sits by and looks wise;
To please us children he always tries.

By Glenn Hunt, Aged 11, Havelock, Neb.

Grandma is as mad as hops,
Grandpa reads and no wood chops,
And grandpa says that she just sits
With that old sock and knits and knits.

By Wilfred Niermeyer, Aged 7, Lowden, Ia.

Here are Frank and sister Mable,
Sitting at their little table.
In the hammock is dog Rover.
Careful! He may tumble over.

By Leola Barnhouse, Aged 13, Lane, S. D.

Now listen, mother; also Ted,
While I sit here and read;
You see, we need the "Farmer's" news
To help us to succeed."

PRESSED HARD

Coffee's Weight on Old Age

When people realize the injurious effects of coffee and the change in health that Postum can bring, they are usually glad to lend their testimony for the benefit of others.

"My mother, since her early childhood, was an inveterate coffee drinker, had been troubled with her heart for a number of years and complained of that 'weak all over' feeling and sick stomach.

"Some time ago I was making a visit to a distant part of the country and took dinner with one of the merchants of the place. I noticed a somewhat unusual flavor of the 'coffee' and asked him concerning it. He replied that it was Postum.

"I was so pleased with it that, after the meal was over, I bought a package to carry home with me and had wife prepare some for the next meal. The whole family were so well pleased with it that we discontinued coffee and used Postum entirely.

"I had really been at times very anxious concerning my mother's condition, but we noticed that after using Postum for a short time she felt so much better than she did prior to its use, and had little trouble with her heart and no sick stomach; that the headaches were not so frequent and her general condition much improved. This continued until she was well and hearty.

"I know Postum has benefited myself and the other members of the family, but not in so marked a degree as in the case of my mother, as she was a victim of long standing." Name given by Postum Co., Battle Creek, Mich.

Postum comes in two forms:

Regular Postum—must be well boiled. 15c and 25c packeges.

Instant Postum—is a soluble powder. A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage instantly. 30c and 50c tins.

The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.

—sold by Grocers.

Of Interest to Our Women Readers

Mother's Hymn

Come, let us live with our children
Lives that are noble and true,
Letting the love of the Father
Shine forth in all that we do.
Sent in His infinite wisdom
That we may teach them aright,
Ours for today, we must guide them
Unto the heavenly light.

Come, let us live with our children,
Tenderly, watchful and near,
To these young lives now unfolding,
Ready with counsel and cheer.
To give them strength for life's battles,
Helping if evil betides,
Building so well that they shall be
Temples wherein He abides.

—Cornelia Shipman.

Our Home Chat

These dark mornings make us appreciate the friendly offices of the alarm clock. Of course, our feelings toward it are not particularly kindly when it first wakes us up in the dark and we think of the plunge into the cold atmosphere from the warm haven of the bedclothes. But if something goes wrong with that alarm clock, or we forget to set it, and get up late, then things go wrong all day because we have not started right, and toward evening we begin to appreciate its warning. Did you ever stop to think that it is a good deal the same way with our friends at times? They offer us advice as unwelcome as the call of the alarm clock and we shiver and are tempted not to take it, but we know all the time that they are right, and later we come to appreciate their help.

* * *

We hear a lot about good taste in home decorating and about the bad effects on one's artistic sensibilities of colored lithographs and home-made oil paintings such as are seen on many walls. If these are in any worse taste than the new cretonne wall papers that are on display in the exclusive city shops we are indeed unfortunate. Cretonne is beautiful stuff when used in moderation, but an imitation of this material pasted all over the walls, with its big, colored patterns, would drive the average housekeeper to madness. So many people seem to believe that good taste and the prevailing style are one and the same thing. It seems to us that good taste in home decoration consists largely in making the house harmonize with its inhabitants and please the fancy of those who live in it. How tiresome our homes would become if the same decorator did them all to suit himself, without regard to the individuality of those living in them.

HOME EDITOR.

Our Weekly Recipe

BAKED RROWN BREAD—This makes just enough for two one-pound coffee cans. Fill the cans half full and bake one hour, with covers on. One-half cup sugar, one-half cup molasses, two cups sour milk, one and one-half cup white flour, two and one-half cups graham flour, one-half cup chopped raisins, one-half teaspoonful salt, two tablespoons melted butter, two teaspoonsful soda, two well beaten eggs. This is much easier than the brown bread that you have to steam.

Time and Money

Our old copybooks used to say, "Time is Money," and with this in mind, I have always tried to have all appliances in the home that would lighten necessary work as much as possible, thus saving time and strength which might be devoted to gainful occupations. I do not want those who read this to think that the pursuit of the almighty dollar for the purpose of swelling a bank account has been my sole aim and purpose, for this is not the case. But I have always had someone that I could "do for," either those of my own kin or else some unfortunate from the highways and byways of life, and it takes something more substantial than good wishes to relieve hunger and provide other comforts that help to make life bearable.

Besides, there is the possibility of a helpless old age confronting all who have no inherited, well invested wealth, and it seems to me commendable for anyone to try "to gather gear by every wile that's justified by honor," as Burns says, when your object is, "Not to hide it in a hedge or for a train dependent, but for the glorious privilege of being independent." So in my case I have worked hard to hold up my end of the yoke and have made use of everything I could that would lighten or simplify the work of housekeeping.

Sometimes the labor-savers have been bought from the general fund; sometimes my undivided earnings have gone into them, but in every case they have paid for themselves many times over in the time saved, which could thus be used for taking care of poultry or in planting and saving vegetables or fruits for sale; for "take it from me," as the present-day slang runs, the average farmer has little time to look after chickens or garden and truck patch, being busy with bigger game—the live stock and fields—which may not in the end yield a much greater profit, and considering money invested, they never do.

We have never had a gasoline engine as our servant, but with a good washing machine and wringer and plenty of tubs, the washing has never been a dread, and with irons of different sizes, including a fourteen-pound iron for pressing, everything that needs smoothing is attended to in short order, but "some day" we are going to have a mangle, and then ironing will be easier still.

Then there is a good step-ladder, with bucket rest; a lamb's wool brush with long handle, a window cleaner, a carpet sweeper, a hand-power vacuum cleaner, a patented mop with oil for painted and polished floors, and smaller appliances that both lighten and expedite the weekly and half-yearly housecleaning; and in the kitchen there is a good range, an oil stove, a fireless cooker and plenty of cooking utensils of every kind. No one knows what a saving of time it is to have a-plenty of pots, pans and kettles when preparing a meal, unless they have tried being short on them, which was my experience for some time after our house burned a score of years ago.

Then there is the separator, barrel churn and butter worker, for the dairy department; the incubator and other appliances for the poultry department and the canning outfit for saving the surplus of fruits and vegetables; all saving time, making possible a bigger output, or, if that is not desired, and the time saved can be devoted to rest and recreation, which, by preventing sickness and doctor bills and prolonging our years of usefulness, become a source of actual profit in dollars and cents.

Friends and neighbors have said to me with many a sigh, "I wish my husband was like yours," and I have replied in effect, "He would be if he were mine," for I would convince him that the little money required for my branch of the business would bring as great a profit as the money invested in improved farm implements for him, and if he were so indifferent to my interests as to fail to agree with my views I should act on my own initiative and buy what I needed as fast as we could afford it, for I consider the wife a partner in the matrimonial business, with an equal investment—her life—and as Scripture has laid down the law, "As

Neuralgia

There is no need to suffer the annoying, excruciating pain of neuralgia; Sloan's Liniment laid on gently will soothe the aching head like magic. Don't delay. Try it at once.

Hear What Others Say

"I have been a sufferer with Neuralgia for several years and have tried different Liniments, but Sloan's Liniment is the best Liniment for Neuralgia on earth. I have tried it successfully; it has never failed."—*F. H. Williams, Augusta, Ark.*

Mrs. Ruth C. Claypool, Independence, Mo., writes: "A friend of ours told us about your Liniment. We have been using it for 13 years and think there is nothing like it. We use it on everything, sores, cuts, burns, bruises, sore throat, headaches and on everything else. We can't get along without it. We think it is the best Liniment made."

SLOAN'S LINIMENT

is the best remedy for rheumatism, backache, sore throat and sprains.

At all dealers, 25c.

Send four cents in stamps for a TRIAL BOTTLE

Dr. Earl S. Sloan, Inc.
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Show your friends

the Kodak pictures you have made of amusing incidents about home, of the boys and girls at play, indoors or out—flashlights of the interior of the house, of parties or socials—portraits of the family and even pictures of fruit or plants,—in every one of these there is something to recall—something worth while.

Ask your dealer for booklet "At Home with the Kodak," or free by mail. It tells how to make portraits and interiors. Kodaks and Brownie cameras $1.00 and up.

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398 State Street, ROCHESTER, N. Y.

Only $2 Down
One Year to Pay!

$24 Buys the New Butterfly Jr. No. 1. Light running, easy cleaning, close skimming, durable. **Guaranteed a lifetime.** Skims 95 qts. per hour. Made also in four larger sizes up to 6 1-2 shown here.

30 Days' Free Trial Earns its own cost and more by what it saves in cream. Postal brings Free catalog folder and "direct-from-factory" offer. Buy from the manufacturer and save half. [12]

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$3.75 25 YEAR Guaranteed GOLD WATCH $3.75
Send No Money. The watch you have always wanted sent to you at our risk, without you sending one penny. Write if you prefer open face or hunting case, ladies' or gents' size, and we will send this ELEGANT 25 YEAR fully guaranteed, thin model, beautifully engraved Stem Wind & Set watch C.O.D. to your P. O. or for free examination at your express office. If you are satisfied with it and are rural it equals a 17 jewel $25 gold watch, pay us our special sale price only $3.75 & the watch is yours. Chain or Fob Free. Write now. LIGHT WATCH CO., DEPT. 211, CHICAGO.

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and inspected Red Clover Also Mammoth, Alsike, Alfalfa and Sweet Clover of choicest quality.
TIMOTHY Blue Grass, etc., at low prices. Now is the time to buy.
Ask for samples and copy of our bargain price list for farmers. Large illustrated catalog, free.
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If you wish to write to a manufacturer whose advertisement you have seen in a former issue of this paper, but whose address or name you cannot recall, write us. We can give you the information.

New American 20 YEAR Thin Model Watch
Elegantly engraved, gold finished throughout, double hunting case, high grade ruby jeweled American lever movement, stem wind and stem set. Equal in appearance to a 15 jewel $50.00 watch. 20 YEAR GUARANTEE sent with each watch. Long gold finished chain for Ladies, fob or neck chain for Gents free

Thin Model
$3.75
20 Year Guarantee
Let us send it to you C O D BY INSURED PARCEL POST, pay your postmaster our Special Price $3.75 when you receive the watch. Satisfaction guaranteed or money refunded. Mention Ladies,' Gent's or Boys' size.
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is his share who goes forth to battle, so shall his share be who abides with the goods," so she is entitled to equal consideration.

It may be in some cases men would not listen to reason, but it all depends mostly whether they are led or driven, and it would be the same with a woman of intelligence and spirit; she would resent being forced to any line of action. My advice—and I have taken it myself—is to state your own wants. No one knows your needs as you do yourself, and without whining and complaining and hinting around, which is aggravating and in time has no effect whatever.

I knew a woman once, a chronic grumbler, who could never be brought to state her grievance, saying if her husband could not see what she needed she was not going to ask him for anything. I told her that he was not doing her work and in her realm was an outsider, and that she had a wholly mistaken idea, and so has any wife who fails to insist on a square deal, which she need have no fear of always getting, if she has the common sense and dignity which belong to the true woman.

CORA S. CORNMAN.

Missouri.

An Educated Girl

A girl's education is incomplete unless she has learned:

To sew.
To cook.
To mend.
To be gentle.
To dress neatly.
To keep a secret.
To avoid idleness.
To be self-reliant.
To darn stockings.
To respect old age.
To make good bread.
To keep a home tidy.
To be above gossiping.
To make home happy.
To control her temper.
To take care of the sick.
To take care of the baby.
To sweep down the cobwebs.
To marry a man for his worth.
To read the very best books.
To take plenty of active exercise.
To be a womanly woman under all circumstances.—Ohio Educational Monthly.

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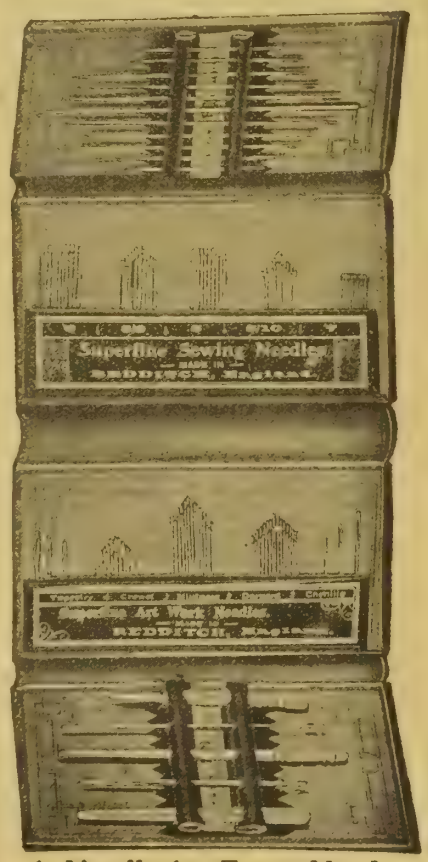

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15 Milliner's Needles.
15 Crewel or Embroidery.
3 Rug or Tapestry.
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1 Steel Bodkin or Tape.
1 Punch Work.
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2 Fine Wool Darners.
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Here is a needle book that is a beauty. Big size 13½ ins. when open and containing every kind of a needle any woman can possibly want. Your needles can't get lost as they are kept safely in rust-proof pockets. Read over the list of needles given above.

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Styles for Home Dressmaker

6918—Ladies' Waist. Simple enough for a shirtwaist, with the upper ends of the sleeve extended to the neck edge and plain front and back. The high neck has a stock collar and an over collar; the sleeves are full length, with ornamental cuff. The pattern 6918 is cut in sizes 34 to 44 inches bust measure. Medium size requires 2 yards of 36-inch material, with ¼-yard of 18-inch satin for the collar.

6938—Ladies' Skirt—This handsome skirt has a tunic of original arrangement, the back and yoke being in one piece. The fronts of the tunic leave the center of the skirt and dip downward in points at each side. One material or two may be used in making. The pattern 6938 is cut in sizes 22 to 32 inches waist measure. Medium size requires 1¾ yards of 36-inch striped goods and 2⅝ yards of 44-inch plain. Also 1 yard of 36-inch lining.

6123—Ladies' Shirtwaist. Linen, madras or China silk can be used to make this shirtwaist, with the collar and cuffs of contrasting material. The waist closes at the front and can be made with either the long or short sleeves. The pattern 6123 is cut in sizes 34 to 42 inches bust measure. Medium size requires 2½ yards of 36-inch material and ¾-yard of 27-inch contrasting goods.

6946—Ladies' Apron and Cap. This apron is designed for real work. There is a deep yoke and the balance of the garment is plain, with the closing in the center of the back. Small sleeves may be used or omitted. The pattern, 6946, is cut in sizes 34 to 44 inches bust measure. Medium size requires 4¼ yards of 36-inch material.

6199—Girls' Dress. Any of the woolen or wash materials can be used to make this dress, with the cuffs and belt of contrasting material. The dress closes at the front and can be made with either the long or short sleeves. The skirt is cut in three pieces. The pattern, 6199, is cut in sizes 6, 8, 10 and 12 years. Age 8 years requires 2¼ yards of 44-inch material and ¾-yard of 27-inch contrasting goods.

5550—Children's Kimono. Cashmere, flannel or printed crepe materials can be used to make this kimono. It can be made in either the long or short length. The kimono is cut in one piece. The pattern, 5550, is cut in sizes 2 to 12 years. Size 8 years requires for the long kimono 4¼ yards of 36-inch material, or 1¾ yards of the same width for the short kimono.

6944—Ladies' Dress. Very simple, but very smart, this dress has a blouse with shoulder formed by sleeve extensions. Front and back are plain. The skirt has a yoke and the lower portion in three gores is slightly gathered where attached to the yoke. The pattern, 6944, is cut in sizes 34 to 44 inches bust measure. Medium size requires 4 yards of 44-inch material.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Reviews of Agricultural Books

A LITTLE book intended as a school text book has recently been written by two of the instructors in the State normal school at Lowell, Mass. It gives outlines for study and experimental work in school in vegetable, flower, fruit and grain production. It is intended as a guide for practical work, and as such it is very complete. Distribution of each crop throughout the various sections of the United States, insect enemies and diseases are among the topics included.

"Soil Production," by Clarence M. Weed and William E. Riley. 252 pages, illustrated. Published by D. C. Heath & Co., Chicago. Price 75 cents.

* * *

Since the death of F. H. King, professor of agricultural physics in the University of Wisconsin and chief of the division of soil management of the United States bureau of agriculture, his papers and notes on soil management have been gathered together by his widow and published. The book contains much material of practical value on such subjects as soil texture, lime, increase in productivity by management, mulches, irrigation and drainage. The latter part of the book is devoted to a report on investigations made by Prof. King in China, Japan and Korea. These ancient nations have achieved remarkable results in maintaining the producing power of their soils, and Prof. King's study of their methods is not only interesting reading, but valuable from a practical standpoint.

"Soil Management," by F. H. King. 305 pages, illustrated. Published by Orange Judd Co., New York. Price $1.50 net.

* * *

"Rural Improvement" is the title of a new book by Frank A. Waugh, treating of highways, bridges, farm plans and the beautifying of home and school grounds. The plans and pictures are all taken from actual, existing conditions, largely in New England and Germany, and the book is beautifully illustrated with photographs.

"Rural Improvement," by Frank A. Waugh. 320 pages, illustrated. Published by Orange Judd Co., New York. Price $1.25 net.

* * *

The Nebraska State Historical society has issued its seventeenth volume of collections. This book is edited by Albert Watkins and contains articles by a number of Nebraskans relating to the early history of the state. These articles are mostly in the form of papers, which were read before the society at its various meetings and will prove of interest to pioneers and those who wish to be informed as to the early history of Nebraska.

* * *

Many people have the mistaken notion that there is nothing to irrigation but turning water onto the land and letting the crops grow. Anyone intending to locate in a part of the country where irrigation must be practiced in crop growing would do well to make a careful study of John A. Widtsoe's "Principles of Irrigation Practice." The author is a little inclined to be technical, but the book is clearly and forcibly written and all the technical expressions used are fully explained. How to utilize water artificially applied on land and why and when certain precautions are necessary are set forth in a practical and logical manner. The writer is a Utah man. He says in his introduction, while this book had the disadvantage of being written away from great reference libraries, it may be said for it that it was written within hearing of the ripple of the irrigation ditch.

"Principles of Irrigation Practice," by John A. Widtsoe. 496 pages, illustrated. Published by the Macmillan Company, 66 Fifth Avenue, New York. Price $1.75.

* * *

Thomas F. Hunt of California and Charles W. Burkett of Kansas are two well known writers on farm topics. Their book on "Soils and Crops," adapted to the mind of a high school student, has previously been mentioned in these columns. They have recently published another book on "Farm Animals." This book includes everything, from the horse to the bee, including poultry, goats and fish. It takes up the differences in breeds, diseases and their treatment, feeding and care, dairying and butchering. The book is written in a very simple manner, so that it is easily comprehended by young people. With "Soils and Crops," it completely covers, in a general way, the entire field of agricultural activities.

"Farm Animals," by Thomas F. Hunt and Charles W. Burkett. 534 pages, illustrated. Published by Orange Judd Company, New York. Price $1.50.

* * *

We acknowledge receipt of the thirty-second volume of the transactions of the Kansas Horticultural society, covering the years 1912 and 1913, containing valuable matter, statistical and otherwise, relating to the fruit industry in Kansas.

* * *

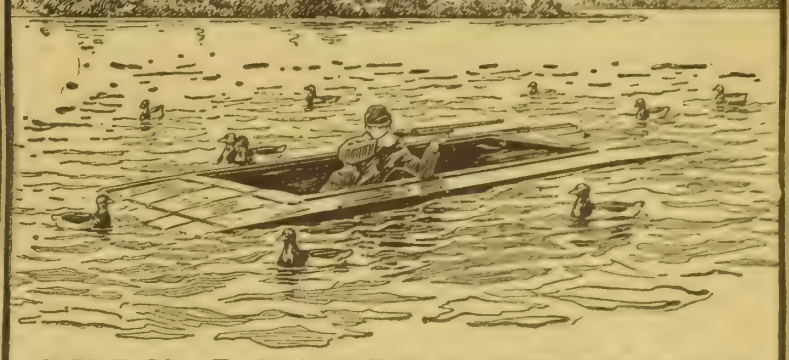
The fourteenth annual report of the Iowa department of agriculture is at hand. The Iowa people get out a particularly complete report, containing much valuable information and many tables of carefully compiled and useful statistics.

* * *

E. S. Hanson, editor of the Cement Era, is bringing out the third edition of his book, "Concrete Roads and Pavements." The first two editions were sold immediately after being printed, and this edition has been enlarged and improved to meet a demand for certain lines of information. While pavements are primarily supposed to be matters of interest to the city dweller only, the time is coming, and has arrived in some especially progressive sections, when the paved country road will extend from city to city. This book fills a want for a manual dealing with concrete as a substance for the improvement of the country road. It is chiefly characterized by a quality of readableness. If one is interested in the subject of permanent roads for rural districts, including the practical phases of the matter and the construction of bridges and culverts, this little book will prove invaluable.

"Concrete Roads and Pavements," by E. S. Hanson. 338 pages, illustrated. Published by the Cement Era Publishing Company, Chicago. Price $1.50.

WINCHESTER



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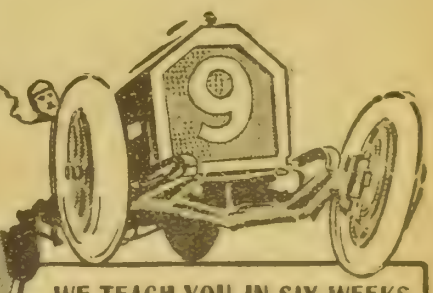

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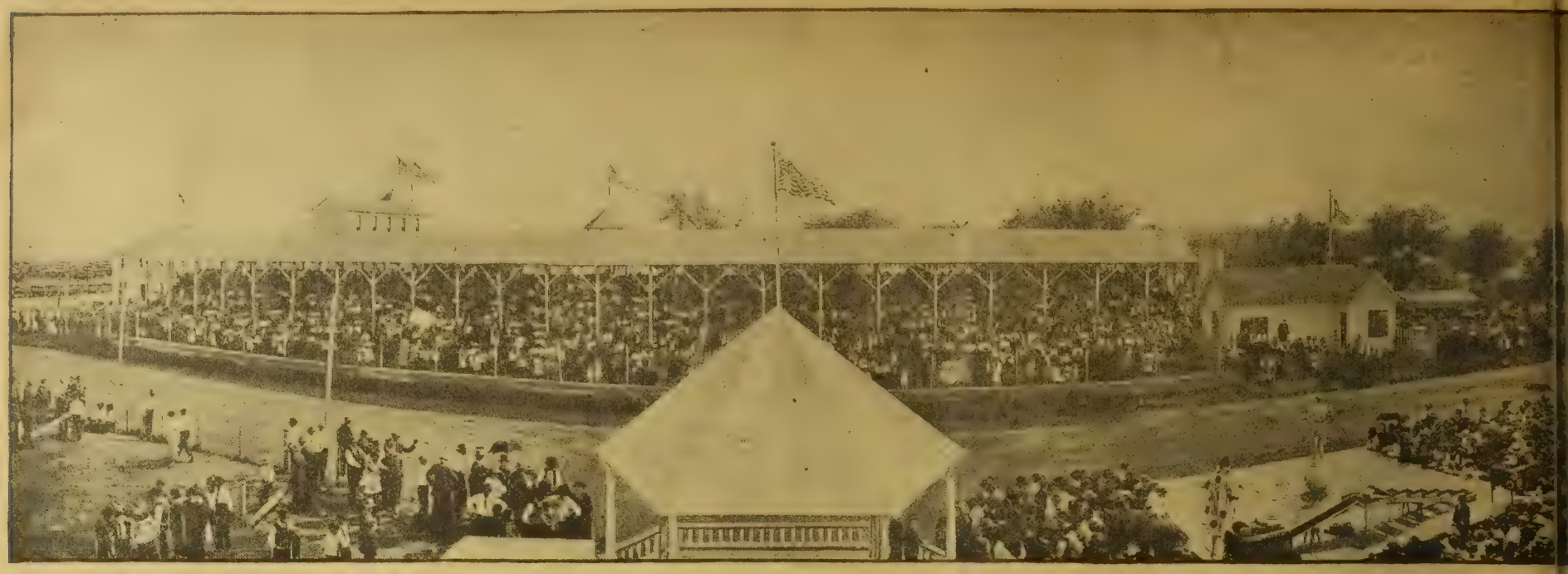

Scene at Boone County (Neb.) fair at Albion September 15 to 17, 1

A few years ago many of the farmers who own these machi have come at all, feeling that they could not spare the t biles are now an important factor in transportation. Gooc west. One of the most interesting things about the pict machine without disturbing the others.

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Automobile is Necessary

During the Last Few Years There Has Been a Great Cha

TWO or three years ago, the word "motorist" conveyed to most minds an impression of a shriveled, anxious-looking individual, goggled, uncouthly clothed, and sitting on the back of his neck while he controlled a snorting road-locomotive that hurtled along through space, carrying a mixed party of tired business men and giddy chorus girls.

Gradually our conception is becoming more intelligent, as we face the hard fact that most automobiles are owned by persons of cool judgment, who use them sanely and get fully as much practical use as pleasure out of them.

In this age of efficiency, the joy-rider is an exception, and the number of cars used solely for the entertainment of the wealthy has become a negligible item in the total sales of the industry. Large, heavy, expensive cars—expensive in first cost and in cost of maintenance—are few and far between, and the number of automobiles owned in the large cities of the country has become an increasingly small proportion of American motordom.

The farmer is now, and has been for several years, the best customer of the automobile industry. Some of the largest manufacturers now dispose of no less than eighty per cent of their total output through dealers in small towns who supply country trade.

And this is but logical, for there is no class to which the automobile brings so much added efficiency as to the farmer.

The prosperous farmer who asks himself, "Should I buy an automobile?" is unacquainted with the full share of benefit a car can bring to him. "Can I do without an automobile?" is a far better way to put it. Unless he is already a motorist his circumstances must indeed be exceptional if he fails to cherish the expectation of soon making this modern addition to his equipment of farm machinery.

No farmer who knows the value of his own time can afford to get along without a car, if he is in position to buy one. The amount of time saved in a year between the farm and the town where buying and marketing are done will alone go far toward paying for the car in its first season. The car i thirds of the way out t is necessary, there is car should average twe ing horse would averag

The up-keep cost of bile is, of course, depe the car consumes supp case it is radically diff farms the light drivers the car.

The care of the car than that of the horse

Our Autom

WE PRESEN series of discuss farmer's Each be short, full of r ranged as to be t reader without an mechanics.

The articles ar writer on automo especially for the

This accompany ductory order, but be expected in the series. The article titled "How to Pic

In connection wh to announce that vices of a compet will answer any troubles or manag questions to Aut Century Farmer, reply.—Editor.

Probably no less than a thousand machines were parked there that day. ...ould have come in horse-drawn vehicles; many of them would not ...t of time that would have been required to make the trip. Automo... are almost a necessity to the success of any fair held in the middle ... the unique method of parking, which permits the taking out of any

...Piece of Farm Machinery

...in the Way in Which Farmers and Others Regard the Auto

...lly moves the town two- ...arm. When a trip to town ...d for hitching-up, and the ...les an hour where a driv-

...tern, light, handy automo- ...on the amount of use. But ...y when running, in which ...rom the horse. On many ...een entirely supplanted by

...far less burdensome task ... in normal circumstances, so simple that little if any skilled attention is needed.

As a cold-blooded investment in equipment, the car will pay dividends. But this is only a part of the benefit it brings to the farmer.

The automobile adds enormously to the pleasure of farm life. There has been no element to compare with it in solving the problem of keeping the boy—and the girl—contented on the farm.

It brings city school and social privileges to the members of the family.

It widens the circle of friendship, for the motorist's range is easily three or four times as great as that of the man who still depends on horse transportation.

It brings to every member of the family a sense of relief and pleasure which can be attained in no other way.

A dividend payer in time, money and satisfaction—not an extravagance—that is the invarable verdict of farmers have become motorists, when one of them summarizes the value and influence of his car.

...Department

...ewith the first of a ...s, in which we shall ...tomobile from the ...of view.

... of the series will ...ormation, yet so ar- ...hly intelligible to a ...alized knowledge of

...ared by a trained ...ics and are written ...th Century Farmer. ...icle is of the intro- ...n idea of what may ...ling numbers of the ...xt week will be en- ... Car."

... series we are glad ...ve secured the ser- ... tomobile man who ...ns relative to car ... Address all such ... Dept., Twentieth ...g 2-cent stamp for

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If you look at a gallon of gasoline as it lies limpid in a pail or can there is really little to it, but if you give it to a three horse power gasoline engine it has a working propensity that beats any other liquid hollow, including any brand of joy juice ever distilled. Here's what a gallon of gasoline will do:

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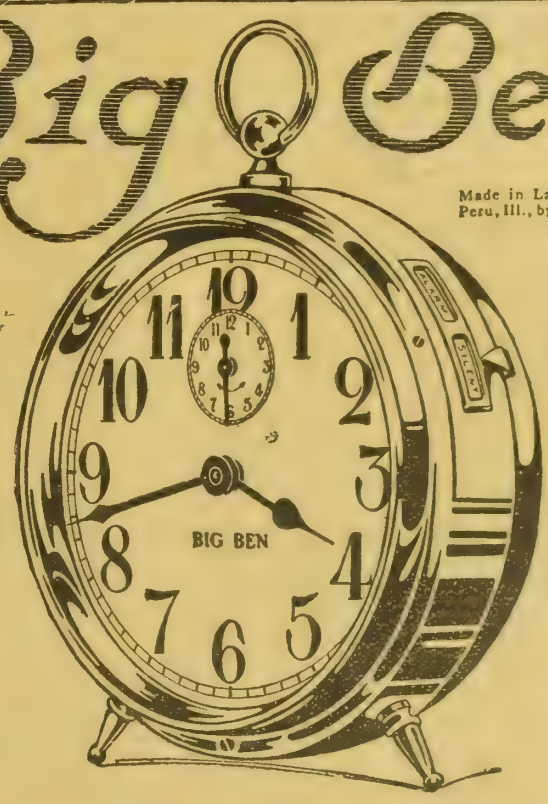
Will do about twenty weekly washings without wringing.

Will grind about twenty sickles, and if harvester is pulled by horses will cut about four acres of grain.—Implement Trade Journal.

Big Ben



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He puts in a full 24-hour day without a grumble—and he'll go 36 hours at a stretch without rewinding.

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In fact, his makers think he's the prize clock—the American People certainly have pinned the blue ribbon on him. $2.50 is his price—a pretty small price for a grand champion.

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(241)

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Dropping Off in Milk Supply

A RATHER common expression among cow owners who have interest enough to inquire into how their cows are doing this time of the year is, "They are dropping off in milk." As the fall season comes on and the grass shortens up a little, and the fresh, green supply is not so abundant, the cow that is not well fed and cared for will begin to slacken up on her milk flow. With some careless hit-or-miss kind of cow owners it is always expected that the milk flow will decrease as the green grass supply becomes less abundant and of poorer quality.

In these times of high-priced milk cows, high-priced butter and high-priced milk it is quite important to keep up the flow of milk right through the summer and fall seasons and into the winter. It can be done measurably with the majority of good, strong milking cows. It cannot, however, unless the cows are fed liberally twice a day with good feed and get all the water they will drink. It is regarded by many cow owners as extravagant, a waste of feed, to give a grain feed to the milk cow every day of the year that she is producing milk.

Practical dairymen know that the cow produces her flow of milk from the feed she consumes, and they provide accordingly and expect results from what the cow consumes. Some cows convert this feed into beef, while others do not seem to be constituted to make any special return or accounting for feed consumed. Here is where man's intelligence in the selection of cow beast must govern in his ability to provide himself with cows of tendency to convert feed profitably to the uses desired.

A Nebraska cow owner who kept a few cows spent many years in experimenting with the influence that feed had on the milk flow, and especially the keeping up of the milk flow through a protracted lactation period above the absence of feed during the same period. Common or scrub cows were not given a place in this select dairy. No cow was introduced into the herd that was not able to start off, after freshening, with a daily yield of twenty quarts of good, rich quality of milk.

These cows were given twice a day, morning and evening, summer and winter, autumn and spring, the same ration—half-gallon of bran, half-gallon of shorts, one quart fine ground cornmeal, with a small allowance of oilmeal for each feed, a gill, possibly, and all the alfalfa hay they would eat morning and evening, and water and salt at will. Four to five weeks was the aimed-at drying-up period. During this time the feed allowance was reduced, being cut down to hay only. The majority of these cows were hard to dry up before freshening, many going very close to the calving date.

Some cow owners make a practice of cutting off feed entirely when the cows are on pasture. Then, if the pastures become dry there is a dropping down in the milk flow that cannot be corrected again fully either by feed or a revival of the pastures due to rains. The sensitive, high-bred, heavy milker cannot stand this irregularity in amount and quality of feed. The dropping off can be accomplished readily, but the regaining is a very doubtful proposition; in fact, this course of treatment is pretty sure to ruin the cow as a steady, reliable milker.

What Farmers Are Doing with Alfalfa

(CONTINUED FROM PAGE FIVE.)

conditions. In 1914, the present season, it was cut four times, yielding four and one-half tons per acre for the four crops or cuttings. The fifth crop was almost knee high on October 10. It was not designed to cut this crop, but to allow it to stay on the ground as a winter mulch, possibly pasture off partially with sheep through the winter.

Mr. Bliss has become a great alfalfa enthusiast and has sown twenty-five acres more this season. The land was in wheat. As soon as the wheat was off the ground was plowed, dragged after the plow and dragged several times before sowing. It was sowed on August 22, with a broadcast seeder and dragged once. This is now five or six inches high and a perfect stand. Fifteen pounds of seed to the acre was used. Land is black, sandy loam river bottom.

This is an example of thousands of farms scattered all over the middle western states, where alfalfa is rapidly taking the place of other kinds of hay for the feed lot in fattening cattle and sheep. There are over a million sheep and lambs fed in Nebraska alone each year among the farmers over the corn raising districts, and alfalfa has been found a necessity in this work in order to secure the best feeding results.

Time to Invest in Good Breeding Stock

(CONTINUED FROM PAGE THREE.)

when a farmer was justified in increasing his number of cattle and hogs it is now. We don't feel, however, that he is justified in overstocking. This seldom, if ever, pays, but if he is in position to increase his live stock holdings without crowding, it certainly looks like a good time to do it. On the other hand, doesn't it look like poor business to decrease your holdings just because the market just now is not what you looked for it to be, or what some optimist said it was sure to be?

One serious question that confronts the American live stock raiser is, with what kind of stock is he going to supply this coming demand—the pure-bred or the scrub? It seems to us that the almost universal results of feeding experiments in different stations where these experiments have been made, showing the much better profits in feeding pure-bred animals than in feeding scrubs, should make any farmer get the best he can.

The feed to be used in the feeding operations is high; the help used costs plenty of money. Can you afford to use this high-priced feed and help in growing and fattening anything, but the animal that will make the best net returns? If you have sold short on account of present prices, don't you think it good business to stock up at least to the normal number? And when you do stock up, is it good business to stock up with anything but good stuff?

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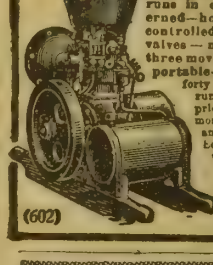

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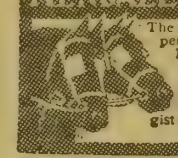

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Big Farms of Chile and How They Are Managed

CONCEPTION, Chile—For the last last week I have been traveling here and there through the central valley of Chile. This extends from Santiago to Valdivia, more than 500 miles south. It contains the largest and best estates in the republic, although there is an extensive wheat-growing region below it in which great forests are now being cut down and the clearings turned into farms.

The central valley of Chile is one of the garden spots of the globe. It will grow anything if it can only have water. As one of the haciendados said to me: "All you have to do is to spit on the ground and drop in a seed and, presto, there is a tree." There is no part quite so fertile as that, but trees do grow here three times as fast as in North America. I have seen groves of eucalyptus that are 100 feet high and still only ten or fifteen years old. I have already described my visit to Santa Ines, the fields of which are walled with poplars as high as a church steeple. There are thousands of trees on that estate as high as any in the eastern part of our country and they have all been planted in the last twenty-five years. It is the same with all kinds of vegetation. In the irrigated sections peach trees bear at one and two years and grains and grasses, including alfalfa, are wonderfully luxuriant. This is so notwithstanding some of the land has been under cultivation for many generations. The lands about Santiago have been tilled for 300 years and today among them are numbered some of the fine farms of the world.

Plenty of Cattle on the Ranches

Fertile Farming Region

But before I describe the big haciendas let me tell you a little more about the region in which they are seated. The central valley is a wide strip of lowland ranging in width from fifteen to 100 miles, and about 700 miles long. It begins above Santiago and winds its way south through about one-fourth of Chile. On the east of it are the snowy walls of the Andes, with here and there the mighty cone of a dead volcano rising above the other peaks, and on the west are the lower mountains and hills of the coast range, their tops almost a desert, but their foothills covered with green. The average width of the valley, all told, is about thirty miles, and its area is somewhere between those of West Virginia and Maryland. This country is settled throughout. It has many large towns along the state railroad, which runs through it from one end to the other, and the most of its lands are divided up into large estates.

In the north these estates are all under irrigation and it is only in the far south that the rainfall is sufficient to dispense with the artificial watering of the crops. Much of the country is slightly rolling. It is cut by many creeks and little rivers which are fed by the Andean snows. Some of these streams carry down a great deal of silt, making fat the lands over which they go. Others, such as the Bio-bio, are as clear as crystal from one year's end to the other.

Trees for Fences

Riding southward through this country, the scenery is far different from that of the richest parts of the union. There are crops in sight all the way, but the fields are divided by rows of tall poplars or eucalyptus or with walls of mud and stone rather than fences. It is only along the railroad that there is any barbed wire. The chief buildings to be seen are the great rambling structures, the homes of the haciendados and the mean mud-walled thatch-roofed huts of the laborers. There are no barns standing out on the fields, and no elevators at the stations for storing the grain. There are plenty of cattle and horses, but very few stables or outbuildings. The weather is so mild that the stock graze out of doors all the year round, and this is so all the way from Santiago to the Strait of Magellan. Therefore there are no haystacks or strawstacks Such grass and alfalfa as are cut are put up in bales and shipped to the cities or north to the nitrate desert, where they bring higher prices. The climate of the central valley is about the same as that of lower California, save that there is less rain, and in the upper part of it nearly everything has to be irrigated. At present there are something like 2,500,000 acres now reached by artificial canals, and I am told that it is possible to put water upon as much more. The most of the non-irrigated lands are in the south. I shall write more fully of them in the future.

Oxen everywhere take the place of horses and mules. They are yoked to clumsy carts by wooden bars tied to their horns and are driven with long goads with steel spikes in the ends. Nevertheless, the farming is well done, and on many estates it is equal to that of the United States.

Business is on a Grand Scale

Nearly everywhere the business is on a grand scale. In many parts of the valley 200 acres is little more than a garden patch, and the irrigated farms of 5,000 and even 10,000 acres are common. There is one farm of 20,000 acres, and several which have 15,000 and more. There are some very large vineyards. The estate of Lo Uurmenta contains 2,000 acres, and of these 200 are now bearing grapes. It has cellars with a capacity of 500,000 gallons of wine, and it bottles and ships vast quantities every year. The Errazuriz vineyard, at the foot of the Andes, puts up 6,000 bottles of wine a day in addition to th. t which 't stores away in casks. It ships more than 100,000

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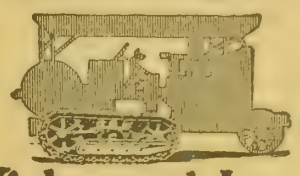

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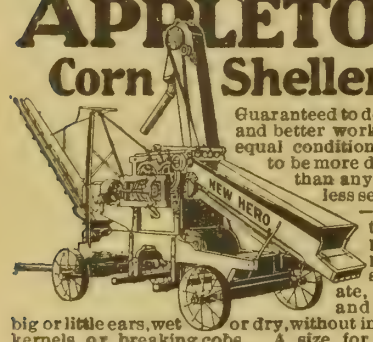

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Farming on a Large Scale

One of the richest families of Chile is that of Augustin Edwards, who is now minister from here to the court of St. James. He has one hacienda about twenty-five miles north of Valparaiso that supplies a part of that city with milk. He has 800 milch cows and he breeds fine dairy stock. He is also noted as a breeder of horses not only for racing, but for heavy draft. He has in his stables 76 Arabian mares, 80 Percherons and 110 Yorkshires. He has 10 Shorthorn bulls, some of which were brought from England. Another big dairy hacienda, which also supplies Valparaiso, is that of Don Tomas Eastman. On that estate there are several thousand cattle, including 1,000 milch cows. On the Denoso dairy farm there are still more. The latter hacienda has the biggest silo in the world and one of the queerest. It is nothing more than a great ditch 350 feet long, 20 feet wide and 12 feet in depth. This is filled with red clover which has been trodden to pieces by driving horses over it and then laying it between layers of straw. The Denoso farm runs its machinery by an electric plant operated by falls two miles away. The hacienda has electric lights and the cows are milked under the rays of incandescent burners.

The nursery at Santa Ines is the largest in Chile. It has an electric plant run by the falls of a branch of the Mapocha river. This is now furnishing a 120-horsepower, which is used in the factories and other establishments connected with the property. Everything excepting the farming and cultivating is done by electricity, and this includes the thrashing of all kinds of grain, the sawing of lumber, the lighting the owner's home and the moving of the machines of a large manufacturing plant. On that estate there are twelve miles of railroads, and there is one peach orchard in bearing that contains 45,000 trees, and the receipts must equal, I should say, the salary of our president. Nevertheless it was twelve years before Santa Ines began to pay, and during that time it cost Don Salvador Izquierdo S., who owns it, an outlay of $300,000.

Estate of Richest Widow in World

During my last visit to Chile I visited the estate of Macul, which belongs to the Courinos, the descendants of a woman who was long said to be the richest widow of the world. The estate cost more than $500,000 when it was bought by Don Cousino. It is now valued at over $1,000,000. It consists of about 5,000 acres of irrigated land, and it has a large number of fine blooded horses and 200 cattle bred from the best Durham stock. Its vineyards have hundreds of thousands of vines, and they produce millions of bottles of wine every year. The water rents there are about as much as the salary of a United States senator, and the irrigation ditches are marked out by long lines of poplars. The park of Macul is one of the finest in Chile.

Another large estate is that of Aguila, belonging to Don Santiago de Toro, which contains 11,000 acres. It is not far from Santiago, and it took me about two hours on the train to go there. At the time of my visit the hacienda had over 2,000 cattle and 200 horses, the most of which were used for breeding alone, and for the family and guests. All of the farm work was done by oxen. Of the cattle 300 were dairy cows, which brought in about $6,000 worth of milk and $8,000 worth of butter a year.

Each Child Has Pony

The Gulla hacienda has many long, low one-story buildings running round patios and gardens. These form the home of the owner. They have roofs of red tile and their floors are of brick. They have wide porches and their windows look out on the gardens. They are situated in a grove of trees which are at least 100 feet high, and among these are wonderful palms. When I visited it the house contained about two score of guests, in addition to the thirty children and grandchildren of the family of its owner. Each of these children had its own pony.

Others of the haciendas here have beautiful buildings of modern construction, with great parks, with miles of shady drives, and all of the other surroundings of a millionaire's home in the states. Many of them are using modern machinery, and some are now experimenting with fertilizers and intensive cultivation. Everywhere I go I see American plows, and there are three or four importing houses in Chile who have their traveling salesmen going over the country drumming each hacienda as to the introduction of American harvesters, binders and windmills.

Labor Conditions Good

One of the interesting features of farming in Chile has to do with the labor. This is made up almost altogether of a class know as inquilinos, or the class of which travelers sometimes speak as the rotos. This is wrong. The word roto is a contemptuous word, meaning torn or ragged, or, as it might be called, ragamuffin. The proper term is inquilino or farmer. He is a respectable person and he may or may not be ragged. These people are the descendants of the Indians and the immigrants from the northern provinces of Spain. They are the laboring class of the country, and they correspond to the peons of Peru, although they are far above them in character and efficiency. They are excellent workmen, and they can learn almost anything that requires handiness and craft. They are very proud and will not tolerate abuse or insult. You might kick a Peruvian's peon and he would sink humbly. The Bolivian Indian is afraid that his master is angry if he is not punished now and then, but the inquilino would be likely to resent such treatment and leave. Indeed, I doubt if it would be at all safe for his master to lay his hands on him. On the haciendas where I have been there seems to me a good spirit existing betwen the haciendado and the laborers. The latter are deferential and the owners sustain a sort of patriarchal relation toward them. They are interested in treating them well, for if they do not the inquilno will leave, and it is upon his labor that the man must depend for the work upon the estate.

Each Man Has Tract of Land

The conditions of employment are somewhat like that of the old feudal times. The haciendado owns the land, and he lets each of the workmen have a small tract to cultivate and also pasturage for his stock if he has any. This tract may consist of two, three, four, five or ten acres, and it may be only enough for a house and garden. In return for the use of the land the inquilino agrees to give one man's work to the owner when he requires it. This means that he pays a rent for the house and grounds of about $2.50 a week, and at the same time has a house for his family to live in. In some cases small wages are paid, but as a rule the man is expected to furnish one hand for his labor. If his family does work, they, of course, receive an additional payment. Many of the inquilinos are in debt to their employers, but the laws here are not like those of Peru and Bolivia, which make the peons almost debt slaves.

Improving Housing Conditions

The huts of the peons are of the rudest description. They are seldom more than fifteen feet square. They have walls of sticks covered with mud and the roofs are of thatch or rude tile. The huts are seldom lighted except from the front, and some have no light but from the door. The ground forms the floor, and, in many cases, the bed of the family. Boxes usually take the place of chairs, and if there is a bedstead it consists of a ledge of sticks built up from the ground. The bedstead may be separated from the other part of the room by a curtain.

I would say, however, that some of the farmers are paying attention to the better housing of their workmen. On the Santa Ines estate they are building tenant houses of concrete and on some others of the haciendas they are putting up what are called model houses.

I am told that the inquilinos are contented with their lot. They seldom strike, and seem satisfied if they can get enough to eat and wear and plenty to drink. One of the great evils of the country is alcoholism. Nearly every one of the lower classes is addicted to

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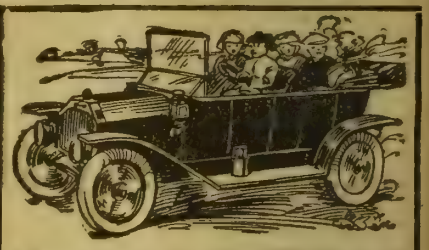

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it, and this is so in both city and country. A census of saloons of Santiago was recently taken and it was found to have 6,000 places where liquor was sold, while Valparaiso was reported to have more cases of drunkenness than English cities of ten times its size.

It is this custom of drinking added to unsanitary conditions of living that is responsible for the great mortality of Chile. The death rate is enormous, and that among children is so high that I fear to quote the figures which have been given. Dead babies are called little angels and are supposed to go straight to Heaven, but no one supposes that this has anything to do with the deaths. It is said that 55 per cent of the children of Santiago die before they are 5 years of age, but I do not believe this to be true.

Army Service Beneficial

There is one institution in Chile now that promises to bring about a change in the conditions of the inquilinos. This is the army, and the law provides that every man in the country shall spend at least one year of his life in the service. This year is at about nineteen or twenty. All of the boys are drafted, and no matter whether they are of the working class or not they have to spend this one year as a soldier. This brings the young inquilinos away from the farms. It teaches them what it is to have board floors to walk on and good beds to sleep in. They get a taste for the better food of the army and do not like to go back to their beans and toasted wheat that until then have formed a large part of their diet. As a result, after leaving the army many go out to seek work otherwheres. You find them as laborers about the ports, as the employes on street car lines and other railway construction and doing all sorts of common labor in the cities. Moreover, they are natural mechanics and they soon learn the various trades.

It is somewhat owing to these changes that a modern labor element is developing in Chile. There have recently been several strikes on the state railways; the hands upon the wharves have their unions and are, I am told, growing very independent. These men in the nitrate ports struck the other day because they were not allowed to use grapling hooks to handle the heavy bags. They had seen such hooks used for dragging about cotton bales, and they found it easier to move the nitrate the same way. The hooks make holes in the bags and for this reason the exporters of the nitrate object.

Beginning of Labor Troubles

A similar unrest among the laboring element is going on all along the west coast of South America. Peru has been sending agitators to Chile, and Chile has sent labor delegations to discuss such matters in the cities of Peru. Moreover, some of the politicians of the several republics are catering to the laboring element, and among the latter is the former president of Peru. When Billinghurst was president, he boasted that he was a friend of the workingman, and did everything he could to get their friendship and support. At one time he sent a command to the head of the Peruvian corporation which manages the Central railway that he must at once raise the wages of all his employes 25 per cent. The official replied that this could not be done. Billinghurst insisted, whereupon he was shown that such an increase would stop the running of the road, for the receipts would not leave enough for the interest on their bonds after running expenses were paid. He also showed President Billinghurst what an outcry would come from the people if trains should have to stop. The president then saw that he would lose more than he would gain by such a proceeding, and the matter was dropped. It was a number of such actions that brought about the revolution that ended in his being ousted from the office.

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A Glimpse at the Bargains

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Buy your Xmas gifts with the money you save on "Standard" prices. "Standard" styles are very charming and, only at the "Standard" are you sure to get the latest style news, because only the wonderful "Standard" Bargain Bulletins can bring you promptly the season's choicest offerings.

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HD198—One of the season's prettiest dresses and best bargains. Of serviceable black-and-white Woven Shepherd Check, tastefully trimmed with black mercerized moire. A dainty touch is provided in the pretty Swiss embroidery turnovers and cute side pocket. Closes conveniently in front. The graceful Russian tunic is employed in skirt. (Sizes 13 to 20 yrs., or 32 to 38 Bust.) Special, postpaid in the U. S..... $1.98

1H81 $1.00

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1H81—A "Standard" dress bargain. Prettily modeled and although of good, dependable quality, is priced remarkably low. Made of serviceable, washable Linene with dainty Madeira embroidery effectively ornamenting front and collar. Pleated across shoulders and buttons through the novel-shaped front fold. (Ladies' sizes 34 to 46 bust; Misses' 14 to 18 yrs.) A splendid value. Special, postpaid in the U. S..... $1.00

Plush Muff Free With This Charming Plush Coat $5.95

HCC595 $5.95

HCC595—A beautiful coat with matched muff FREE. The coat for the miss and small woman. Offered FREE. The coat is a straight fitting, dressy model made of heavy, durable, black Plush. A stunning "Animal" effect is developed in the large black Caracul shawl collar with a small animal head. Closes with plush buttons and loops and substantially lined throughout with black sateen. The muff is a thickly bedded, warm pillow model, with silk-ruffled ends. (Misses' and small women's sizes, 32 to 38 bust and 45-inch lengths.) This $9 coat with muff FREE postpaid in U. S. $5.95

The Latest Design Extraordinary Dress Offer.... $1.98

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VDD198—One of the biggest bargains of the year. A lovely Russian model — the most becoming of these charming fashions, priced so low that you must be sure to enjoy the pleasure of wearing it. Of serviceable, pretty black-and-white woven shepherd check material, stylishly combined with sleeves, lay-down collar, sash and bottom of silky black sateen. Finished with black braid and a dainty white organdie collar. Buttons in front. (Ladies' sizes 34 to 44 bust; Misses' 14 to 18 yrs. Postpaid in the U. S. $1.98

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2VD698—No other fashion is quite as charming as this quaint Russian model. A "banner dress offer." Made of excellent All Wool Serge with becoming, long-waisted Basque and handsome, pleated Russian tunic. A lovely trimming is provided in the bottom, collar and cuffs of contrasting Roman stripe material. Closes in front on a satin panel and a dainty finish is offered in the hemstitched white organdie collar and detachable, hemstitched satin messaline sash. In black, navy blue, wine, brown or dark green. (Ladies' sizes 34 to 44 bust; Misses' 14 to 18 yrs.) This $9.00 dress, postpaid in the U. S... $6.98

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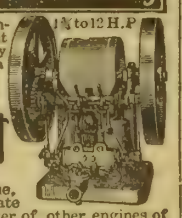

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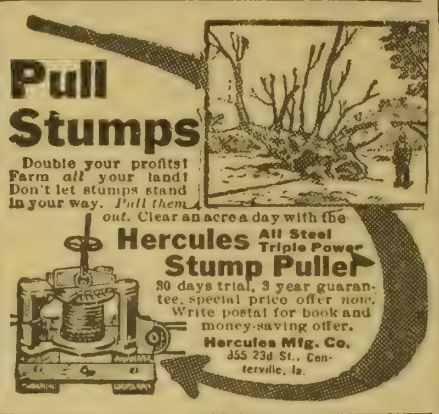

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Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Is It Hessian Fly?

C. E. P., Iowa—We saw an article in the Twentieth Century Farmer about the Hessian fly. We notice on the stubble ground where fall wheat has come up that there are eggs of some kind and would like to know if they are what they call Hessian fly eggs. It is an entirely new thing in this locality. I am enclosing a few leaves of volunteer wheat.

I plowed this ground about September 25 and disced and harrowed it and sowed it to wheat with a disc drill about October 15. Do you think there is any danger of the Hessian fly doing any damage to wheat sown that late?

Answer—There was no trace of Hessian fly in the wheat in the letter. The sample was so badly crushed, however, that we could not be sure what was in it, if anything.

The chances are pretty good that there may be Hessian fly, as the method pursued would give them a good chance. The flaxseed, as they are called at a certain stage, on account of their resemblence to these seeds, remain in the stubble after the wheat is harvested. These should be destroyed by immediate deep plowing or by burning. In your case you did not plow until the latter part of September, giving the flies a chance to develop and lay their eggs.

The date of planting was late enough, but the flies could live on the volunteer wheat until reaching the flaxseed stage, in which they live throughout the winter without food. The fact that there are two broods of Hessian fly in a year makes the pest very hard to combat.

There is nothing you can do at this time to protect next year's crop from a possible attack by Hessian fly. The only protection against them is deep plowing immediately following harvest, which buries the flaxseed and prevents their development; burning the stubble, which destroys them, and crop rotation, which starves them, as the Hessian fly does not feed on corn. Wheat, rye and barley are the only grains it attacks.

To Prevent Farm Fires

W. H. M., Iowa—In your issue of October 10 I read a very good article entitled "Fire! Fire! Fire!", and being in the position in which I am, it appealed to me. Fires are a great loss to the farmer every year, and they are caused mostly through carelessness. In nine cases out of ten it is the carelessness of men or boys smoking in the barns or out-buildings, carrying matches loose in their pockets and allowing rubbish to accumulate about.

This is a great problem for the farmer, who has no fire protection and therefore should take every precaution against conflagrations. Below I offer a few suggestions that may be of value to the readers of your paper.

Commence first at the house. Carefully inspect the furnace, remove all rubbish from the cellar. Visit the attic, going over the chimney very carefully near the roof to see if any defects are to be found. Most fires are caused by defective flues or chimneys in the roof or attic. The mortar becoming old will give way between the bricks, allowing sufficient draft for sparks to escape from the opening. Also sometimes where soft brick has been used in the construction of the chimney, these bricks will waste away until only about one-fifth is there. These defects are found in many places where mortar has become rotten on account of leaks in the roof. The water running down causes the mortar or brick to decay, thus causing fire. By a little investigation once or twice a year a good many such fires might be prevented.

Many barn fires are caused by putting into the mows hay that is not thoroughly cured, causing spontaneous combustion. Carrying around a lighted lantern doing chores is also dangerous. An electric lantern is absolutely safe and is not very expensive. This is the only safe way of looking after the automobile or gasoline engine after dark.

You often read of fires having been set by boys playing with matches. Many suggestions might be offered to prevent this, but the only one I offer is that where this is liable to happen the parents should buy safety matches that can only be lighted by scratching on a prepared surface.

In many localities throughout the middle west farmers are providing themselves with chemical fire extinguishers. These are very effective and work wonders in an oil or gasoline fire. The chemicals used in them are bicarbonate of soda and sulphuric acid and water. The charge in the small size, when properly used, will equal in effectiveness a fifty-gallon barrel of water on the average fire. In order to obtain best results in fire fighting you should begin at the bottom and work up.

If farmers would be careful about matches, defective chimneys, rubbish, etc., the fire loss throughout the middle west would be greatly reduced.

Note—This correspondent, judging from his letter-head, is the chief of the fire department in a large town. The suggestions given are excellent and timely and are evidently based on the writer's experience.

Shoats with Stiff Joints

P. R., Nebraska: I have a bunch of shoats weighing about 100 pounds apiece. Some of them get lame and their joints swell up; some of them get over it and some do not. It appears mostly in the front joints. Can you please tell me what it is and the cure for it?

Answer—Considerable complaint of a similar nature has reached us this season. It is undoubtedly caused by different things. Improper feed and damp sleeping quarters frequently cause the trouble. Be sure to have good, dry, well ventilated sleeping quarters; feed the hogs a mixed ration. Plenty of corn will not hurt them, provided it is properly balanced with tankage, shorts, oats or alfalfa. Nothing is better than good alfalfa pasture.

Express vs. Parcel Post

R. S. M., South Dakota: It has been bruited about that the express companies were lowering their rates to compete with the parcel post. We hear a great deal about the advantage of the parcel post for the farmer, and for sending farm products to market. Now, is it really feasible to use the parcel post? And does it really help the farmer to sell as much as it does the city man to sell? We find the rates on dry goods and notions make a city market possible for buying things, but the weight of the farm products is such that the shipment by parcel post is almost prohibitive. For instance, we have been shipping eggs to St. Paul for some years by express. We ship in thirty dozen crates, and the weight and size of packet are rather above the par-

cel post. We learned that the express rates had been lowered and exulted in the thought that now our eggs would go for a less price by express. We sold the eggs, received our statement and check, to learn that the express rates were about 20 cents higher than they had been previously. We thought the buyers had made a mistake and wrote for correction or explanation, and the reply came back that the company had paid the usual expressage, but that the express company sent back asking for more, which was paid. My conclusion was that there was still some mistake and the next crate we shipped we paid the expressage, and learned that the rate had been raised. The agent stated that in lowering express rates to compete with parcel post they had raised other rates to make up this deficit! The query is, What shall it profit a farmer if he gets a reduction in rates on the things which he buys prepaid, and gets a raise on the things which he must pay himself? It is a curious situation. And who is going to fix it unless Uncle Sam himself does?

Editor's Note—We are very much interested in this statement and should be glad to hear from others of our readers who may have similar experiences. We are hearing a great deal about what parcel post has done for farmers and have advocated the parcel post in the past. What do you think of it? Is it a success or a failure?

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

FROM a specialty fancier of Barred Rocks: I would like to say a few words about the all-purpose value there is today on the "pullet-bred" Barred Rock, the finest production in poultry of America, laying aside the American Standard of Perfection and laying aside the American Standard of Perfection's idea of morals. They are one distinct variety by virtue of their intrinsic value, and the cockerel-bred line of late has been stealing from them a most deserving praise. The day is coming when the pullet-bred variety of Barred Rocks will be fully recognized as just one variety in Standard. Wake up, brother breeders, cry out their secrets. I cannot see how one can admire the cockerel-bred line of hens; they are too dark, their legs and bills are dark, and these hens are of no use except to breed dark cockerels. What kind of lookers are they beside the pullet-bred? They are not good layers, except a few individuals among them; they are outrivaled in every way by the "pullet-bred." Yet, despite that a large number of specialty breeders know this, yet they stand conservative because the American Poultry association argues for the cockerel-bred, with no effort made to show their superiority as an all-purpose bird. To those who might not understand will say the standard exhibit in males are developed from mating dark females with dark males into what is now called cockerel-bred, while mating the light females with light males produced what is called "pullet-bred." This has produced two varieties as a requirement which you must meet if you enter the show room.

Show Birds

At the poultry shows people are often astonished over the high prices in the catalogues placed against the names of certain fowls. They cannot believe that ever such prices are paid for birds. To most people $5 seems a big enough price for any ordinary prize winner, and they are apt to see them all as ordinary. Then hear them talk aside, and they say, "Lots of wind in that. Don't believe all you read." And yet we must believe, because figures from reliable authority assure us that certain fowls do bring the high price asked for them. Every breed has an ideal established by the American Poultry association. It is an ideal to which all fanciers aspire for the breed they keep. Each section of the bird has a stated value in points, and if it departs even to one-fourth of a fraction from those points it is "cut." One hundred points is the high limit for these sections, and the bird that cannot come up 90 points cannot take a first prize. One that scores 94 is a good bird, 95 is fine, 96 very high and 97 is an exception. It is these high scoring birds, near to the ideal in all sections, that get the high price tacked to them. High prices for certain birds have always been the rule in other countries. In this country the high prices began to be heard of not yet a dozen years ago. It is only a few years back that U. R. Fishel of Hope, Ind., sold Prince of India, a White Plymouth Rock cockerel, for $800, while G. H. Northrup, Black Minorca breeder of Raceville, N. Y., was paid $1,000 for a Rose Comb Minorca male. Not one had ever come so near the ideal set for this breed. Much was said in comment on the $10,000 value set by Ernest Kellerstrass some years ago on "Peggy," White Orpington. Perhaps none was found as a purchaser at this price, but Peggy's fame, aided by this price, netted her owner thousands of dollars, not only from the sale of Peggy's sons and daughters, but the sale of eggs at $2 apiece from the pens of her daughters. Remember, when you see these high prices listed that extra care has been given to breed to the high ideal as well as the care given after, feed carefully selected, extra heat or cold never allowed to touch such a bird. Miss Peggy was never allowed to chill or overheat. She ran on soft grass; she never felt rain on her coat; she was bathed, powdered and manicured.

Poultry on a Town Lot

Says one poultry keeper, "Do mechanics and others having a cottage or ordinary town lot do as well with these lots as they could?" I know of one man with a small lot 66x200 feet, who produced eighty-three Plymouth Rocks that from December 1 to April 1 produced 425½ dozen eggs that sold in our stores for $146.11. Also, I know another that from ten Silver Wyandottes gathered in fifty-nine days, February and March, twenty-eight dozen eggs. Surely these hens, with but a few minutes' care each day, pay large for the small bit of ground given over to them. Cases of this kind can be multiplied over and over.

Notes

During cold weather chop up a few red peppers in the mash.

The usual causes of roup are cold, dampness and exposure.

Buckwheat fattens fowls rapidly, so does corn and barley meal.

Feeding hens broken up oil cake once a week promotes laying.

A good remedy for scaly legs on fowls is sulphur and sweet oil.

For roup in chickens a teaspoonful of tincture of chloride of iron given in each quart of water will effect a cure.

Some breeds of fowls fatten rapidly. These must be watched if intended for laying purposes. Cochins, Brahmas and Barred Rocks are chief of these.

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for a sick chicken, yet one sick chicken in a flock generally means more sick chickens soon,—their diseases being mostly contagious or caused by the same food, drink or housing.

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Best of all is the "twice a week" preventive treatment, a teaspoonful of Germozone to a quart of drinking water. It purifies the drinking water, from which source contagion is most frequent, and also has a beneficial action on mouth, throat, crop and bowels. It is a great bowel regulator for poultry, pigeons, birds, dogs and other pet or domestic stock.

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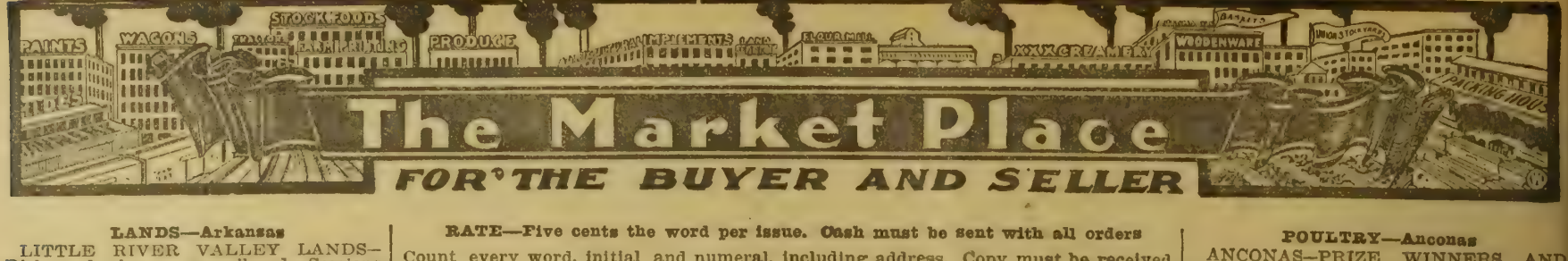

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WANTED—TO HEAR FROM OWNER of good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

Minnesota

BETTER THAN HOMESTEADS—Write us for information regarding our "Half Earnings" plan and get a farm home of your own. Flax crop on first breaking will make you a lot of money the first year. We have about 1,000 quarter sections to select from, part under cultivation. No cash payment required. Address Hackney Land Credit Co., Hackney Bldg., St. Paul, Minn. * * * The European war means high prices for all American farm and factory products. The result will be a big increase in the value of farm lands.

LOOK AND YOU WILL BUY! OUR beautiful country fascinates all; responsible company; honest service; railway fare refunded buyers; free lists and literature. St. Croix Valley Land and Loan Co., Drawer G, Rush City, Minn.

SPECIALLY SELECTED MINNESOTA Lands—225 acres; good timber; part easily cleared; fine lake front; $15 on time or $14 cash; 80 acres high, timbered, small river, $18, terms; 160 acres very open, some timber, fine brook, $20, terms; 80 acres high, timbered, $15, terms; half section, timbered and meadow, brook, $15, terms. Write Floodwood Land Co., Jos. G. Fogarty, Mgr., Floodwood, St. Louis County, Minn.

Mississippi

340 ACRES—200 ACRES IN CULTIVAtion, balance in wood land and pasture; one five-room dwelling, six tenant houses, large barn; dark loam soil, red clay subsoil; slightly rolling; well drained; watered by spring creek; two miles from Brookhaven, near turnpike road. A good farm for either stock or general farming; Brookhaven, city of 10,000 people and county seat; 500 feet above sea level; 129 miles to New Orleans, on main line Illinois Central Ry.; good schools, churches and best of health conditions; long growing seasons. Write for farm booklet. Only $30 per acre. The Mississippi Development Co., Brookhaven, Miss.

Nebraska

FRUIT FARM OF 40 ACRES TWO miles from Norfolk, Neb. (8,000 population); bearing apple, cherry and plum trees; small fruit; nearly new two-story, modern 7-room house; $200 per acre. $40 per acre buys a well improved 160-acre farm 8½ miles from Norfolk. A decided bargain. W. J. Gow & Bro., Norfolk, Neb.

IF YOU CAN PAY $320 NOW, $680 next March, can sell choice of 12 rich Nebraska valley farms, balance 9 years at 6 per cent. C. Bradley, Wolbach, Neb.

THIS FARM HOME OF HOLT COUNty, Neb., is a dandy, sure enough; 320 acres; steam plowed land, black loam soil, fenced and cross-fenced and in high state of cultivation; fine corn land; 12 acres alfalfa, new eight-room house; cemented cellar; large, new barn, sheds, windmill and other outbuildings; only eight miles from Atkinson on good auto road and near school. Price only $75 per acre, worth $100. Mortgage runs eight years at 6 per cent. Owner will take some money and a 40 or 80-acre farm in eastern Nebraska or Iowa. For particulars write W. P. O'Brien, 410 Bee Bldg., Omaha, Neb.

WILL MAKE FINE STOCK FARM—1,600 acres rich valley land, Morrill county, Neb. Owner must sell. Hicks Land Agency, Omaha.

LANDS—Wisconsin

UPPER WISCONSIN—BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

WONDERFUL BARGAIN FOR QUICK deal! Level black loam farm, 290 acres; half-mile railroad town; elegant, large, up-to-date buildings; all farm machinery and 100 tons of hay; only $85 per acre, on easy terms. Harry D. Baker, President Polk County Bank, St. Croix Falls, Wis.

Wyoming

BLACKBURN FARMS—BLACKBURN farms lie so that tractor plowing is easily and cheaply done. A farmer tends a half section there as easily as a quarter section in eastern Nebraska or Iowa. Their distance from Omaha is substantially the same as from Omaha to Denver, and only six or seven hours by auto to Denver. The Union Pacific at Laramie has scores of trains both east and west daily. The stock yards there feed in transit 10,000 cars of cattle, hogs and sheep per year. The Wyoming university and the local schools will be found a great aid in farming and stock raising aside from the education of the boys and girls of the community. The government forest reserve supplies practically free to the settlers all the timber needed for building, fencing, etc. There are various mines near, and there are promising indications of oil; in fact, boring is going on there now. With the best food, water and healthful surroundings stock raising is not only sure, but remarkably profitable. Big ranches in times gone by have made great fortunes. The water system of Blackburn Farms has been in continuous operation for over twenty years and the title to both land and water is perfect. These lands are offered by the actual owners, not agents. Settlement now is composed of farmers from Illinois, Iowa and Nebraska. Prices of land low and terms liberal. A few sections will be exchanged for Iowa and eastern Nebraska farms. Our illustrated booklet will interest you. Send for it; it's free. Laramie Development Co., Laramie, Wyo., or A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

IF INTERESTED IN SECURING A fertile farm at a low price, in a well settled community, where climate, soil and water are good, write Federal Land Company, Cheyenne, Wyo.

PATENTS

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., 808 F St., Washington, D. C. Established 1880.

FERRETS

FERRETS—GOOD HUNTERS. RATters. F. Breman Co., Danville, Ill.

HELP WANTED

YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

WANTED—RESPONSIBLE PARTY to take charge of business in each county. New Automatic Combination Tool, combined wire fence stretcher, post puller, lifting jack, etc. Lifts or pulls 3 tons, weighs 24 pounds. Sells to farmers, shops, teamsters, etc. Descriptive catalogue and terms upon request. Harrah Manufacturing Co., Box M, Bloomfield, Ind.

MEN AND WOMEN OVER 18 wanted—$65 to $150 month; United States government life jobs; common education. Write immediately for list of positions open to you. Franklin Institute, Dept. M 94, Rochester, N. Y.

WE WILL PAY YOU $120 TO DISTribute religious literature in your community; sixty days' work; experience not required; man or woman; opportunity for promotion; spare time may be used. International Bible Press, 210 Winston Bldg., Philadelphia.

MISCELLANEOUS

HIGHEST PRICES PAID FOR BUTter, eggs and poultry. Write for prices to Perry & Co., Omaha, Neb.

GOVERNMENT FARMERS WANTED—Ages 21 to 50. Make $125 monthly. Write Ozment, 39-F, St. Louis.

FOR SALE—REAL NICE CLOVER honey, in 60-pound cans; also in 10-pound pails. Write for prices. John Peterson, Oxford, Neb.

ROSENBLUM SAVES YOU MONEY on groceries. Buy direct at wholesale prices. Send for catalogue today. Five pounds Golden Santos Coffee, $1; pound can Pure Baking Powder, 11c; dozen cans sweet corn, 80c. L. Rosenblum, 808 North 16th St., Omaha, Neb.

WAR BOOK—A LARGE BOOK OF the European war, contains 350 pages, with over 100 full page illustrations; bound in cloth. Price, prepaid, 85c. John Peterson, Box 212, Oxford, Neb.

VIOLIN FOR SALE CHEAP. SENT on trial. Write Miss Bertha Mardiss, Route 5, Rosedale, Kan.

SEEDS

ALFALFA SEED DIRECT. SAMPLE and growers' price on application. J. L. Maxson, Buffalo Gap, S. D.

ALFALFA SEED—NORTHWEST NEbraska high land seed, white blossom sweet clover seed; alfalfa hay, all cuttings; prices and samples free. Schwabe Bros., Chadron, Neb.

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Savannah, Mo., Sept. 13, 1914.

Twentieth Century Farmer—

I had more orders through your paper than I could fill. Your ads certainly "deliver the goods."

MAUDE McMURRAY.

You get "value received" a dozen times over when your ad is in Twentieth Century Farmer.

POULTRY—Anconas

ANCONAS—PRIZE WINNERS AND utility stock for sale. George Lines, Neligh, Neb.

Langshans

BLACK LANGSHAN COCKERELS. Write Jake Hetrick, Wahoo, Neb.

WHITE LANGSHAN CHICKENS, White Holland Turkeys, White African guineas; large, early birds; eggs in season. Write for prices. L. T. Cummings, Lakeview Farm, Howe, Neb.

Leghorns

FOR SALE—S. C. W. LEGHORN AND S. C. B. Minorca cockerels. Prices right. Mrs. Emma Duerr, Dorchester, Neb.

FOR SALE—COCKERELS, SINGLE Comb White Leghorns, March and April hatched. Ivar Johnson, Fremont, Neb.

A FEW S. C. WHITE LEGHORN cockerels left. I will make a right price on them. Write for it. Geo. L. Darling, Route 2, Doniphan, Neb.

ROSE COMB WHITE LEGHORN cockerels, $1 each; 6 for $5. F. A. Ham, Saronville, Neb.

Light Brahmas

LIGHT BRAHMA COCKERELS, hens; reasonable. Mrs. M. Wall, Eddyville, Neb.

Orpingtons

PRICE LIST FREE—SINGLE COMB Buff Orpington, Toulouse geese, Indian Runner ducks. Peter Brehm, Harvard, Neb.

ORPINGTONS—BUFF OR WHITE—Stock for sale. Price list free. Frank Lewis, Gibbon, Neb.

CRYSTAL WHITE ORPINGTON cockerels for sale; big stock. Send to J. Christensen, Colon, Neb.

S. C. BUFF ORPINGTON COCKERels from good stock. Write me for prices and guarantee. E. L. Woodcox, Willow Island, Neb.

S. C. BUFF ORPINGTON COCKERels for sale, both utility and show birds. George F. Hahn, Octavia, Neb.

THOROUGHBRED, FINE, LARGE Buff Orpington cockerels, $1. Fawn White Runner ducks, laying now, $1; drakes, $1.25. G. Stewart, Henderson, Ia.

WHITE ORPINGTON COCKERELS. William Langbehn, Avoca, Ia.

POST CARD PHOTOS OF MY WHITE Orpington cockerels free. Extra large birds. Write for prices. R. B. Murphy, Shenandoah, Ia.

PRIZE-WINNING BUFF ORPINGtons reasonable. Mrs. Cook, Eddyville, Neb.

Plymouth Rocks

500 WHITE PLYMOUTH ROCK COCKerels, early hatched, large-boned, from high scoring stock, $1.50 each, or $12 a dozen. Charles A. Gabelman, Tilden, Neb.

FINE, EARLY WHITE PLYMOUTH Rock cockerels, extra large, $2 each. A bargain. Hugh Williams, Route 1, Box 71, Wymore, Neb.

CHOICE BARRED ROCK COCKERels and hens for sale. Will ship on approval. George Franklin, Axtell, Neb.

Rhode Island Reds

FINE SINGLE COMB RED COCKerels; White Pekin ducks, $1 each. Amos D. Birky, Bancroft, Neb.

SINGLE COMB RHODE ISLAND RED cockerls, $1.25 each. Henry Barjenbruch, Leigh, Neb.

ROSE COMB RED COCKERELS, $1.50 to $2 each. F. M. Shaver, Bruning, Neb.

SINGLE COMB RHODE ISLAND RED cockerels, birds of fine quality and breeding. Write for details and prices. A. F. Magdanz, Pierce, Neb.

THOROUHBRED S. C. RHODE Island Reds; cockerels, $2; pullets, $1. Lawrence A. Nelson, Lock Box 707, Hartington, Neb.

Turkeys

FOR SALE—BOURBON RED TURkeys. Clinton Myers, R. 4, Fairbury, Neb.

Wyandottes

WHITE WYANDOTTE COCKERELS, early hatch; fine specimens; price cheap. Write your wants. L. Brown, Fairmont, Neb.

SNOW BALL WHITE WYANDOTTES—First premium hen, second premium pen, Big Four fair, Fremont. Prices right. Robert Frahm, Snyder, Neb.

SILVER WYANDOTTE COCKS AND cockerels, $1.50 to $5.00. Mrs. Thos. Long, Madison, Neb.

Review of Live Stock Market

By A. C. Davenport

HORSES are more talked about just at present than any other class of farm animals. The daily press is filled with sensational statements as to the great number of animals being puchased by foreign armies in every section of the west presumed to have a surplus of marketable stock. Divested of sensational features and allowing for exaggeration, the fact remains that there is more activity in the horse markets of the country than for a long time back, but there is no wild or crazy scramble for horses nor are sensational prices being paid. Prices have ranged from $125 to $180 per head, or largely around $150 to $175. At these prices the buyers will take only broken horses of dark colors, good size and conformation. So exacting are the requirements that only a small percentage of the horses offered are taken.

Breeding horses of the required kind at these figures is no "get rich quick" scheme, as any farmer or grower can testify. In fact, it does not begin to be as good a proposition as breeding cattle at current prices for feeders. It follows that there is no occasion for excitement among growers and as a matter of fact there is none. The grower is only interested to the extent that there is now a demand for his surplus stock at a reasonable price, whereas a little earlier in the season it was very hard to sell at any price due to the lack of demand from the cotton states and the lumber camps.

May Be Heavier Horse Demand

All this is very interesting, but there is still another side to the question—what of the future? There is every indication that the European war will be of long duration. With both France and England already forced to buy horses in the United States there are certainly good reasons for anticipating a still heavier demand as the war progresses. It will be remembered that during the Boer war in South Africa the British government bought a great many horses in this country, taking range horses largely that were practically unbroken. A great many ranchmen at that time took advantage of the demand to clean up their stock, disposing of a class of horses for which there was previously very little sale. Stockmen are wondering if the present war will carry on the cleaning up process on the farms and ranches of the west until there will be an actual shortage of horses in this country the same as there is a shortage of cattle. No such idea would occur to anyone were it not that all can remember a few years back when cattle were plentiful and cheap, but the foreign export demand and the growing home demand incident to increased population reduced the surplus until now there are not enough cattle in the country to meet the requirements of the home demand. It remains to be seen if the European war will do the same for horses.

The outcome must depend largely upon policy followed by growers. If they do as they did with their cattle, sell not only their surplus, but dispose of their breeding stock as well, they may wake up some day to find that they are oversold and out of business and that breeding stock is so high that they cannot get back into business again without spending more money than they made by selling out. Growers made that mistake with their cattle. Will they repeat it with horses?

Cattle On See-Saw

During the last two weeks or more the cattle market has been playing see-saw and no mistake. Two weeks ago prices were going down and down until cattlemen were feeling very pessimistic. Last week the movement was reversed and they went up until the previous weeks' loss was entirely recovered. The cause for this erratic movement of prices is to be found in the alternating large and small receipts. It was noted in these columns some time ago that receipts were likely to be a controlling factor in fixing prices for some little time to come and there is no apparent reason for changing this opinion. There is very apt to be a tendency at this time of the year, when short fed cattle and natives are ready to market, to chowd them in as often as prices advance. As range cattle are still coming in large numbers to western points, it is an easy matter to overload the market and smash prices. At present writing prices are high, but should receipts prove heavy at the beginning of the coming week, the market may be down again before this can appear in print.

The arrival of settled winter weather would have a tendency to stiffen the consuming demand. Improvement in industrial conditions would also be a great help. Foreign demand for canned meats has already helped some and a broadening of this demand would help a whole lot more. Any of these influences, could, in the way of increasing the consuming demand help to render the market less sensitive to the depressing effects of temporarily large runs. While speaking of cattle receipts it might be well to bear in mind that for the year to date there is a shortage in the run of 730,000 head at the six big markets as compared with the same time last year.

Hogs Depend On Exports

Hogs have shown a little tendency to react during the last week. Under the influence of somewhat freer buying prices on some days have improved, but, still, no very noteworthy gain has been made. The bulls, however, have taken hope and it is possible just now to find some who believe that the market has touched low point. The bears, on the other hand, believe that the improvement is only temporary, and that the market is due to go still lower, some putting the figures at around $6.50 on the basis of Omaha, and some of the more pessimistic naming as low a figure as $6.00.

The future course of the hog market seems to depend largely upon the export demand for pork products and for cotton. Start provisions and cotton moving freely across the water, and hogs might be expected to look up, or, at least, stop declining. Until that time arrives, or until large speculative interests believe it is near at hand, it is difficult even for a bull to name anything to stop the downward movement in prices.

It may be of interest to note that hogs are selling at the lowest point touched at the end of October since 1911, when, on the basis of Omaha, the average price on the last day of the month was $6.10. That, in its turn, was the lowest since 1908, when the average price on the same day was $5.68.

Sheep and lambs have shown improvement during the last week under the influence of greatly diminished receipts at the big market centers. The run from the range suddenly dropped down and sheep men are talking that range supplies from now on will average light. Moderate receipts have put the trade in a good, healthy condition and most operators are looking for a good, firm market for some little time to come. No one is really anticipating any great advance, as both killers and feeders are already the highest they ever were at this season of the year.

Changed Conditions Observed

Through the influence of agricultural education and agricultural improvement there are developing changed conditions among the landowners of the country. Where there existed a few years ago a tendency to breed and grow cattle for the feed yards of other districts, these cattle growing sections are now becoming grain growing and cattle feeding sections and they are seeking their supply from other sources than their own.

Improved agriculture seems to cultivate the tendency to a form of speculation, the taking up of the unfinished products and completing them for the consumer by a short process of skilled work. The raising of cattle is too slow a process for the average farmer who aims to be a producer of beef; he wants the cattle already prepared ready for a short feed in the feed lot. Thus it is observed that whole communities, whole states turn from the beginning principles of animal production to the speculative idea.

Missouri, Kansas, Nebraska and Iowa not many years ago were strong producing districts of stock cattle; today their farmers are the largest patrons of the big central markets of the country, supplying cattle to put in the feed yards to finish for the beef trade. Thus the growing of cattle is each year becoming more distinctly an industry apart from the work of feedyard beef making. This, in a great measure, corresponds to the natural producing resources of the entire country than any tendency to follow fads or fancies because of associating influence.

Grain growing farmers readily see how they can market these feed crops on the farm by the use of a carload or a few carloads of cattle, sheep or hogs, and following the example of their neighbors become feeders instead of growers of stock. There seems to be a disposition among the agricultural classes to encourage and provide a place for all lines of industry in which scientific agriculture, in its best efforts, has suggested as a work for the specialist. It is generally conceded that the feeder and grower of cattle occupy distinct positions and relationships to production, when this work is brought down to intensive agricultural operation on the small farm.

The Sheep-Tight Fence

It is quite a common expression, "the hog-tight fence," and this applies equally well for the sheep. The sheep is not a persistent or bad fence crawler where anything like a close, substantial fence is used. The woven wire fence has been found a very satisfactory barrier against the sheep in all its efforts at trespassing or escaping from the fold or pasture. Barb wire is not desirable as a sheep fence, as it cannot be constructed so but what it damages the fleece by pulling out little tufts or particles. Such fences have their evidences of being the inclosures of sheep pastures by the wool the barbs carry.

The cheapest and best sheep tight, hog tight, dog tight and wolf tight fences are the woven wire fences of some of the good patterns, too close for any of these animals named to get in or out through the mesh. A thirty-six-inch fence of this kind, well stretched and stapled to good, strong posts, with a barb wire at the ground, so as to discourage animals from digging under the fence, which some times occurs where this precaution is not taken, and two or more barb wires stretched at the top makes the best all around pasture or corral fence that can be built for the money.

There is very little difference in the labor and expense between this kind of a fence and a barb wire fence, or cheaply constructed woven wire fence that would not offer resistance against the dog or wolf. A little more labor, a little more material and almost absolute security is

(CONTINUED ON PAGE TWENTY-TWO)

Happy Evenings 'Round the Rayo Lamp

The circle 'round the center table flooded with soft, mellow, yet brilliant light that allows the family to read, embroider, sew and study all through the long winter evenings.

RAYO LAMPS give a clear, steady, restful light, without glare or flicker, smoke or odor. For the light that is next best to daylight, that saves the eyes and prevents eye strain, as well as to give the family pleasure and comfort, get a RAYO Lamp for the reading table.

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MARKET PLACE

POULTRY—Ducks

INDIAN RUNNER DUCKS. MRS. Derrick, Battle Creek, Neb.

INDIAN RUNNER DUCKS, $1 EACH. Vern Johnson, Meadow Grove, Neb.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

THE 115,000 FARM FAMILIES WHO regularly read this page are anxious to buy their breeding stock early this year. A nickel a word a week is the cost of advertising what you have to sell.

BIG BARGAINS IN ALL LEADING varieties chickens, ducks, geese, turkeys and guineas. Progressive Poultry Farm, Box 750, Hampton, Ia.

POULTRY RAISER—IF YOU CAN ship 15 dozen or more fresh eggs every week we will pay highest market prices. Buffett & Son, 315 South 14th St., Omaha.

CHOICE COCKERELS FOR SALE—We can supply choice cockerels for your next season's breeders of all popular breeds of chickens, geese and ducks, also bantams and fox terrier pups. Logan Valley Poultry Farm, Wayne, Neb.

TURKEYS, DUCKS, GEESE, CHICKENS, rabbits, butter and eggs wanted. Ship direct to Perry & Co., Omaha, Neb. Estab. 1896. Reference, Merchants National bank. Prompt pay. Write for quotations.

LUMBER

SHIPLAP, $21.50 PER THOUSAND FT. This is our delivered price on No. 1 guaranteed fir shiplap at most any station in Nebraska. Other lumber and mill work at same low prices, shipped subject to inspection. Send your lumber list for freight paid estimate, or ask for complete price list. Western Lumber & Millwork Company, Incorporated, 534 Perkins Bldg., Tacoma, Wash.

GOING TO BUILD? BUY YOUR FIR lumber, red cedar shingles, finish and mill work of us. We are located in the lumber center of today. We saw and sell to the consumer direct. We will save you money on what you need. Send us your lumber bill for estimate. Get our figures before you buy. The Keystone Lumber Co., Dept. R, Tacoma, Wash.

FIR LUMBER! RED CEDAR SHINgles! Choice. Mill direct. Same money Write Lansdown, Drawer H, Everett. Wash.

LIVE STOCK

FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned; are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

POLAND-CHINA PIGS—BIG TYPE pedigreed. Davis Bros., Lincoln, Neb.

MULE-FOOT HOGS, SPRING GILTS, fall pigs, either sex. Prices reasonable. Henry Jorgensen, Minden, Neb.

DOGS

SCOTCH COLLIE PUPS CHEAP Fred Kucera Clarkson, Neb.

FOR SALE—SCOTCH COLLIE PUPS, pedigreed stock from working parents, $5 each. Eugene Burkett, Herman, Neb.

Nebraska Farmers' Congress

THE Nebraska Farmers' Congress meets at Omaha December 8, 9 and 10. The program allows for a full discussion of the live topics that are to be presented.

The congress is made up of delegates from all the farmers' organizations of the state, each local organization being entitled to ten delegates.

The subjects discussed will be those of the most vital importance to the agricultural interests of the state. Bovine tuberculosis, rural schools, telephones and co-operation —there is no farmer in the state that is not vitally interested in all these subjects. Read the program below and see if you can afford to miss these meetings.

TUESDAY, DECEMBER 8.

9 a. m.—Welcome address, Mayor James Dahlman; response, George Coupland, president Nebraska Farmers' Congress.

9:30 a. m.—Co-operative Creameries; speaker will be chosen; discussion.

1:50 p. m.—Introduction of resolutions; appointment of committees; "Tuberculosis and Uniform Live Stock Shipping Laws," Dr. L. C. Kigin, state veterinarian, and E. Z. Russell; discussion.

3 p. m.—Report of legislative committee; discussion.

7:30 p. m.—Motion pictures: "Tuberculosis in Nebraska Cattle"; "Nebraska Water Power," Dr. George E. Condra. Address, "Conservation of Nebraska Water Power," Hon. J. J. McAllister, president State Water Power commission.

WEDNESDAY, DECEMBER 9.

9 a. m.—Introduction of resolutions; report of committee on improvement of rural schools; discussion.

1:30 p. m.—Introduction of resolutions; address, "Farmers' Mutual Insurance," Hon. W. E. Straub, Lincoln.

3 p. m.—Report of committee on reorganization of State Board of Agriculture; discussion; report of committee on resolutions.

7:30 p. m.—Motion pictures (three reels), "Nebraska Apples, Poultry and Better Babies," Dr. George Condra; farmers' organizations: Hon. C. H. Gustafson, Mead, president State Farmers' Union; Hon. J. D. Ream, Broken Bow, master State Grange; R. M. Tyson, Tobias, secretary Farmers' Equity society.

THURSDAY, DECEMBER 10.

9 a. m.—Address, "Rural Telephones," Hon. M. E. Shipley, Hooper; discussion; reports of officers; reports of committees; discussion.

1:30 p. m.—Election of officers; "Co-operative Buying and Selling," O. E. Wood, R. F. D. 7, Lincoln, State organizer Farmers' Union; discussion; reports of committees; discussion.

7:30 p. m.—Motion pictures; films to be selected by audience from the following: Irrigation, wheat and corn; address, "Relation of State Soil Survey to Agricultural Development," Dr. George E. Condra; address, "Torrens System of Land Registration," Hon. A. E. Sheldon, director Nebraska legislative reference bureau, Lincoln.

Cost of Producing Alfalfa

THE cost of producing alfalfa is a matter that is receiving considerable attention among land owners, especially owners of the higher-priced lands, land selling at from $100 to $200 per acre. It taxes the ingenuity of some farmers to make these high-priced lands yield a fair interest on the investment. Others say, "We have invested in these high-priced farm lands because of their security, regardless of what we are able to get out of them. No matter what turns up, the land will remain."

There is another class of farmers who are constantly pursuing the profit in every deal they make, and with these interest on the investment must show up at the end of each crop season. It is this class of land owners that have developed the crop industry of various kinds and that are increasing the acreage of commercial feed crops to satisfy the demands of the feeder and live stock producer.

A Kansas land owner says: "The cost of producing alfalfa is not extravagant. On good land worth $100 and above per acre, the average in my locality is about four tons per acre. This is worth $8 per ton minimum price, which shows a crop value of $32 per acre. The expense of harvesting and marketing does not exceed from $2 to $3 per ton; using the outside price, there would be left $20 per acre net for the crop. This on the highest-priced farm lands would be a larger interest than any other investment could reasonably be expected to yield."

Another example is cited during the season of 1913, a very unfavorable crop season, where the crop yielded four tons per acre, and the price received was $15 per ton, showing a possible $48 per acre, above all expenses. At the present prices of the 1914 crop it is reasonable to put the farm value of alfalfa over the most successful alfalfa-producing districts at approximately $10 per ton. This represents a good rate of interest for the high-priced lands that are devoted to alfalfa production. While alfalfa acreage is rapidly increasing, there seems to be a demand on the farm and in the market for all that is produced, and the trade is calling for more.

A very conservative Nebraska alfalfa raiser more than fifteen years ago asserted that every acre of Nebraska land that was successfully sown to alfalfa had in this act of improvement raised the value of this land to $75 per acre. This statement was made in the days of cheap lands before $100-per-acre land was thought of west of the Missouri river. His estimate was made on his own experiment and results of producing hay and seed.

Poisonous Plants on Western Ranges

Six of the poisonous plants that cause the heaviest losses of live stock on western ranges are described with the aid of full-page photographs in a circular just published by the United States Department of Agriculture under the title, "Principal Poisonous Plants of the Western Stock Ranges."

Despite the damage that these plants do every year, there are many stockmen who do not recognize them and in consequence are unable to protect their stock effectively from being poisoned by them. It is probable that there are on the ranges a large number of poisonous plants, but the heaviest losses are those produced by the plants named in the circular. These are the zygadenus, or death camas; the lupine, the rattleweed or white loco, one of the worst of the many varieties of loco plants; the tall larkspur, the low larkspur and the cicuta, or water hemlock. Of these the cicuta alone is dangerous to man, causing violent convulsions and even death. The root of it, however, is the only poisonous part. In the case of the other plants, with the exception of the lupine, all parts are poisonous to stock. Both the tall and the low larkspur lose their poisonous qualities after blossoming.

The illustrations in the circular are accompanied by brief descriptions of the plant which should enable the stockman to identify them readily. The symptoms peculiar to each form of poisoning and the remedy, when there is one, are also set forth.

The Sheep-Tight Fence

(CONTINUED FROM PAGE TWENTY-ONE)

the result. It pays in building a farm fence to build it where it is to remain for all time, and build a good one. The advantage in the sheep tight fence described is that it is a good, serviceable fence for all kinds of stock and for many years. Such fences may be made rabbit proof, depending upon the size mesh used at the bottom.

The portable sheep fence is sometimes used and advocated for pens and service about lambing yards. This kind of fence is most generally made of boards built into pannels and hinged together into double pannels, and set up with temporary posts or braces to answer the purpose of posts, and the various pannels stapled and hooked together.

Call Vaccination Worthless

Reports reach the university farm from time to time, occasionally even from veterinarians, that it is no use to vaccinate hogs, and the only way to stamp out the disease is to kill and burn the diseased animals. Despite these statements, the experience of not only the department of animal pathology of the College of Agriculture in Nebraska, but those of the other similar institutions all over the United States and the United States Department of Agriculture is that vaccination done in time and according to directions with good serum is effective. The heads of these departments say that the failure of the vaccination to be effective is usually caused either by waiting too long, not using enough serum, or frequently by not strictly following directions. The experts, however, insist that hogs dying from cholera should be burned as well as all the litter with which they come in contact.

Thanksgiving week, November 24-29, is the time of Missouri's state poultry show. It will be held at Mountain Grove at the famous poultry experiment station of Missouri.

As many as seventy-two different kinds of wood are used in the manufacture of umbrella handles, canes and whips in this country.

Breeders' Notes

Duroc Boars of Real Merit

We wish to call your attention to the advertising in this issue of the Twentieth Century Farmer of R. P. McGuire, Wisner, Neb. Mr. McGuire is offering for sale forty fall and spring boars. Thirty of these spring boars are sired by B. & K.'s Colonel Gano, he by Colonel Gano. This boar is a full brother to King Gano, the O. E. Osborne boar, sold last week for $800. The herd boar is a big, heavy-boned, long hog and is producing a splendid line of pigs. The boars offered for sale are a very useful lot, a number of them having the quality and finish being sought after by many breeders. The dams of these pigs offered are by Wallace's Wonder, Comodore Lad, Belle's Crimson Wonder and other sires of equal merit. Mr. McGuire is by no means a new breeder, but heretofore has confined his efforts to local sales. He lives in a community where good Durocs are supreme and has made use of the opportunity of selecting a splendid lot of sows. Mr. McGuire is making a price on these pigs that is attractive. Any of our readers wanting to buy a good, strong, well-bred pig will be looking after their own interests by writing to him. The farm adjoins the town, making it very convenient for anyone so desiring to visit the herd in person. Kindly mention this paper when making inquiries.

Lamb Has Good Herd

A representative of this paper recently visited A. W. Lamb, Loretta, Neb., and looked over his herd of Durocs. At the present time he has about twenty-five spring boars for sale and is offering them well worth the money. Mr. Lamb's herd is so well known throughout the Duroc fraternity that it is unnecessary for us to say that he has a splendid bunch of boars now for sale on his farm. They have the two desired qualifications—quality with size. It has been our pleasure to visit this farm many times in the last ten years, but we can truthfully say that the herd in general we believe is better this year than ever before. Mr. Lamb has a great line of spring gilts, a number of which will be bred and offered for sale in his brood sow sale, February 9, 1915. If you are needing a boar for use this fall or will want a bred sow next winter, it is our advice to write to Mr. Lamb, telling him what you want. You will be treated right. Kindly mention the Twentieth Century Farmer when writing.

SLIDEWELL
Hall's
COLLARS

—demonstrate conclusively that correct *style* and absolute *comfort* can be obtained in the same collar.

The only collars with the little time and temper saving devices that keep your tie from sticking.

Sold Everywhere — 15c, 2 for 25c

If your dealer hasn't them, send 75c for 6 or write for the Slidewell catalog.

HALL, HARTWELL & CO. . . . . Troy, N. Y.

98 cents

6 YEAR GUARANTEE

Railroad Style

To advertise our business, make new friends and introduce our catalogue of Watch bargains we will send this elegant R. R. style watch by mail post paid for ONLY 98 CENTS. Gentlemen's size, full nickel silver plated case, locomotive on dial, lever escapement, stem wind and stem set, a perfect timekeeper and fully guaranteed for 5 years. Send this advertisement to us with 98 CENTS and watch will be sent by mail post paid. Satisfaction guaranteed or money refunded. Send 98 cents today. Address R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO.

IMMUNE DUROC JERSEY BOARS

40 spring and fall boars, all immune. 30 of the spring boars are sired by B. & K.'s Col. Gano, full brother to King Gano, that was recently sold for $800; five by Model's Hope by Golden Model 2d. Full boars by Golden Modeler by Golden Model 15th. Choice pigs at reasonable prices. Farm adjoins town. Call or write

R. P. McGUIRE, Wisner, Neb.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Lemmerman Makes $30 Average

F. A. Lemmerman of Creston, Neb., breeder of Duroc-Jersey hogs, held his fall sale October 27 and made an average of $30 on the entire offering. This was strictly a boar sale, no gilts being offered. A much better result would undoubtedly have been obtained had not Mr. Lemmerman's family been quarantined, and the report was circulated that on this account the sale was postponed. This kept quite a number of local buyers from coming. The sale was advertised to be held at the farm, but on account of the quarantine the hogs were taken to town and sold at the livery barn. The offering was in nice breeding condition and buyers certainly had the opportunity to get breeding stock worth the money. Below is a list of all sales of $30 and over:

No.	Price.
1—Fred Cegavske, Leigh, Neb.	$36
3—John Oeltjra, Madison, Neb.	32
7—Fred Albrecht, Humphrey, Neb.	50
8—Gus Herehauhan, Leigh, Neb.	49
9—A. P. Hines, Leigh, Neb.	38
10—G. Reins, Creston, Neb.	47
12—Joe Bartah, Madison, Neb.	38
13—A. Renshaw, Blair, Neb.	41
14—Peter Fusselman, Leigh, Neb.	49
15—Fred Reintz, Leigh, Neb.	35
20—C. Edwards, Leigh, Neb.	42
31—L. Freyermuth, Madison, Neb.	31
32—Herman Van Heuften, Leigh, Neb.	32
33—Leeske Bros., Columbus, Neb.	42
34—J. B. Smoot, Creston, Neb.	31
38—F. A. Wellman, Humphrey, Neb.	32
39—Rob Thompson, Creston, Neb.	40

A Few Top Boars

A. R. Barnes of Petersburg, Neb., still has a few top Duroc-Jersey fall and spring boars left. There are few better herds anywhere than that owned by Mr. Barnes. When he has something good to offer you can usually figure that it is all right. The fall boars are by that grand old sire, Belle's Crimson Wonder. In this connection we want to say that it is very seldom that the grand champion boar of any of our larger shows develops into as strong a breeder as has Belle's Crimson Wonder. When you can buy a boar sired by a champion boar such as Belle's Crimson Wonder and combining the ability to win with the ability to deliver the goods as a breeder, you are buying something that you have a right to expect something from. Mr. Barnes also has spring boars sired by Belle's Crimson Wonder, as well as others by Belle's Big Wonder, B. & L.'s Wonder and Golden Model 4th. These pigs have not been overcrowded. They will go out and do you good service. Write Mr. Barnes, mentioning Twentieth Century Farmer.

Young Duroc Boars

Robert M. Young, proprietor of Cedar Hill stock farm at Cook, Neb., has several Duroc-Jersey boars for sale at this time that should attract the attention of anyone wanting a good boar. He has two fall boars that he is offering for sale that are plum good ones and should go to some good herd. One of these is a dandy good-boned, long, smooth, deep, good-colored, good-footed fellow, sired by Model King by Valley King, and the other is a more compact boar, with a neat head and ear, good bone and the best of feet. He is sired by Nebraska Model. Mr. Young also has a number of dandy good spring pigs sired by Gano Wonder mostly. In this connectionn we want to say that Gano Wonder is one of the top Colonel Gano pigs in service in Nebraska. The prices Mr. Young is making on these pigs are certainly right. If you want a boar, here is your chance. Kindly mention Twentieth Century Farmer when writing.

Robbins Sells January 27

We are in receipt of a letter from Willard Robbins of Lyons, Neb., claiming January 27, 1915, as the date for his bred sow sale. Mr. Robbins has one of the good herds of Duroc-Jerseys in north Nebraska. He has been in the business for a number of years, and while he has not been making much noise about it, yet he has been bringing his herd up to a standard that will compare favorably with the best. At the Interstate fair this year he showed the junior yearling boar, Crimson King, and won grand championship. We saw a line-up of spring pigs sired by this boar the last time we visited Mr. Robbins and want to say they were good ones. There will be a number of these young gilts in his sale, as well as a number of sows bred to Crimson King. Watch these columns for further particulars.

Koehlmoos Offers Boars

Henry Koehlmoos of Pilger, Neb., has some big, strong, rugged fall and spring Duroc-Jersey boars that he is offering for sale. Every one of these boars are immune and are ready for hard service. The spring boars are by H. K.'s Wonder, by B. & G.'s Wonder, and Premier Colonel by Colonel Tippy. The fall boars are by Crimson Wonder Select and should be picked up at once on account of their merit and breeding. Get in touch with Mr. Koehlmoos at once, mentioning Twentieth Century Farmer.

How Do You Feed Yours?

Here are some stock rations that are approved by the animal husbandry department of the Nebraska College of Agriculture. How do they compare with those you are using?

For Work Horses—Corn, one part; oats, one part; prairie hay.

For Colts Under Two Years—Oats, two parts; corn, one part; alfalfa, liberal feed.

For Fattening Steers—(1) Corn, sixteen pounds; alfalfa, all they want. (2) Corn, sixteen pounds; alfalfa, all they want; silage, ten pounds. (3) Corn, sixteen pounds; cottonseed cake, three pounds; silage, all they want. (4) Corn, sixteen pounds; alfalfa, all they want.

For Fattening Pigs—Corn, nineteen parts; tankage, one part. (2) Corn and alfalfa.

For Fattening Lambs—Corn, one part; shorts, two parts; alfalfa, liberal feed; silage, medium feed.

For Fattening Ewes—Alfalfa; silage, two or three pounds.

Sale Dates

Poland-China Hogs

February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb.

Duroc-Jersey Hogs

January 27—Willard Robbins, Lyons, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday, Rising City, Neb.
March 1—Harry Tidrick, Windside, Neb.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt,
March 12—Edgar Taylor, Plainview, Neb.

DUROC-JERSEY HOGS

Schultz' Duroc Boars

Spring boars for sale, sired by Golden Model 31st, King Cleathem and Gold Dust Jim. They are the big litter, big boned kind. Prices reasonable. GEO. W. SCHULTZ, Yutan, Neb.

HAMPSHIRE HOGS

HAMPSHIRE BOARS

Hampshire spring boars for sale; sired by De Kalb's King 100, a son of the famous Major. They are very growthy, and all priced to sell. Also have Aryshire bull calf for sale.
WILLIAM PAMP, Benson, Neb.

BECKENDORF'S HAMPSHIRES

Fall and spring boars for sale. Also my herd boar, De Kalb King No. 53. For prices write IRA BECKENDORF, Walnut, Iowa.

PUBLIC SALE

Will sell at St. Paul, Neb., November 10, 25 Hampshire boars, 10 gilts and 80 fall pigs. Registered. H. P. BERCK, Dannebrog or St. Paul, Neb.

RED POLLED CATTLE

Both sexes; good as any in America. Call or write me your wants. W. F. Schwab, Clay Center, Neb.

Twentieth Century Farmer advertisers are reliable. They could not use these columns if they were not. When you write to them be sure your name and address is written clearly, and mention this paper.

DUROC-JERSEY HOGS

I HAVE THE GOODS

Boars of herd heading character by Col Chief, Golden Model, Fancy Chief, Clipper Chief, Golden Model 31st, Model Gano, Crimson Wonder 10th and others. All March farrow. I can supply your wants. GUS KRUEGER, Beemer, Neb.

BOARS! BOARS! BOARS!

Several fall boars and a few choice spring boars for sale, sired by BELLE'S CRIMSON WONDER, COL. CHIEF, GOLDEN MODEL 4th and BELLE'S BIG WONDER, out of Crimson Wonder bred dams. I am offering these boars at bedrock prices for quick sale. A. R. BARNES, Petersburg, Neb.

IMMUNED DUROC BOARS.

I am offering an exceptionally strong lot of Duroc Jersey boars for sale, largely of Crimson Wonder and Golden Model breeding. They are the best lot I have ever offered and are being priced worth the money.
E. R. DANIELSON, Osceola, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

DUROC JERSEY MALES

Top spring boars for sale, sired by Model Critic, Crimson Gano, Red Chief Wonder and others. They are very growthy with plenty of stretch and bone. Prices right. See me at Nebraska State Fair. C. E. PETERSON, Genoa, Neb.

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.
F. E. MERRICK, OSCEOLA, NEB.

BIG SMOOTH DUROCS

Am offering some splendid boars of March farrow; by H. K.'s Wonder, Muncie Col, Col 2d, Golden Model 31st, Sweet Rose's Wonder and others. Prices right.
HENRY KOEHLMOOS, Pilger, Neb.

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.
GEO. W. SCHWAB, Clay Center, Neb.

CEDAR'S DUROCS

The best lot of spring boars I have ever raised. Sired by Cedar's Critic 2d. They are kind that will go out and make good. Write me your wants.
P. P. CEDAR, GENOA, NEB.

HEKRDLE'S DUROC BOARS.

I have the best lot of spring boars for sale that I have ever produced. Sired by A. A.'s Model and Beauty's Wonder. A combination of the Crimson Wonder and Golden Model blood lines. Correspondence solicited. A. A. Hekerdle, Stanton, Neb.

Duroc-Jersey Boars

Two top fall boars and several extra choice spring boars for sale, sired by Model King by Valley King and Gano Wonder by Col. Gano. These boars are all right, and I am pricing them worth the money.
B. M. YOUNG, Cook, Neb.

35 TOP BOARS

35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st, Prince Munice, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

POLAND-CHINA HOGS

McCULLOUGH'S BIG POLANDS

We have a splendid lot of Poland-China spring boars for sale. Sired by Smooth Big Bone, Columbus Again and Expansion Again. These boars have been grown right. They are big and smooth with lots of bone. For particulars write O. J. McCULLOUGH, CLARKS, NEB.

Immune Poland-China Boars

Splendid lot of big, smooth spring boars, sired by BLUE VALLEY, COLUMBUS WONDER and BLUE VALLEY ORANGE. If you want herd headers with size and quality, we have them. THOS. F. WALKER & SON, Alexandria, Neb.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

$14,105.50 in prize money was divided amongst 225 breeders of pure-bred registered Holstein cattle during last year. This is a part of our system of Advanced Registration of milk records. The prizes, 673 in number, rate from $40 to $5. Breeders are limited to three prizes in each of our four divisions. Wealthy owners have no advantage over those of limited means. Here is an additional reason for purchasing pure-bred registered Holstein cattle.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Asso., F. L. Houghton, Secy., Box 179. Battleboro, Vt.

Immune Poland Chinas

Big, smooth, heavy boned Poland China boars for sale. Sired by Long Wonder 2d, Wayside Jumbo 2d and Wayside Jim. Write me your wants. FRED WILLE, Columbus, Neb.

Poland-China Boars

Blue Ribbon boars with great length and bone; some weigh 325 lbs. Sired by Blue Ribbon Hastings, Big Iowa, Big King, Nebraska Mouw and High Mogul. All immuned. W. J. Eavey, Geneva, Neb.

POLAND CHINAS. BIG type, long bodied, pedigreed. All ages. Satisfaction guaranteed. DAVIS BROS., Box 6, Lincoln, Neb.

JERSEY CATTLE

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and yearly milk and butter records. HAL C. YOUNG, Lincoln, Neb.

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.
A few good sons of King Segis Lyons are still left.
DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

AYRSHIRES

WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb.

PERCHERON HORSES

At ordinary prices, farm-raised registered Percheron studs—1, 2, 3 and 4 years old. Kind disposition because well cared for. You would admire their big bone first, then their immense weights, because they are developing big like their imported sires and dams. And you will receive true old-fashioned hospitality on your visit at Fred Chandler's Percheron Farm. Just east of Omaha.
FRED CHANDLER, Route 7, CHARITON, IOWA.

HUDSON Six-40-$1550

What This Car Did

This HUDSON Six-40 is known to you, probably, as the leading class car of the day. But it is more than that. Its amazing career, its jump to top place, form the most interesting tale in this industry.

Its Beginning

This HUDSON Six-40 was started in 1910. It took three years to work out the first model. It has taken four years to perfect the refinements shown for 1915.

The car was conceived by Howard E. Coffin, the great HUDSON designer. His aim was to embody here his final conception of the ideal new-day Six.

It was ten years ago when Howard E. Coffin loomed up as a leader in this field. It was five years ago when, because of his dominance, we made him chief engineer of the HUDSON. Since then, some of the greatest advances made in motor car building have been evolved in the HUDSON shops.

This HUDSON Six-40 was designed as the culmination. And 47 engineers, the whole HUDSON staff, worked with Mr. Coffin on it.

The Big Revisions

These men, in this car, have revised in some great ways the old-time motor car standards.

One is in weight. Cars of this capacity used to weigh around 4000 pounds. This HUDSON Six-40 weighs 2890 pounds. This enormous saving has been made by eliminating crudeness. All up-to-date cars have been lightened now, but this is the lightest 7-seat car that's built.

Another great advance is in fuel economy. A new-type motor in this car has reduced operative cost about 30 per cent.

Another is in price. The chief aim in this car was the ending of over-tax. And, in the high-grade field, the main over-tax was price.

By sheer efficiency, the price of the first model was brought to $1750. This year, by a trebled output, we reduced it $200 more. The new-model price of $1550 marks a record among quality cars.

Other Refinements

They made this car a beauty. They made it luxurious. They devised for it comforts and conveniences never seen in cars before.

They took part by part, detail by detail, and brought them to perfection. These 48 engineers, each a man of ability, devoted four years to these things. Their finished product, our 1915 model, is the most attractive car you'll see.

Thus, in big things and little, we have tried to fulfill here your every ideal in a car.

Hudson Popularity Multiplied by Five

Now note how men received this prince of cars. The first season they bought 3000 more than we could build. In July, for the new season, we trebled our output, but 30 days later we were 4000 cars oversold. Men waited weeks for this model, thousands of them, when rival cars were plentiful.

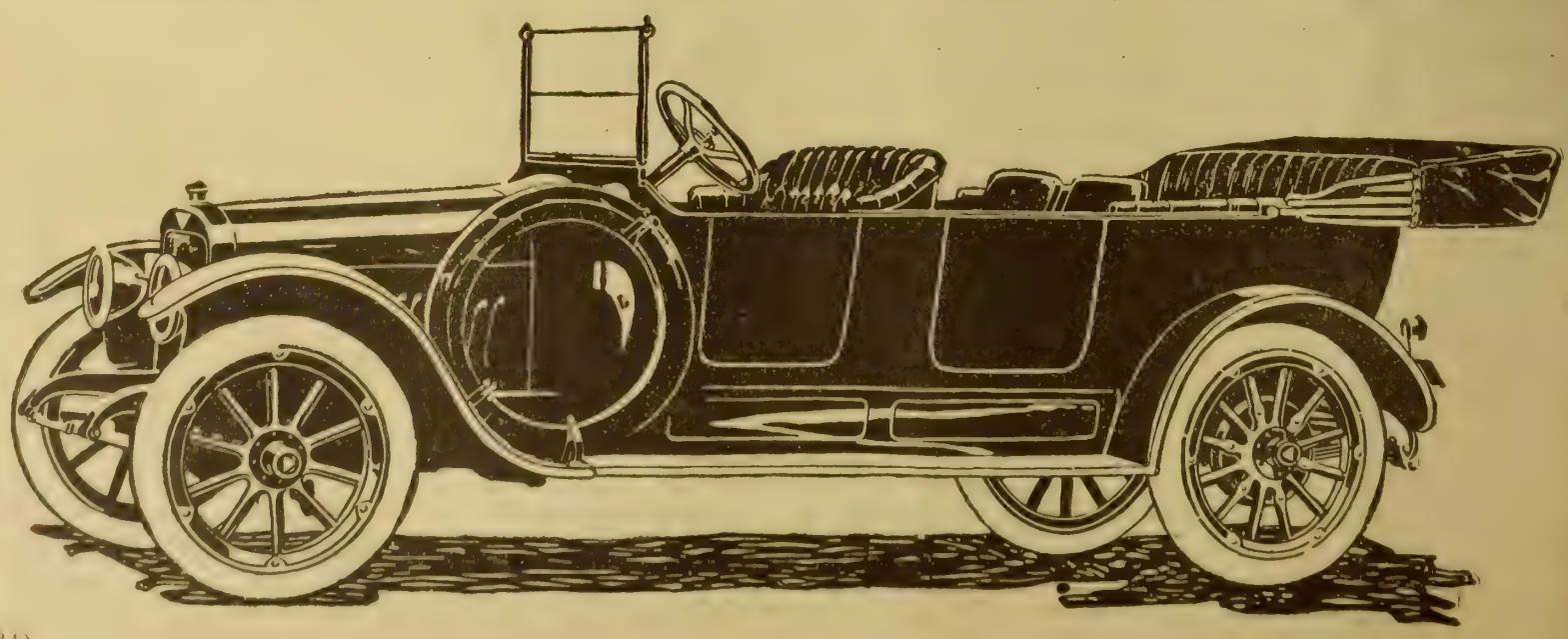
By September we were building five times last year's output. In one year this new-type car had increased HUDSON sales five fold.

This HUDSON Six-40 now rules the high-class field. It outsells any car with a price above $1200. Yet the demand is just beginning. Not one man in ten who should own this car has yet seen it.

We urge you to see it now. For a year we have been constantly oversold. Now, for the first time, we tell you of this car with the promise that you can get it. Go now and see what a car this is.

Phaeton, with two extra disappearing seats, $1550 f. o. b. Detroit. Canadian price, $2100 f. o. b. Detroit, Duty Paid. HUDSON dealers are everywhere. New catalog on request.

HUDSON MOTOR CAR COMPANY, 8352 Jefferson Ave., DETROIT, MICH.



TWENTIETH CENTURY FARMER

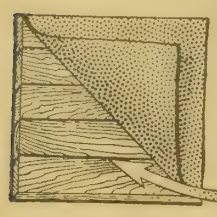
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, November 14, 1914 | Number 727

Is the only Wood Core Wall Board

DON'T accept *any* wall board that is alleged to be Compo-Board unless it has the center core of wood slats. There are some mighty good reasons why you should prefer Compo-Board to other wall boards. It is strong, rigid, durable. Makes beautiful, smooth walls.

Write for sample piece and book containing an interesting and valuable message. Write today.



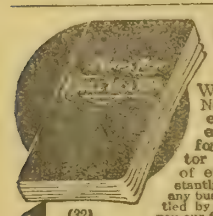
Northwestern Compo-Board Co.
4323 Lyndale Ave. No., Minneapolis, Minn.

Lauson FROST KING Gasoline Engines

No Cranking—start easily with a slow turn of fly-wheel. Sumter Gear Driven Magneto does away with batteries, their expense and trouble. In other ways they **SAVE YOU MONEY** and give best of satisfaction for all farm work. Write today for catalogue, dealer's name and Proof of Lauson Frost King efficiency.

2 to 50 H. P.

THE JOHN LAUSON MFG. CO. 204 N. W. St., New Holstein, Wis.



GET IT FREE

We are giving Ropp's New Calculator FREE to every farmer or land owner who has not yet sent for a copy. Ropp's Calculator should be in the hands of every farmer. It will instantly give the correct answer to any business problem that can be settled by arithmetic. We will also send you our free illustrated catalog on

(32)

SQUARE DEAL FENCE

Which tells you why it is better than any other fence and where to get it. Land owners, if you want a farm fence that will last, and stay trim and tight the year round, write for these FREE books today.

Keystone Steel and Wire Co. 1632 Industrial St. PEORIA, ILL.

In Wisconsin

I have several tracts of 40 to 640 acres of first class lands in Northern Wisconsin which I am obliged to sell at a sacrifice at once. Land ideally suited to grazing, dairying, truck or general farming—some with standing timber. I can make a clean bargain for small cash payment with securities or long time terms but must act now or will hold for investment. Write

R. E. JOHNSON,
Care Twentieth Century Farmer.

North Platte Valley

is rich in crop raising soil—irrigated and non-irrigated. Large or small tracts. Easy payments. If you are preparing to go to a new country you will certainly investigate the rich and productive lands of the North Platte Valley, Nebraska. I have complete and authentic information and will gladly send it to you free.

R. A. SMITH,
Colonization and Industrial Agent, Union Pacific R. R. Co., Room 3513 Union Pacific Building,
OMAHA, NEB.

Prattle of the Youngsters

Serviceable Ones

A little girl, after noticing for some time the glittering gold filling in her aunt's front teeth, exclaimed:

"Aunt Mary, I wish I had copper-toed teeth like yours."

Hard on Doctor

Doctor (superintendent of Sunday school)—Now, children, who can tell me what we must do in order to get to heaven?

Bright Boy—We must die.

Doctor—Quite right, but what must we do before we die?

Bright Boy—Get sick and send for you.

What They Called Him

The Sunday school teacher had explained the familiar Bible story at length, and then asked Tommy if he expected to be among the sheep or among the goats.

"I dunno," said Tommy doubtfully. "How's a feller to tell when his ma calls him a lamb an' his pa says he's a confounded kid?"—American Boy.

He Knew

"What is a sentence?" asked the English professor.

"Usually not less than thirty days," replied the experienced looking lad on the front seat.—Kansas Industrialist.

Budding Politician

Little Willie is a kindergarten pupil. His father is a politician. Because Willie had been good all the week the teacher permitted him to choose a game. He lined up his classmates against the blackboard and shouted fiercely:

"All who are going to vote for Dempsey hold up the right hand!"

Minded Teacher

"Now, John, I want you to apologize to William for calling him a liar."

"I—I apologize for callin' ye wh-what ye are."—Life.

Sharp Cat

Little Pauline came in, bringing a scratched finger for salve and sympathy.

"I cut it on the cat," she explained.—Judge.

Sounds Rather Horrible

Officer Shawhan—What's your big sister gettin' teached up dere at de school?

Teeny O'Tuft—Aw, electrocution, physical torture and stuff like that.—Puck.

Stung

Josephine, aged 10, has a decided lisp. She is also very fond of attending the matinee. The other day she was giving a spirited story of the play to Marian, who was aged 9.

"My mamma says it isn't good for little girls to go to the theater," said Marian, with an air of self-righteousness. "I'm not ever going till I'm 18."

"Humph," retorted Josephine, without any hesitation, "th'pose you die when you're only 17; then you'll be thtung!"

Bright and Breezy

Not Fifty-One Per Cent

"Prof. and Mrs. Methods take a great scientific interest in their children, don't they?"

"Yes; but not a controlling interest."

One Kind

Professor (to horticultural class)—Upon what kind of trees do the finest peaches grow?

Young Man (bashfully)—Family trees.—Judge.

Doubtful

"Won't you be very, very happy when your sentence is over?" cheerfully asked a woman of a convict in prison.

"I dunno, ma'am; I dunno," gloomily answered the man.

"You don't know?" asked the woman, amazed. "Why not?"

"I'm in for life."

Among the Amateurs

Stage Manager—Remember, Bangs, we are depending on your baby to cry lustily in the third act. Do you think he'll do his part?

Actor Father—He ought to. He's been rehearsing every night for months.

Financial Settlement

A young couple went to a minister's house to get married. After the ceremony the bridegroom drew the clergyman aside and said in a whisper:

"I'm sorry I have no money to pay your fee, but if you will take me down into the cellar I'll show you how to fix your gas meter so it won't register."

Same Old Story

"The women demand that a candidate for office must have clean hands."

"Yes," sighed the mere man, "women have been after me about that ever since I was 2 years old."

Liked Their Methods

Restaurant Patron (caustically)—I am glad to see your baby has shut up, madam.

Mother—Yes, sir. You are the only thing that has pleased him since he saw the animals eat at the zoo.—Puck.

In the Boudoir

Helen—Why, I never could marry that man!

Hazel—Mercy! Why not?

Helen—Why, he wears a wig!

And then the dear creature took off a rat, some puffs, a coronet, a braid, a pompadour and a switch and sat down to peruse a novel.

Simply Terrible

"A terrible poison has been discovered lately."

"What's that?"

"Aeroplane poison."

"Is it deadly?"

"Well, it only takes one drop to kill a man."

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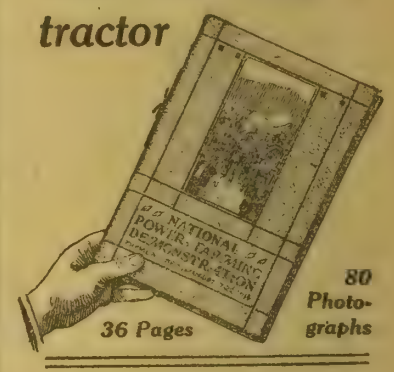

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TWENTIETH CENTURY FARMER
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THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Quarantine for Foot and Mouth Disease

This Measure Working Hardship on Many Stock Owners, but Co-operation of All Stockmen Needed to Prevent Spread

PROBABLY more talk and comment has been caused among live stock men by the quarantine recently placed on shipments of cattle in Indiana, Michigan, Ohio, Pennsylvania and Illinois, including the stock yards at Chicago, which are the largest in the world, on account of the recent outbreak of the foot and mouth disease, than by any live stock quarantine ever issued before by the United States government.

Under the provisions of the quarantine no cattle can be shipped out of the Union Stock Yards in Chicago except within the state of Illinois, and then for immediate slaughter only. In the other states named no cattle can be shipped between points within the state even from one infected district to another. The restrictions are placed on the shipment of catlte, sheep and swine. Provision is also made that all fodder, feed and animal products of every sort which might possibly carry the disease must be thoroughly disinfected.

Many states east of Chicago get a large part of their supply of beef on foot from the Chicago yards. Under the rules of the quarantine all this is cut off, as are also all shipments of feeder cattle from the Chicago yards and within the states named.

At first thought one cannot begin to realize the magnitude of this action by the government. More than a thousand men are at work while this is being written disinfecting the Chicago yards under direction of government inspectors. It is estimated it will take a week to complete the work.

This drastic measure is without doubt working a serious hardship on many live stock owners, but on account of the ease with which the disease spreads such action seems necessary.

This is not the first outbreak of this disease in the United States. The government has heretofore been successful in stamping it out by strict quarantine and disinfection of premises and by killing and burning the carcasses of diseased animals. Many farmers with their cattle are now quarantined at the Chicago yards.

Great Losses of Stockmen

To get some idea of the big loss sustained by some cattle owners we will state that the University of Notre Dame of Indiana maintains a very select herd of Holstein cattle. Examination shows that fifty-two head of these fine cattle are affected and will be killed. Many, in fact most of them, are valued at more than $1,000 each. This is only one instance. Herds in which the disease has been found are located in all the states quarantined.

At the Chicago Union Stock Yards the National Dairy Show was being held. One Holstein cow in this show was found to have the disease. In order to prevent the spread of the disease to other animals they were protected by sheets saturated with disinfectants and enclosing the stalls in much the same way human patients are isolated in hospitals.

The disease originated in southern Michigan in August, but was not discovered by the authorities until October 15, when quarantines were placed in force to try to check its advance. It was found, however, that milk from infected cows had been fed to hogs, giving them the disease. These hogs were shipped to Chicago and the disease has been traced from there to the states quarantined through stockers and feeders being shipped from the Chicago yards to these points. It will be readily seen that the disease is exceedingly infectious. It can be carried on the hoofs of the animals, on a man's shoes or clothing. The disease at the present time is not widespread, showing up in but a few localities, yet on account of the ease with which it can be carried the officials are apprehensive that it may become very severe and in consequence are taking no chances. If the disease does become more widespread it is possible and probable that a much more strict quarantine will be enforced covering a much wider territory.

Symptoms of the Disease

The disease shows itself principally in the foot and mouth. The animal refuses to eat, keeping its mouth closed most of the time. Soon the saliva begins to run from the mouth and little yellowish sores begin to show, increasing in size until some are as large as a silver dollar. The hoofs become sore and in dairy cows the teats are often sore. It is not often fatal to animals. The effect generally is to emaciate feeding animals and reduce the milk supply of dairy cows. It certainly looks like a dangerous proposition to use milk from cows having this disease. Some authorities claim it can be communicated to human beings in this manner.

At this writing no prediction can be made as to the effect on the market on account of this action by the government. Authorities and packers are hopeful that it will be rapidly wiped out and that usual trade conditions can be resumed. The cattle feeders in the states under quarantine will be seriously affected if the quarantine cannot be raised soon, for now they can make no shipments of cattle whatever. If it is necessary to maintain the quarantine for any length of time, the breeders of pure-bred cattle, hogs and sheep will feel the effect of the move.

Co-operation Absolutely Necessary

In our articles on hog cholera we urged a close co-operation between authorities, both state and government, and stock owners. The necessity of close co-operation to make the work in hand in fighting this disease effective is evident. Without doubt state and government authorities will do everything possible to stamp out the disease. They, however, cannot do it all. Owners of live stock must lend these authorities every assistance possible. Every precaution possible must be taken in the way of cleaning up and disinfecting affected premises.

It is impossible to tell where the disease might show itself. Farmers should watch their stock closely, and if they discover any animals with sore feet or mouths such as described, should not lose any time in placing that animal in quarantine and thoroughly disinfecting the premises. Do not stop here, but immediately notify your veterinarian. You cannot afford to hold back fearing your stock may be affected with this disease and that you will have to destroy some of them. Should any of your animals be affected, the quicker you know it the better, and the less will be your loss.

It is to be hoped that the authorities will soon become masters of the situation. Farmers and stockmen can give very material assistance by lending their co-operation as suggested above.

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Uses His Neighbors' Wasted Machinery

How One Farmer Turns Into Profit the Implements His Neighbors Have Left Exposed to the Weather

ON A FARM in western Nebraska lives a man who, with his ability as a farmer, combines considerable mechanical ingenuity which he turns to good use in his farming operations. A homesteader of the earlier days, he has made the once barren land he got from Uncle Sam into one of the most profitable and best equipped farms of that section.

How familiar to all who live in the country, or who travel through it, are the weed-grown junk lots, in which repose the remains of once valuable farm implements, broken-down buggies, rusty iron tires, wheels with broken spokes and a lot of other miscellaneous matter that might have been turned to good use had the owner cared to spend a little time and thought upon them. These junk piles, the eyesores of many a prosperous community, are treasure piles to this Nebraska homesteader. From them he gathers material for many a useful farm machine that he can build in this way much more cheaply than he could buy.

The accompanying picture shows the home-made portable elevator, by the use of which the loft of the big barn is easily filled with hay, the corn stored away and all the other jobs of lifting about the place are done. This is only one

One of the Farm Junk Piles from Which Material is Gathered

Home-Made Portable Elevator Built Entirely from Parts of Discarded Machines

of the numerous conveniences this man has manufactured in his spare moments from apparently useless material.

Moreover, he is an asset to the whole community. Implements once thought to be worn out or broken beyond repair he is able to doctor back to health and usefulness. Whenever any machine in the neighborhood becomes worn or broken the owner brings it to him, gets his diagnosis and abides by his decision in the case. If he pronounces its condition to be hopeless, to the junk heap it goes; if it can be mended, he prescribes for it and performs whatever operation is necessary.

Not every man has the mechanical ability that would enable him to build such machines as this portable elevator or repair apparently useless machinery, but a good many men would be able to accomplish wonders in this direction if they realized how well worth their while it might be.

This man keeps his own machinery carefully housed in good, weather-tight sheds, so that it lasts a long time, and furnishes little material for his experiments, but he has no trouble in finding plenty of machinery on his neighbors' farms among the vehicles and implements they have discarded and are glad to sell him for small sums.

Shorthorns as Factors in Beef Production

This Breed Will Not Acquire a Distinctive Color, But Otherwise Responds Readily to Skill of Breeders

DEMAND for cattle today is from the feeder to the breeder, and is for a better grade of cattle; and while this demand comes with a price that appeals to the business intelligence of every breeder of cattle, there is also the promise of permanency behind it—that it can be depended upon as a business. It is the money incentive in the breeding of cattle that actuates every man. Thus, the market demand helps us form our ideas of what our aim should be in breeding cattle. We breed for the market, not to satisfy any fancy we may have for color in the animal.

The intelligent breeder is now studying what type of cattle is most popular. The best cattle in the beef market are subjects of study and investigation for the cattle raiser, and the question of which breed is most popular has frequently been put to packers and their agents at all the great packing centers. So far as we have been able to learn there has been no distinction made as to a preference in breed among the distinctive breeds by the packers. The beef type in Shorthorns, Herefords, Angus and Galloways has been satisfactory to the slaughterer.

It then remains for the breeder to select his breeding animals with a view to producing the most perfect type of animal, the one which will result in the ideal fat animal for the slaughterer.

Cannot Breed True to Color

As to color in the Shorthorn, this feature, which at one time caused divisions and factions which threatened the best interests of the breed, has in recent years practically been disregarded. The rival colors were the roans and the reds. The effort of certain breeders to establish families of Shorthorns true to color marked a long period in the history of Shorthorn breeding, and while not an entire failure, the appearance of white and roan calves in the color-bred red herds were of too frequent occurrence to be termed "freaks." The breaking down of this color prejudice is within the memory of many of the comparatively young breeders, and the recognition of the white bull as a champion winner in the show ring is of more recent date.

Not many years ago there was an enterprising Nebraskan whose observation and experience in handling steers had led him to the belief that the roan color had some special inherent property that was a key to excellence in beef production. Using his observation, that practically all the roan steers that came into his possession were good individuals and when in the feed lot responded satisfactorily to good feed and care, he proceeded to organize a roan Short-

horn herd, from which he would, with his uniform high class of roan cows and bulls, incidentally set the pace for the creation of a roan strain of cattle that would excel in beauty and beef qualities anything heretofore invented by the Shorthorn breeders.

A market was at once created for roan Shorthorn bulls. Excellent individuals and high prices were the rule. A foundation herd of the best bred roan cows were procured and the breeding venture, which was on the basis of "like produces like," started off, with the result that the old indiscriminate Shorthorn habit of calves coming red, white, red and white and roan prevailed. This fixed principle in the breed had not been well understood by this would-be reformer and roan cattle promoter who was not able to do more in his system of color blending than greatly increase the number of white calves, a feature which he had not counted on and which he did not want.

Many Defects Bred Out

The efforts of breeders to establish a distinct color for any family of Shorthorns was not wholly lost, since it was the means of great effort in breeding improvement in the cattle industry of the country. All the time that these rival factions were at work in contending for the supremacy they were bettering the general beef properties of their herds by close attention to physical defects and encouraging the early maturity habits of the animal by good care and rapid development influences.

It is generally conceded by Shorthorn admirers that the breed is on a satisfactory basis to face any kind of competition or rivalry that may appear on the cattle horizon. What the present tendency to develop the milk quality in the Shorthorn may bring forth cannot now be announced. The Shorthorn is a progressive animal, yields readily to the desires of man, and with the inherent milk tendency cultivated and encouraged by the ingenuity and skill of the present-day breeder, some of the greatest milkers of this age may confidently be looked for as the result.

In the matter of breeding cattle, as in all other lines of stock breeding, the success of the work depends upon the judgment and knowledge of the breeder in the selection of his breeding stock. If it is not in a man to be a close observer of cattle qualities he will never make a breeder of any prominence, no matter how much training, money and experience he may have or what breed of cattle he may select. The skill of properly mating to secure desired results in the offspring is a faculty that all cattle owners do not possess and many never can acquire.

General Cattle Improvement Among Grades

The great improvement in the cattle stock of the country, however, does not wholly depend upon the skilled breeding. It takes place in the common grade herds, on the farms and on the range, and is operated upon a basis of general improvement. The popular breeds of stock in the country are taken as they can be secured, and thus a greater or less degree of improvement is made by the ambitious and enterprising stock owners, regardless of scientific or acquired mating knowledge.

A close study of the qualities and characteristics of our best breeds of cattle by every man who is handling cattle will tend to improvement in the general stock, and this is along a line of improvement that is practical and of advantage to the country. It should be the aim of everyone in the least degree interested in the breeding and handling of cattle for breeding purposes to advocate and urge the use of pure-bred sires to the exclusion of the grade. High grades and pure-breds for the female division of the herd is sound doctrine and points toward an ascendency in beef quality.

Standard is Constantly Raised

The progress made with this breed of cattle would indicate that there is no such thing as perfection, yet the ambition of the breeder is for a more perfect animal, a raising of the standard called type. The education of the breeder is upon a basis of ideals that he is supposed to have in his mind. But as these ideals are approached new images appear of a higher order of creation, thus the ideal of the breeder of a few generations ago would not correspond favorably with that of the standard type of the present-day show ring champions. What would be the exclamation, what could picture the surprise of the Shorthorn breeders of 100 years ago, were they now permitted to view the foremost herds of this country as they represent the type and standard of the Shorthorn achievements of the present day?

The Shorthorn is a breed that, while its centuries of fixed character has placed it practically proof against despoilation and ruin, may be so changed in many of its minor qualities as to be a satisfaction and pleasure for the breeder who wishes to see individual characteristics and changes of his own direction and fancy in the produce of his herd, and yet not interfere with the general Shorthorn features. We have observed herds where very marked changes were made in the produce, within three o. four generations of cattle, by the simple matter of starvation treatment persistently adhered to, resulting in the cutting down in growth of the animal in size of bone and in the general tendency to develop.

Shorthorns Respond to Good Care

The Shorthorn is not a feed-economizing breed to the extent that it can be wintered in cold climates through a feeding period of five or six months on cold air and snow. The Shorthorn, for best results, for good results, must be provided with pasture during the grazing season and with a good quality of prepared feed through the cold, stormy weather of the feeding season.

No other breed has done so much in establishing the substantial character that our American beef industry now enjoys throughout the civilized world as the Shorthorn. It is a recognized passport for any member of the bovine family when it can be truthfully said of it that Shorthorn blood courses through its veins.

Now in the excitement and interest of cattle improvement, when the money and intelligence of the country is being centered on the live stock industry, no better recommendation need accompany any lot of cattle offered for sale than that they are good grade Shorthorns. This is sufficient to settle the matter of quality in the mind of any prospecive buyer. The reputation that the Shorthorn enjoys on the farm and on the range is as wide and as broad as the great cattle-growing countries of the world.

Our Old Friend Putnam Writes to Us Again

Tells Us of What He Thinks of Arkansas and the Cotton Situation

I GUESS you all been wonderin' what's become of old Put. Well, I hain't been in jail, so it ain't no use to worry about me, and I don't feel like I have to give a account of my doin's fur the last year nohow. Just lately I been down to Arkansaw ag'in, and, durn me, if them Arkansawyans ain't a-gittin' theirs. You see, on account of the war, nobody wants to buy cotton. About three-quarters of all the cotton they raise in the south goes to the mills in Europe, and the war stopped the looms, so they ain't buyin' no cotton, and even if the mills could run, it wouldn't be safe to ship because of the German navy. Consequence is, the south has got about 15,000,000 bales of cotton on hand.

I've been down in Arkansaw a good deal, just lookin' over the country and travelin' around, and I hain't never seen a Arkansawer what could eat cotton, and as they don't raise much else on their plantations, they're liable to go hungry this winter, because cotton is their money. "No cotton, no cash," is the motto of the storekeepers. If a farmer wants credit they says: "Wall, I reckon we kin give you-all some terbaccer and groceries and gingham if you'll put in thirty acres of cotton."

The farmer kin trade in his cotton fur what he needs to eat and wear, and, besides raisin' a few pigs fur salt side and some greens and things in the garden, he don't need much. Sometimes he's got a native cow or two, but them critters don't give much milk nohow, and then the farmer buys canned milk or goes without.

How the Planter Lives

That's the small farmer I'm talkin' about—the feller that owns about eighty acres in the timber with half of it cleared, except here and there a stump which he leaves in to keep him from going to sleep at the plow handles. With the big planter it's a little different. He's got maybe 600 or 1,000 acres; he lives in town, in a fine mansion, and his darkies do the work. The darkies never gits ahead; they plant and chop and hoe the cotton and pick it when it's ripe, and they git all they need to eat and wear—and that ain't much, 'specially in summer. If they're sick the planter sends his doctor to give 'em medicine; if they die, the planter buries 'em. Most of 'em is satisfied to git along that way because they know they'll be cared for the rest of their lives. They never git out of debt fur fear of losin' their job on the plantation. Of course, lots of big planters raises corn fur feedin' their mules, but they don't aim to raise much to turn into profit except cotton.

Now you take a country with two classes of farmers like that—the big feller and the little feller—and all of 'em goin' in strong fur one crop, and that crop bein' one that nobody kin eat, exceptin' the cattle a few hulls and a little cottonseed meal, and then let a war come on and tie up the ships and the cotton mills, and you got somethin' to work out of.

Buy-a-Bale Won't Help

That's what the south is up against right now. Somebody got a bright idea and started a buy-a-bale-of-cotton movement. Of course, that's about one drop in the bucket, and it ain't helpin' nobody much exceptin' the brokers. I don't much favor that kind of nonsense, not because I don't believe in helpin' the feller that's in distress, but because it's such a durn poor way to help him. If we all put up the cash to tide over the cotton till the war stops, then the southern planter would come back at us ag'in when he got a long crop.

I'm only a hoss sense farmer and none of them thar specialists or professors in agriculture, but I do know that charity hain't never solved no economical problem—and the buy-a-bale movement is charity, pure and simple, because we in the north don't need the cotton. Now if our capitalists would put up the cash fur more cotton mills, that would be practical.

I don't believe in war, but now that it's come, why, we got to make the best of it, so we ought to git busy and try to find a way to use up more of our own cotton; and next, the south could git

(CONTINUED ON PAGE SEVENTEEN.)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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Nebraska organized agriculture meetings are held in Lincoln January 20 to 23. The committee in charge is composed of W. R. Mellor, J. R. Duncan, Prof. C. W. Pugsley, Dean E. A. Burnett, W. S. Whitten, Prof. George E. Condra and George W. Kline.

Some people are boosting hard for free admission to state fairs. "Why should the farmer have to pay 50 cents to see his own show?" they ask. This is all very well, but the farmer is not the only man to see the fairs. With free admission, how many town loafers and other uninterested people would clutter up the grounds merely because it was "some place to go" that would not cost anything? Isn't this admission fee really a sort of protection to those who have a real interest in the fair?

While Missouri is rapidly advancing to a most prominent position among the poultry-raising states of the union, some of the neighboring states are unduly slow to realize the profits to be derived from this industry, which is too generally considered as merely a side line. Big profits await the Missouri valley farmer who will go into the thoroughbred poultry business in a businesslike manner. It requires less feed, less land and less capital than any other line of breeding business. That there are real profits to be made is shown by the fact that one Iowa poultryman who raises good stock has recently received over 300 orders for pullets at $2 apiece. Of course, success with poultry requires the exercise of everlasting vigilance in small things, but success with any kind of live stock requires this, also.

Dog Law to Protect Sheep

The sheep-growing interests of the country are taking on new life, owing to the increased mutton demand among meat consumers. Mutton is estimated the cheapest and most economical meat for the common people in these times of high prices for all food products. The demand thus encouraged has stimulated a desire among feeders of live stock to turn more of their attention to the feeding of sheep and less to cattle feeding. This tendency is observed all over the corn-growing districts, where the farmer and the small cattle feeder have introduced sheep into their feed yards this fall in view of testing out the lamb and sheep-feeding problem, which has been so favorably commented upon during recent years.

The ownership of sheep means an anti-dog sentiment, as the two lines of stock industry—sheep raising and dog raising, or dog ownership—do not in any sense harmonize from the standpoint of profit to the sheep owner. While the educated and well disciplined shepherd dog may be quite serviceable in the handling of sheep on the farm, the best results with sheep are had on the farms where dogs are not kept and not permitted even as trespassers. This anti-dog sentiment is developing so rapidly in every state where sheep are kept that public opinion is fast forming in favor of stringent dog laws, regulating the keeping and conduct of the dog.

At the national convention of sheep and wool growing interests which was called last spring at Washington, D. C., by Secretary Huston of the Department of Agriculture the regulation of the sheep-killing dog was discussed in view of laying the foundation for creating such state laws as will give the sheep owner, as nearly as may be, perfect immunity from damage by this source of present-day flock annoyance.

It was decided that a dog law was necessary, this law to make the dog personal property, the same as other kinds of live stock kept on the premises, and subject to specified assessment and tax, the revenue from this source to form a sheep damage fund, to reimburse flock owners for any loss they may incur by sheep-killing dogs. All states where sheep are kept and this industry given the required promotive encouragement must line up in defense of production; otherwise, if in the judgment of the citizens the cur dog industry is worth more to the people and the state than the mutton and wool industry, then drive the sheep out and give the dog increased liberty.

The Live Stock Market

There is sometimes a rather pathetic feature to the live stock market which is not realized or appreciated by the public or those not directly connected with the sale or proceeds from the sales of the stock. This condition of market influence prevailed for several weeks during the decline in prices of cattle, commencing in September and continuing through the heavy run of cattle in October.

This market situation was one never before experienced in its influences and uncontrollable bearing on its depression of prices. It was the season of the year when growers and handlers of cattle plan to sell the surplus of the cattle on hand not intended for wintering through or to put into the feed lot to be finished for beef. The decline of practically $1 per hundredweight in the prices of most grades and classes of cattle, especially stockers and feeders, was a situation that thousands of cattle sellers experienced, and the situation seemed to catch big cattle handlers and experienced dealers, as well as the small owner of small means.

All manner of reasons and apologies were offered and suggested. "Too many cattle coming at once," was a very safe and consoling suggestion. This explanation, however, was supplemented by a lack of buyers, and the lack of buyers was caused by the local banks claiming they had no funds that they could let their feeder patrons have to buy these cattle, that were coming into the market so freely. One of the reasons assigned why the cattle were coming in so liberally was that the local banks held loans against the cattle owners and wanted the notes lifted; consequently instead of holding the cattle back, they felt obliged to sell.

The country from which the cattle came was full of feed. It was merely a matter of money stringency with the cattle raiser or shipper, supplemented by a lack of ready cash with the prospective feeder buyer. The farmer or feeder who had the cash got the advantage in the declining prices, and when the end came the scarcity of cattle started the prices back, and now the self-adjusting influence of the real cattle shortage in the country is again being manifest at all the central markets.

The real situation means a country full of feed and not animals sufficient to take it up. The very mild autumn season, with pastures of grass and wheat everywhere, shortening the feeding season and economizing the use of prepared feeds, all tend to stimulate the tendency to buy more cattle to winter. It is believed that prices will be on the ascending scale rather than downward. It is also freely expressed by observing cattle dealers and handlers that had there been money available to handle these cattle there would not have been any decline of the early September prices, but that a distribution to the farms needing cattle would have taken all and more than came to the central markets.

"Movable Hog Houses" is the title of one of the most practical college bulletins that has been issued recently. It is written by John M. Evvard and J. B. Davidson of the Iowa College of Agriculture at Ames and gives plans and directions for building a number of hog houses of different design, all of which are of more or less simple construction and are easily movable from one part of the farm to another.

The splendid fall pastures will start the calves and colts into the winter in fine shape. Don't let them lose a pound of flesh.

Successful Handling of Stock

The quality of all the feeds used in entering into the proposition of growing and developing live stock is a factor that cannot be overlooked in the sucessful conduct of this feature of the live stock business. In the one feature of feed supply, hay, there is significance sufficient in quality to govern the matter of profit or loss in the feeding enterprise. It matters not how complete the yardage and stabling accommodations are for the stock, if the feed lacks in some essential feature of quality there is at once a handicap placed upon the particular enterprise.

Feed that has not been handled and prepared to preserve its best feeding qualities cannot be expected to produce the best results in the growth and development of the animal. The time of harvesting and storing the feed crops is the important period in securing good quality. The corn crop husked and piled out on the ground cannot be considered in as good condition for feed as the crop carefully cribbed and under a good rainproof roof. Mouldy, damp, half decayed corn has not the feeding value that dry, well-cured, sound corn has that went directly from the field, when ripe and well cured, to the rain-proof, well ventilated crib. The same holds good with the hay and other rough feeds used in carrying the live stock of the farm through the feeding season.

Quality of feed is the governing influence in the growing or fattening of live stock, and should receive more consideration than generally accorded it. The value of damaged feeds cannot be replaced or made up by quantity given the stock. It is sometimes remarked that this hay or grain is not as good as it should be, consequently we will have to feed a little more of it. This is a very generous thought on the part of the feeder or owner, but it meets no responsive approval on the part of the animal which is obliged to sicken its appetite, nosing over a lot of uniformly damaged feed.

The matter of quality, in all that goes into the feed ration of the animal, either for milk or meat production, is of sufficient importance to command the closest attention and scrutiny of the feeder and owner of the animal. The time to study quality in feeds is now when you are handling the prepared feeds starting the animals into winter care. It is an easy thing to see the difference between a good quality of alfalfa or prairie hay and a poor quality, or even a medium. You will see by observing the way the stock takes hold of these various qualities and conditions of feeds what is best for them, and how damaging it is to your interests not to have all these hays and grains in the very best condition.

All the eggs in cold storage in Chicago have been purchased and shipped to England. This means a big demand for fresh eggs to supply the current demand. The result should be a boom in the poultry and egg business of the entire United States this season, but especially in that part tributary to the Chicago market.

Baling and Feeding Straw

Reports are coming from some districts in some of the best agricultural states to the effect that farmers have commenced to bale their straw preparatory to a system of saving and economical feeding of the farm stock. The strawstacks and straw piles scattered over the grain-growing states have a feeding value far beyond any estimate placed upon them by their owners. It is only through an experience of forced conditions that the present-day farmer gains a feeding knowledge of the straw product of the wheat and oats crop.

The urgency causing the use of straw as a feed introduces better methods of handling the straw and more care in its distribution to the stock, thus making it of special importance and value to the farm. In seasons of great plenty of the crops ordinarily classed as forage there is little or no account taken of the straw at threshing time. It is looked upon as a waste product and treated as a nuisance. The only matter of special concern is the disposing of it in the quickest and cheapest way and at as little expense as possible.

Straw, while not a first-class feed, when properly handled, is one of the farm resources for the fertilizing and maintenance of the land that cannot be overlooked without serious loss. The practice of turning all refuse of crop and vegetable matter into some form of fertilizer to be returned to the land, is one of the inherited observances that the early settlers of the old eastern states handed down. The western farmer, through the almost unlimited fertility of the prairie lands, practiced waste and extravagance, until the cry is now going up for a saving of these various forms of waste and fertilizing materials, even to the straw pile, that usually was burned as the cheapest means of getting it out of the way.

Outdoor Feed Lots

The outdoor feeding of cattle has for many years received considerable endorsement by some of the leading feeders. In comparison with stable feeding or stall feeding it has the preponderance of evidence on its side. Where cattle are fed by the hundreds, indoor or stall feeding is not practical, neither is the open lot method conducive of the best results in putting on flesh.

There seem to be two extremes in practice in the matter of feeding cattle. The experiment stations in their feeding tests demonstrate what can be done with certain combinations of feeds with various lots of cattle, but all under the very best of stable or barn conditions, stalled and handled equal to the best equipped dairy herds. On the other hand, the cheapest equipped feed lot, bare of all furniture and protection of any kind, exposed to wind and storm, is found on scores of farms where the feeding of cattle is carried on year after year.

To the observing, consistent caretaker of farm animals these extremes are both wrong, and both conducive to waste of opportunity for profit-making in the feeding industry. The former method is all right in a general way, where the feeding business is not carried on extensively and where the investment of money in buildings and equipage is not a matter of consideration. The latter is a waste of feed in forcing the extra exertion and loss of animal heat in fighting against the inclemencies of weather to which the animal is exposed.

A compromise between these two conditions affords comfort to the animal and at the same time gives it all the open air treatment that is now so popular with the animals of higher order in the use of outdoor sleeping porches. The outdoor open feed lot is all right, but should be protected from the winds on two sides at least, with open sheds, sheds with good waterproof roofs, and a drainage that would insure a dry place for cattle to lie down without coming in contact with mud or water. It will pay to protect the feed lot with a tight board fence on all sides, to shut off the bleak, cold storm winds. This outdoor feed lot thus protected is robbed of all its damaging influences of storm severity, cold rains and ice-covered coats, and yet has every feature of outdoor health and invigorating influence that the animal demands to keep it healthy and able to withstand reasonable exposure.

Expensive buildings for the handling and wintering of stock sometimes make the rent per head for the stock kept in them come pretty high, so high, in fact, that it takes many years for the stock to pay for this investment. Yet sheds, buildings of some sort, must be provided in order to carry on the work of putting on flesh profitably and holding until the animal is disposed of.

Leaf spot, a serious disease attacking sugar beets and reducing both sugar content and feeding value of tops, is the subject of a recent government bulletin. Like all diseases and insect pests, the best prevention is crop rotation. Wherever one crop is grown on the same piece of ground for a number of years, some disease or pest is almost sure to occur and to thrive. Change of crop for a few years will always starve out the pest, whether in the nature of disease or insect.

Plans for the tenth National Western Stock show are well under way, and the indications are that the show will be of more interest and be larger and better in every way than ever before. The show will open in Denver on January 18. The railroads are promising low rates from all sections, and there is more interest throughout the west than ever before. Last January approximately 37,000 people came into Denver during stock show week. If the weather conditions are favorable this number will be greatly increased during the coming show. The premium list is out and has been materially strengthened all along the line, both in the amount of premiums and the number of classes.

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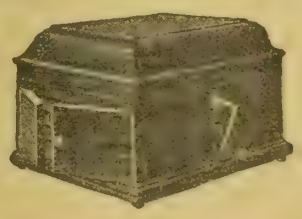

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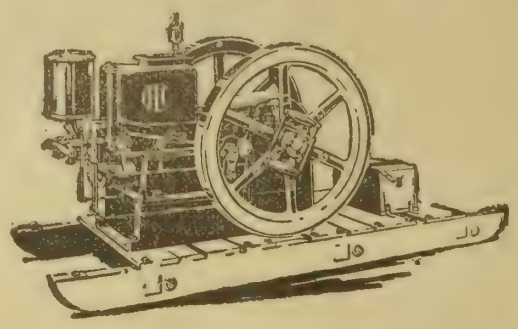

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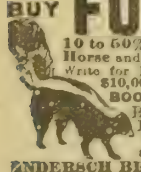

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Steel traps are light, and may be moved about from place to place, while the deadfall is unwieldy and not moveable to any practical degree.

The deadfall cannot be set in any substantial manner after the ground freezes, but the steel traps can be set regardless of the condition of the ground.

Steel traps may be set in many places where the deadfall is absolutely impracticable—in swampy spots, in the water, under roots, in hollow logs and trees, in drifts, dens, etc.

Steel traps really are cheaper than the deadfall, where one can put his time to practical use, and we may add here that we long ago adopted the plan of ordering our traps from some reliable catalogue house rather than the more expensive one of buying them at a higher retail price.

One can secrete steel traps, while with the deadfall it must be left more or less exposed. It has the appearance of a thing devised by man, and animals are pretty sure to regard it with suspicion, some to such an extent that they will not approach it from any angle, no matter how enticing the bait.

Some Necessary Accessories

An old gunnysack should be provided for carrying traps. A keen, substanital knife for skinning is very essential.

A small, light ax or a good hatchet should form a part of every trapper's outfit. These come in for a variety of uses at different time and should be kept keen-edged.

A 22-caliber rifle or revolver should be carried for disposing of captured animals. We always favored a reliable revolver, as it added little to our load and could be easily carried in the pocket.

This method of killing captured animals is much preferable to that of beating them to death with whatever is available, as the small ball does not injure the pelt; it is a quick, sure method; and in the case of skunks it does much to forestall the unpleasant odor through speedy dispatch of the animal. By shooting animals in the eye or the ear, both of which are vital spots, there is not the slightest damage done the fur.

Haunts of Different Animals

This article would be incomplete without some mention being made of the places most frequented by various animals, since one will want to set his traps in a position where there will be the greatest chances of capture.

Raccoon—This animal haunts streams of water during the night, sleeping in some hollow tree or log through the day; is very fond of fish, clams, birds, etc., feels along drifts, logs and shallow places in river or pond for crawfish, clams, fish and frogs.

Opossum—Frequents both hills and hollows in woodland, and sometimes in fields; sleeps in hollow trees, logs and under roots and banks during the daytime; is fond of all kinds of flesh, either fresh or otherwise, especially chicken, birds, rabbits and other game.

Skunk—This is a sort of brother to the opossum, with much the same haunts, habits and appetite, except that they live more in dens underground and are more given to roaming the fields, meadows and small streams and sloughs away from the larger streams; they relish all kinds of fowls, birds and small game, being especially fond of visiting some farmer's chicken roost. The civet cat is a specie of skunk (properly polecat), and possesses practically the same tastes and characteristics.

Mink—This animal is almost entirely aquatic in haunts, but is to be found also in various places among the woods, especially where there are dens and places of hiding along ditches, small bridges and hollow logs. They are fond of fish, frogs—anything that inhabits the water, as well as all kinds of birds, poultry,

(CONTINUED ON PAGE FOURTEEN.)

A REBELLION

Food Demanded

The human body will stand a lot of abuse, but some time it will surely rebel and demand proper food in place of the pasty, starchy, greasy stuffs on which it has been made sick.

Then is the time to try Grape-Nuts, the most scientific and perfect food in the world.

A lady of Washington says: "Three years ago I was very ill with catarrh of the stomach and was given up to die by one doctor. I laid in bed four months and my stomach was so weak that I could not keep down medicine or hardly any kind of food, and was so weak that I could not keep down medicine or hardly any kind of food, and was so weak and emaciated after four months of this starvation that my daughter could easily lift me from bed and put me in my chair.

"But weak as my stomach was, it accepted, relished and digested Grape-Nuts without any difficulty the first time that wonderful food was tried.

"I am now strong and in better health than for a great many years and am gradually growing still stronger I rely on Grape-Nuts for much of the nourishment that I get. The results have certainly been wonderful in my case and prove that no stomach is so weak it will not digest Grape-Nuts.

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Ever read the above letter? A new one appears from time to time. They are genuine, true and full of human interest.

Stories of Our Young People

The Land of Storybooks

At evening, when the lamp is lit,
Around the fire my parents sit.
They sit at home, and talk and sing,
And do not play at anything.

Now, with my little gun, I crawl,
All in the dark along that wall.
And follow around the forest track
Away behind the sofa back.

There in the night, where none can spy.
All in my hunter's camp I lie,
And play at books that I have read,
Till it is time to go to bed.

There are the hills, there are the woods,
There are my starry solitudes,
And there the river by whose brink
The roaring lions come to drink.

I see the others far away,
As if in firelit camp they lay,
And I, like to an Indian scout,
Around their party prowled about.

So, when my nurse comes in for me,
Home I return across the sea,
And go to bed with backward looks
At my dear Land of Storybooks.
—Robert Louis Stevenson.

The Editor's Corner

Every now and then someone sends in a poem saying they hope to win a prize. We hardly know what to do with these poems, as we do not have any contests or offer any prizes for poems, except the verses in the picture contests, so we usually include them among the stories, although it is not fair to award a story prize to them. Occasionally, when one is especially good, we print it for you all to read. If this is satisfactory to our poets we are glad to have them send their poems in.

In regard to the stories, we want to say one word that has been said before: Remember that they must be original. Some of you will know why this has to be said again, though we are glad to say that most of the stories are undoubtedly original and good, too.

This week we had a number of stories we know you would like to read. One was about a boy that was supposed to have stolen a watch, though he really didn't do it; another was about the picture of the apple eaters shown on this page a week or two ago (the young author remarked that the children ought to wash their feet, which we believe is quite true); there was a coon hunt, a fishing trip and a visit to the circus and a story about a little boy that stole a pumpkin and so had to eat it and eat it until he was good and tired of pumpkin. Wish we might print them all.

HOME EDITOR.

(Prize Story.)

Dynamite and Thunder

By Francis Rettenmeyer, Aged 11, De Be ue, Colo.

Shep, our dog, was very much afraid of thunder. We were building a trail across some very rocky ground and blasted a great deal. Whenever Shep heard the blast he would run home as fast as possible, thinking it was thunder.

But as Shep finally grew braver he would run back as we did. After the report had died away he would run back to see what had happened.

One day the man who used the dynamite set two charges instead of one. Shep, as usual, ran to see what the explosion of the first had done, when the second blew up and some rocks barely missed him.

After that Shep would wait until we had gone up and never seemed anxious to beat us.

Note—This story came in accompanied by a letter from the author saying he hoped that it would win a prize, thus making him a member of the Honor department. And we are glad to say that the story did win the prize, and that our honor department now consists of Orrie Campbell, Bertha E. Hayes, John Wiebe, Myrtle Woolery, Helen Barnhouse, Walter Cheney and Francis Rettenmeyer. For the benefit of those who may not understand we will say that when one of the readers of this page has written two prize stories he or she becomes a member of the honor department, with the privilege of writing at any time. The honor department stories are held until we have room, providing they are good enough to use, and when printed the writer receives a book, the same as the prize winners do.

A Bad Storm

By Tommie Goodill, Aged 14, Cedar Bluffs, Neb.

Last summer when we were putting up hay we were caught in a bad storm. The storm came about 4 o'clock in the afternoon, and before it came the heat was terrible.

We had just finished a stack and

(CONTINUED ON PAGE ELEVEN.)

Picture Contest No. 18

What do you suppose these boys are doing? Why are they doing it? What is it all about, anyhow? Answer some of the questions this picture suggests to you, putting your answer in the shape of a verse of four lines. Each of the two children writing the best verse will receive a book as a prize. In awarding the prizes, quality of verse, neatness, punctuation and spelling will be considered. Give your name, age and address and send your verses to Picture Contest Editor, Twentieth Century Farmer, Omaha, Neb. Verses must reach this office by November 28 or they cannot be considered.

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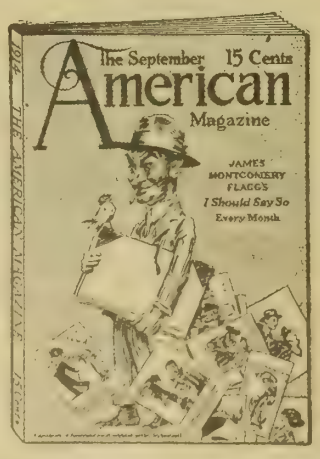

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Styles for Home Dressmaker

6847—Ladies' Waist. In this model the collar and small front vest are cut in one piece. The fronts of the blouse are gathered along their upper edges and are joined to the extentions of the sleeve, which act as a small shoulder yoke. The back is plain, without fulness. The pattern, 6847, is cut in sizes 34 to 44 inches bust measure. Medium size requires 2 yards of 36-inch material and ¾-yard of 27-inch goods for the collar and vest.

6929—Ladies' Dressing Sacque. As simple a design as possible, cut in a single piece, with sleeve and body in one. The surplice closing leaves the neck slightly exposed. All free edges are trimmed with a band of ribbon. The pattern, 6929, is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 2¼ yards of 36-inch material and 4¼ yards of ribbon.

6919—Ladies' Skirt. Serge, cheviot or broadcloth can be used to make this skirt. The skirt is cut in five gores and is made with a yoke. The pattern, 6919, is cut in sizes 22 to 32 inches waist measure. Medium size requires 4½ yards of 36-inch material.

6901—Ladies' Nightgown This very plain gown is made with Raglan sleeves, the upper ends extending to the neck edge. The front and back are plain, with an opening in the front. At the neck is a small, flat, turnover collar and cuffs to correspond finish the sleeves. The pattern, 6901, is cut in sizes 36, 40 and 44 inches bust measure. Medium size requires 4¼ yards of 45-inch material.

6914—Girls' Dress. This dress has a simple blouse, with a small dip below the waistline in front and back, wide collar and plain, long or short sleeves. The two-gore skirt has panel effect in front and back. The pattern, 6914, is cut in sizes 6, 8, 10 and 12 years. Medium size requires 2⅝ yards of 36-inch material and ½-yard of 27-inch contrasting goods to trim.

6928—Childs' Coat. A simple double-breasted model that may close high at the throat, with side front closing or be left open with shawl collar and revers. Plain sleeves are finished with a cuff. The pattern, 6928, is cut in sizes 2, 4 and 6 years. Medium size requires 1½ yards of 54-inch material and ¾-yard of 27-inch contrasting goods to trim.

6899—Ladies' Dress. This very stylish dress should appeal to women both stout and slender. It has a plain blouse, with a small chemisette and flare collar at the neck and with full length sleeves shaped to the arm. The underskirt is made with two gores and is overhung by a two-piece tunic. The pattern, 6899, is cut in sizes 34 to 46 inches bust measure. Medium size requires 3 yards of 44-inch plain goods and 2 yards of 36-inch plaid, with ½-yard of 18-inch material for the vest and 1 yard of 36-inch lining.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Of Interest to Our Women Readers

The Little Things

If you are sighing for a lofty work,
If great ambitions dominate your mind,
Just watch yourself and see you do not shirk
The common little ways of being kind.

If you are dreaming of a future goal,
When, crowned with glory, men shall own your power,
Be careful that you let no struggling soul
Go by unaided in the present hour.

If you are moved to pity for the earth,
And long to aid it, do not look so high
You pass some poor, dumb creature faint with thirst;
All life is equal in the eternal eye.

If you would help to make the wrong things right,
Begin at home; there lies a lifetime toil.
Weed your own garden fair for all men's sight
Before you plan to till another's soil.

—Ella Wheeler Wilcox.

Our Home Chat

We published on this page in the issue of October 24 a little poem called "Let Us Smile." It was a beautiful thing in thought and construction and we wondered who wrote it, but had no way of finding out, as it was published in another paper without credit. Now we discover that it is one of Wilbur D. Nesbit's poems, issued originally in book form by the P. F. Volland company of Chicago, and we are very glad to have the opportunity to give the proper credit.

* * *

"I don't mind taking care of sick people so much," said a busy housewife the other day, "but I do dread the care of convalescents." It is true, when the patient is on the road to health he is likely to be cross and impatient, for the long confinement to the sick room becomes more and more tiresome and the strengthening muscles seem to beg for exercise. The family, too, cease to feel as sympathetic as they did when the patient was in danger and are apt to plume themselves rather on how good and kind they have been. Then all the little duties devolve on the mother of the family and her work becomes pretty hard. But this is a really a critical time, as carelessness now may mean a relapse, which is generally worse than the original trouble.

* * *

Do the school children have a quiet place to study? Children should learn concentration, but it is too much to expect them to master difficult problems while there is a heated discussion going on among older people in the same room, or the smaller folks are making a lot of noise at their play.

HOME EDITOR.

Our Weekly Recipe

ROAST CHICKEN—Clean and prepare the chicken. Make dressing of one cupful fine bread-crumbs and four tablespoonsful melted butter; season with salt, pepper and herbs to suit the taste; rub the chicken with soft, salty butter and dredge with flour. Put three tablespoonsful of butter in the pan; use no water. At first have the oven hot and baste in five minutes with the hot butter. When the flour is brown baste with one cupful hot water as needed; turn so that it will brown properly. Bake a four-pound chicken about one and one-half hour; pour off nearly all the liquid in the pan; thicken the remaining liquid with flour mixed with cold water. Chop and add the giblets that have cooked until tender and cook all together for five minutes.

Just Being Friendly

"Mrs. Claire didn't speak to me today; she just passed me by without as much as a glance; she's too snippy for anything!" and Mrs. Jocelyn tossed her head indignantly.

Did you speak to her?" Mrs. Brown asked.

"Why, no; how could I?" asked Mrs. Jocelyn.

"Well, if she passed you by without so much as noticing you, and you passed her by without speaking, how are you going to decide just which one is to blame? (Mrs. Brown's voice was a little quizzical). Weren't you really just as much at fault as Mrs. Claire?"

"Well, no, I'm not to blame," said Mrs. Jocelyn. "If she'd just looked at me and smiled a little I should have spoken, of course, but—she won't find me any too ready to notice her the next time we meet!"

"But if she didn't see you! Do you really think she saw you?"

"I'm not sure that she actually saw me, but I do know that just before we met she turned her head and—"

"Seemed to evade you? Oh, nonsense; many people are estranged from just such things! Why, don't you ever become so engrossed in somebody or something that you are really unconscious of every person and thing besides? I do. Once I met at a grocery store a woman I had known a good many years. She was not really a friend, although she frequently invited me to call when in town. One day when I might have called I met her and she again suggested calling, but when I gave out the slightest feeler as to whether a call upon that occasion would be acceptable I saw at once that it embarrassed her; that she did not want me to call then, anyway, and since then I have met her twice and she has failed to see me, although she certainly has seemed to be looking my way. I suppose I ought to get indignant, but what is the use? We all meet people who are friendly to meet, but who have no real sincerity in their hearts concerning any further association. I had accepted this woman upon her face value and I learned that it was mere face worth. Nothing deeper or better."

"And you wasn't hurt at such treatment?" asked Mrs. Jocelyn.

"Possibly, at first, I was sorry I had taken her for what she was not. But I certainly believe that Mrs. Claire is of a different stamp. You wait and see. I meet people and pass them without realizing whom it is I am meeting and passing. Then, suddenly perhaps, it comes to me that I really did meet someone to whom I should have spoken. I always try to make such a matter right, and if you will casually let Mrs. Claire know that she ignored you, I am sure she will make ample amends."

'I don't know that I want her to," said Mrs. Jocelyn, in a tone that showed very clearly that she really did care a great deal. Just then the telephone bell rang and Mrs. Jocelyn excused herself to answer it. She came back radiant.

"Good news?" asked Mrs. Brown.

"It was Mrs. Claire, and she has asked me to dinner tomorrow. She says she has so many things she wants to talk over with me she wants a quiet hour alone with me."

"And are you going?" Mrs. Brown asked, mischievously.

"Of course; I can't let a little think like that spoil a friendship."

"You're wise," agreed Mrs. Brown. "But even if this hadn't happened, it was not for you to cut her friendship. I will tell you a secret. I have learned it in more ways than one—'A man to have friends must show himself friendly.' Now you'll wonder where I caught hold of that cant, but, my dear, it isn't cant, it's real religion, and those very words are in the Bible. I found them one day when I was burning with indignation against one whom I thought had slighted me. I took them to heart and I have since tried to live up to them. We can't let our happiness and friendships go because someone seems to slight us. Very often there is no intentional slight. It is better always to give one the benefit of the doubt and you will find that the friendly spirit brings its rich rewards. We get, mostly, what we give in this world, and if we give friendliness we are pretty certain of reaping a rich harvest of the same. We are too self-sensitive and self-centered. When we learn to forget self in others we shall find life much better and more satisfactory. If I find a person really does not wish to speak to me, I still continue in a friendly manner, but if after several friendly meetings on my part I get the stony stare, why, then I ask what the trouble is, and sometimes I find that gossipping tongues have hurt a warm heart and we are able to make things right again.

ROSE SEELYE-MILLER.

A Bad Storm

(CONTINUED FROM PAGE NINE.)

were loading several hayracks, when it began to cloud up in the southwest. The clouds grew thicker every minute, and then the wind began to blow. Seeing it was going to be a bad storm, we unhitched the horses, which were attached to several different instruments, and took shelter behind a load of hay. We were there but an instant, when the load blew over, but we were quick to act, and took shelter behind another load. While we were doing this the wind blew a regular gale and the hail and rain came down in torrents.

We stayed under our shelter for about ten minutes, until the storm blew over, and then we hitched a team onto an empty rack and got home as quickly as possible, for we were about frozen. When we got home we put on dry clothing and soon were talking over the excitement of the day.

Additional Stories

Esther Leineweber, Adams, Neb.; Harland Buckner, Papillion, Neb.; Thelma Graham, Summerfield, Kan.; Maude Smith, Jameson, Mo.; Dixie L. Mullino, Kingsville, Mo.; Emma Cobby, Riverdale, Cal.

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Twentieth Century Farmer

Chile's Government Building New Railways

By Frank G. Carpenter

PUERTO MONTT—The war in Europe will force upon Chile the purchase of a large amount of United States steel rails, steel bridges and other railway materials. The country has several enormous projects under way, and there are a dozen new roads either surveyed or projected. For the last two weeks I have been riding over the state railways. I have had a pass from the government, going here and there at my will without paying fare. The place where I am now writing is the southern terminus of the system. It is Puerto Montt, a thriving port on the very frontier of the settled part of the country, and as far south of Pisague, the northern terminus, where the railway begins, as the distance from Boston to Dallas, or New York to Denver. This country is like a great sausage. It is long and narrow. If it were laid on the United States with its northern end at Boston it would stretch across New England and the Appalachian system, across the whole of the Mississippi valley and far into the Rocky mountains, ending in Utah. Cape Horn and the Strait of Magellan, which form the southern end of the sausage, would be just about as far west of Boston as is Salt Lake City. The country is nowhere much wider than from Baltimore to New York, and in many places it could be squeezed in between Baltimore and Philadelphia.

Scene in the Nitrate Fields

Road from Peru to the Strait

It will pay our exporters to consider the future railway system of Chile. This will consist of a long line of railroad running from Peru to the Strait of Magellan, with feeders going west to the coast and east to the mountains. This line is known as the longitudinal system, and it is now being built. It is already about 2,000 miles long and it will eventually connect Peru and Punta Arenas, the metropolis of the straits. The railway already extends almost to the Peruvian boundary. It traverses the nitrate fields and connects them with Valparasio and Santiago. The southern section extends to Puerto Montt, where this letter is written. The first part of the road is through a desert as barren as the Sahara. This goes southward almost to the latitude of Valparaiso, where the longitudinal system crosses the trans-Andine railway to Buenos Aires. Then begins the great central valley, an irrigated region which corresponds in its fertility with the best parts of southern California. Below that the road enters the forests, traversing a country where the farms have had to be cut out of the woods, and where the rainfall in places is 100 inches per year. The central valley section has been built a long time, and fifteen years ago, when I first visited Chile, they were already penetrating into the forest region. I then came on construction trains as far as Temuco, the home of the Araucanian Indians, and I am now a day's ride further south, having gone through pioneer settlements all the way. Within another fifteen years the road will probably have been extended to the Strait of Magellan. This I should say is as much further south of here as from St. Louis to New Orleans.

Government Cross-Country Road

The longitudinal railway belongs to the government and contracts for material and cars may be made with the government officials. The government is furnishing the capital for the extensions and the building goes on steadily. During 1913, 700 miles of new lines were opened to traffic and the total number of miles under construction was 500. Some of this has since been completed. The railroad work paid for in that year was valued at $75,000,000, a sum equal to more than $4 for every man, woman and child in the country.

At the present time Chile has over 4,000 miles of railroad in operation, and of this about one-half belongs to the state. The government began to take over the roads about a generation ago, and by 1910 it had paid something like $200,000,000 for them.

The state railways are managed by officials appointed by the president. There is a general manager who is assisted by nine administrators. The administrator holds a similar position to that of general manager of a private railroad, and the system is divided into nine sections, each of which has its administrator. The chief offices of the state roads are at Santiago, and there is a close connection with them and the government as to all appointments. Every man who gets more than about $1,000 a year receives his appointment directly from the president, and the others are selected by the general manager with the advice of his subordinates. This makes every railroad office a government job, and all appointments, from the administrator to the brakeman and track layer are more or less affected by pull. I have talked with many people here concerning the service. So far have yet to meet an unprejudiced observer who believes that government ownership is good for the roads or the people. Indeed, the railway question is one of the live ones of public discussion, and the figures show that the most of the lines are annually worked at a loss of several millions of dollars.

Big Deficits Caused by Politics

The difference between the receipts and the expenditures does not show the whole deficit arising from government management. There is an enormous additional loss in the wear and tear of the roads and the rolling stock, owing to carelessness and waste. This is so great that Chile has recently passed an act appropriating more than $20,000,000 to re-equip and reorganize the system. A large amount of this will go into new cars, and will result in large orders from the United States. As it is now, most of the cars have come from our country and as originally shipped they were the best of their kind. They now show the effects of the long lack of repairs. Those in which I have traveled need paint and varnish. The windows rattle and everything seems rickety, shabby and going to seed. I have been in Pullman cars where the fine veneering of the ceiling has so cracked and blistered that it hung down like the wall paper of a damp building, and in some coaches the rain dripped through. The freight cars are in a bad way and no one watches the leaks. Others of the cars are more comfortable, the dining and sleeping car service being fairly good. With the new appropriation there should be no lack of money and conditions will probably improve.

Two-Cent Fares Prevail

The rates of travel on the state railways are low, for a country like this. First-class fares are about 2 cents a mile, second class 1⅓ cents and third-class less than two-thirds of 1 cent per mile. There are additional charges of 50 per cent on the express trains and of about 100 per cent on the rapidos and trains de luxe. There is a reduction of 10 per cent on return tickets of all classes. The freight rates are high, and more than half of the earnings come from freight. The extra charges for baggage are much greater than in the United States and on the central system 4 per cent of the total earnings are made out of luggage.

The amount of freight carried is about 5,000,000 tons per annum, the number of passengers over 12,000,000,000 and the total receipts more than $13,000,000 in gold. The expenditures are more than $15,000,000, so that the deficit is more than $2,000,000. The state is now operating about 2,000 miles of railway, and its employes are more than 11,000, or over five to the mile.

In addition to the government railways are those owned by private parties and companies. These roads have a trackage almost as long as that of the government system, and their total capitalization is quite as great. Their freight and passenger rates are higher, but the service is better. Many of them are run in connection with mines and other interests and the returns do not show the actual receipts or the profits.

Nitrate Companies Operate Lines

Take, for instance, the nitrate railways, of which there are seven. They run from the ports out into the desert and carry but little else than nitrate of soda. They range in length from fifty miles to 300 or 400, and their business is in proportion to the nitrate factories or oficinas with which they connect. The Pisagua railroad, that runs between Pisagua and Iquique, has a length of 350 miles, and its capitalization is $10,000,000. Its gauge is only sixteen inches. Nevertheless, it has been paying over 7 per cent on its common stock for a number of years, and its net receipts are now more than $17,000,000 per annum. That road is owned in England.

Another profitable road is the Anglo-Chilean nitrate road, which runs from the port of Tocopilla to several different oficinas, having a length of seventy odd miles. It is capitalized at $5,000,000 and in 1911 its dividend was 15 per cent. And then there is a road from Mejillones that connects with the Antofagasta railway to Bolivia. That road is about eighty miles long, and it has a thirty-inch gauge. It will carry the copper of the Guggenheim syndicate mines down to the coast and should have an enormous profit therefrom. At present it is a part of the Antofagasta-Bolivia railway system, which is exceedingly profitable. The Taltal Railway company, which runs from the southern nitrate fields to the port of Taltal on the Pacific, paid a dividend of 9 per cent in 1912. All of these railroads are feeders of the longitudinal system, and that system has been built to connect them as well as to give a line north and south throughout the republic.

Large Number of Lines Planned

A most interesting feature of the Chilean railway situation is the number of lines that have been planned to cross the continent, traversing the Andes and joining the Argentine railray systems to those of the west coast. The only one of these that has been completed is that which extends from Valparaiso to Buenos Aires. This is about as long as the dis-

tance between New York and Chicago. It crosses the Andes at an altitude of 10,500 feet above the sea through a tunnel that is nearly two miles long. The road was expensive to build, and it is so costly to operate that its freight rates will always be high. It has a rack and pinion or cog railroad system of about twenty-five miles, and the gauge is such that freight has to be transferred twice during the journey across the continent. The fare from Santiago to Buenos Aires is $65, with a very small allowance for baggage. This is more than three times as much as the cost of the trip from New York to Chicago.

Merely a Short Cut Line

Another transcontinental railroad that will soon be completed will connect the port of Antofagasta with Buenos Aires. This is an extension of a branch of the Antofagasta-Bolivia railway. I have already described my journey over it from Bolivia to the sea. The transcontinental extension leaves the main line at Uyuni, where it has an altitude of about 12,600 feet, and thence passes through a rich mineral district, crossing Bolivia to the frontier, at La Quiaca, where it will connect with the great railway system of Argentina. The road has already been constructed to Tupiza, and within less than a year it should be connected with the Argentine system. The distance between the two points is now only sixty-six miles. This road will never be a general passenger line across South America. The distance is too great. It will, however, be the short cut from the Pacific ocean to the upper part of the Argentine Republic, and will be Bolivia's outlet to the Atlantic.

Chile has plans and surveys already made for several very important transcontinental railways south of the present line from Valpraiso to Buenos Aires. Some of them will have their termini at Bahai Blanca, the Argentine port on the Atlantic ocean, a day's ride south of Beunos Aires, and one will connect Talcahuano, the great commercial and naval station near Concepcion with that port. This road will cross Chile from Concepcion to Antuco, and thence go on into the Argentine, where it will connect with the roads which have their termini in Bahia Blanca.

Crosses Andes Through Short Tunnel

This transandine road will be about 200 miles shorter than the road now in operation between Valparaiso and Buenos Aires, via Juncal. It will be easier of construction and will cross the Andes through a tunnel, which will be less than a mile in length. The government has already granted a subsidy of $1,000,000, to be paid at the rate of $5,000 per kilometer, as it is opened to traffic, until $600,000 have been paid, the remaining $400,000 to be held until the line has been joined up to the Argentine system. Some of this line is already in operation, and it is steadily proceeding. The Argentine section is being arranged for. Another road to Bahia Blanca which has already been decided upon will have a length of 350 miles. This will go via Donquimai.

Between these southern transcontinental roads and the transandine road now in use, several roads to Buenos Aires are being considered and surveyed. One of these from Valpraiso via Maipo, is about 1,000 miles long. Another from the port of Llico, still further south to is ninety-five miles, and a third from the port of Llico, still further south to Buenos Aires, is 1,033 miles long. In addition to these there are three others planned to go through the Colorado route, which would connect them with the port of Constitution. These roads are each about 1,000 miles long.

Panama Canal Has Caused Building

One reason for the anxiety that Chile has for more transcontinental routes is the fear that the Panama canal will reduce the shipping via the Strait of Magellan. Many of the ships that now come through the straits will pass through the canal and down the west coast of Chile, and the country will not have as good facilities by the straits as it has now. The new roads will bring the country into close connection with the Argentine, and the future travel to Europe will be largely by way of Argentine ports.

Chile was the first country of South America to build railways, and the first railways built here were constructed by United States citizens. The first road on the South American continent was made to connect the silver mines of Copiapo with the port of Caldera. The builder was William Wheelwright, whom I have already mentioned in a previous letter. He opened his road for traffic July 4, 1851. The first locomotive that was used is still in existence in one of the Chilean museums, and its name plate shows that it was made by Norris Brothers in Philadelphia in 1850. Wheelwright began the railroad from Valparaiso to Santiago, and he made surveys toward and over the Andes with the idea of a transcontinental route. His first road was built four years before Henry Meiggs, another great railroad contractor, also an American, began work on the Central railroad southward from Santiago.

Massachusetts Man Greatly Honored

William Wheelwright's name is highly honored in Chile. He had a great deal to do with the development of the country. He was born in Newburyport, Mass., and at the age of 26 years was made United States consul at Guayaquil. He served there for several years and then moved to Valparaiso, where he established a line of passenger vessels along the coast. He was the founder of the Pacific Steam Navigation company, and so may be called the first to introduce steam on the west coast. He built the first gas and water works of South America and strung the first telegraph line.

Henry Meiggs, the other great American railroad constructor, built the wonderful road which goes up the Andes back of Lima, Peru. He also constructed the road from Mollendo to Arequipa that now goes on to Lake Titicaca, and he did a great deal of railroad building in Chile. He completed the road from Valparaiso to Santiago, and built some of what is now a part of the longitudinal system. Today a great deal of American rolling stock and rails are still used in Chile, and it is impossible to write about the roads without reference to their close connection with the United States.

(Copyright, 1914, by Frank G. Carpenter.)

To the Boy of the Twentieth Century

SO LIVE that your afterself—the man you ought to be—may in his time be possible and actual. For away in the '20s, the '30s, of the twentieth century, he is awaiting his turn. His body, his brain, his soul are in your boyish hands. He cannot help himself. What will you leave for him? Will it be a brain unspoiled by lust or dissipation, a trained mind to think and act, a nervous system true as a dial in its response to the truth about you? Will you, boy of the twentieth century, let him come as a man among men in his time, or will you throw away his inheritance before he has had the chance to touch it? Will you let him come, taking your place, gaining through your experience, hallowed through your joys, building on them his own, or will you fling his hope away, decreeing, wanton-like, that the man you might have been shall never be?—David Starr Jordan.

This Cheap Farm Power Cuts the Expense-Increases Profits-Reduces Work.

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Write for free catalog and find out how The Heider Tractor is made. How easy it works. How cheap to run. Why it's giving satisfaction and increasing profits on hundreds of farms and why you should have one to reduce your high cost of farming and to solve your hired help problem.

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and inspected Red Clover. Also Mammoth, Alsike, Alfalfa and Sweet Clover of choicest quality.

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Biggest Stumps Pulled For 4c Each—In 5 Minutes!

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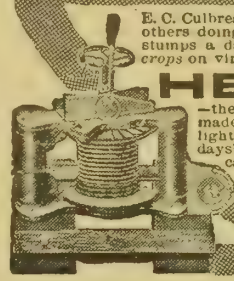

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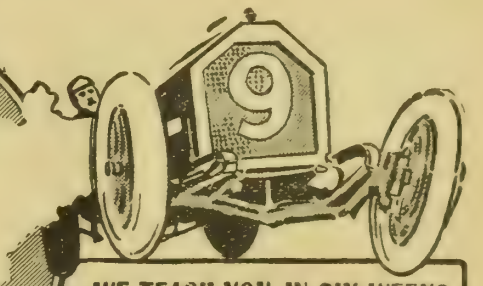

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This is one of the most fertile districts in the West and farming is carried on here entirely without irrigation. The district is traversed by railroads and market conditions are good. We are owners—not agents—and sell our lands on ten annual payments, or on our Celebrated Crop Payment Plan, whereby one-half the crop raised each year is delivered to us at market price until the land is paid for.

Write for descriptive literature and sectional map.

FEDERAL LAND COMPANY
100 West Seventeenth Street, Cheyenne, Wyoming.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

SOME extra good judges of poultry in many ways are very utterly ignorant when it comes to the subject of chicken cholera. Many diseases remote from cholera are classed as cholera by poultry keepers. Most of these thought to be cholera are really curable diseases if taken in time, while cholera is not curable. Limber neck, indigestion, blackhead, etc., are often mistaken for cholera. The main symptoms in cholera are high fever, extreme thirst, saffron-colored droppings, doubling over or getting in the shape of a ball, bill turned under the breast as death approaches, which is in a few hours after attack.

The great Pasteur investigated fowl cholera thoroughly. He tried every drug known that will destroy the bacillus of cholera. This is now over thirty years ago. He found not one remedy, because the action of the germ, after getting into the body, is too swift and destructive for drugs to head it off.

He did find a preventive, though—a good, cheap one; it is sulphuric acid. One pound of the crude acid to every twenty gallons of water. Spray it all over the yards, in the house and on the roosts. Go over everything about the yards, burn all dead fowls and all feathers and poultry filth. Miss one day and again spray, miss a day, then again spray. Keep sulphuric acid in the drinking water, ten drops to the gallon. Where this treatment has been used in outbreaks of cholera, Pasteur made the claim that the outbreak was soon stopped, with but few deaths.

Pasteur proved that the disease must be taken into the mouth if the disease spread. He hooded some chickens in such a manner they could not eat, then placed these, with some others as yet healthy, but free to eat and drink, with cholera-infested fowls. The hooded birds escaped the disease and those free to eat and drink died of the disease shortly.

Sulphuric acid kills the germs by its fumes. It is safe for well chickens to eat over. Its fumes also kill mites and poultry lice also.

Cut Bone for Laying Purposes

Some years ago a certain poultry keeper wrote to this page of his success with green bone in a flock of laying hens. All the extra care this flock got was to see that they got all the extra green-cut bone they could eat every day. Laying was heavy, cockerels and hens grew heavy; it saved other feed. When next I heard that flock had gone to smash after a couple of years. Too much pushing, too much green bone. You cannot give hens all they will eat of fresh meat, for green-cut bone is certainly fresh meat and fresh bone mixed. A few years ago every poultry writer was experimenting with green-cut bone and giving results; then the enthusiasm over green-cut bone died out. And yet there is much to the advisability of feeding green-cut bone in moderation each day in certain amounts if you can get it fresh, as it contains all the elements found in the egg from shell to center, while often much of other animal matter fed for eggs contains nothing of some of the egg elements, and these must be supplied in other foods. An ounce of green bone each day is enough for a laying hen. It must be fresh; to feed it tainted means sickness in the flock, and soon worse. A bone cutter is a necessity where winter eggs are furnished in large numbers for market; or, if handy to a meat market, the butcher often disposes of his green bone scraps, ready cut or shaved, and at low prices. An ounce of green-cut bone a day for each hen saves just that much on the grain bill.

Small Poultry Paragraphs

Lightning lice killers are handy concerns about the poultry house. If the machine is large enough you can put in more birds than one. Place two heaping teaspoonfuls of some good louse killer in the machine, then the bird, or birds. Or, better yet, throw it on them after putting them in the machine. Close the door, turn the crank slowly about ten revolutions if the fowls are grown, five if very young. Let them out. The lice will be fixed. Seven days after give them another turn at the machine—this to kill any nits that have since hatched. These you cannot kill the first time. These machines are made in size for turkeys also.

* * *

If you find fowls getting too fat, cut the ration down to oats or potatoes, or just a litlte of both until the fat is reduced. If the fowls show diarrhea, feed them boiled milk and cooked rice.

* * *

It does not take long to fatten up turkeys for the Christmas market on thick-boiled oatmeal or cornmeal, to which add some suet. Geese fatten on cornmeal, bran and a little suet or meat.

* * *

A flock of twelve hens will supply a family of four with all the fresh eggs they need for table use. The largest hens do not always lay the largest eggs .Minorcas and White Leghorns, as well as other varieties of the Leghorns, lay large eggs. The Hamburg lays a very small egg.

* * *

Rheumatism comes from dampness. This is true with hens as well as ducks. Keep all scratching litter dry. Clean the hen house often. Droppings produce damp. Old, fat hens die of apoplexy. Watch the hen that is heavy with abdominal fat. Better sell her quick.

* * *

Charred bone or charred corn once a week keep hens healthier in winter.

* * *

Those big lice that infest the fluff in winter bring on diarrhea. Keep the fluff dusted.

* * *

Lime purifies the air of the poultry house. Lime is cheap, chickens are high. Every hen you lose you pitch close to a silver dollar in the manure pile, never again to be found.

* * *

One of the simplest nests made is one used in the Maine experiment station. Any boy or girl can make it. Merely a box, into one side of which is fixed a slatted door. This door slips up and down in grooves at the side and is provided with a cheap hook. You hook up the door just so high that the hen in going into the nest presses with her back against the door. This lifts the hook, and as she settles on the nest the door slips down in place, and there she is, shut in until you come to let her out and give her a record.

* * *

All of our chickens originated from the jungle fowl, native to southern Asia and Oceania. Turkeys came from the Americas, guinea fowls from Africa; pheasants originated in Asia, pigeons from the wild Blue Rock dove; ducks are derived from the wild Mallard; geese seem to be common the world over and are the most ancient of fowls.

* * *

Never make the poultry house so low at the back as to strike your head every time you have occasion to go back to the roost. Six and one-half feet for back height is none too high, although some poultry keepers judge five and one-half feet to be a good height. A house twenty feet long by fourteen wide will hold more than fifty or sixty hens if they are allowed considerable free range in winter, and afford scratching room on the bad days well up to the front, but it is safer to house just this number in a house of this size, placing the roosts well to the back and windows to the front.

Big Profits in Trapping

(CONTINUED FROM PAGE EIGHT.)

rabbits, squirrels—in fact, almost any kind of fresh flesh—the fresher the better; they eat of stale flesh only when very hungry and are apt to do without rather than attempt to secure a bait that is not fresh and tempting. Muskrats may be considered as wholly aquatic, being rarely ever seen on land; their range of appetite, however, is greater than that of their brother mink, as they are extremely fond of various vegetables, and nothing seems to suit them better than to cut down the farmer's corn and drag ears, stalk and all, into the water they haunt.

Germozone

The best medicine for Poultry and Pet Stock—roup, colds, canker, sore head, chicken pox, loss of hair or feathers, sores, bowel trouble, skin disease. 25ct., 50ct. and $1.00 bottles. Tablet form 50cts. postpaid. Sold at most cities and towns. Write for sample and poultry book.

GEO. H. LEE CO., Dept. 7, Omaha, Nebr.
Makers of Lee's Lice Killer, Mandy Lee Incubator, etc.

CORN STEEL BIN

Soon pays for itself

in saving from rats and insurance. Portable, Perforated, Shoveling Board, Ventilators. If your dealer does not handle, write for circular and special introductory price.

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MARKET PLACE

POULTRY—Langshans

BLACK LANGSHAN COCKERELS. Write Jake Hetrick, Wahoo, Neb.

WHITE LANGSHAN CHICKENS, White Holland Turkeys, White African guineas; large, early birds; eggs in season. Write for prices. L. T. Cummings, Lakeview Farm, Howe, Neb.

Leghorns

FOR SALE—S. C. W. LEGHORN AND S. C. B. Minorca cockerels. Prices right. Mrs. Emma Duerr, Dorchester, Neb.

A FEW S. C. WHITE LEGHORN cockerels left. I will make a right price on them. Write for it. Geo. L. Darling, Route 2, Doniphan, Neb.

PURE-BRED SINGLE COMB BROWN Leghorn cockerels, $1 each. Ben Meyer, Oakland, Neb.

R. C. WHITE LEGHORN COCKERels, year-old hens, 75c and $1. Elizabeth Hogan, Chippewa Falls, Wis.

ROSE COMB BROWN LEGHORN cockerels, $1 each, 6 for $5. Theodore Reicks, Elgin, Neb.

Light Brahmas.

LIGHT BRAHMA COCKERELS, hens; reasonable. Mrs. M. Wall, Eddyville, Neb.

Orpingtons.

PRICE LIST FREE—SINGLE COMB Buff Orpington, Toulouse geese, Indian Runner ducks. Peter Brehm, Harvard, Neb.

ORPINGTONS—BUFF OR WHITE—Stock for sale. Price list free. Frank Lewis, Gibbon, Neb.

S. C. BUFF ORPINGTON COCKERels from good stock. Write me for prices and guarantee. E. L. Woodcox, Willow Island, Neb.

WHITE ORPINGTON COCKERELS. William Langbein, Avoca, Ia.

POST CARD PHOTOS OF MY WHITE Orpington cockerels free. Extra large birds. Write for prices. R. B. Murphy, Shenandoah, Ia.

PRIZE-WINNING BUFF ORPINGtons, reasonable. Mrs. Cook, Eddyville, Neb.

BUFF ORPINGTON PULLETS, $10 per dozen; line breeding compels sale; best stock from range. Mrs. Minnie Tatro, Geneva, Neb.

Plymouth Rocks.

FINE, EARLY WHITE PLYMOUTH Rock cockerels, extra large, $2 each. A bargain. Hugh Williams, Route 1, Box 71, Wymore, Neb.

CHOICE BARRED ROCK COCKERels and hens for sale. Will ship on approval. George Franklin, Axtell, Neb.

50 FANCY BARRED ROCK COCKERels, $3 to $10; immediate sale; best blood in America; money back guarantee. Dr. George A. Flippin, Stromsburg, Neb.

BARRED PLYMOUTH ROCK COCKerels. A F. Hansen, North Platte, Neb.

FINE WHITE ROCK COCKERELS from good laying strain, $5 each. George A. Kaffenberger, Plattsmouth, Neb.

GIANT BARRED ROCKS AND TOUlouse geese. Sweepstakes on geese; 1st, 2d on cock; 1st, 2d on cockerel at county fair; 40 geese and 400 cockerels to pick from; $1 to $2 for cockerels. $5 per pair for geese. Geo. Drinnin, Columbus, Neb.

WHILE ROCK COCKERELS AND pullets, extra large. Fishel strain, $1.50 each. Mrs. F. S. Manning, Friend, Neb.

Rhode Island Reds.

ROSE COMB RED COCKERELS, $1.50 to $2 each. F. M. Shaver, Bruning, Neb.

SINGLE COMB RHODE ISLAND RED cockerels, birds of fine quality and breeding. Write for details and prices. A. F. Magdanz, Pierce, Neb.

THOROUGHBRED S. C. RHODE Island Reds; cockerels, $2; pullets, $1. Lawrence A. Nelson, Lock Box 707, Hartington, Neb.

REDS, BOTH COMBS, AT LIVING prices; also good incubator. Write for particulars. W. J. Cocklin & Son, Rising City, Neb.

ROSE COMB RHODE ISLAND RED cockerels and pullets, $1.25 each. Claude Musselman, Lyons, Neb.

Turkeys.

BOURBON RED TURKEYS FOR sale. Clinton Myers, R. 4, Fairbury, Neb.

Wyandottes.

SILVER WYANDOTTE COCKS AND cockerels, $1.50 to $5.00. Mrs. Thos. Long, Madison, Neb.

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INDIAN RUNNER DUCKS, $1 EACH. Vern Johnson, Meadow Grove, Neb.

INDIAN RUNNER DUCKS. MRS. Derrick, Battle Creek, Neb.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

THE 115,000 FARM FAMILIES WHO regularly read this page are anxious to buy their breeding stock early this year. A nickel a word a week is the cost of advertising what you have to sell.

CHOICE COCKERELS FOR SALE—We can supply choice cockerels for your next season's breeders of all popular breeds of chickens, geese and ducks. also bantams and fox terrier pups. Logan Valley Poultry Farm, Wayne, Neb.

TURKEYS, DUCKS, GEESE, CHICKens, rabbits, butter and eggs wanted. Ship direct to Perry & Co., Omaha, Neb. Estab. 1896. Reference, Merchants National bank. Prompt pay. Write for quotations.

100 CHOICE COCKERELS, R. I. REDS. Barred and White Rocks, Silver Compines and Buff Orpingtons; prices reasonable. Archdale Farm, Fremont, Neb.

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U. S. GOVERNMENT USES RICHmond Chemical Extinguishers that kill gasoline fires; auto and factory sizes. District managers make 500 per cent profit; auto free. Richmond Chemical Co., Desk 39, Wheeling, W. Va.

YOUNG MAN, WOULD YOU ACCEPT and wear a fine tailor-made suit just for showing it to your friends? Or a Slip-on raincoat free? Could you use $5 a day for a little spare time? Perhaps we can offer you a steady job. Write at once and get beautiful samples, styles and this wonderful offer. Banner Tailoring Co., Dept. 922, Chicago.

$120 ABSOLUTELY SURE—MAN OR woman to distribute religious literature; sixty days' work; quick promotion; no experience necessary; spare time work also. Ziegler Company, Dept. 126, Philadelphia.

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YOUNG MAN OR WOMAN WANTED who desires to attend business college. We have for sale at a discount a scholarship in Boyles Business College, good for either shorthand or business course. Best school in the west, and a position guaranteed. Write us. Twentieth Century Farmer, Omaha, Neb.

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ROSENBLUM SAVES YOU MONEY on groceries. Buy direct at wholesale prices. Send for catalogue today. Five pounds Golden Santos Coffee, $1; pound can Pure Baking Powder, 11c; dozen cans sweet corn, 80c. L. Rosenblum, 808 North 16th St., Omaha, Neb.

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SHIPLAP, $21.50 PER THOUSAND FT. This is our delivered price on No. 1 guaranteed fir shiplap at most any station in Nebraska. Other lumber and mill work at same low prices, shipped subject to inspection. Send your lumber list for freight paid estimate, or ask for complete price list. Western Lumber & Millwork Company, Incorporated, 534 Perkins Bldg., Tacoma, Wash.

FIR LUMBER! RED CEDAR SHINgles! Choice. Mill direct. Save money. White Lansdown, Drawer H. Everett, Wash.

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WE HAVE A FEW HOMESTEAD LOcations and timber claims in northern California, cheap. Full particulars on application. W. T. Smith Co., 1111 City National Bank Bldg., Omaha, Neb.

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LOOKING FOR SOMETHING FOR nothing? Here it is. Small cash payment down and easy terms on balance gets one of my 12 "hand-picked" quarters near Akron, where farmers from Iowa, Nebraska and other states have made good raising wheat, oats, barley, rye, alfalfa, flax, etc.; seasonable rains produce these crops; no hot winds; tractor plow land; every modern convenience near, including fine system of transportation. Price only $10 per acre. A single crop sometimes pays for several acres; fine climate for every member of the family; disease microbes cannot live there. For particulars write Alfred C. Torgeson, Owner, Cedar Rapids, Ia.

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FOR SALE—640 ACRES NEAR GOOD town, well improved, Alberta; 320 acres fair improvements, near good market, Saskatchewan. Good opportunity for well equipped renter. Price right; easy terms to good man who wants home farm. Address Owner, Box 164, Independence, Ia.

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LANDS—Farms Wanted

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THIS FARM WILL SURELY SUIT you. It is well improved and all in crop, hay land and pasture. It makes big money every year. Notice the location—12 miles from O'Neill, 4 miles from Emmet, 7 miles from Atkinson, in the Elkhorn valley, on the river; railroad runs through it and school house on the farm; good five-room house, new barn 26x40 and lean-to whole length double corncrib. Price only $75 per acre. Terms, $5,000 cash, $15,000 at 1¼ per cent and $4,000 6 per cent. Call or write W. P. O'Brien, 410 Bee Bldg., Omaha, Neb.

IF YOU CAN PAY $320 NOW, $680 next March, can sell choice of 12 rich Nebraska valley farms, balance 9 years at 6 per cent. C. Bradley, Wolbach, Neb.

1,000 ACRES, TWO MILES FROM Mullen, Neb., the county seat; house, barn, windmill, and all fenced; fine corn, alfalfa land; $10 per acre. Quick. Lowe & Young, Mullen, Neb.

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I only ran my ad one month in your paper and it sold me entirely out.
MRS. J. L. DERRICK.

Were you as wise as Mrs. Derrick last year? She knew the medium that would sell her stock quickest.

LANDS—Wyoming

FOR SALE OR EXCHANGE—320 acres, six miles from Millbrook, twenty miles from Laramie, half-mile to school; rural route and telephone; all good level land; all irrigated; first-class water right; 30 acres alfalfa; good seven-room house; fair barn and other buildings. Price, $65 per acre. 160 acres, seven miles from Millbrook, twenty miles from Laramie, one mile to school; rural route, telephone; all but twenty acres under cultivation; good five-room house, large barn, granary, milk house and other buildings; first-class water right; very best soil. Price, $75 per acre. 320 acres, eight miles from Millbrook, nineteen miles to Laramie, 1½ miles to school, two miles to postoffice; five acres of alfalfa, 20 acres other crops; good fences; no buildings; fine, level farm; can all be plowed; all irrigated. Price, $55 per acre. 80 acres, seven miles from Millbrook, twenty miles to Laramie, 1½ to postoffice, half-mile to school; seventy acres under cultivation, balance good land; all irrigated; first-class water right; splendid producing land. Price, $65 per acre. I represent all the above as owner and have several other farms, some larger. Will exchange for improved farms in Iowa or eastern Nebraska that are offered worth the money. A splendid opportunity for those wanting to change to better climate. A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

ATTENTION GERMAN FARMERS! My four improved farms to rent on the crop-sharing plan, which will easily double your present income and more, with no aditional labor or investment. These farms are situated about seven miles from Millbrook, twenty miles from Laramie, Wyo., an up-to-the-moment city of 10,000 people, with the State university there and the experiment station on the way. Roads are fine and the rural free delivery stage goes by every day; school within a mile and telephone, too; good, comfortable houses, barns and other buildings. These farms have plenty of water to irrigate with and good, pure water in wells for other uses. They are partly in alfalfa and have been farmed for several years. Can farm a quarter here as easily as an eighty where you are; no diseases to attack stock; hog cholera unknown; climate particularly suited to growing children and those having asthma, throat or lung trouble. Here you can have plenty of cheap feed to fatten stock and have a money-making dairy. Butter-fat brings from 33 to 38 cents per pound; four to five cows will far more than support the family; plenty of cheap pasture. Applicants should have horses, implements and cows. For further particulars write A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

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FOR THE NEXT 90 DAYS WE WILL dispose of all our Holstein calves, from heavy-producing, high-grade Holstein cows and a very fine, pure-bred sire. The calves are from 3 to 5 weeks old, weaned; are beautifully marked. Either sex, $17, crated for shipment anywhere. If you wish to get started in good ones, send order at once. Whitewater Stock Farm, Whitewater, Wis.

POLAND-CHINA PIGS—BIG TYPE pedigreed. Davis Bros., Lincoln, Neb.

MULE-FOOT HOGS, SPRING GILTS, fall pigs, either sex. Prices reasonable. Henry Jorgensen, Minden, Neb.

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FOX TERRIER, ALL AGES; BEST rat, pet or watch dogs. T. H. Kaldenberg, Pella, Ia.

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ALFALFA SEED; BUMPER SAMPLE and growers' price on application. J. L. Maxson, Buffalo Gap, S. D.

SUDAN GRASS SEED FOR SALE. John L. Abernathy, Purcell, Okl.

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Recommendations of the Nebraska School Law Revision Commission

IN ACCORDANCE with a resolution passed by the Nebraska Farmers' Congress at its session last year, a bill was introduced into the legislature and passed, authorizing the governor to appoint a commission for the purpose of suggesting a new code of laws regulating the schools of the state, and especially the rural schools. There has been some criticism of the commission thus appointed for the reason that it is entirely composed of school men, the rural patrons, who originally asked for the appointment of such commission, having no representation on the board.

Moreover, there has been a wide difference of opinion among the people of the state, including the school people themselves, as to just what the recommendations of this board were. We have secured, in black and white, the recommendations of this school law revision commission and give herewith, in the words of the commission, their recommendations as to certain things upon which there has been a great deal of disagreement and misunderstanding. While we believe the rural patrons are right in thinking they should have been represented in this matter, yet we believe a careful consideration should be given to the plans outlined and that they should be considered entirely on their merits and without regard to the source from which they came. We give some of the recommendations of this commission which particularly interest the patrons of the rural schools:

Constitutional Amendments

The elimination of the office of state superintendent and the creation of a board of education, with authority to appoint a commissioner of education as its executive officer and to perform such other duties as may be provided by the statutes.

An amendment preventing further sale of school lands.

Changes in Present School Laws

(Numbers referred to are in chapter 71, entitled "Schools," of the Revised Statutes of Nebraska, 1913.)

ARTICLE I—SCHOOL DISTRICTS.

The provision for the discontinuance of old districts shall not apply to change of boundaries or consolidation of districts.

ARTICLE II—DISTRICT MEETINGS.

Change in the date of the annual meeting from last Monday in June to third Monday in June.

The qualified voters in any new school district shall have power to adjourn for a period of six weeks after the first meeting to designate a site.

There shall be no authority for adjourning the annual meeting for the purpose of changing a site when once established.

Provision for seven months' school in all districts.

The extension of state aid for free high school tuition in all districts exempt from free high school tuition.

ARTICLE IV—POWERS AND DUTIES OF DISTRICT OFFICERS.

The recommendation of the county superintendent for all teachers employed by school officers.

ARTICLE V—DISTRICT BOARD—POWERS AND DUTIES.

School boards shall require the school to be classified in accordance with the prescribed state course of study.

Making it the duty of school districts to pay the expenses of at least one school officer to one meeting of county school officers.

Officers interested in contracts for building or furnishing supplies shall be automatically removed from the board.

It shall be the duty of the county treasurers to withhold annually from the general funds of each school district the sum of 10 cents per pupil as shown by the total number of pupils within the school district. This money shall be invested in library books. County superintendents shall select these books from a list prepared and furnished by the Nebraska Public Library commission. School boards shall provide for the care of the library. The rules and regulations under which the library shall be used shall be furnished by the state superintendent, together with the secretary of the Public Library commission.

ARTICLE VIII—FREE HIGH SCHOOL EDUCATION.

School districts to be holden for free tuition for the time for which free high school was applied, when parents or guardians remove from the district.

County superintendents shall be required to notify all persons interested in approval of accredited schools.

The tuition for free high school attendance was recommended to be raised from 75 cents to $1 a week.

ARTICLE XV—COUNTY SUPERINTENDENT.

County superintendents shall be required to hold professional state certificates and have three years' successful experience as a teacher; and county boards shall allow them such clerical help and traveling expenses as shall be deemed necessary.

ARTICLE XVI—STATE SUPERINTENDENT.

State superintendent shall be required to hold a life certificate and have five years' successful experience in school work.

ARTICLE XVII—SCHOOLHOUSE SITES

Provision for sanitary location of school buildings for the state superintendent to prescribe rules and examine plans for new buildings and that said plans shall be submitted to the state department before any money is paid for new school buildings.

ARTICLE XIX—COMPULSORY EDUCATION.

The minimum for compulsory attendance shall be twenty weeks.

The county sheriff to be made the truant officer for the county.

Persons violating the compulsory school law and found guilty shall be holden for costs in addition to fine.

Children residing within the corporate limits of cities, towns and villages shall be required to attend school the full time school is in session. The exemption as to distance shall be two and one-half miles instead of two miles.

ARTICLE XX—SCHOOL FUNDS.

The laws governing the state appropriation of school funds are recommended to be amended as follows:

The one-fourth apportionment to be divided equally among all the districts of the state and the amount for each district certified to the county superintendent direct from the state superintendent's office. The remaining three-fourths to be apportioned to each county in accordance with the school census, as last certified to the state superintendent by each county superintendent. And the amount coming to the county superintendent from this source to be apportioned in his county to the different districts in accordance with the average attendance.

School treasurers may deposit school funds in accordance with the depositing law, and the interest shall revert to the fund.

Money in the sinking fund may be invested in school district warrants of their own issue in addition to the five provisions already certified in the present law.

New Legislation

STATUTORY PROVISIONS FOR TAXATION.

A tax of 5 per cent of the gross receipts from water power projects in the state under state franchise to be invested in permanent school funds.

A tax sufficient to wipe out indebtedness in insolvent school districts, said districts to be named in the bill.

The levy of a 2-mill state tax for the support of the schools, said tax to be distributed with the state apportionment.

COUNTY UNIT MEASURE.

Whenever 10 per cent of the voters of the county, having children of school age, petition the board of commissioners, an election shall be called to determine whether the county shall be organized as a single school district. If a majority of the voters, voting at the election, decide in favor of said proposition it shall be the duty of the county commissioners to organize the county into a school district and divide it into five school wards. The board of education shall consist of five members, who shall be vested with the corporate powers of the district. These members shall be residents of each ward, but be elected at large. They shall further be elected at a school election held in March and on a ticket with no political affiliation. The organization of the board shall consist of a president and vice president and a recording secretary. This board shall hold its regular meeting quarterly and special meetings as circumstances may require. The county treasurer shall be ex-officio treasurer of the school district and be general custodian of the funds of the district. School officers shall receive expenses for attendance at meetings.

The county superintendent shall be elected by the board; he shall hold a life certificate and shall have had three years' successful experience as a teacher.

There shall be elected at the annual election in March a school director in each sub-district. The term sub-district indicates the territory prescribed by the county board for attendance at a particular school and constitute the election sub-district for all school elections.

The board of education of county school districts shall be charged with the establishment of a uniform and efficient system of schools, may purchase and hold real estate; locate, build and maintain in repair necessary school buildings; employ teachers, supervising and administrative officers; change boundaries of school districts equip buildings and buy necessary supplies.

TEACHERS' PENSION.

In every school district in the state of Nebraska other than districts in cities of the metropolitan class there shall be created a school teachers' retirement fund.

The management of this fund is to be vested in a board of five members, consisting of the state insurance commissioner, secretary of the state banking board, state superintendent of public instruction and two persons appointed by the governor. They shall receive all money collected by the school officers of the different institutions supported by public taxes for this fund and turn the same over to the state treasurer to be drawn on by themselves as authorized by this act.

The first appointment by the governor shall be one member to serve three years and one to serve five years. The two appointed members shall serve for a term of five years after the first appointment.

This board has full power to make its own rules governing the receipt and withdrawal of funds and to employ an executive secretary, who shall carry out the orders of the board and who shall receive a salary of not less than $2,000 a year. The members of this board shall be reimbursed for all traveling and other necessary expenses.

This fund shall be raised by an assessment of not less than 1 per cent and not more than 1½ per cent of every installment of salary paid to a teacher, instructor, professor, supervisor, principal, superintendent regularly employed by a school district, normal school, university or any educational institution supported by public funds. The board of education of each school district or authorities controlling public educational institutions shall collect this amount and remit monthly to the state board of teachers' pensions.

First—In school district bonds.

Second—In county bonds.

Third—In bonds of the state of Nebraska.

Fourth—In bonds of the United States of America.

Any teacher in the state who has taught twenty-five years or more in public schools, or in educational institutions supported by public funds, at least five years of which have been taught in Nebraska, may retire at the age of 60 and receive a pension according to the terms of this law.

Any teacher who has taught a total of twenty-five years or more in public schools, or in educational institutions supported by public funds, at least fifteen years in Nebraska, may retire at the age of 55 and receive a pension according to the terms of this law.

Every teacher in the state entitled to the benefits under the provisions of this act shall receive $500 annually, to be paid quarterly, after they have retired as herein set forth.

Any teacher coming into the state and having taught five years in Nebraska and twenty years in another state in public schools or other educational institutions supported by public funds of other states, and desiring to be retired, must first pay into the fund an amount equal to the amount they would have paid under this plan had they taught the full twenty-five years in Nebraska.

All teachers who have completed a part of the required number of years prior to the passage of this act must also pay in the full twenty-five payments before they may be allowed to participate. Anyone whose experience and age will meet the requirements of this act may immediately be retired upon the payment into the fund of an amount equal to twenty-five payments, payments to be the per cent of the average salary for the twenty-five years. Persons who are disqualified to longer work on account of ill health, accident, etc., may be retired and receive a yearly pension, which shall be such a part of $500 as is the total payments paid in.

Seven months will be the minimum term that will count as a year. Where less than seven months has been taught in any one year, each month taught shall count as one-seventh of a year.

Any teacher withdrawing from the service shall have all contributions refunded with 2 per cent interest.

The heirs of any teacher who dies before retirement shall have all contributions refunded with 2 per cent interest.

The heirs of any teacher who dies after retirement shall have all contributions refunded with 2 per cent interest less the amount received from the retirement fund by such teacher.

The commission recommends that a law be enacted to provide for medical inspection through the co-operation of the board of health and the state superintendent.

The commission recommends that a law be enacted to provide for the selection of county superintendents in a manner similar to that now governing the selection of city superintendents.

The commission recommends that a law be enacted to provide a system of vocational training for rural schools.

Breeders' Notes

Rapp Bros. Average $136

Rapp Bros.' Shorthorn sale was held on the farm south of St. Edwards, Neb., October 29, as was advertised. The day was ideal and roads splendid for automobile travel, and in consequence a very large crowd was in attendance. Rapp Bros. are well known as men of integrity and standing, not only abroad, but at home. It was certainly gratifying to find so large an attendance of the neighbors of these gentlemen at this sale, showing that they were interested in what was being done and wished them sucess in their enterprise. The cattle offered were in prime breeding condition, not a single animal going through the ring overloaded with fat and none on the thin order. In all seventy-one head were disposed of at an average of $136. Colonel Fred Rappert did the selling in his usual efficient style. Below is list of sales of $100 and over:

No.	Owner and Residence.	Price.
1	Dan Cahill, St. Edwards, Neb.	$225
2	A. S. Nelson & Son, Malcolm, Neb.	150
3	A. S. Nelson	155
4	Dan Cahill	115
5	J. S. Weaverl, Ewing, Neb.	130
9	Jim Lahey, Ewing, Neb.	120
10	G. E. Clark, Elgin, Neb.	140
11	Thelander Bros., Osceola, Neb.	147
12	E. B. Kinney, Elgin, Neb.	135
13	L. F. Voss, Schuyler, Neb.	140
16	Sample Bros., Belgrade, Neb.	125
17	Cloy Ayers, Albion, Neb.	110
18	M. A. Swain, Ewing, Neb.	170
19	Thelander Bros.	120
20	Fred Barnes, Loretta, Neb.	120
21	Thomas Stanton, Wheaton, Ill.	190
23	F. L. Foss, Schuyler, Neb.	112
24	L. G. Rapp	105
25	Howell, Reese & Son, Pilger, Neb.	190
26	G. E. Clark	145
28	R. Widle & Son, Genoa, Neb.	122
29	D. Cahill	110
30	Thelander Bros.	100
32	G. Collins	140
33	R. Widle & Son	200
34	Dan Cahill	120
35	L. E. Anderson, St. Edwards, Neb.	110
36	A. E. Olson, Newman Grove, Neb.	162
37	J. P. Johnson, New. Grove, Neb.	147
39	E. C Clark	110
40	L G. Rapp	115
42	Frank Johnson, St. Edwards, Neb.	160
43	M. A. Swain	145
44	Cloy Ayers	110
45	E. L. Moss, Fullerton, Neb.	160
46	J. S. Weaverling	200
48	Sample Bros.	115
49	D. Cahill	130
52	E. C. Clark	120
55	M. A. Swain	170
56	J. S. Weaverling	450
57	E. M. Bird, Gothenburg, Neb.	340
58	A. S. Weaverling	105
59	A. Douhit, Fullerton, Neb.	215
60	Chaybur Bros., Monroe, Neb.	112
61	C. G. Wagner, St. Edwards, Neb.	105
62	William House, Fullerton, Neb.	137

(CONTINUED ON PAGE EIGHTEEN.)

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Wilson Common-Sense Ear Drums often called "Little Wireless Phones for the Ears" are restoring perfect hearing in every condition of deafness or defective hearing from causes such as Catarrhal Deafness, Relaxed or Sunken Drums, Thickened Drums, Roaring and Hissing Sounds, Perforated, Wholly or Partially Destroyed Drums, Discharge from Ears, etc. No matter what the case or how long standing it is, testimonials received show marvelous results. Common-Sense Drums strengthen the nerves of the ears and concentrate the sound waves on one point of the natural drums, thus successfully restoring perfect hearing where medical skill even fails to help. They are made of a soft, sensitized material, comfortable and safe to wear. They are easily adjusted by the wearer and out of sight when worn.

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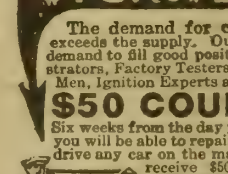

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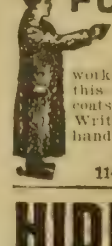

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Helps to Rural Credit

It often happens when a needed reform halts or fails that the secret of the failure lies in a quite unexpected quarter. Necessary conditions have not been met. Perhaps some necessary condition has even been opposed by the prejudice of the very advocates of the reform. The reform of rural credit is a case in point.

Before farmers can borrow on their land at best advantage to themselves we must introduce several changes in our accustomed procedure.

First, we need a system of land registration that shall remove the delay and expense of tracing titles back through many transfers of ownership. The Torrens system, originated in Australia, has been introduced into Canada, and is making its way slowly in the United States. It provides for careful examination of title once for all by state officials, who register the title upon public records and issue a certificate to that effect. When the owner wishes to borrow he presents his certificate of ownership. The lender has simply to inquire at the registrar's office to discover that the certificate is good, and the title is then established without further trouble or expense.

A second reform of first-rate importance to the farmer is the introduction of an amortization clause into mortgage loans. Amortization is the extinction of an interest-bearing debt by annual payments, each of which includes the interest and a part of the principal. For example, if a man borrows $1,000 at 6 per cent, and agrees to pay $70 a year to the lender, it is evident that the first year the interest paid will be $60, and that the amount of principal extinguished will be $10. The tenth year $53.11 will be paid on interest and $16.89 on principal, and so on until, in thirty-four years, the entire debt is paid. Almost all mortgage debts in Europe are subject to this amortization process, which plays a great and beneficent part in rural finance. The arrangement need not prevent the debtor from paying the debt in full before its maturity should he wish to do so.

A third reform that is greatly to the advantage of the farmer is freeing from local taxation all mortgages on real estate and all bonds issued against them. The farmer himself is often the chief objector to this exemption. He is his own worst enemy here. If farm loans are to be cheap, it is necessary not only that the security be good, but that capital of a convervative type, which is satisfied with relatively small returns, should seek them out. Here freedom from taxation is helpful. On the one hand, the tax, when it exists, is often upon the debtor's shoulders. Take it off and the farmer benefits immediately. On the other hand, where the creditor has to pay no tax, he may lower the rate of interest, and, as more capital is attracted to this form of investment, he must lower it. In any case mortgages will be in greater demand, find a wider and more stable market and attract a more conservative type of lender. That means competition for good mortgages, and that, in turn, means low interest rates.

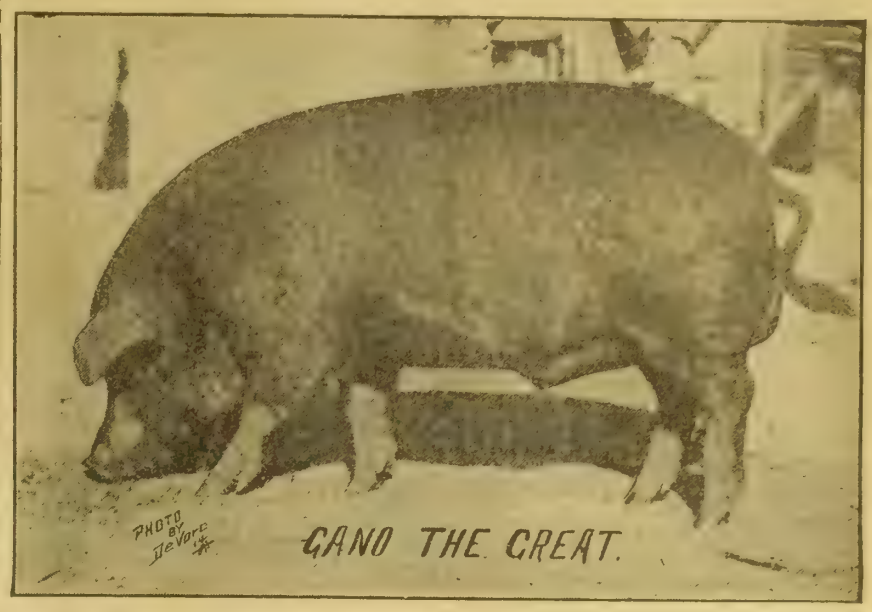
Note—The above article, which appeared in a recent issue of the Youths' Companion, sets forth clearly and comprehensively some matters that are of particular interest to farmers at the present time. We would be very glad to hear from our readers on their views of the subjects thus suggested. In this connection we want to call the attention of our Nebraska readers to the fact that the Torrens system and farm credits in general are among the live topics to be discussed at the meeting of the Nebraska Farmers' Congress in Omaha in December.

Bog Spavin

R. E. B., Missouri: I would like to ask in your exchange column if your editor or any of your readers can give me any information as to treating bog spavin? I have tried patent medicines, also coal oil. I have gotten good blisters, yet it doesn't seem to take out the swelling. Any information will be gratefully received.

Answer—Bog spavin is one of the most stubborn things there is to treat. After it becomes well developed there is nothing that will entirely cure it. The best remedies are rest, blistering and a good liniment. If the horse is kept at work it is impossible to do anything for the spavin. We would be glad to recommend liniments with which we have had good results had you sent your name, so that we could have written a personal letter, but we cannot do so through these columns.

Steinbach Buys Boar



This boar now heads the herd of Fred Steinbach of Yutan, Neb., who is back in the Duroc game again. Gano the Great is perhaps as good a boar as Colonel Gano ever sired. He is surely one of the largest boars of his age. He was farrowed February 12, 1914; weighs 325 pounds in very thin condition, measures six feet three inches from tip to tip, fifty-four inches from between ears to root of tail, and has a 7½-inch bone. Mr. Steinbach paid O. S. Larson $300 for this pig.

Our Old Friend Putnam Writes Again

(CONTINUED FROM PAGE FIVE.)

along with raisin' less fur a few years and learn to put in some other crops.

Cottrell, that agricultural man the Rock Island railroad has had travelin' around here, he's got the right idea on that point. He's tellin' the Arkansaw farmers right now to put in winter oats, so's they'll have feed fur their work stock next May when corn is high. And then, in the spring, put in corn, peanuts, cowpeas and other kinds of grain and hay crops and figger on puttin' some of this feed into hogs and cattle. If the southern farmers don't do that they won't have no money to send up to the Chicago packers fur lard and dressed beef, and no cash fur the Elgin butter-makers or the Wisconsin cheese fellers next year, and then they'll have to turn their stock out in the woods fur pasture and eat wild blackberries and git chigger-bit while foragin' fur grub in the wilderness theirselves.

Must Learn by Experience

They ain't no way by which you kin force a man to quit plantin' a cash crop except by experience. All the laws they would make to stop cotton plantin' wouldn't have no effect except to make the farmer put in a little more than usual, because he thought his neighbor was a law-abidin' simpleton. If the south would pass such laws we'd have the biggest cotton crop in hist'ry in 1915.

If the government would advance money to finance the south fur this season it would be convincin' evidence to the southern planter that it's his God-given right to supply the world with cotton and that the world owes him his grub in return.

Now I don't want to be misunderstood—I'm tellin' you-all that the south ought to raise cotton, and lots of it, but she'll never be real prosperous till the cotton farmer learns that he's got to feed himself and his stock, too. He's got the soil, the climate, the land and everything but the inclination, an' if this war in Europe lasts six months longer he'll have that, too, and it will be bought at the expense of a hard winter and be cheap at the price.

There's this about cotton—it won't spoil. It's a good deal like cold storage eggs—it will keep a long time and be just as fresh when the bale is busted open as them eggs you brought in off the farm last April and got 15 cents a dozen for, that goes on the table in December at 60 cents a dozen, havin' increased in value with age like wine or Kentucky whisky. But age don't make cotton higher-priced; it depends on supply and demand.

If the crop is big, prices goes down, and if the mills quit runnin', it has to wait till they start ag'in. But, just the same, more and more cotton is bein' used every year.

Civilization is makin' the nations of the tropics put on cotton pants; the Chinese Mandarin is beginnin' to use less silk in his fine robes, and the coolie is wearin' a broader ribbon around his waist. Even our fashion ladies are goin' in more fur cotton then they used to; so there ain't nothin' the matter with the demand. There ain't nothin' wrong except the war's interferin' with our trade, so I say it won't do fur the south to stop raisin' cotton, but just ease up a little and give some of the cotton land a rest. I never could see the sense of raisin' a cash crop and tradin' it fur somethin' else that you could just as well raise yourself, and on which you was payin' two or three profits besides.

He Should Feed Himself

The farmer in the south that'll grow his own meat and feed kin put some of the cotton cash in the bank instead of sending it north. Us farmers in the north has got plenty market in the cities for our meat without sending it to a country that kin raise three steers to our one; that kin git 80 to 100 bushels of corn every season and kin fatten hogs at 2 cents a pound.

Then why don't they do it? Just because it's so easy to make a livin' in the south that most of the farmers are satisfied to float along without exertin' theirselves. But they're findin' out this fall that the man who don't make his farm a one-crop proposition is the man that makes the money, even if he has to use more muscle and brains in the makin'.

I ain't a-sayin' that, with all its natural advantages, the south hain't got some drawbacks. I done mentioned one of 'em—chiggers Ever been chigger-bit? Well, I got all covered up with bites onct in Arkansaw and I'll never furgit what a time I had. Lawsy! how they did itch! I'll never gi caught that way ag'in, though. A travelin' man told me that the way to do was to take a bath right after comin' from the woods and use laundry soap, which will kill 'em. Of course, when a man's got to go out in the woods every day and git exposed, it's kind-a hard on your constitution to apply the remedy so often, especially when he's like me, from Missouri, where the maximum bath rate is onct a week.

I think the Lord put chiggers in the south to give the farmers a little energy, but they've got so used to 'em that they just sets there and scratches and scratches and cusses their luck. Yours truly,

THOMAS JEFFERSON PUTNAM.

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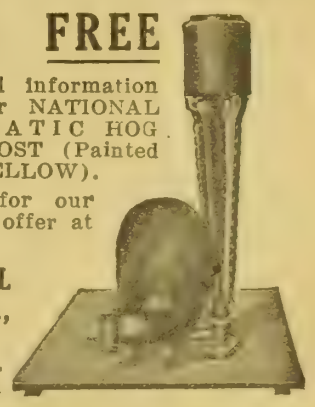

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H. D. Beers, Springwater, N. Y., writes: "Last spring I bought Save-the-Horse to use on a large knee and a bone spavin and it cured both."

Our Answer Gave Him Hope

John. P. Peterson, San Leandro, Cal., Sept. 14, 1914, writes: "I thought several times to write, but waited to be sure of what Save-the-Horse has done. It is surely all you claim. It has actually done wonders for my black mare Phoebe. She was foundered so bad that neither I nor anybody else ever thought she would walk again.

I was told to kill her for the chickens. I wrote and your answer gave me hope, so I got Save-the-Horse. It cured the founder entirely, I can't see any remains of it whatsoever, I thank you for the promptness and kindness that you awarded me in your dealings."

Bows Tendon, but Races 28 Days After

McKenney-Hunter, Roman Hippodrome Races and High School Horses, of Haddam, Kan., Feb. 29, 1912, writes: "Please send me Save-the-Horse Book. We have used Save-the-Horse for years, and found it the best remedy that we ever used. One of our runners bowed a tendon last fall so bad that by the time we got him back to the stable he could barely put his foot to the ground; horsemen that saw him said it would be impossible to use him again that season, and some went so far as to say he would never be able to race. We used your Save-the-Horse, and within 28 days from the day he was hurt we raced him ¾ of a mile at Greenfield, Ia., in 1:15½, winning. We raced him two more times after that. The horse's name is Major Danials, and he is now as sound as ever."

We Originated the plan of treating horses Under Signed Contract—Bond to Return Money if Remedy fails.

OUR LATEST "SAVE-THE-HORSE BOOK" is our 18 years' **Discoveries—Treating** Every Kind of Ringbone—Thoropin—SPAVIN—and ALL—Shoulder, Knee, Ankle, Hoof and Tendon Disease. It is a mind settler—Tells How to locate and treat 58 forms of **LAMENESS—Illustrated. Our Charges for Treatment ARE MODERATE.**

But write, describe your case, and we will send our—**BOOK**—Sample Contract, and Advice—**ALL FREE** to (Horse Owners and Managers Only). **Address,**

TROY CHEMICAL CO., 16 Commerce Ave., Binghamton, N. Y.

Druggists Everywhere sell Save-The-Horse with Contract, or we send by Mail or Express **PREPAID.**

A.V. Rowe Pres.

TRY This RUBBING POST 30 Days FREE At My Risk

SEND NO MONEY

If you will write and tell me how many hogs you have I will send you at once, all freight charges paid, as many of my New Idea Rubbing Posts as you want to try and one gallon of Medicated Oil free with each Post. You can put them up in your own hog yard and let your hogs rub against them 30 days at my risk. If you don't say my Posts are the simplest, safest, most durable and most economical Rubbing Posts on the market, and the best investment you can make for your hogs I will pay the return freight charges and not ask you to pay me a single penny either for the use of the Posts or for the Oil consumed.

Rowe's NEW IDEA Rubbing Posts

have no valves—nothing to get out of order. Stock can't break them. Dirt can't clog them. Oil can't be wasted. Rain can't wash out oil. Every drop is applied as needed **right on the itch** when the hog rubs. Pigs of all sizes and ages can rub on these Posts and keep themselves vermin-free, mange-free and healthy. Three rubbing bars on each Post. One Post accommodates 30 hogs. Uses either crude oil or Medicated Oil. **Helps prevent hog cholera.** Keeps animals comfortable, contented—and they put on flesh faster—make you more money.

SAVE $2 to $12 ON EACH POST at these CUT PRICES

Pay if Pleased

1 Post	$ 7.75
2 Posts	15.00
3 Posts	21.75
4 Posts	28.00

1 Gal. Medicated Oil Free with each Post.

I'll Furnish the Posts—I'll Furnish the Oil—I'll Pay the Freight

Prove these claims at my risk on your own farm before you pay. Just write and tell me how many Posts you want to try. Send no money. Order direct from this advertisement or if you prefer write for big illustrated folder today.

Alvin V. Rowe, Pres., ROWE MFG. CO., 421 Liberty Street, Galesburg, Ill.

Also Makers of Famous CAN'T-SAG Gates

Canada is Calling You to her Rich Wheat Lands

She extends to Americans a hearty invitation to settle on her **FREE Homestead lands of 160 acres each** or secure some of the low priced lands in **Manitoba, Saskatchewan and Alberta.**

This year wheat is higher but Canadian land just as cheap, so the opportunity is more attractive than ever. Canada wants you to help to **feed the world by tilling some of her soil—land similar to that** which during many years **has averaged 20 to 45 bushels of wheat to the acre. Think what you can make with wheat around $1 a bushel** and land so easy to get. Wonderful yields also of **Oats, Barley and Flax. Mixed farming is fully as profitable an industry as grain growing.**

160 ACRE FARMS IN WESTERN CANADA FREE

The Government this year is asking farmers to put increased acreage into grain. Military service is not compulsory in Canada but there is a great demand for farm labor to replace the many young men who have volunteered for service. The climate is healthful and agreeable, railway facilities excellent, good schools and churches convenient. Write for literature and particulars as to reduced railway rates to Superintendent Immigration, Ottawa, Canada, or to

W. V. BENNETT,

Room 4 Bee Bldg., Omaha, Neb.

Canadian Government Agent.

Twentieth Century Farmer Sells Live Stock

October 5, 1914.

Twentieth Century Farmer:

Have sold quite a few spring boars for very good prices and have had plenty of inquiries. Must say that a good majority came over the Twentieth Century Farmer route.

CLARENCE WALLACE, Wisner, Neb.
Breeder of High Class Duroc-Jerseys.

The Twentieth Century Farmer is read weekly by so many buyers of good breeding animals that it is bringing excellent returns to its live stock advertisers. Rates furnished upon request.

Review of Live Stock Market

By A. C. Davenport

FOOT and mouth disease, the terror of the live stock industry, has spread its blighting influence over the markets of the United States. All previous calculations as to the course of trade are as naught and no one can form the slightest idea of what the next twenty-four hours will bring forth. It is one thing now, but long before this can appear in print the situation may have changed back and forth several times.

It seems as if the live stock market this year has been under a cloud of uncertainty most of the time. No sooner do the clouds disappear and no sooner does the trade settle down to a normal basis than some new trouble bobs up to disturb the even flow of business. Unsatisfactory industrial conditions at large eastern consuming centers, foreign war and tight money have each held their sway at times and contributed their share toward upsetting the natural course of the live stock market. Now comes the foot and mouth disease, which, if not speedily brought under control, can easily prove the most disturbing influence of all.

Don't Jump at Conclusions

Prices on sheep and hogs and on some kinds of cattle advanced during the first week of the quarantine and some people have jumped to the conclusion that they will continue to advance. Perhaps they will and perhaps not. Some people thought the war would send prices sky high, but on the contrary, some kinds of stock, notably hogs, declined sharply as a result of the war. The quarantining of several of the big cattle and sheep feeding and big hog producing states and the prevention of shipments of stock to or from those states must have a big influence on the market some time or other, in one direction or the other. When, where or how that influence will be manifested no one can say except as it makes itself felt from day to day.

With Chicago and some other points out of business for a week at least, and the operation of packers in the quarantined area more or less hampered, it would be only natural to expect shipments of stock to be turned to the Missouri river markets, so long as they are open. When it is remembered that these markets are already handling nearly all of the stock west of that river, the increase in stock receipts must of necessity come from east of the river. Unfortunately most of the live stock territory east of the river is under quarantine. Hence no one is anticipating any very great increase in the receipts of stock at Missouri river markets. On the other hand, if the quarantine is long continued the demand for fat stock at the open markets might become more urgent by reason of so much fat stock being tied up in the quarantined states.

"If" is the Largest Word

That would look like higher prices for cattle if there is no comeback to it. In times like the present that word "if" is the largest in the whole vocabulary. The quarantine which prevents the movement of fat stock to market and tends to boost prices on killers, also prevents the shipment of feeders back to the country. Everyone knows that the competition of feeder buyers goes a long way toward sustaining the market on the medium grades of cattle on which both killers and feeders bid. It is also well understood that the sales of medium kinds of cattle to feeder buyers takes them out of the way, leaving the field that much clearer for the better grades of beef. Thus the market on even the best fat cattle is helped by the competition of feeder buyers. Hampering the movement of feeders may counteract the upward movement of fat cattle, due to decreased available supplies, and it may not. It is all guess-work and is only mentioned as showing how uncertain the immediate future of the market really is and to put stockmen on their guard.

As far as hogs are concerned, packers thus far have shown no disposition to recede from their previous position, but their attitude might change any day. The advance that has taken place at western markets within the last few days has been due almost entirely to the operations of buyers filling orders for eastern packers catering to the fresh meat trade. Any change in quarantine regulations that would hamper the operations of the shippers could hardly fail to have a depressing influence on prices so that the future of the hog market is just as uncertain as the cattle market.

Sheep Market Now High

With sheep the situation is somewhat different. The run of stock from the western range states is practically over with for this year, and from now on the packers will be compelled to depend upon fed sheep and lambs from the corn belt for their supply of mutton. As it is too early to expect very much fed stock at market points, operators, as noted in these columns a week ago, were looking for a good firm market. They did not, however, anticipate any great advance in the market, as prices were already the highest for this time of the year in the history of the trade. The quarantine cutting off shipments from several big feeding states has made the shortage in receipts still more pronounced, so that the market advanced by leaps and bounds during the last half of the week just closed. Fat lambs went above $9.00, and ewes touched $5.85 on the basis of Omaha, breaking all November records.

The Percheron Society of America now recognizes forty-eight shows and fairs in the United States and nine in Canada. The total prizes offered for 1914 in cash, medals and cups, together with incidental expenses, will aggregate about $18,000.

The American Poultry association, recently meting in Chicago, established standard weights for Leghorns as follows: Cocks, five and one-half pounds; hens, four; cockerels, four and one-half; pullets, three and one-half pounds.

Breeders' Notes

(CONTINUED FROM PAGE SIXTEEN.)

63—John P. Johnson..... 150
64—E. B. Kinney..... 100
65—John Payne, Burke, S. D..... 145
66—T. M. Willeivan, Central City, Neb. 105
67—Will Tebauh, St. Edwards, Neb.... 100
68—G. D. Harrah, South Omaha, Neb. 140
69—G. D. Harrah..... 110
72—R. K. Arthur, Fullerton, Neb..... 125
73—E. M. Byrd..... 330

Durocs Average $45

The sale of Duroc-Jersey boars held at Wisner, Neb., on October 31 by Robert Leisy of that place brought out a very nice crowd of breeders and also a good, strong local crowd. As usual, Mr. Leisy had a very creditable offering. The boars were a very uniform, growthy lot and seemed to be well appreciated by those present. There were hardly any tail-enders in this sale, the best evidence of this fact being in the uniformity of the prices paid all the way through. The top of the sale was $80 on lot No. 8, a March 7 pig sired by Colonel Chief and out of a Prince Muncie Colonel dam. This pig went to the veteran breeder, John Tighe of Pilger, Neb. When you consider that the average was $45 on the entire offering, with an $80 top, it will readily be seen that the prices held very even. Colonel N. G. Kraschel officiated on the block in a creditable manner. Below will be found a list of those selling for $30 and over, together with name of purchaser:

No.	Owner and Residence.	Price.
1	Gus Lemmerman, Creston, Neb.	$67
2	Joseph Martinek, Dodge, Neb.	75
3	Harry Fogerlee, Verdell, Neb.	37
4	John Stauffer, Page, Neb.	34
6	Peter Boehr, Wisner, Neb.	35
8	John Tighe, Pilger, Neb.	80
9	Andrew Rassmusson, Pilger, Neb.	55
10	Robbins Bros., Lyons, Neb.	39
14	Herman Magdanz, Wisner, Neb.	50
15	John Blaalid, Newman Grove, Neb.	49
16	H. C. Brandt, Wisner, Neb.	31
17	John Cohie, Beemer, Neb.	36
18	Seth Herfel, Allen, Neb.	75
19	S. D. Tichnoff, Fairfax, S. D.	50
21	Wharton & Barkley, Allen, Neb.	65
22	Fred Seckel, Battle Creek, Neb.	38
24	John F. Peterson, Bennington, Neb.	42
26	Olaf Munson, Anoka, Neb.	35
27	Walter Bowden, Wisner, Neb.	60
28	Bernard Steffensmeyer, Dodge, Neb.	40
30	B. F. Freeman, Beemer, Neb.	61
31	O. Koehler, Pilger, Neb.	50
32	B. F. Martin, Beemer, Neb.	42
35	W. E. Rogers, Walthill, Neb.	39
36	Henry Stauffer, Wisner, Neb.	42

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

A Correction

In reporting the sale of R. Widle & Son of Genoa, Neb., an error was made in the name of the purchaser of No. 23, which was purchased by Fred Coulton of Silver Creek, Neb. Also, Nos. 13 and 18 were purchased by W. D. Stambaugh of Richfield, Neb., instead of Missouri, as reported.

Duroc Boars for Sale

George W. Schultz of Yutan, Neb., has a choice lot of Duroc-Jersey spring boars that he is offering for sale at this time. These boars are right in every way and are being priced worth the money. They are a big, smooth, growthy lot and, as far as breeding is concerned, they cannot be beat. He has several sired by Golden Model 31st that are sure good ones. They have the size, stretch and bone. He also has other good ones sired by King Cleathem and Gold Dust Jim. Write him for further information, mentioning the Twentieth Century Farmer.

Immune Duroc Boars

F. E. Merrick of Osceola, Neb., has one of the top herds of Durocs in Nebraska. He has been a consistent buyer of the very best breeding stock and, along with this, is an excellent care-taker. At this time he has for sale a splendid lot of spring boars that should find ready sale at the prices at which they are being offered. In the first place, these boars are immune. Along with this they have every qualification that could be asked for, both in individuality and breeding, carrying such blood lines as King Gano, I Am Crimson, Dusty Crimson and others. Write Mr. Merrick for further information, mentioning the Twentieth Century Farmer. He will treat you right.

Hensley Offers Boars

Elsewhere in this issue will be found the advertisement of J. E. Hensley of Central City, Neb., who is offering Duroc-Jersey boars for sale. These boars are strong, growthy fellows and are being priced at figures within the reach of almost any farmer or breeder. They are of the very best blood lines, being sired by such boars as Sensation Wonder 2d, Golden Model 4th, Golden Model 31st, Prince Muncie Colonel and others. They are the big, strong-backed, heavy-boned kind and will go out and do valuable service in any herd. Get in touch with Mr. Hensley if you want anything in his line, and we assure you he will treat you right. Kindly mention the Twentieth Century Farmer when writing.

Immune Boars for Sale

We wish to call the attention of our readers to the advertisement of E. R. Danielson of Osceola, Neb., who is offering immune Duroc-Jersey boars for sale at this time. Mr. Danielson is so well known to breeders in general that it is unnecessary for us to go into any detailed account regarding his herd. He has always been a booster for the Duroc business and has been most discriminating in his selection of breeding stock. The boars he is offering at this time are thoroughly immune and have been grown and developed in a way that insures their going out and doing good for anyone who purchases one of them. These boars are largely of Crimson Wonder and Golden Model breeding, and it is a well known fact that these two families take rank with the very best of the breed. If you are in need of a boar you will make no mistake in writing Mr. Danielson, for he is pricing these boars worth the money and will surely treat you right. Kindly mention the Twentieth Century Farmer when writing.

Immune Poland Boars

Thomas F. Walker & Son of Alexandria, Neb., have a number of big, heavy-boned, smooth, growthy, immune Poland-China boars that they are offering for sale at this time. Messrs. Walker & Son are known to practically every breeder of Poland-Chinas in the west as having one of the very top herds. We doubt whether there is a herd in the country that so completely combines size and quality as does this herd. This is true of the boars that they have to offer at this time and has been true of this herd for a great many years. They have always advocated size, but they wanted the quality with it. Boars that they are offering at this time are sired by Blue Valley, without exception one of the best big boars in service in Nebraska today. Others are sired by Columbus Wonder, a son of Big Columbus, and Blue Valley Orange, a son of Big Orange. If you are looking for this kind of a boar, here is your opportunity. Kindly mention the Twentieth Century Farmer when writing.

Sale Dates

Poland-China Hogs

February 6—O. J. McCullough, Clarks, Neb., sale at Central City, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb

Duroc-Jersey Hogs

January 27—Willard Robbins, Lyons, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 20—Will Morgan, Wayne, Neb.
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday, Rising City, Neb.
March 1—Harry Tidrick, Windside, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt,

A Most Remarkable Litter

The above illustration represents part of a litter of seven boars and three gilts owned by D. W. Kane of Wisner, Neb. This litter was sired by Golden Model 31st and is out of a sow sired by Golden Model 15th. This sow was the highest-priced sow in the sale of Herman Toelle of West Point last winter ,and this litter certainly verifies the fact that it pays to buy the good ones. There are a number of boars in this litter that are good enough to go into any pure-bred herd. This illustration shows the good, strong backs; also the strong bone, with the very best of feet. If you could look them over you would sure want a boar from this litter. Write Mr. Kane for further particulars regarding what he has to sell. Besides this litter, he has a number of other very toppy boars. Kindly mention the Twentieth Century Farmer when writing.

DUROC-JERSEY HOGS

BOARS! BOARS! BOARS!

Several fall boars and a few choice spring boars for sale, sired by BELLE'S CRIMSON WONDER, COL. CHIEF, GOLDEN MODEL 36 and BELLE'S BIG WONDER, out of Crimson Wonder bred dams. I am offering these boars at bedrock prices for quick sale. **A. R. BARNES, Petersburg, Neb.**

IMMUNED DUROC BOARS.

I am offering an exceptionally strong lot of Duroc Jersey boars for sale, largely of Crimson Wonder and Golden Model breeding. They are the best lot I have ever offered and are being priced worth the money.
E. R. DANIELSON, Osceola, Neb.

IMMUNE DUROC JERSEY BOARS

40 spring and fall boars, all immune. 30 of the spring boars are sired by B. & K.'s Col. Gano, full brother to King Gano, that was recently sold for $800; five by Model's Hope by Golden Model 2d. Fall boars by Golden Modeler by Golden Model 15th. Choice pigs at reasonable prices. Farm adjoins town. Call or write
R. P. McGUIRE, Wisner, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.
F. E. MERRICK, OSCEOLA, NEB.

Duroc-Jersey Boars

Two top fall boars and several extra choice spring boars for sale, sired by Model King by Valley King and Gano Wonder by Col. Gano. These boars are all right, and I am pricing them worth the money.
E. M. YOUNG, Cook, Neb.

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.
GEO. W. SCHWAB, Clay Center, Neb.

35 TOP BOARS

35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st, Prince Muncie, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

HEKRDLE'S DUROC BOARS.

I have the best lot of spring boars for sale that I have ever produced. Sired by A. A.'s Model and Beauty's Wonder. A combination of the Crimson Wonder and Golden Model blood lines. Correspondence solicited. A. A. Hekerdle, Stanton, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

Schultz' Duroc Boars

Spring boars for sale, sired by Golden Model 31st. King Cleathem and Gold Dust Jim. They are the big litter, big boned kind. Prices reasonable. GEO. W. SCHULTZ, Yutan, Neb.

DUROC BOARS

I have a number of choice spring boars for sale, sired by Sweet Rose's Wonder, Chief's Model, Col. Chief and others. Prices reasonable.
HENRY STUTHMAN, Pilger, Nebraska.

HAMPSHIRE HOGS

HAMPSHIRE BOARS

Hampshire spring boars for sale; sired by De Kalb's King 100, a son of the famous Major. They are very growthy, and all priced to sell. Also have Aryshire bull calf for sale.
WILLIAM PAMP, Benson, Neb.

RED POLLED CATTLE

RED POLLED CATTLE

Both sexes; good as any in America. Call or write me your wants. W. F. Schwab, Clay Center, Neb.

When writing to advertisers please mention Twentieth Century Farmer.

POLAND-CHINA HOGS

Immune Poland-China Boars

Splendid lot of big, smooth spring boars, sired by BLUE VALLEY, COLUMBUS WONDER and BLUE VALLEY ORANGE. If you want herd headers with size and quality, we have them. **THOS. F. WALKER & SON, Alexandria, Neb.**

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

The University of Missouri has a herd of thirty-five purebred registered Holsteins all descended from four cows purchased ten years ago for $450. Animals have been sold from this herd for breeding purposes to the amount of five times the cost price and the herd now contains more than thirty cows worth at least ten times the cost of the foundation stock.

Here is an object lesson for any man ambitious to go into dairying on a money-making basis.

Send for **FREE** Illustrated Descriptive Booklets.
The Holstein-Friesian Association of America, Box 179, Battleboro, Vt.

Immune Poland Chinas

Big, smooth, heavy boned Poland China boars for sale. Sired by Long Wonder 2d, Wayside Jumbo 2d and Wayside Jim. Write me your wants. FRED WILLE, Columbus, Neb.

Poland-China Boars

Blue Ribbon boars with great length and bone; some weigh 325 lbs. Sired by Blue Ribbon Hastings, Big Iowa, Big King Nebraska Mouw and High Mogul. All immuned. W. J. Eavey, Geneva, Neb.

BIG type, long bodied, pedigreed. All ages. Satisfaction guaranteed. DAVIS BROS., Box 6, Lincoln, Neb.

JERSEY CATTLE

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and yearly milk and butter records. HAL C. YOUNG, Lincoln, Neb.

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.
A few good sons of King Segis Lyons are still left.
DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

AYRSHIRES

WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. **LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb.**

PERCHERON HORSES

At ordinary prices, farm-raised registered Percheron studs—1, 2, 3 and 4 years old. Kind disposition because well cared for. You would admire their big bone first, then their immense weights because they are developing big like their imported sires and dams. And you will receive true old-fashioned hospitality on your visit at Fred Chandler's Percheron Farm. Just east of Omaha.
FRED CHANDLER, Route 7, CHARITON, IOWA.

1915

Overland

TRADE MARK REGISTERED

$850

(Model 81)

Electrically Started and Lighted

THIS is the first car of its size, capacity, power and electrical equipment to sell below $1000!

Though the price is lower than ever, the quality is maintained throughout. All materials, metals and workmanship are of the very best.

This newest Overland has the genuine fashionable stream-line body design.

The body color is Brewster green—always so rich and attractive. It is neatly trimmed with fine hair-line striping of ivory white.

The electric starting and electric lighting equipment is one of the most reliable and best established on the market.

There is also a high tension magneto which is independent of the starting and lighting system and requires no dry cells.

This car rides just like it looks—beautifully. The new, long, improved underslung rear springs give maximum riding comfort under all conditions.

Tires are 33" x 4" all around. Never before has a car at this price come equipped with such large tires.

It seats five adults comfortably, without crowding. It is a big, spacious five-passenger touring car.

It has the famous Overland 30 h. p. motor of remarkable strength, speed, durability and economy, developing more power than you will ever require.

This car at this price is destined to be known as the greatest motor car achievement of the season.

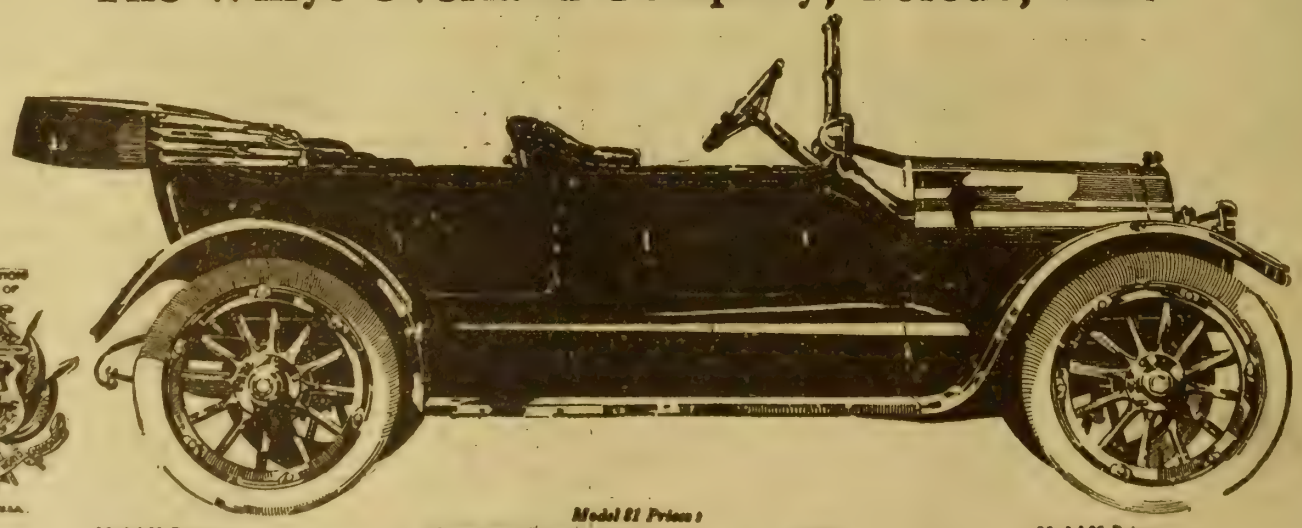
Orders are now being taken for immediate delivery.

Following are a few of the many high-grade features

- 30 h. p. motor
- Stream-line body
- Ample room for 5 passengers
- Electrically started
- Electrically lighted
- Electric horn
- High-tension magneto
- All electric switches on instrument board of cowl dash
- Ventilating, rain-vision type windshield
- High-grade upholstery
- Thermo-syphon cooling
- Five bearing crankshaft
- Rear axle; floating type
- Rear springs; extra long, underslung, 3-4 elliptic
- 106 inch wheelbase
- 33 inch x 4 inch tires
- Demountable rims
- One extra rim
- Left-hand drive
- Center control
- Body color: Brewster green with ivory white striping
- Mohair top, top boot, robe rail, foot rest, speedometer, tire carriers, full set of tools, jack and pump.

Handsome catalogue on request. Please address Dept. 107

The Willys-Overland Company, Toledo, Ohio



Model 80 Prices:

5 Passenger Touring Car	*$1075*
2 Passenger Roadster	*$1050*

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5 Passenger Touring Car	$850
2 Passenger Roadster	$795
Delivery Wagon with closed body	$895
Delivery Wagon with open body	$850

Model 80 Prices:

4 Passenger Coupe	*$1600*

All prices f. o. b. Toledo, Ohio

NOV 1914

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

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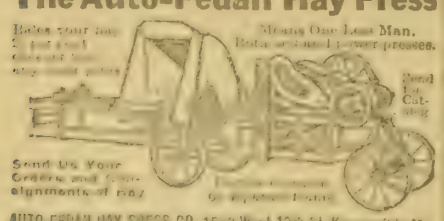

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"Oh, Doctor, I have sent for you, certainly; still, I must confess that I have not the slightest faith in modern medical science."

"Well," said the doctor, "that doesn't matter in the least. You see, a mule has no faith in the veterinary surgeon, and yet he cures him all the same."

Our Presidents

When Uncle Rod, the old colored man who worked about the place, came one morning Mrs. Stone said:

"Well, Uncle Rod, I hear you have another pair of twins at your house."

"Yaas, missus," responded the man, "we has. Bress dey little hearts!"

"Have you named them yet?" asked the woman.

"Yas'm," said Rob. "Done named 'em aftah two ob de fust pres'dents ob dis countray."

"Indeed!" said Mrs. Stone, "which two?"

"Ole Christofo C'lumbus an' Juleyous Caesar," said the man. "We's great on namin' de chillun fo' de pres'dents 't our house."

Touching Reminder

The new cleryman was sent for by an elderly lady.

"Oh, sir," she said, "I hope you will excuse my asking you to call, but when I heard you preach and pray last Sunday you did so remind me of my poor brother, who was took from me, that I felt I must speak with you."

"And how long ago did your poor brother die?" asked the clergyman, sympathetically.

"Oh, sir, he isn't dead," was the reply; "he was took to the asylum."

A Peace Meeting

A riot call had been sent in, and the police had arrested the whole lodge meeting. At the hearing, however, there appeared to be a strange reluctance about testifying. The judge noticed that although everybody would admit that there had been trouble, nobody would tell what started it. So it was that his honor pinned one conscientious man down to facts.

"You say somebody started this row by hitting somebody over the head with something. Now, who hit whom with what on what occasion?"

"The occasion was the annual grand peace pipe meeting of the Brotherly Love Lodge of the Heart and Heart fraternity. We were met to welcome—"

"Never mind. Who was the assailant?"

"The chairman of the entertainment committee."

"Whom did he hit?"

"We call him noble lord of universal peace."

"What did he hit him with?"

"The loving cup."

Lively Corpse

A Boston lady attended a funeral in a church in a small town a short time ago. After the singing of a hymn which was strikingly melodious and approprite, a male friend who was seated beside her remarked, with an air of intense local pride:

"Beautiful hymn, isn't it? The corpse wrote it."

Not Enough to Go Round

In an Arkansas hotel in one of the smaller towns a new, colored clerk stood behind the desk. A traveling man entered and registered.

"Sam, give me a call for 6 o'clock," he ordered. The clerk ran his eye down the call sheet and saw that all the spaces in that column were taken.

"Ah is sure sorry, boss," he explained, "but all de 6 o'clock calls done been taken. Ah can give you all a call for 7 o'clock."—Youths' Companion.

Prattle of the Youngsters

Depends On Where

"Bobby," said the lady in the tube railway, severely, "why don't you get up and give your seat to your father? Doesn't it pain you to see him reaching for the strap?"

"Not in a train," said Bobby.

Without Modern Improvements

The Teacher—Now, children, listen to this: Thomas Campbell, the famous poet, once walked six miles to a printing office to have a comma in one of his poems changed to a semicolon. Why did he take all that trouble?

Bright Boy—'Cause he didn't have no tellyphone.

The Difference

Little Robert was playing with his army of tin soldiers one Sunday afternoon, when his mother entered the room.

"Why, Bob" she exclaimed, "how many times have I told you not to play with your army on Sunday?"

"Well, you see, mother," explained Bob, "this is the Salvation Army."

Making Them Feel at Home

Ethel, 10 years old, was studying her geographical reader, and learned that fish are placed in brine before they are fried and prepared for sale. Her teacher, after explaining that brine is very strong salt water, asked why the fish were placed in it. Ethel's face, inexpressive for a moment, suddenly was illumined with understanding.

"Why, because they're used to salt water!" she cried.

Ready for Satan

A small boy had heard a near relative swear rather frequently and it was soon observed that he had acquired rather a large profane vocabulary, which he used pretty frequently.

"If you swear, Bobbie," his grandmother told him, "the devil will come and get you."

Bobbie didn't offend in this way for several days; then he forgot. His grandmother looked at him in a reproving way, but said nothing. Shortly after his mother heard him knocking on the floor in the front bed room.

"Come on up, Mr. Devil, and get me," he was calling softly. "I've been swearing again."

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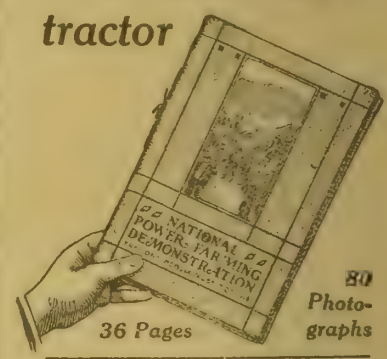

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TWENTIETH CENTURY FARMER
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The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

What is the Matter with Our Rural Schools?

IV--Too Many Taxpayers Howl When Asked for Money to Buy Necessary Equipment

By Ben F. Robinson

GROUNDS and building, while being the first essential, are by no means all the adequate equipment of a rural school. There need to be tools with which to work. No farmer thinks of sending his men into the field with empty hands, nor does the blacksmith, carpenter or other tradesman expect to accomplish anything in an empty shop. How absurd for the physician to discard his instruments when attempting a surgical operation. Carry the inference as far as you wish and the logical conclusion is that the best results are obtained only when the workman has access to the very best tools available.

We are already agreed that the teaching of a child in his physical, mental and moral relations is vastly more important than mending a fence, setting a tire or constructing a window frame, though these things are well worth while and should be done perfectly.

What about the surgical operation? Well, that ought to be none the less important, at any rate, and certainly demands to be done equally well. However, we want to venture the statement that if the youth of our country were correctly taught at home and at school, the necessity of such operations would be considerably reduced.

To teach corectly, then, there must be the necessary material at hand—the first of which is the text books. How well does the writer remember the books he had in the rural schools of eastern Kansas and Nebraska twenty years ago. The spellers, readers, histories and geographies certainly differed in many respects from those now used by the boys and girls under his supervision.

Text Books Have Been Improved

It seemed a universal conviction of the makers of spellers that words were to be spelled only, and that boys were made to spell them. We took to the notion, for to toe the mark on Friday afternoon and spell down the school on some six-syllable word that the teacher could scarcely pronounce, and that we have not used to this day, was a feat well worth striving for. This was all right in itself, but it was not enough, so today the child studies words in all their various phases—derivation, pronunciation and meaning—in order that he may be able not only to name over the letters in their correct order, but that he may make them serve his purpose by being able to use them intelligently.

Changes just as marked have been made in the other books. The subject matter is more concrete, more attractive and practical; it is much more in harmony with the active life of the child.

The physical nature of the books has been changed; they are more attractively bound, more profusely illustrated and printed with better type upon a better class of paper. What a priceless treasure one of Frank Carpenter's Geographical Readers would have been to us as boys.

Yes, I am firmly convinced that there has been a good, substantial improvement in the matter of text books during the last decade or so.

But now do all rural schools have as good books as those just described? The should have, and if they do not it is somebody's fault. Only a few years since I taught in a school in which there were text books bearing dates almost a quarter of a century old. Utah was studied as a territory and nothing was said in the histories about McKinley's administration. The first thing necessary was to dispose of this dead material and to replace it with books of more modern publication.

Is there a tendency on the part of rural directors to turn a deaf ear to the teacher's request for new books? Is there a disposition on the part of the taxpayers to set up a hard-time cry, should the directors ask for an appropriation of $100 or so for such purposes? This is the case in some districts. How is it in yours? Would it not be a good plan for the three directors to appoint one of their number to meet with the teacher at some convenient time, and when together they can go over the books, taking a complete inventory, disposing of the old and useless ones and making out a list of the best and newest ones to replace them? It is a business proposition and needs to be treated in a businesslike way.

Don't Make Teacher Raise Funds

Then, too, there is the matter of other material—maps, charts, globes, primary and kindergarten supplies, etc. These things are well nigh as important as text books and should be provided. Nor ought it is be necessary for the teacher to resort to entertainments and box suppers to secure funds for such purposes. That this is commonly done is evidenced by the boy who in answering the question in the eighth grade examination, said that the principal means of support for the rural school were taxation and the box social.

There is no objection to the entertainment; should be part of the school course. And it may be that children take especial pride in the organ bought with revenue raised in the manner prescribed by the boy, but it ought not have to be bought in this way. Why not vote enough money to buy all needed supplies? Certainly, when farmers are prospering, as they have been, in these fertile regions of the middle west, there ought to be no complaint against a 12, 15, 18, or even a 20-mill levy for educational purposes: but there is. Many country people would throw up their hands in holy horror if the little one-room district spent as much in proportion as town and city schools spend. If the town boy has more school privileges than your boy has, it is in part because town people are voting more money for such privileges. However, we shall have more of this in another article.

Cheaper for Schools to Buy Books

We have digressed somewhat; let us consider again the book proposition. Only a short time since children bought their own books, the district not being compelled to do it. Of course, there was no uniformity, so that when a family moved from one district to another it was often necessary to buy new books or to have separate classes doing practically the same work in some subject, which was a disadvantage alike to teacher and pupils.

Now these things are changed. In comparatively recent years some legislation has been done along these lines which is a decided advantage over the old system. So we are getting

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Facts and Figures from the Dairy Show

What a Farmer Saw, Heard and Learned at the Ninth Annual Dairy Show at Chicago

Herds of the Various Popular Breeds of Dairy Cattle Are Increasing in Number and Quality on the Farms of the Middle West

WITH forty acres of dairy machinery and appliances and hundreds of top-notch cattle of the five prominent dairy breeds, the ninth annual National Dairy Show, held in Chicago October 22-31, was perhaps the most successful pageant of this sort ever held.

The attendance was slightly ahead of last year and noticeably more farmers and dairymen were present. Yet comparatively few milk producers availed themselves of the opportunity to take this "short course" in condensed dairying. One would think that a man owning a dozen or more cows would be interested enough in their welfare to spend a part of his milk check getting next to the very latest in the art and science of dairying. Certainly there was much to see and to learn, to say nothing of the stimulus of travel and the purely entertaining aspects of the show.

Of the latter there is nothing to say except that no report is adequate to convey any idea of its variety and character. Of the value of seeing new places only those who have enjoyed this phase of education and relaxation can speak. Of the items of information supplied by a great exposition a great deal may be said that is as valid for the stay-at-homes as for the gadders.

Who Gets the Money?

Of the many things the writer learned on this occasion, the most significant is that a small army of capitalists and skilled helpers are making handsome profits on the product of the cow after it leaves the producer, while that great army of men who milk the cows are not all getting their share, and in some cases actually losing out in the game. To enter into a discussion of the causes would take more space than is allowed for this brief sketch. The fact stares one in the face at every turn.

I am one of those who believe in the farm as the best place to live, and especially to bring up children. There are compensations in rural life that more than offset its drawbacks. At the same time there is no valid reason why peace, health and independence should not also be a means to a prosperous business as well as good in themselves.

There is no denying that where intelligent effort is applied to the cow as a converter of cheap raw materials into high-priced finished products very commendable results are achieved, but in the main the lessons of this great aggregation of products and processes teach us that the average milk producer has much to learn.

The cow is one of the oldest institutions in the history of mankind. Indeed, before history was written the wild cattle of the plains were tamed and bovine maternity made to do duty for man's benefit. In the last score of years as much progress has been made in scientific dairying as was gained in all previous time. The trouble seems to be that methods have changed so rapidly the rank and file of cow owners have not kept up with the processsion.

Causes of Failure

Let us draw a veil over the vast number of scrubs which help to pull down the United States' yearly average to 140 pounds of butter per cow; let us forget for the moment the wastefulness of feeding milk to hogs and calves when this refined product can be made to yield larger profits as human food; let us overlook the recklessness of many farmers in handling milk and cream intended for market; of their negligence in feeding suitable rations; of their inability to make more than mere wages in the process of cow-keeping, and turn to the strange and unwarranted attitude of the only farmers' organization officially represented at the dairy show, in which these men oppose the use of the tuberculin test for cows brought into or transported out of what is known as the "Elgin District."

"Do you mean to tell me," I asked one of their officials, "that you wish to sell tubercular cattle to outsiders, or to bring them in for dairy purposes where their milk will expose innocent children to disease, without restrictions?"

"Sure," was the answer, "the tuberculin test is no good."

Wouldn't it be unusual, to say the least, if all the men of science and others whose province it is to keep accurate records and to make precise experiments, are mistaken and these men (most of them with unpronounceable names) whose custom of indiscriminate cow-buying and selling is a menace to public health, are correct? If the tuberculin test is no good, then are the greatest minds in this country askew.

Of one thing we are sure, it is the only practicable plan at present known to science that offers a protection to the consumer and at the same time aids to prevent the spread of this scourge throughout the land. Until the men who oppose it establish its ineffectiveness, opposition to its use is a stigma upon the honest farmer who takes no chances in selling milk for human consumption from questionable sources.

Twenty or more other organizations held meetings and banquets during the ten days of the show. It was like the "gathering of the clans" for united purpose.

What There Was to See

Some of the best cattle belonging to the Holstein, Jersey, Guernsey, Ayrshire and Brown Swiss breeds were on exhibition and filled the eye of the beholder with pictures of good dairy form. One could not regard the scrawny scrub with tolerance after noting the beauty and efficiency of these models of performance and show quality.

Forty-eight picked students from sixteen colleges of agriculture were on the grounds in a judging contest. After a standard had been set by the combined estimates of the sixteen dairy professors who accompanied the expedition, the first prize was awarded to Ohio, second to Kansas and third to Maine. Robert Wiley, a student at the Ohio College of Agriculture, carried off the individual honors.

Among the curious facts the visitor learns is that milk is made into coat and collar buttons, piano keys, moving picture films, kalsomine and sizing, as well as into butter, cheese, ice cream, baby food and candy.

One learned also that cleanliness, proper temperatures, good cows, modern machinery, salesmanship and alfalfa will make the business of cow-keeping a profitable one, whereas the opposites mean working for a mere subsistence, if not absolute loss.

Feeding Facts to Be Learned

Incidentally, one picked up such stray bits as this: "Ten pounds clover hay, twenty-five pounds silage, four pounds bran and four pounds corn-chop make a good daily ration for a cow giving twenty-five pounds of milk per day;" "The average cow gives less than 140 pounds of

Every Year Sees a Larger Number of Promising Pure-Bred Youngsters, Farm Raised and Destined for Farm Use in the Corn Belt

butter in a year;" "One quart of average milk is composed of the following:

		Per Cent.
Water	29.94 ounces, or	87.4
Fat (butter)	1.29 ounces, or	3.6
Protein (cheese)	1.30 ounces, or	3.8
Sugar (in the whey)	1.54 ounces, or	4.5
Ash (minerals)	0.24 ounces, or	0.7
Total	34.25 oz., or	100.00"

One of the memories which sticks is of a placard which reads as follows: "There is a principle which is a bar to all progress; which is proof against all argument and cannot fail to keep a man in everlasting ignorance. This principle is unreasoning prejudice prior to investigation."

That is a pretty big mouthful and I had to chew on it for some time to get its full meaning. I was helped out by another sign in the United States Department of Agriculture exhibit, which told that "The 'average' cows and 'boarders' are in most cases the daughters of scrub or indifferently-bred sires, whereas the profit producers represent 'bred for production' families."

For the farmers of the Missouri valley the dairy cow is what is popularly known as "a comer." Here are some of the reasons: "You harvest your wheat and corn once a year. You harvest milk wice a day." "A ton of wheat takes $7 worth of fertility from the soil; a ton of butter takes 50 cents' worth. The wheat is worth $20 and the butter is worth $400." "A carload of grain is worth $250; a carload of butter $5,000. By turning corn into butter you save freight on nineteen cars."

Judging by the magnitude and quality of the National Dairy Show, and the extent and variety of its products, I am impressed above all by the conviction that the dairy cow is one of the most valued members of the barnyard family.

Automobile is Necessary Machine on Farm

II---How to Choose the Car Most Suited to Your Needs

GRANTING that no prosperous farmer can afford to do without an automobile as part of his mechanical equipment, the question arises, "What kind of car?"

To a great extent this is a question which each buyer must answer for himself. The amount of money available for the purchase, the number of members in the family, the tastes of the owner and his personal ideas of efficiency and social position must all enter into this question. There are, however, a number of points that are common to all automobile purchases.

A veteran motorist once remarked that, as the result of his experience, he would advise any prospective automobile buyer to concern himself less with the car itself than with the company behind the car and the dealer who made the sale.

"Buy a manufacturer; buy a dealer," he said. "The automobile will just about take care of itself if the other two considerations are right."

He may have overstated the situation a bit, but there is a lot of truth in this view, nevertheless. It is doubtful wisdom to buy a car from a dealer not equipped with a garage and the disposition to treat fairly those who buy from him. The dealer's obligation to his customer only begins with the sale of the car. Dealers without equipment, financial stability and established reputations cannot be relied on in time of trouble. But the existence of a dependable dealer adds dollars to the value of every car he sells.

An even more critical blunder is to buy a car made by a manufacturer whose permanence can for a moment be questioned. Like all other machinery, automobiles need repair and replacements. The man who has owned a car that has become "orphaned" through the failure of its parent company usually repents bitterly and finally finds it necessary to dispose of the car at a ridiculous price, to replace it with one built by a standard manufacturer.

The buyer not an experienced motorist will always be wise, too, to buy a new, rather than a used, car. As compared with the wiles of the dealer in used cars, horse traders are as free from guile as a bevy of carrier pigeons.

The experienced motorist also shuns any car embodying new and untried features. It is always wise to let others do the experimenting, unless unusual evidence is given in shape of guarantee or other assurance. Radical changes in models are also good ground for apprehension—investigate at the least.

The experiences of friends form, in all probability, the best guide for any automobile buyer. A type of car that has done good service for them will give reasonable promise of similar satisfaction. The manufacturer and the dealer who have satisfied them should also satisfy you.

Don't buy a seven-passenger car if you need room for but five passengers. But never underestimate your demands, for five can ride comfortably in the large body, and hospitality is a pleasant duty to us all.

You can find a thoroughly reliable little five-passenger car for from $500 to $800. You can get greater stability and more advanced design, equipment and style in a car at $1,000 or thereabouts. If you can afford to spend $1,400 or more for your car, a light "Six" will be your logical choice. Six-cylinder smoothness and luxury are cheaper this year and more efficient than ever before, and thousands of farmers have learned to appreciate them.

Beyond $1,500 you can invest in style and size as far as you like. An investment of such size is not necessary, however, to insure long life and efficiency, with a reasonable amount of luxury thrown in.

——:o:——

Value of a Farm Paper in the School Room

THE value of a farm journal in every school room can scarcely be estimated. Unfortunately, it happens that most text books of agriculture apply to the immediate territory with which the author is most familiar. Teachers feel that because a subject is treated in the text it is necessary for them to teach this subject. For example, the study of cotton and rice would be of little value except in the southern states. The farm journal, which is published primarily in the interests of a particular state, gives information which is workable. I am inclined to believe that one progressive farm journal in a school room is of more value than several books which apply to remote conditions. Boards of education and superintendents can spend a few dollars in no more profitable way than by subscribing for one farm journal for each of their schools.—West Virginia Educator.

I Am Thankful

THAT I am permitted to bring up my family where all have the right to worship God according to their own way of thinking.

That I live in a country which is at peace with the whole world—a country which expects to keep the peace, and whose aim it is to promote peace among all the nations of the earth, with the ultimate end in view of bringing about that much-longed-for and blessed condition, "universal peace!"

That it is possible for my children to receive the same instruction in our schools as the millionaire's sons and daughters; that the sons' ballots, when they are men, will bear the same weight in an election as any other man's, regardless of political, financial or social position, and that no power can take this privilege away from them as long as they conduct themselves as law-abiding American citizens.

That I have a bountiful crop of fruits, field and garden products to store away for winter's use, thus materially cutting down my expenses at the village store this winter, while furnishing more wholesome and palatable food for the whole family than that which is bought. It also gives me a feeling of pride and satisfaction to see an ample supply of grain and roughage stored safely away for the live stock this winter, as well as the snug, clean quarters for their comfort during severely cold or stormy weather that is sure to come this winter.

That I am a farmer, and that I am training my children up to love the farm home, with all its pleasant surroundings, so that they will follow in my footsteps when I am gone. It thrills me with unutterable thankfulness and happiness to see all my boys and girls around me, with no desire to stray away from the farm to the crowded and wicked city. They love this most blest habitation, where the blue of the sky never is blurred by the murky smoke of the city; where the air and sunlight are pure and free; where the birds sing and the flowers bloom. I can ask no more, when I see my loved ones thus happy and contented, dwelling here in the very heart of nature, close to the soil that God gave them to till and make fruitful. Verily, I am thankful!

M. COVERDELL.

——:o:——

Training Children for Work

THE human pathos of the problem of education is what appeals to me—the pitiful figure of the boy or the girl faltering on the edge of the strenuous struggle for life, needing to earn, yet not knowing how to learn, and forced to enter the battle without the slightest training for the contest. Let me suggest that while we must not forget the great debt we owe to the private vocational schools, yet the future of industrial education lies in the hands of the public school. I do not venture to let my thoughts run freely into the social results of removing our industrial misfits. I can hardly picture, as a manufacturer, what it would mean in a great factory to have every employe trained for his work and fitted for it. This is a little too much of an industrial heaven for me to grasp at once. Yet I wonder if it may not be true of the work we have undertaken that it has not entered into the heart of man to conceive the great things which are prepared for our people when industrial education and vocational guidance shall each have wrought their perfect work.—United States Secretary of Commerce Redfield.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

T. F. STURGESS - - - - - - Editor
G. W. HERVEY - - Associate Editor
C. C. ROSEWATER - - Gen'l Manager
G. E. HALL - - Mgr. Live Stock Dept.
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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

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To all points in the United States and Mexico, per annum, in advance.....$1.00
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Don't let the first snow hit with the fall pigs sleeping in a shed without any bedding. You cannot make money any faster than by keeping the fall pigs well bedded.

Did you hang up that seed corn you picked out, or did you just leave it in a pile where the rats can have a good feed on it? Better take good care of it, for you will probably need it in the spring.

Several cases are reported of fines being imposed for selling oleomargerine as butter. It is unfortunate that larger fines are not imposed than $10, which seems to be the maximum. There is no law against selling oleomargine to those who want it, but there should be a greater penalty for selling it to those who want butter and think they are getting it.

It will soon be time for our farmers to shoe at least one team of horses. This important work is many times put off too long. It is dangerous to the life and limb of the horse to use him on rough, frozen ground in the fields or on slippery roads. Every farmer has more or less hauling to do in the winter and he cannot afford to try to do it with a barefooted team. It is not only dangerous, but it is inhuman, to use a team in the winter without shoes. Do not put off shoeing a team until you have an accident. It is too expensive to run the risk. The expense of keeping a team shod is not much, but the loss from a valuable work horse being crippled or killed because he slips on the icy road may be considerable.

Foot and Mouth Disease

Developments have been rapid in the progress of the foot and mouth disease. The Union Stock Yards at Chicago, as well as many other public markets, have been closed for the first time in history The government has taken hold of the matter with a firm hand, determined to wipe out the disease. Hundreds of cattle have been killed in the attempt to check its spread.

This is the fifth time the disease has broken out in the United States. On every former occasion it has been absolutely wiped out, and we feel sure the authorities will now be successful in again becoming masters of the situation, but it will be a hard fight, and the losses will mount up into the millions of dollars.

More or less criticism has been made on account of the large number of animals being killed; sometimes a whole herd has been destroyed when one or two animals were affected. The foot and mouth disease is without doubt the most infectious animal disease known. It is almost sure to go through a whole herd when one animal is affected, and the only way to stop its spread is to kill all exposed animals.

Should several animals in a herd contract the disease and be let go, without doubt it will be carried by birds, dogs, cats, rats or men's shoes to different herds in the neighborhood. It can be communicated to man through the milk of cows having the disease or to hogs following the cattle or drinking the milk.

Government and state authorities are working night and day, watching every shipment at the public stock yards, superintending the cleaning up and disinfecting of stock yards and stock cars. All animals shipped from infected districts are being traced and quarantined. Bedding and feed of all kinds that might have come in contact with diseased animals are either being thoroughly disinfected or destroyed.

The American Royal and International Live Stock Shows have been called off, and market operators do not know which way to turn or what may come up next. Numerous cattle sales already advertised have been postponed indefinitely, waiting the end of the trouble.

The government has now placed a quarantine on fourteen states and Canada, the disease having been found in one or more localities in each of them. So far no animals having the trouble have been found west of the Missouri river, and every effort possible is being made to keep it from getting across.

When epidemics of this kind break out heavy losses are bound to be incurred, inconveniences must be suffered and farmers and stockmen made to suffer when to them it often seems useless.

We want to make an appeal to all farmers, stockmen and others to take hold of this matter determined to do their part, even though they are made to suffer. Lend every assistance possible to the authorities. If any of your animals show sore mouths, with the saliva running from it, or a sore in the cleft of the hoof, do not take any chances, but notify the state veterinarian at once and then take the animal from the herd and do the best job you can in cleaning up and thoroughly disinfecting the premises, especially any place where the diseased animal may have been.

Fines for Serum Producers

A government bulletin makes the statement that the Oklahoma Stock Yards Serum Company was fined $25 for making an interstate shipment of anti-hog cholera serum without a government license.

We do not know the circumstances in the case cited, but we do feel, and have felt that both state and government authorities are far too lenient in dealing with manufacturers of serum who knowingly violate the law. A small fine of this kind is nothing to the manufacturer compared to his profit on the sale of a considerable amount of serum.

We have had authorities say to us, when talking on this subject, that a manufacturer who would send out a poor product would put himself out of business. Do not get that into your mind for a minute. It will put him out of business in some particular neighborhood, but he is probably doing business in several states, so he keeps selling in new localities, getting the money and killing the farmers' hogs.

If we have laws to protect stock growers, they should be enforced and not be allowed to be tramped under foot. A good, stiff example of some of these laws-breakers would have a wholesome effect.

Grain explosions are very common, but as a usual thing no lives are lost. Last year in a feed grinding plant in Buffalo, N. Y., thirty-three men were killed and seventy injured in such an explosion. This has started the government to making investigations into the matter of just what causes these grain explosions, in the hope of finding means to prevent them. Whenever anything of the kind occurs, no matter on how small a scale, they request that it be reported at once to the Department of Agriculture at Washington. This will aid them in their investigations.

Guard Against Dourine

A disease known as dourine, which is peculiar to mares and stallions, has made its appearance in northwestern Nebraska. Dr. L. C. Kigin, state veterinarian, was notified by government authorities that dourine had been found to exist in a locality in Wyoming, from which horses had been shipped into Nebraska. Dr. Kigin, accompanied by one of the government inspectors, went at once into this district and tested 113 horses. The result of this test was that five were found to react and six were suspicious. The Live Stock Sanitary board at its last meeting placed a quarantine on the counties of Hooker, Grant, Thomas, Blaine and Cherry, which provides that no horses are to be allowed to be moved out of this district except on the authority of the state veterinarian. Dr. Kigin estimates that there are at least 20,000 horses in this district susceptible to this disease. Further tests of the horses in the district will be made by the state authorities in the near future.

Horse owners in this district have a fight to make. The disease may not be easy to wipe out, but it can be done by every horse owner in this district leanding his co-operation to the state authorities in combatting the disease, using every precaution necessary to stop its spread.

Growing Crops for Seed

The reports of seed yields of certain hays and forage crops during the last two or three seasons, especially the present season of 1914, are sufficient to stimulate the seed-growing activity to a point that will result in cheapening prices for the common crop grower. The common, every-day farmer thinks that seed growing demands a skill, attention and special care that only the expert is prepared to give the crop. Thus the great body of farmers prefer to pay an extra price for all their seed, rather than exert a little care and attention in growing it.

There are usually a few farmers in each neighborhood who take a pride in being a little out of the ordinary in the matter of seed growing and in being posted on seed quality, the various breeds of grains of the different kinds, and on farm crops generally. This class of men are of great value to their communities in the building up of an ambition to produce better yields.

A self-constituted seed grower near Pierre, S. D., has just issued his report on a fraction over two acres of alfalfa, thirty bushels of seed machine measure. Figure this up at market price in any market in any neighborhood and what have you to say for alfalfa seed-growing as a side issue on the farm? What farmer cannot do this if he tries? One dollar per acre profit on alfalfa seed has been reported by many growers both last year and the present season. An Aberdeen, S. D., farmer reports that he has just threshed 400 bushels of alfalfa seed and has 400 tons of hay in stack from the same ground. He values his alfalfa hay and seed at $8,720, and this in a district of country where alfalfa a few years ago was reckoned a failure, or, more properly, an impossibility. This is another self-constituted seed raiser.

Alfalfa in the Orchard

There are some alfalfa enthusiasts recommending the growing of alfalfa in the orchard. There may be conditions under which alfalfa would not seriously injure the trees or fruit crop, but as a general proposition almost any other hay or grass crop is safer for the thrift of the orchard than alfalfa. The general complaint against alfalfa is its deep rooting tendency, and with this its inclination and tendency to the taking up of the moisture in the soil that the tree needs to produce its crop and carry on its growth.

Five years ago an experimenter planted a two-acre cherry orchard in the suburbs of Omaha, and as alfalfa was being so highly recommended as an improver of the soil as well as a profitable crop to grow on the unoccupied space between the tree rows, it was readily figured out that the trees could be spaded around, using a circle of about five feet in diameter, and with a little hand cultivation be kept in good tilth. The trees were planted thirty feet apart in rows thirty feet with a view of later planting between with other fruits. This plan seemed to suggest good protection for the trees and offer a chance for growing a crop that would more than pay the expense of taking care of the orchard, pay rent, interest on investment, etc.

The experiment started off all right; the trees were spaded around and were easily kept hoed and weeds and other growth subdued. The alfalfa also got a good start in the open and was mowed three and four times each season, but the third season there was a great shortage of rainfall and trees seemed almost to stop in growth; the foliage was not so green and vigorous as formerly and there was but little, if any, growth of tree. The alfalfa was not nearly so good, but the dry weather was a satisfactory explanation for the condition, and the matter passed over to another season with little or no concern of the light growth.

The trees were carefully sprayed four times each season and the hand cultivation observed. The fourth year gave a good growth of alfalfa, though the moisture supply was rather below the normal. The trees were slow starting and made very little growth, the foliage in the summer showing a sickly appearance. At this juncture it occurred to the owner that possibly the alfalfa was robbing the trees of moisture they needed to carry on their growth and development. Four prominent fruit growers and orchardists were consulted, each given a detailed statement of the case. Answers in each case assigned the alfalfa as the moisture robber. The orchard, these men said, was on a sure basis of decline and nothing could check it but plowing up the alfalfa and giving the trees all the moisture they could command.

The alfalfa was with difficulty plowed up or broken to a depth of ten inches. The roots were large and evidently penetrated to a great depth. This ground was planted to corn the next spring and well cultivated and produced a big yield. This year, 1914, it was used for potatoes and garden crops and clean cultivation observed. A stronger and finer growth of tree for the two years following the alfalfa being plowed up cannot be found under any system of fertilization or cultivation. The owner is convinced that he just saved his orchard in the nick of time by plowing up the alfalfa. He is positive that the decomposition of the alfalfa roots has abundantly paid back in growth of tree all they robbed in the first years, and with interest.

Sudan Grass for Hay

We are hearing more or less about Sudan grass. This plant is an annual of the sorghum family and from experiments already made in different localities by the government we are of the belief that it will prove valuable to American farmers.

This grass was brought from Africa a few years ago by the Department of Agriculture and has been tried out in many different parts of the United States. Yields of five to six tons of cured hay have been made. The hay is of good quality, cures more readily than kafir or sorghum, is easily handled and is relished by stock.

Sudan grass is a drouth-resistant plant, yet it has proven equally as good in the more humid regions. It grows readily in many different kinds of soil, requiring generally from 90 to 100 days to mature.

We feel sure it will pay our farmers to investigate this grass carefully. Try a small patch of it next year and make your own experiment. You will then know something about what you may expect from it. Of course, conditions for a single year may be such that a fair trial cannot be had.

Our farmers should freely look into new things of this kind coming to their attention. Do not always be satisfied with what was raised ten, twenty or thirty years ago and think it will do, but investigate things of this kind for yourself, and if you can better your condition by raising something new, do it.

The government is not trying to fool the people; there would be no object in doing so. If the Department of Agriculture recommends a trial of this grass, wouldn't it be well to follow the advice and find out whether or not raising it will be to our advantage?

Transmitted By Serum

It has been found that the foot and mouth disease has been spread among hogs treated with serum manufactured at the Union Stock Yards at Chicago. Two plants were closed by Dr. Samuel E. Bennett, chief federal inspector in that district.

The disease broke out in localities where no hogs, cattle or sheep had been received from Chicago. Hogs were affected that had been treated with serum. A bacteriological examination of the virus proved it was affected with foot and mouth disease.

No doubt the plants sending out the serum and virus did not know of this infection, yet the damage was done. The Twentieth Century Farmer has urged in former issues the importance of all serum being tested by government or state men. The hogs used in the manufacture of the product should be tested before being used and the product tested after it is made.

Many manufacturers are honest and send out a good product all the time, but there is absolutely no question but that poor serum is being sold. We believe the expense that would be incurred in the testing by state or government authorities of all serum would be justified.

If you don't keep salt so your horses and cattle can get it all the time, be a little more careful than usual in this respect just now, for these animals are eating a large amount of very dry feed in the stalk fields and at the straw piles. Too many farmers neglect salting their stock. The best way is to keep it so they can get it any time they want it.

The dust accumulates in the hog sheds before you know it this season of the year. Watch this and keep the dust down. It is a louse and disease breeder. A hog whose lungs are full of dust cannot have much vitality.

Is There an Emergency?

At the last meeting of the Nebraska Live Stock Sanitary board Dr. Howe of Denver, chief government inspector for this district, appeared before the board and explained to them that owing to the demands on the department for men to be used in combatting the foot and mouth disease, and the condition of the government fund for this purpose, it was found necessary to ask the state to pay the salary of five inspectors now being used by the government in western Nebraska to eradicate scabies, or take these inspectors away and leave the territory unprotected.

The government has been at this work about twelve years and now believes that within the next year the disease will be entirely eradicated from the district, provided the work can go on. Thousands of dollars have been spent by the government in this work. Governor Morehead was in conference with the board on this proposition. The state fund for this purpose is nearly exhausted. There is, however, a statute that says that if an emergency comes up the governor may create a deficit. Governor Morehead expressed himself as hardly feeling that at the present time that an emergency existed, but took the matter under advisement. We certainly hope that Governor Morehead will see his way clear to keep these government inspectors at work in this district. It would look to us like poor business to allow the district to go unprotected after the government has spent the large sums of money it has during the last twelve years to protect Nebraska live stock owners.

One thing that has materially retarded the work of the government in this district has been the fact that there was no statute by which they could compel owners to dip their cattle, leaving close quarantine as the most effective method to be used by the inspectors in their work. The next legislature should take this matter up and give these inspectors such authority as they may need to carry on their work successfully.

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Prepare the Flock for Winter

THE winter preparation of the flock determines to a great extent the success of the next spring's lamb crop November and December, with the majority of sheep owners, cover the breeding period. Observing these months as the breeding season brings the lambs in April and May. The spring season is usually opened up at this time and very little loss from cold or exposure to inclement weather is anticipated or experienced, where the necessary stabling and shedding is provided.

The breeding flock should be well cared for during the autumn season, following the weaning of the lambs. As soon as the ewes are dried up, after the lambs have been taken off, there should be every possible effort exerted to put the ewes that are to be continued in the breeding flock in the best possible flesh. A thin ewe at the beginning of winter is a poor prospect for a strong lamb the next spring. Of course, there is such a thing as putting flesh on thin sheep during the winter, but it is an expensive proposition demanding lots of feed and care.

The properly handled breeding flock should never be in thin flesh, should never be permitted to drop down to the condition where the general health of the animal is affected. The early weaning of the lambs is a benefit both to ewe and lamb, where the weaning is properly handled. Deferring the weaning period usually injures the ewe, and not infrequently both ewe and lamb. It is best immediately following the separation of the ewe and lamb to put the ewe on the thinnest, lightest pasture on the farm until she dries off in milk, and put the lamb on exactly the reverse, the best fresh pasture available, where it can keep full and get an extra feed advantage to make up for the loss of the mother's milk.

The ewes at the beginning of winter should be strong, vigorous, active and in a condition of thrift that guarantees a steady development of the unborn lamb. Besides, there is nothing made nor gained in any way by keeping out-of-condition animals. Especially may this be emphasized when applied to breeding stock, male or female. Some owners and feeders do not seem to understand or realize in the slightest degree the proposition they have on hand while they are carrying forward a bunch of breeding animals that have been selected for their quality, and for the specific purpose of bringing into existence a crop of youngsters that are to be an improvement over their progenitors. From their utter lack of attention it would seem that the effort in view was to see how quickly they could degenerate the race or breed below the present generation.

There is a medium position that the best and most skilled breeders take the matter of feed and care of the breeding flock. Plenty of rough feed, pasture and exercise is always endorsed by the practical handler of sheep. Grain feed should be given moderately or sparingly, owing to the flesh condition of the ewes. It is not desirable to have ewes fat when carrying the young. This condition is almost as objectionable as having them too thin in flesh. Ewes in a strong, vigorous, active condition come as near the perfect physical development of the animal possible while in the period of pregnancy. Keep between the two extremes, too fat and too lean.

The breeding ewes should have all the good hay they will clean up, given in racks, morning and evening. Alfalfa is preferred by the sheep and will come more nearly supplying a full ration than any other feed. A little grain should be given once a day. Shelled corn goes well with the alfalfa hay. This, with a blue grass pasture for the flock to have access to every day that is fit for them to be out, affords ideal conditions for the breeding ewes and will certainly guarantee a strong, vigorous, well developed lot of lambs when the lambing season arrives.

Care of Automobile Tires

THE professor in charge of automobiles and other motors at the Nebraska College of Agriculture offers the following suggestions regarding the care of automobile tires:

The large percentage of tire trouble is due to lack of sufficient air pressure. Pressure should be maintained at twenty pounds per inch of tire diameter. Thus, a four-inch tire should have a pressure of eighty pounds. The heating of the tire when in use should not be depended upon to increase the air pressure sufficiently if it is much less than that required at the time of starting.

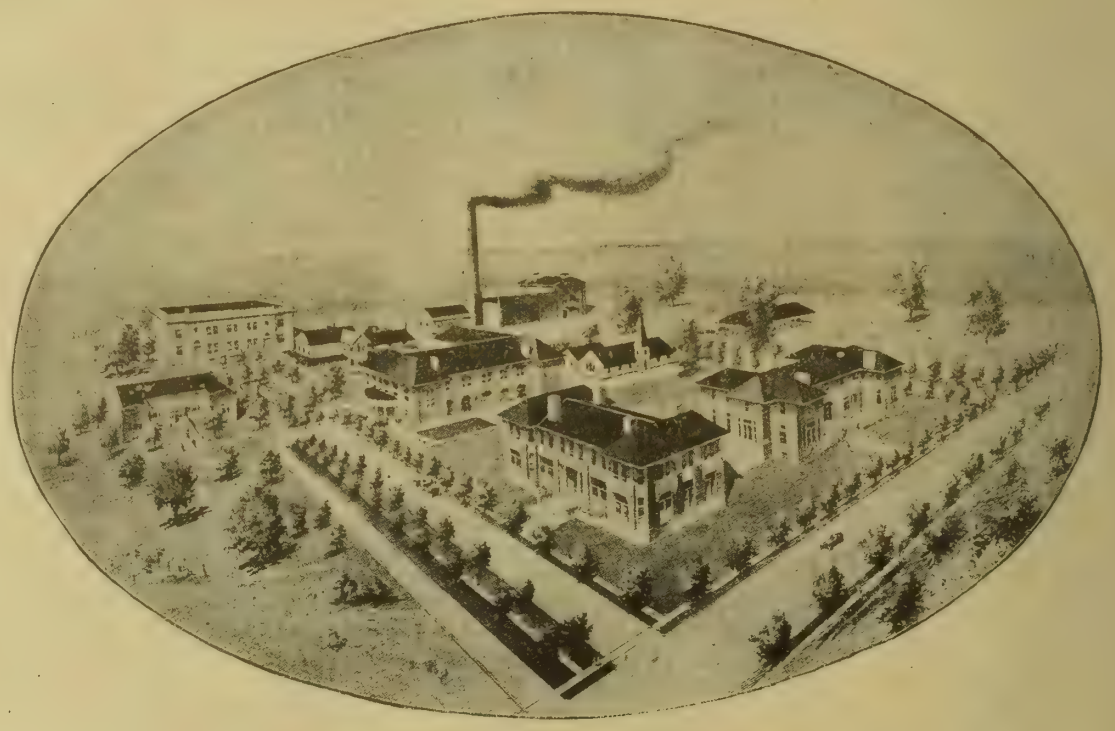
There is little danger of having too high a pressure on a new tire, as every average sized tire is tested to 200 pounds before being sold.

If tires are old, judgment must be used in maintaining the normal pressure. If two strands of the fabric are left, however, the pressure of twenty pounds per inch of diameter may be maintained.

Tires should always be kept from the direct rays of the sun when possible.

Every effort should be made to keep moisture from the fabric of the rubber. Tire dough is useful in keeping moisture out of the cracks and is not very expensive.

Recent experiments indicate that round timbers of all the pines, of Engelmann spruce, Douglas fir, tamarack and western larch can be readily treated with preservatives, but that the firs, hemlocks, redwood and Sitka spruce, in the round, do not take treatment easily. This information should be of value to persons who contemplate preservative treatment of round posts, poles or mine props.



Bird's-eye View of the

Christian Home Orphanage

Council Bluffs, Iowa

THE Christian Home Orphanage was founded in the fall of 1882. Incorporated March 16, 1883, under the laws of Iowa governing charitable and religious institutions. It is non-sectarian. Employs no agents and receives no county or state aid whatsoever. It has no endowment, but is supported entirely by the contributions of those who are concerned for the welfare of orphan and destitute children Receives children from any part of the country and has **a daily average of 260 to provide for.** All property of the Home is held by a board of trustees, and is deeded to the purpose of an Orphanage forever. It can never be mortgaged or alienated. The Christian Home receives not only those children who are well and strong physically and mentally, and who can readily be placed out for adoption in private families, but it also receives the sick and afflicted, and conducts a department for dependent aged women.

All contributions for the support of the Home are publicly credited in the **Christian Home,** the official organ of the institution. All expenditures are published in itemized form For many years past, the average number of visitors to the Home has been 3,500 annually. These people are from all parts of the country, but more than half come from Iowa alone. The continued rapid growth of the Home, the increased interest in the work, is due to a large extent to the influence of these thousands of people who visit the Home and return to their various homes with accounts of the work.

A special effort is being made by the management of the Orphanage to raise enough money at Thanksgiving to free the work of debt. The institution has seriously felt the effects of close times and high prices and needs the liberal assistance of all charitable people.

On September 1 the population of the Home was 263. From September 1 to November 1, 109 new inmates were received, without a cent of expense to the counties from which they were received, and 108 were placed out in families, leaving the population on November 1, 264, and this number will no doubt be greatly increased as the winter approaches. Whatever sum you feel disposed to send to help carrying on this great work will be gratefully received. Address, the

Christian Home Orphanage, Council Bluffs, Ia.

Stories of Our Young People

A Thanksgiving Puzzle

I have wondered and I've puzzled
Till my mind is all in doubt,
How the little Pilgrim children
The first Thanksgiv.ng day made out.
They had fathers, kind, and mothers,
Dear as anyone could be,
But their lovely gray-haired grandmas
Were away across the sea.

Pray, who stuffed the turkey gobbler?
And who baked the pumpkin pie?
And who fried the nice fat crullers
That we love so, you and I?
And who gave them nuts and candy
Until they could eat no more?
And who told them lovely stories
When the happy day was o'er?

Now my mamma does quite nicely
For ord'nary times, you see,
But on big days like Thanksgiving
Only grandma pleases me.
—L. B. Suellman.

Turkey Day

Less than a week now until the big feast of the year, when all the uncles, aunts and cousins for miles around get together and feast on the biggest, tenderest and juiciest gobbler in the turkey flock. It is a grand day for everybody but the turkeys, and, of course, they don't understand about it anyhow, and that is what we have them for. What good would a turkey be if we didn't eat him?

But they are wise looking birds. Sometimes they almost seem to understand. Look at the turkeys in the picture. One can imagine that they are discussing the Thanksgiving proposition and planning their escape. I'll tell you the real truth about it, though. They were not doing anything of the kind. They saw the camera and thought it was a nice little box, probably containing something good for them to eat, so they crowded up as close to the fence as they could get, to be sure to get their share.

Big Tom is a great, greedy fellow anyhow, always wanting to eat, eat and never getting enough. That's what we want him to do, for the more he eats the fatter he will get, and the richer the nice white and brown slices will be that father carves off at the Thanksgiving feast. Can't you just see the baby sitting in her highchair now, waving a drumstick joyously about and thoroughly enjoying the noise of the talk and laughter and the petting she gets from all the relatives? Hurrah for Thanksgiving! It is one of the three best days in the year. Isn't it? HOME EDITOR.

(Prize Story.)

Her Experience with Bread

By Floyd Rhodes, Aged 11, Durango, Colo.

I live in the country, but on account of being ill was forced to spend part of last winter and all summer in town near medical aid.

A lady who lived across the street was making light bread one stormy, cold day. For some unknown reason the bread would not rise as it should. After working with it all day with unsuccessful results, she decided to destroy it. But how could she do it? If her husband found it out he would be angry, for they were hard-working people and had to be as economical as possible.

Finally, weary and disgusted, she buried it in the back yard and, thinking it safe, said nothing of the whole affair. The next day was nice and warm, and she was terribly surprised when her son came in and said:

"Mamma, what is this in the yard? Do come and see."

Well aware of what he had found, she followed him. The bread had at last risen, being warmed by the sun. We all had a hearty laugh over it, but I think it will be a lesson to the mother, don't you?

(Honorable Mention.)

The Ghost Parade

By Mae Young, Aged 14, Humphreys, Mo.

The girls in this town and community have a club they call the "Jolly Girls' club." On Thursday night before Hallowe'en we met at the home of one of the members. We were all dressed as ghosts. There were about twenty-five girls.

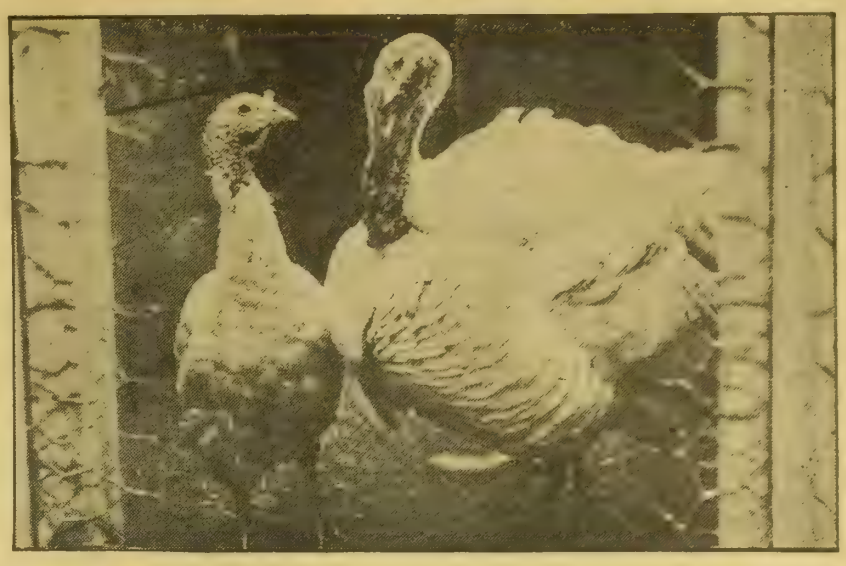
About 8:30, or a little later, we all lined up single file and marched to town and around the square and back home again. We walked about eight blocks altogether and frightened lots of people. We had lots of fun guessing who each other was and hope we can have as much fun again next year.

Additional Stories

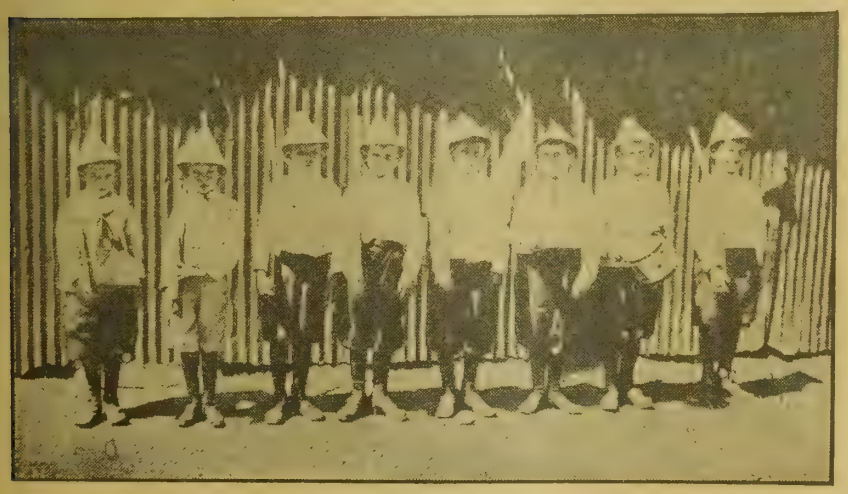
Emma Gillespie, Greeley, Neb.; Lloyd E. Heldenbrand, Stapleton, Neb.; Bessie Russ, Chambers, Neb.; Elizabeth Sanner, Brunswick, Neb.; Geneveive Rounds, Emerson, Ia.; Goldie Cortner, Sheridan, Mo.; Myra Cortner, Sheridan, Mo.

You cannot keep temptations from knocking at your door, but you can hang out a "Busy" sign.—Country Gentleman.

Are They Discussing Thanksgiving Dinner



Picture Contest No. 18



What do you suppose these boys are doing? Why are they doing it? What is it all about, anyhow? Answer some of the questions this picture suggests to you, putting your answer in the shape of a verse of four lines. Each of the two children writing the best verse will receive a book as a prize. In awarding the prizes, quality of verse, neatness, punctuation and spelling will be considered. Give your name, age and address and send your verses to Picture Contest Editor, Twentieth Century Farmer, Omaha, Neb. Verses must reach this office by November 28 or they cannot be considered.

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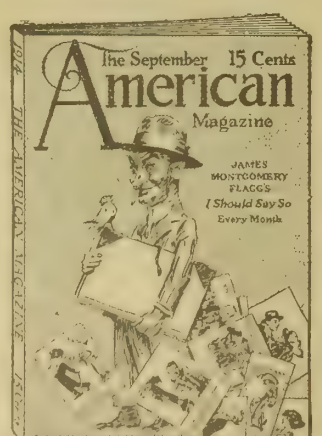

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Styles for Home Dressmaker

6836—Ladies' Waist. Made to give the new small armhole effect without any shoulder seam, as sleeve and side bodies are in one, joined to the front and back of the waist beneath a small tuck. The neck may be closed or open, with turnover, and the sleeves are full length, finished without any cuff. The pattern, 6836, is cut in sizes 34 to 44 inches bust measure. Medium size requires 3 yards of 27-inch material.

6916—Ladies' Skirt. A two-gore foundation is attached to a one-piece lower section, and over this is the tunic, tucked in front and back to produce a panel effect. One or two materials may be used in making. The pattern, 6916, is cut in sizes 22 to 32 inches waist measure. Medium size requires 3¼ yards of 44-inch material and 1¾ yards of 36-inch lining for the foundation.

6882—Ladies' Waist. Quite in the new manner, this waist is plain and has only straight lines. In front are short darts and the back is so cut that the central panel is extended to form sash sections. The open neck is trimmed with a standing collar and revers. The pattern, 6882, is cut in sizes 34 to 44 inches bust measure. Medium size requires 2¼ yards of 36-inch material.

6860—Ladies' Dress. This dainty frock has a short tuck at each shoulder in front and a side front closing to the blouse, with round neck and small fancy collar. The three-gore skirt is gathered across the back and is plain in front and at the sides. The pattern, 6860, is cut in sizes 34 to 46 inches bust measure. Medium size requires 4 yards of 44-inch material and ½-yard of 27-inch contrasting goods.

6892—Girls' Dress. For the girl at the difficult age, neither big nor little. There is a plain blouse with front closing and open neck, trimmed with a collar of medium size. Small sleeves follow the shape of the arm. A full tunic overhangs a separate skirt. The pattern, 6892, is cut in sizes 8, 10, 12 and 14 years. Medium size requires for blouse and tunic 2½ yards of 36-inch material; for skirt with flounce 1⅞ yards of 36-inch.

6824—Boys' Overcoat. This coat is quite in the regulation style. It is cut in sacque style, with double-breasted closing; the neck finished with small collar and revers. The plain sleeves are inserted in a regular armhole and are finished without a cuff. The pattern, 6824, is cut in sizes 2, 4, 6 and 8 years. Medium size requires 2¼ yards of 54-inch material.

6839—Ladies' Coat. This handsome, loose coat is made with Raglan sleeves, extending to the edge of the neck. The closing is low, below the normal waistline, and the neck is open, with a small collar and long revers. A wide belt marks the waistline. The pattern, 6839, is cut in sizes 34 to 44 inches bust measure. Medium size requires 3¼ yards of 54-inch material and ⅝-yard of 27-inch contrasting goods.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Of Interest to Our Women Readers

Thanksgiving Ode

Once more the liberal year laughs out
O'er richer stores than gems of gold;
Once mo e with harvest-song and shout
Is nature's bloodless triumph told.

Our common mother rests and sings,
Like Ruth, among her garnered sheaves;
Her lap is full of goodly things,
Her brow is bright with autumn leaves.

O favors every year made new!
O gifts with rain and sunshine sent!
The bounty overruns our due;
The fullness shames our discontent.

God gives us with our rugged soil
The power to make it Eden-fair,
And r'cher fruits to crown our toil
Than summer-wedded islands bear.

Who murmurs at his lot today?
Who scorns his native fruit and bloom?
Or sighs for dainties far away,
Beside the bounteous board at home?

Thank Heaven, instead, that Freedom's arm
Can change a rocky soil to gold;
That brave and generous lives can warm
A clime with Northern ices cold.

And let these altars, wreathed with flowers
And piled with fruits, awake again
Thanksgivings for the golden hours,
The early and the later rain!

—John G. Whittier.

The Music of Home

Frequently distinguished foreigners come to this country and make what they fondly suppose is a study of our people and the conditions under which they live, and then go back and write long articles for the papers and magazines of their own countries, giving much interesting misinformation regarding the way we live and think and act. They cannot know that the real Americans are not the few wealthy city dwellers and celebrated authors and artists they meet, but the common people, who ride to and from work each day in the street cars, or who live on the farms of the country.

One of the things they most like to say is that we are not a musical people—that we are immersed in commerce and trade and lack an appreciation of the finer things of life. I read just such an article a short time ago and wished I might take the author into the homes of the real people in town and country in this great middle west. If we lack an appreciation of music and culture, why is it that there is scarcely a home, except those of the very poor, that lacks a musical instrument, and why is it that pianos are almost as common as dining tables?

A group of people were trying to count the homes they know not long ago, where there was neither piano, organ, violin, victrola or some other musical instrument, and they were unable to do it. Not because there were so many, but because they could not think of one. In every family there is at least one member that finds pleasure in music, and usually all do, in varying degrees. The evening music is one of the strongest bonds between the growing children and their parents, being an amusement that all can enjoy, irrespective of age.

In some of the foreign countries they have great public halls where, for a very small sum, the people can hear fine music. It is a great privilege, and greatly enjoyed, but the ordinary American home, with the mother or older sister at the piano and the children clustered around singing the songs and hymns that have been familiar to them from babyhood, presents a more betutiful picture than is to be seen on any operatic stage. The remembrance of these happy days draws brothers and sisters together and holds them close through the storms of after life.

What is the last thing that most of our families will do this coming Thanksgiving day? Someone will start to play, and soon all will leave their various occupations and gather about the piano to sing the old familiar songs. "Home, Sweet Home," will have a place on every program. It is an American song—our real national hymn—and its beautiful spirit places it far above the greatest opera or concerto ever written in its power to bring us back through after years to that greatest of our national institutions, the American home.

HOME EDITOR.

Our Weekly Recipe

BRAN BISCUIT—One cup of bran, one cup of white flour, one-half cup of sugar, one-half tablespoonful melted butter, one teaspoonful baking powder; sweet milk to make a heavy dough; one-quarter cupful of molasses may also be used, if molasses flavor is liked. Bake about twenty minutes in gem pans. These are delicious biscuits and very good, especially for the children, as bran has a beneficial effect on the digestive system.

Autumn Thoughts

Autumn is again with us in all its gaudy beauty, and I sometimes think it the most lovely of our seasons.

The woods are aglow with wild flowers of every hue and the forest trees are covered with their red, yellow, brown and mottled leaves; but I suppose those colors are getting out of fashion now, as they are throwing them off.

The nut trees have contributed their share to our winter's store, so when you come to see me, bring your nut picks.

Migratory birds are flitting to their winter homes, and we often hear the musical "honk, honk" of the wild geese flying southward.

Thanksgiving day is only a few days off, and we have so many things to be thankful for.

Bounteous crops are being harvested in this country, considering the variable seasons, and digging sweet potatoes and making syrup is now the order of the day, and you can see loads of sugarcane being hauled to the mills in nearly any direction you chance to look.

My autumn flowers are lovely now; chrysanthemums, cosmos and hybiscus, besides a score or more of roses in full bloom. House plants are yet on the porch; they look fine, but I have only a limited number nowadays; they are so hard to winter in houses like ours and, growing so many in the yard, it is not necessary to grow so many in pots. I have twenty-three kinds of cactus—both curious and beautiful—a few ferns, geraniums, coleus, etc., and that is all.

Jack Frost has made us one visit. I don't think he really intended coming so early, but think he was passing this way, and to keep down hard feelings he just called in a social way. For my part, I would have forgiven him had he slighted us this once, for I had a 100-foot row of roselle or Jamaica sorrel, an annual fruit plant, seed sent from a friend in the West Indies, and I was very anxious to test it here. It was a beautiful plant, some seven feet high, and just loaded with fruit that would have been ready for use in just a few more days, but Sir Jack, with his usual greediness, never left a taste.

We have five little folks in school now. This is our Wilder's sixth birthday, and that means he will soon troop off to school with the other children, and will only leave me the baby for company. Wilder keeps reminding me of "that chicken." Wonder what he means?

How time does fly! It seems only a few months ago that I would watch my neighbors' children on their way to school, and wish ours were old enough to go also; now all are old enough but one, and it won't be long until you will hear me wishing—but never mind, I sometimes think this is just an old wishing world, anyway, and the things we have not got are what we most wish for until we attain them, and then someone else is wishing for them and we are wishing further on. Thus it goes. This morning "Baby Mavis" came to me and told me that Clifford had put a huckleberry in her hair and she wanted me to get it out. Of course, it was a cockleburr.

While dressing a chicken Wilder exclaimed, "Oh, mamma, I see its windmill," when he meant the windpipe, and Mavis had claimed the heart and asked, "Where was her little heart?" I touched the region of her own heart and she said, "Oh, mamma, I'm not a chicken; chickens have hearts." It hurts me to know all my children must get grown up and wise. NANCY J. HAVENS.

Louisiana.

Note—This letter came just in time to get into this number. I know you are all as glad to hear from Mrs. Havens again as I was. The intimate glimpses she gives us into her charming home cannot fail to do us all good.—Home Editor.

Bakers' Buns

At noon on baking day take one cup of bread dough, one cup of sugar, one-half cup of lard, one cup of warm water and one egg; mix all well together. Add one quart of flour, or about that amount, to make as stiff as before; let this rise till evening; then mould into small rolls and place far apart in a large pan; set in a warm place over night and bake in a moderate oven until a light brown. They are delicious hot for breakfast and splendid cold for sandwitches. This recipe makes twenty-eight buns.

This recipe was sent in by a reader in Nebraska and sounds like a good one, well worth trying.—Home Editor.

Grinder Troubles

If you are bothered in using the utility grinder—about raisins and other things sticking to it, making it almost impossible to run them through—put the raisins, currants, dates, figs—whatever you wish to grind—into hot water and dip them out into the grinder, and you will find they work through easily and leave the chopper almost clean. A bit of dry bread run through the grinder after these, or after grinding meat or other things, will clean it so that little or no washing will be needed. Many will not use the grinder because it is so much trouble to grind the fruits mentioned through it, and because it is so difficult to clean. The above method saves all bother.

The Man Who Helps

The man who has no time to help the community in its struggle for advancement is a man of extremely ordinary ability.

It takes all his time and effort to make a living.

The line between this man and that of the community charge is but faintly defined.

To make the definition clear, let us say that the man who helps the town is a community asset, and the man who lends no such help—is not a community help!—The Efficient Citizen.

DOCTOR KNEW

Had Tried It Himself.

The doctor who has tried Postum knows that it is an easy, certain and pleasant way out of the coffee habit and all of the ails following, and he prescribes it for his patients as did a physician of Prospertown, N. J.

One of his patients says:

"During the summer just past I suffered terribly with a heavy feeling at the pit of my stomach and dizzy feelings in my head and then a blindness would come over my eyes so I would have to sit down. I would get so nervous I could hardly control my feelings.

"Finally I spoke to our family physician about it and he asked if I drank much coffee, and mother told him that I did. He told me to immediately stop drinking coffee and drink Postum in its place, as he and his family had used Postum and found it a powerful rebuilder and delicious food drink.

"I hesitated for a time, disliking the idea of having to give up my coffee, but finally I got a package and found it to be all the doctor said.

"Since drinking Postum in place of coffee my dizziness, blindness and nervousness are all gone, my bowels are regular and I am again well and strong. That is a short statement of what Postum has done for me."

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If you wish to write to a manufacturer whose advertisement you have seen in a former issue of this paper, but whose address or name you cannot recall, write us. We can give you the information.

Great Port of Concepcion and Naval Station

By Frank G. Carpenter

CONCEPCION—Owing to the war and the increased demands for United States goods the port of Concepcion will soon be as well known to our business men as Valparaiso is now. Concepcion is the metropolis of southern Chile and the outlet to the best farming part of the country. It has railroads going north and south through the great central valley, and extensions are proposed which will cross the Andes and Argentina to Buenos Ayres. It already takes a large part of our American exports and farm machinery and tools of all kinds from the United States are for sale in its stores. Not far from it are great coal mines of Lota and within a short street car ride is Talcabuano, the chief naval station of the republic.

Concepcion is the third largest city of Chile. It is surpassed only by Valparaiso and Santiago and it is rapidly growing. The town lies on the Bio-bro river not far from the sea. A low range of hills separates it from the ocean. When it was first founded it lay right on the beach. Then came an earthquake that swallowed the city as the whale swallowed Jonah. Concepcion disappeared into the maw of the Pacific. It was wiped out like Port Royal, Jamaica, and there is now only a bathing resort on that spot. In rebuilding the people chose the present site, where the hills keep out the waves, so that in spite of the earthquakes the city still stands.

The Docks at Talcahuano, the Chilean Naval Station

Earthquakes Are Constant

I say in spite of the earthquakes, for there are so many that the land moves to and fro as though it had the ague. The quakes are almost as common as those of Japan. We had one last night that swayed the walls of my hotel room and set the electric lights swinging. The first shock awakened me. It was about 11 p. m. The experience made me think I was in a storm out at sea. My bed rose and fell and a bottle of ammonia on the edge of my washstand dropped to the floor with a crash. At the same time its pungent scent filled the room. I looked at my watch. It was ten minutes after 11 p. m. As the second hand measured one minute I rose and went into the hall. The walls were still trembling, and as I entered the portico looking down on the patio, a smokestack fell down and the guests of the hotel came running out in their night clothes for fear that the heavy tiled roof of the building might fall. Some of them stayed outdoors all night. I waited until the trembling of the earth ceased and then went back to bed. But I could not sleep for an hour or more for fear of the second shock, which often follows a first. I finally dropped off and slept soundly until 4 o'clock, when the second shock came. It was quite severe, but not so bad as the first. The dispatches of today's paper show that these two earthquakes have been felt all over Chile. They have thrown down one small town and the created such consternation at the capital that many of its citizens spent last night in the streets.

Experience With Japanese Quake

I do not like earthquakes. There are regions where they have some kind of a shock every day; but even there the natives are afraid of them, and it is only the ignorant globe-trotting tenderfoot who says he is not. The most severe earthquake I ever experienced was in 1894 in the capital of Japan. At that time a great number of buildings were destroyed, the high chimney of the Parliament House crashed through the roof, and the American legation building was almost split in twain. At the time this earthquake occurred I was in the household department of the mikado, having an interview with the high court chamberlain concerning the empress, about whom I was to write a magazine article. The building was modern, and after the style of the public buildings of our country. Had it been Japanese it would probably have stood, but at it was the earthquake threw half of it to the ground. We saw the walls moving and felt the floor rising and falling, when the high Japanese official said: "There is an earthquake and I think we had better get out." At the same time the halls were filled with flying clerks. We rushed out and had barely gotten clear of the building before about one-half of it fell to the ground.

Buildings All of One Story

On account of earthquakes nearly all the buildings of Concepcion are of one story. The town covers a great deal of ground. It lies on a flat plain at the edge of a hill known as the Caracol, 1,000 feet high. It is the public park of the city and rises up almost like a fort over the houses. I climbed it today for the view. Walking through wide streets lined with one and two story buildings, I crossed the Alameda and went up the winding slopes. The road was lined with mighty pines and it made me think of the great Cryptomeria avenue that leads up to Nikko, Japan. Mixed with the pines were mimosa trees now in full bloom. There were many green shrubs, the vegetation rising like a wall on one side of the road. By and by we came to the top. We were now high over the city of Concepcion and the valley of the Bio-bio. We could see the houses of Talcahuano, the naval station, and the ocean beyond. We could pick out the Bio-bio river, as it wound its way down to the sea and the bridge across it, the longest and largest in Chile.

Concepcion itself lay just below us, a great expanse of terra-cotta roofed houses with a plaza of green in the center. We could see the cathedral on one side of the plaza. It is a large building with an audience room covering half an acre. The streets go out from the plaza. They are wide and cross each other at right angles. They are paved with asphalt and clean and well kept. The houses of the city are low. Looking over them we see here and there a cluster of trees surrounded by walls. The trees seem to be sprouting from the roofs of the houses. They are in the courts of patios around which the houses are built.

People Believe in Recreation

We turn around and look toward the north. There is nothing but wooded hills on that side. You might imagine yourself in the midst of a wilderness did you not know that the city of Concepcion lay at your back. The town shows signs of its sport-loving character here from the mountain. You can see the golf-links, the polo grounds and a race course, with a track more than a mile long. The bands play in the plaza every evening and the people come out in their best clothes and walk about and look at each other. The city is a commercial center. It has large business houses and a great deal of agricultural machinery from the United States is here distributed throughout southern Chile and through the farms of the great central valley.

During my stay at Conception I have investigated the opportunities for American coal by way of the canal. The best coal mines of Chile are situated not far from here on Coronel bay. The coal lies about the bay and extends far out under the ocean. The seam is about five feet thick and the rock above is so compact that the water does not seep through. Indeed, the submarine tunnels are so clean that one could walk through them in evening clothes without danger. The mines are equipped with modern machinery. They are lighted with electricity and the coal is carried out on electric cars. The amount now being mined is about 1,000 tons per day, and the total output runs into the hundreds of thousands of tons per year.

Necessary to Import Coal

The supply of coal furnished by the Lota mines does not begin to fill Chile's demands. The country is now using more than twice as much coal as it produces and it has been importing one-half of its supply from Australia and England. The state railways now use 400,000 tons per annum and practically all of the smelting coal comes from Australia. I understand there are other extensive deposits in the province of Arauco, south of Concepcion, and they have recently discovered coal near Punta Arenas, at the Strait of Magellan. Petroleum and natural gas are known to exist 500 miles south of Valparaiso, and that in a region not far from the steel works at Corral. By means of the canal our coal from the gulf and south Atlantic states ought to have a great market here and coal might form the return freight for the nitrates and other minerals that from now on will be shipped north through the canal to our country.

It was these Lota coal mines that formed the foundation of the great Cousino fortune, still one of the largest of Chile. For several generations it had been known that coal existed not far from Concepcion, and it was at the time that Madison was president that an American named Wheelwright, who put the first steamers on the southern Pacific, tried to utilize these deposits for his ships. It was not until 1855, however, that they proved to be of any value, when they were bought by Don Matias Cousino.

The coal is not a very good steaming coal, but it does well for smelting. Cousino established smelting works near the mines and began to develop the coal properties. He did so well that in one year his net receipts were more than $1,200,000, and in time he built up a big business. He established the town of Lota, which has 10,000 people, including the most of the 6,000 men who are employed in the mines. The town has good homes, a church, a hospital, free doctors and a plaza for recreation.

Richest Woman in the World

When Don Cousino died his widow was said to be the richest woman in the world, and her income was over $1,000,000 a year. She had not only the coal mines, but silver mines and copper mines, bonds

and stocks galore. She had also a large hacienda near Santiago and a fine home in that city. She gave to the public the Cousino park, which is the chief pleasure ground of the Chilean capital, and she made herself famous also for her palace and park at Lota, not far from her mines. I have visited both places. They are wonders of landscape gardening, that at Lota having many picturesque effects of both land and sea.

The canal should also give an outlet to the lumber of our southern states into all the Pacific coast countries. Chile has a large forest region, but the woods do not compare with ours and the country is now importing about 80,000,000 feet of lumber per annum. The most of this comes from California, Oregon and Washington, and it has to go a long way farther to reach the canal than would the lumber of our gulf states. Indeed, the increased distance would probably more than offset the tolls charged to the gulf state lumber for passing through the canal.

Lumber Demand Will Grow

Moreover, the outlook is that there will be an increased demand for lumber in Ecuador, Peru and Chile. All of the ports and the most of the cities will grow and they will need building materials. This will be especially so in Chile, where the government is undertaking public building operations which are to run through a period of ten years and cost many millions of dollars. The buildings to be put up include administration offices at the state capitals, a number of penitentiaries and customs houses, and many public school buildings. A new president's palace is also to be erected at Santiago and the government will remodel the repair shops on the state railways and spend some millions on the harbor at Valparaiso.

Indeed, the opportunities for the introduction of all kinds of American goods are now at their height. Our trade has been steadily gaining over that of England and Germany before the war in Europe occurred. In 1913 the increase in American trade was more than $3,000,000, while during that year the decrease in the German trade was $3,600,000, and that of England $2,500,000. At present the importations from France and Germany are practically stopped, and those of England are clogged by the war. In addition are the better transportation facilities that will come from the lines of shipping under the American flag, the great advantages from the Panama canal, and also to the fact that American capital to the amount of $50,000,000 or more has recently been invested here. Outside of this our capitalists have taken options on other mining properties, including gold, copper and iron, and the invasion of such capital seems to be only at its beginning.

American Guards in Evidence

I took an American street car and rode across to Talcahuano to see the port and naval station. The road is an electric trolley, built by our firm of Grace & Co., and the cars run from one place to the other in thirty-five minutes, the distance being about eight miles. We passed the race track and cricket and polo grounds and rode for some distance on the edge of the sea. Entering Talcahuano, we found ourselves in the heart of a rapidly growing city of 40,000 people. The stores are good, and there are large wholesale establishments.

The naval station is carefully guarded, and I had to get a permit from the admiral to go over it. I rode to it on a construction train, seated on a dirt car. The main buildings are four or five miles away, at the entrance to the harbor or bay, which is well protected from the sea. The bay is large enough to float all the navies of the world and it has deep water right up to the wharves. Preparations are now making to improve the docking facilities, and it will eventually be a great commercial port.

The naval arrangements are excellent. Great storehouses of reinforced concrete have been put up and something like fifty acres have been covered with buildings and machine shops for repairs. In some of the basins I saw them putting eight-inch guns on the older war vessels, and in the drydock one of the cruisers, the Esmeralda, was being cleaned and repaired. Another drydock, large enough to hold a dreadnaught, is now building, the construction going on under the water. The station has the latest of modern improvements, including a large electric machine shop, electric cranes and all the necessary machinery for handling great weights.

The Chileans are proud of their navy. They have two dreadnaughts of 28,000 tons each now building. They have two armored cruisers, the Esmeralda and the O'Higgins, which are of 7,000 or 8,000 tons, and three protected cruisers. They have three torpedo gunboats, thirteen destroyers, five modern torpedo boats and two submarines. There is also a mine ship and a hospital ship. The total strength of the navy is about 6,000 officers and men.

Esmeralda Named for Predecesor

The Esmeralda, now in the dry dock, is named after the little boat of about 800 tons which fought so well in the great engagement with Peru about thirty-five years ago. At that time the Esmaralda and the Cavadonga were lying off the nitrate port of Iquique when two much larger vessels belonging to Peru, the Huascar and Independencia, attacked them. The Chilean vessels were made of wood and the armament of each consisted of twelve four-pound guns. Neither was over 850 tons. The Huascar had more than 1,000 tons and its guns shot shells of 300 pounds. The Independencia was an ironclad of more than 2,000 tons, and it had twelve seventy-pounder guns. Notwithstanding the Esmeralda blazed away at the Huascar, sending its little four pound shells against the other's 300-pound shells It continued until it was almost a wreck and when the Huascar finally bore down upon it and rammed it wtih its great iron clad prow the Chilean captain, Arturo Pratt, who commanded it, leaped to the deck of the Huascar and called his men to follow him. Before they could do so the boats again separated. Pratt fell beneath the Peruvian bullets and the Esmaralda fought on without a commander It was again twice rammed. It sank with the Chilean colors still flying.

The Cavadonga was of just about the size of the Esmeralda. It pretended to flee from the ironclad Independencia and the latter pursued. The little ship led the big one into the mud and when it had stranded it came within close range and fired upon it. This firing was continued until the Huascar came up, at which time the Cavadonga left. There are paintings representing the story in the art galleries of Santiago.

There is no question about the bravery of the Chileans. They are natural soldiers and always ready to fight. According to the present military system all citizens are obliged to serve in the national militia. Every boy must go into the army and serve for a year. After that he serves off and on for nine years in the reserve. The total strength of the army is 18,000 officers and men, the infantry being armed with Chilean Mausers. The military training is German, and the army and navy expenditures are large. Altogether they are about $6,000,000 a year, an amount equal to $8 or $9 to every family in the country.

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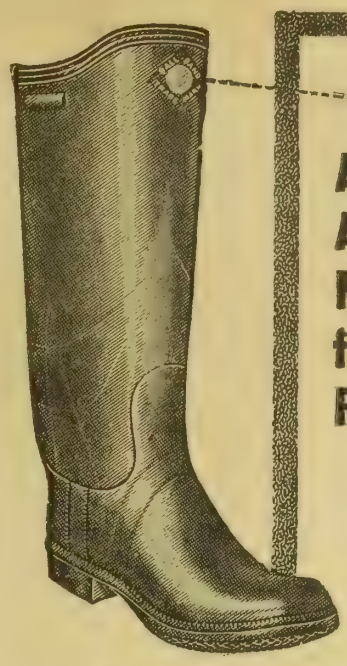
Our Rural Schools

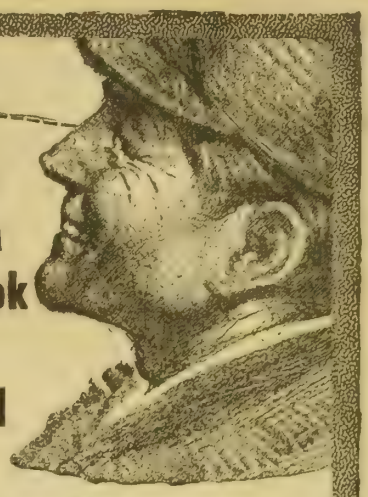
(CONTINUED FROM PAGE THREE.)

ahead a little. But not fast enough, and largely because of our own indifference. I tell you some of us need to wake up; we do not need to pay less attention to cattle, hogs, corn and alfalfa, but we do need to give more time and thought to matters pertaining to the welfare of our children. Let the board members see that every child, rich or poor, Slav or Saxon, saint or sinner, is well supplied with text books; that there are dictionaries, library and reference books for general use, and that globes, charts and other useful articles are provided for the teacher. And finally, let the taxpayer forget to howl when the appropriation is asked for, but rather let him say cheerfully, "Oh, pshaw! That isn't enough. Let's add $100 for incidentals."

When people unite on anything they have taken the first important step for the improvement of conditions, but it is up-hill business for a few energetic ones to fight the battle alone.

In the next paper we shall discuss the qualifications and tenure of service of the rural teacher.

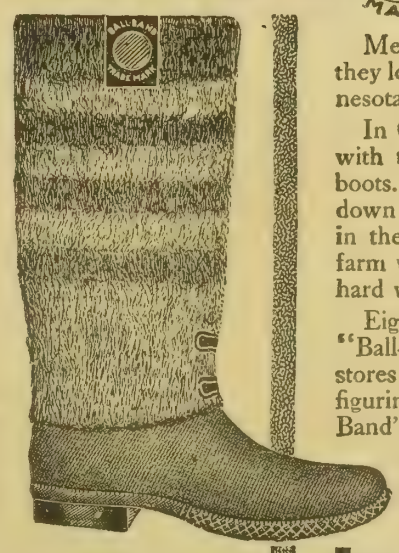




All over America Men Look for the Red Ball

Wherever rubber footwear is worn you will see "Ball-Band" Rubber Footwear, with the Red Ball trade mark.

"BALL (Red) BAND"



Men look for the Red Ball in Alaska, they look for it in Massachusetts, in Minnesota and in Oregon.

In Colorado you can see sportsmen with the Red Ball on the knee of their boots. "Ball-Band" Footwear is worn down in the mines of Pennsylvania, up in the woods of Maine, and on every farm where dry, comfortable feet make hard work easier.

Eight and one-half million men wear "Ball-Band" Rubber Footwear. 50,000 stores sell it. And the reason is that, figuring on the *cost per day's wear*, "Ball-Band" is the lowest priced rubber footwear. Look for the Red Ball and if you see it, you are safe, for you are getting "Ball-Band."

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The book tells how to treat your footwear so as to get the most out of it. Write for it. If your footwear merchant doesn't sell "Ball-Band," tell us his name and we will see that you are supplied.

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The "Ball-Band" Coon Tail Knit Boot is knit, not felt, insuring the utmost wear. The only high-grade knit boot of this character on the market. The patented snow excluder keeps out snow and dirt. Heavy gum overs to fit. This boot is completely shrunk; it can be washed when dirty—it simply *won't* shrink any more. *Look for the Red Ball on the Straps.*

"Ball-Band" Arctics are made with one, two and four buckles. Look for the Red Ball on the sole. The tops are best cashmerette and the warm linings we make ourselves from the same kind of wool that goes into the Coon Tail Knit Boot. Fine to wear at work, or to protect your good shoes. A strong, sturdy piece of footwear.

The Golden Prairie District of Southeastern Wyoming

This is one of the most fertile districts in the West and farming is carried on here entirely without irrigation. The district is traversed by railroads and market conditions are good. We are owners—not agents—and sell our lands on ten annual payments, or on our Celebrated Crop Payment Plan, whereby one-half the crop raised each year is delivered to us at market price until the land is paid for.

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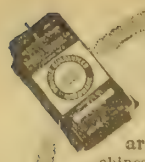
100 West Seventeenth Street, Cheyenne, Wyoming.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.



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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

ONE usually begins planning to buy a needed article before it is needed in active use. Few persons buy incubators without having given the matter of purchase long and serious thought. Incubators will be needed anywhere from first of February until June—perhaps after this time. While no doubt natural incubation will be responsible for the hatching of thousands of chicks where incubators will show but 100 for a long time to come, yet for all this fact each year sees the sale of incubators increase, and each year sees the number increase of poultry keepers who favor artificial incubation over natural.

Artificial incubation of fowls is an old art; it was practiced in China and Egypt ages ago and is still practiced there, and often yet in the old, crude ways, such as heat given off by the sun, by heated ovens or by the heating process of stable manure placed in a sun-baked mud oven or hut. Even twenty-five years ago our mechanical hatchers, placed against the present up-to-date machines, seem nearly as crude as the old Chinese or Egyptian hatcheries of thousands of years ago. One of our first incubators was a square wooden box, its double walls filled with sawdust, heated by a lamp. There was no regulator, so the operator had to regulate by the lamp flame and touch of his hand upon the eggs—a doubtful way. Next followed the experimental stage in incuabtor building, each incubator builder holding theories of his own. The first of these hatched so few eggs that no wonder artificial hatchers were so long in disrepute with the majority of poultry owners.

Some of the First

Finally, the incubator began to climb the ladder of fame. We are not prepared to name all of these good pioneer machines. Perhaps one of the first machines to lift the artificial hatching business to a safe basis was the Model, put out by A. M. Halstead. This was a hot air machine. Closely allied with this, if we remember aright, was the Prairie State, a Pennsylvania machine. These machines became known as reliable hatchers in that time of many machines proving reliable only under extremely favorable circumstance of weather and attention.

Perhaps next to follow was the Monitor, by James Rankin, the extensive eastern duck keeper. Then came the Buckeye, Successful, Sure Hatch, Stahl's Wooden Hen, the Petaluma, the Victor, by Ertel, and the Burr. The Cyphers is said to be the first nonmoisture machine. To name all of the improved and perfect hatchers of today would be a long list, but there are, among others, the Queen, Racine, Rayo, Belle City, Old Trusty, X-Ray, Simplicity, Wisconsin, Champion, Hatching Wonder, Mandy Lee, Progressive, Reliance and Ironclad, that belong strictly to our western, northern and middle state regions, besides those that were studied out and manufactured in the eastern states. All of these named represent the practically perfect hatching machine of today. The question of moisture has been settled, ventilation made perfect, instructions are plainly given and, if followed, the up-to-date incubator equals the best of old hens in its hatching power. It puts the chicks in the nursery for you, hearty and strong. The rest lies with you. It has done its duty.

* * *

The Houdan is a much neglected fowl; it is one of the oldest of the pure breeds. The Houdan has a rather heavy body and short legs; its crest is sort of frowsy and its feathers about evenly marked, white and black, giving it a pretty spotted appearance. It is a fine able bird and is a heavy layer of large white-shelled eggs. It seldom gets broody until 2 years old.

* * *

You never see the real fancier pushing his birds to lay in winter. The fancier is perfecting some breed, or a certain type in some breed for shape and color, and he cannot afford to push for anything out of the line he wants. When he gets close to his type it matters not to him how old his fowls, or if they do not lay two dozen eggs a year; he knows the eggs are likely to contain something better than anything he has as yet secured in the type wanted.

* * *

The farmer's flock gains much on range, it is true, but where hogs are kept and hog cholera comes, the ranging fowls are a menace, as they bring back cholera from infected places, causing loss greater than the gain made by the long range. It is the same with turkeys; they carry hog cholera to your droves of hogs and then often die of it themselves. Keep the fowls as closely home as possible in such cases and discourage your neighbors' fowls from intruding on you for fear of contagious disease.

* * *

In mating Buff Orpingtons, remember that if you use big-boned, broad-backed males, over-size really for the breed, you are surer to get strong, lively chicks that persist in living in spite of cold and bad usage. Never breed from a thin, long type, drooped-tail Orpington. Somehow massive build and big bone tell for more in this breed than in some others.

Columbian Corn Crib

1,000 Bu. Bin (plain) $88.88 1,000 Bu. Bin (perforated) $91.88
500 Bu. Bin (plain) 66.66 500 Bu. Bin (perforated) 69.66
(Above capacities figured on small grain.)

We want to send you this Combination Grain Bin all freight charges prepaid. You can pay us for it when you get it. The special perforations make it suitable for ear corn, shelled corn, kafir, wheat, etc. Rain cannot beat in or small grain fall out. Fireproof—rat proof. Sectional—portable. Made of best quality pure metal, galvanized. 3 and 6 ply metal joints bolted together make it strong and rigid. Order today. The advancing price of grain will pay for it the first season. Prompt delivery guaranteed. Special prices on larger sizes. Circular free.
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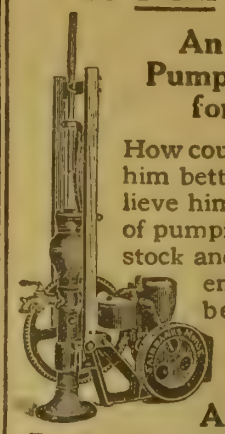
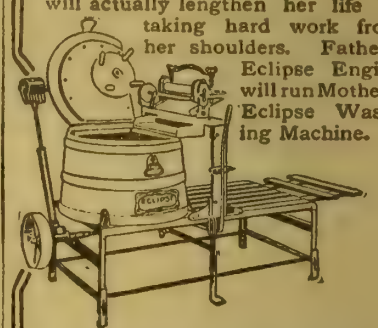


An "Eclipse" Pumping Engine for Father

How could you please him better than to relieve him of the work of pumping water for stock and house. The engine can also be used for many other purposes.

An "Eclipse" Power Washing Machine for Mother

will actually lengthen her life by taking hard work from her shoulders. Father's Eclipse Engine will run Mother's Eclipse Washing Machine.



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GOVERNMENT JOBS NOW OPEN TO men and women; $65 to $150 month; over 15,000 appointments coming; no layoffs; summer vacations with full pay; common education sufficient. Full directions showing how to get position—free. Write Franklin Institute, Dept. D 94, Rochester, N. Y.

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SWEET CLOVER SEED—THE TRUE, white blooming variety. (Melilotus Alba.) Write for free sample of new crop seed and latest prices. Henry Field, Shenandoah, Ia.

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ALFALFA SEED—NORTHWEST NEbraska high land seed, white blossom sweet clover seed; alfalfa hay, all cuttings; prices and samples free. Schwabe Bros., Chadron, Neb.

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WHITE LANGSHAN CHICKENS, White Holland Turkeys, White African guineas; large, early birds; eggs in season. Write for prices. L. T. Cummings. Lakeview Farm, Howe, Neb.

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LIGHT BRAHMA COCKERELS, hens; reasonable. Mrs. M. Wall, Eddyville, Neb.

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RHODE ISLAND RED COCKERELS, Single Comb, large, dark red, a strong laying strain. Order at once. The Redman, R. A. Harrison, David City, Neb.

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SILVER-LACED WYANDOTTES—A specialty of English strain. A few fine cockerels and pullets for sale from a pen of as good layers as the best, barring no breed. W. H. Mead, 404 East 10th St., Fremont, Neb.

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SILVER-LACED WYANDOTTE cockerels. Mrs. Ed Ackerman, Stanton, Neb.

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INDIAN RUNNER DUCKS. MRS. Derrick, Battle Creek, Neb.

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PIGEONS—RED CARNEAUX, BELgian stock, pair, $2. Mrs. Allison, Rodney, Ia.

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EGGS! EGGS! EGGS! THIRTYthree pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Sheandoah, Ia.

THE 115,000 FARM FAMILIES WHO regularly read this page are anxious to buy their breeding stock early this year. A nickel a word a week is the cost of advertising what you have to sell.

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TURKEYS, DUCKS, GEESE, CHICKens, rabbits, butter and eggs wanted. Ship direct to Perry & Co., Omaha, Neb. Estab. 1896. Reference, Merchants National bank. Prompt pay. Write for quotations.

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WE HAVE A FEW HOMESTEAD LOcations and timber claims in northern California, cheap. Full particulars on application. W. T. Smith Co., 1111 City National Bank Bldg., Omaha, Neb.

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YOU CAN BUY 15 ACRES FOR EVery one you now own, and each will produce more wheat, oats, barley, root crops, potatoes or vegetables and alfalfa than where you are, and will bring you a larger income; besides, you can live where catarrh, malaria, lung and throat troubles are unknown; where the whole family can enjoy the rich ozone of the air. Why not make money and have the best there is while you live? Get one of my twelve hand-picked quarters near Akron, Colo., at only $10 per acre. Cash payment and easy terms. A. C. Torgenson, care Denecke's, Cedar Rapids, Ia.

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SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

FARMS WANTED FOR CASH BUYers, and farm bargains for sale. Write me if you want to buy or sell. Terms free. Established 1881. John B. Wright, successor to Frank P. Cleveland, Real Estate Expert, 1315 Adams Express Bldg., Chicago, Ill.

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WARNING! DON'T WAIT. BUYERS picking up best bargains. World's Corn Growers prize counties, Chisago and Pine, Minnesota. Railway fare refunded buyers; lists free. St. Croix Valley Land and Loan Co., Drawer G, Rush City, Minn.

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LISTEN! CORN, ALFALFA AND Hogs yield great wealth in Holt county. A million dollars' worth of hay shipped from Atkinson yearly. My "Hage" quarter adjoining this town I will sell at a great sacrifice. Fine second bottom tractor plow land, all cultivated; good, eight-room house, big barn and double corncrib. A splendid home for a large family. The boys and girls can go to either the public school or to a $20,000 Catholic school. Price, $75 per acre, easily worth $100. Easy terms. Write W. P. O'Brien, 410 Bee Bldg., Omaha, Neb.

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FARMERS, DO YOU NEED MONEY? We negotiate for farm loans, 5 years at 6 per cent and ten years at 5 per cent; dealing direct with borrower; 2½ per cent straight commission. Correspondence solicited. Security Farm Loan Association, 30 North Dearborn St., Chicago, Ill.

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Tilden, Neb., Sept. 11, 1914.

Twentieth Century Farmer:

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Breeding Ewes Going East

STRANGE things are happening in these beginning years of the twentieth century. Not many years ago the home of the sheep was in the eastern states, and a century ago it was confined to the far eastern states. The sheep industry of the United States was then only commencing to attract the attention of the farmer as a profitable source of farm income. The sheep was produced for its wool-bearing qualities. This one feature of fabric-producing material made the sheep too valuable for uses other than growing wool, and only the aged, non-producing members of the flock were turned to mutton purposes.

The sheep followed closely the opening up of the farms and the improvement and cultivation of the lands, and not until the range sheep industry commenced developing over the grazing country of the western plains did the mutton feature become a matter of consideration and a necessity, in order that an outlet be provided for the surplus of the range flocks. At this period of western sheep development the mutton sheep-feeding industry was introduced in the western corn belt district. It was in the latter '70s when sheep-feeding was extensively introduced for mutton purposes, first commencing in eastern Nebraska and rapidly spreading to other districts and other corn and hay-producing states in the Missouri valley.

For many years prior to this, and while the western country was filling up with sheep, there was an urgent market created throughout the old eastern and New England sheep-growing states for all the ewe surplus of their flocks. The western sheep demand for twenty years following the war of the rebellion was the life of the eastern sheep-raising business and furnished a profitable industry for the eastern sheep farm. This, however, under the rapid development of the sheep-growing industry of the western side of the United States, slackened up and finally almost entirely ceased. The western range country became self-sustaining from the standpoint of breeding stock supply. The low prices for wool, lack of demand for breeding stock and inability to compete in the mutton market with the western sheep feeder caused a decrease in the sheep-producing industry over the eastern states, from which it has never recovered its former standing.

Changed conditions now mark the sheep business of the country. It is not now an unusual thing to see in the live stock market reports of our big live stock centers, shipments of breeding ewes to eastern states, to supply the demand for this class of sheep which thirty and forty years ago were being shipped out of these states as a surplus coming west of the Missouri river by the trainload from the same eastern districts that now are not producing sheep sufficient to fill their own breeding demands.

The Chicago, Omaha and Kansas City sheep markets congregate the best class of sheep for breeding mutton lambs that can be found on the continent, and buyers of large numbers can be more satisfactorily supplied in quality and price than by any local means of purchase in any eastern state. Hence, the revolution in the sheep business within the last quarter of a century. The old eastern sheep-raising and wool-producing states can now more profitably engage their time and energy in the dairy industry and systematically and economically build up the fertility of their lands.

Shredded Corn in Silos

THERE is a lot of misinformation going the rounds about putting shredded cornstalks into the silo. Some claim that if these dead ripe and weather-banged stalks are put into the silo with the proper addition of water they will nearly equal in feeding value the regular corn ensilage cut and siloed at the right stage of growth.

We don't believe it. There is a saving that really wastes in the end. There is but little good milk-making nutriment in old, ripe cornstalks, and putting them into a silo does not add a whit to their nutritive value. It may make it a little easier for the cow to worry such stuff down, but it is done at the expense of the cow and her milk product. So far as our own experience goes in the way of clear profit from corn as a roughage, there is but little of it in stalks that have stood in the field long enough for the ears to ripen well and safely for the crib. We used to spend a lot of expensive labor to husk, bind and finally cut these stalks for our cows, but they could find but little in them they could make use of in a way that would bring profit to us. But such stalks run through a power husker and stacked do make the finest bedding for cows that we know of. As an absorber and holder of the liquid manure they have no superior.

The central thought with the corn plant used as ensilage is to cut it and put it into the silo at just that stage of growth when there is the most feeding value in stalk and ear combined. We have found that stage to be when the ear has just passed the denting or glazing period. Every day after that sees the stalk lose its succulence and digestive value, all of which is sacrificed to the making of the ear. If this be true, how much feeding value can there be when the stalk has become old, dry, woody and of about as much help in promoting a flow of milk in a good cow as so much browse?—Hoard's Dairyman.

Six thousand bushels of lodgepole pine seed are being collected this fall on the Arapaho national forest, Colorado, for use in reforestation work next spring.

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Shall the Farmer Sell Milk, Cream or Butter?

CONSIDERING from all angles the question as to whether the farmer should sell his dairy products in the shape of milk as it comes from the herd, or turn it into some other form (cream or butter), the general rule would be to sell either cream or butter; yet there are exceptions to this rule.

Milke Sales Return Quickest Profits

Where the farmer is situated near enough to a good market to deliver his milk to private customers in the city or ship to a good market point, there is no question but that the milk form of dairy products can be made to work out very satisfactorily.

Distance is not as much of a factor to be considered as formerly, since by the use of the automobile the milk can be marketed three times as far as by team and vehicle. Again, in selling milk there is not as much expense attached to storage as with other forms of marketing, it being absolutely necessary to keep cream and butter fresh and cool at all times, especially during the heat of summer.

Milk turns in the greatest amount of ready, available cash—that is, greater than either cream or butter; but there are other points to be considered in this connection. When milk is sold the entire product is gone; there are no by-products, no chances of any kind to continue the profits. Even the fertility exhausted from the land in producing the milk taken from the herd is lost when the milk is sold. These facts tend to lower the ultimate profits of selling milk, or, rather, to raise those of other methods.

Selling Cream Most Popular

The selling of cream represents perhaps the most popular plan among farmers for disposing of their dairy products, as it requires less room for storage than milk, returns a profit that compares favorably with that of milk and leaves a profitable by-product.

After the cream is separated from the milk the skim milk can be fed while still warm to calves, pigs and poultry, which means an additional profit in stock and poultry products, while the fertility contained in the skim milk is returned to the land through the manure thus furnished.

In selling cream, another advantage gained is that of not having to market it more than three times (often only twice) a week. This amounts to considerable during the rush season in early spring and harvest times. However, it is a fact that cream thus handled often is allowed to deteriorate considerably, and with improved and scientific methods the profits could be raised materially.

Selling Butter Also Has Advantages

In stating that selling butter is advantageous, I would not for a moment have the reader take it that I mean selling butter in the open market.

The reason for this is seen in the fact that the amount of really high-grade, eatable butter offered for sale at the various stations represents such a very small per cent of all which is offered that the price established for butter must of necessity be gauged by the lower-grade product.

So the only plan by which any appreciable profit can be realized from selling butter is to establish a private trade in the city, guaranteeing to deliver a first-class product, and charging a premium price for it (which is only fair). In this way a profit near that secured by selling milk or cream will be realized, and the amount of by-products will be still greater than under either of the other systems of marketing.

Thus, with the skim milk and buttermilk as by-products to feed the stock and poultry, the plan of selling butter will have a less exhaustive effect on the fertility of the soil than any other, what little remains in the butter being all there is lost. Then, with the proper equipment, which should include either a good refrigerator, ice box or running water place of storage, the butter need be marketed only once (or twice at most) each week. It is, of course, much more difficult to keep in prime condition while being taken to market, but with a little preparation for it this difficulty is easily overcome.

M. COVERDELL.

Selection of Seed Potatoes

Many potato growers do not give sufficient attention to the selection of their seed potatoes. The usual plan of planting whatever happens to be left in the spring cannot be too strongly condemned. A very few of our best informed potato growers are already making hill selections. This is a wise practice and will pay for itself in the increased yields.

The department of agricultural botany of the Nebraska College of Agriculture has already shown the advantage of fumigating or otherwise disinfecting the potatoes and the cellar. Dry rot can be prevented by proper treatment of the cellar and potatoes. The work of this department has already demonstrated that the dreaded leaf roll may be eliminated through the development of resistant varieties. Correspondence regarding potato diseases is desired by the College of Agriculture.

Starting Gasoline Engines

With the approach of cold weather more or less trouble is experienced in starting gasoline engines, regardless of the type. Methods for relieving this difficulty are offered as follows by the department of agricultural engineering at the Nebraska College of Agriculture:

First—Fill the water jacket or radiator with hot water.

Second—Heat the gasoline by putting a bottle of it in hot water, being careful to keep the cork off the bottle containing the gasoline.

Third—Place a few drops of ether in the priming cup or spark plug hole. The last method is inexpensive and is used by many motor owners.

Two Good Ones

THIS ILLUSTRATION SHOWS THE TYPE AND CHARACTER OF SOME of the splendid Duroc-Jersey boars being offered for sale by Robert Young of Cook, Neb. Write him for particulars, mentioning this paper.

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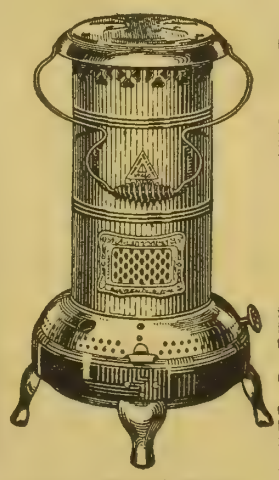

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Review of Live Stock Market

By A. C. Davenport

UNCERTAINTY continues the dominant feature of the live stock market. The extension since a week ago of the government quarantine to embrace several additional states has hampered the movement of live stock to even a greater degree than depicted in these columns a week ago. At the same time local authorities have established quarantines against the shipment of live stock into several of the western states so that the movement of feeders as well as fat stock has been interefered with to an extent that has entirely disrupted the regular course of trade. Everyone is doing a hand-to-mouth business, being afraid to branch out for fear that the next few hours may bring some fresh order from the authorities that might prevent the movement of stock to the destined point. This fear has almost entirely eliminated the speculative interests from the market. Even shippers buying on orders have been forced to keep very close to shore, as there have been days when it has not been at all easy for them to get their shipments loaded out at some points. The fear that some day might come when they would not be able to ship has had a naturally restraining influence on their operations.

A week ago at this time cattle at some market points were selling at extremely high prices because of the desire of packers to accumulate a few beeves to make them safe against a possible temporary shortage that might arise from the quarantine. As it turned out, there was no shortage. Missouri river markets were fairly well supplied and Kansas City was overwhelmed with cattle. As a result, even with Chicago and some other markets closed, there were enough cattle to supply the demands of packers and some to spare. Taking advantage of the latter fact buyers were able to break the market and at present writing beef cattle are considerably lower than a week ago at this time. Even now, considering that the cornfeds coming to market are practically all shortfeds, prices are still high compared with other years.

Future Cannot Be Guessed.

It is hardly possible to find two stockmen agreeing as to the future course of the market. Views even of the best informed differ widely, as there is so much uncertainty as to the duration of the quarantine. Should the foot and mouth disease be speedily stamped out and the quarantine lifted soon the market might be expected to readily assume normal conditions. Should the quarantine continue for several months the results might be more keenly felt. Some have figured it out that the loss from disease will make cattle scarce and hence put the market up later on.

There are, however, other influences to be reckoned with. Thus far there are no reports at hand to indicate the number of cattle destroyed by the government agents, but so far it is not large enough materially to affect the country's supply of beef.

On the other hand, a good many stockmen are inclined to believe that the prevention of shipments from quarantined territory is conserving the supply of fat cattle in several of the big feeding states. These cattle are gaining in weight and making more beef every day. If the quarantine is continued long enough these cattle might be thrown onto the market later in the season and for a time actually increase the supply and weaken prices.

About the time the prophets get something figured out along this line, along comes another consideration. The quarantine has discouraged, in fact, almost stopped, the movement of feeder cattle back to the country. To be sure the feeder buying season is pretty well over, but there is no question but what a good many feeder cattle, carrying just enough flesh to make them available for killers, are going to the packers. These cattle, under normal conditions, would go back to the country to be fattened for the late winter and early summer markets. If the quarantine is continued long enough this tendency to slaughter light and thin cattle must have an effect upon future beef supplies and might offset some other influences working in the opposite direction.

The deeper one goes into the subject the more thoroughly he is impressed with the idea expressed in the first line of this review—uncertainty is the dominant feature of the market.

Just at the time this is written stockmen are in a very hopeful frame of mind. For several days there have been no new outbreaks of disease, and it is hoped that the government in the near future will be able to release some of the territory now covered by the quarantine. The plan proposed is to release clean counties in the quarantined states as rapidly as such action can be taken with safety, permission being given for shipment of stock from such districts to market for immediate slaughter.

Slight Advance in Hogs.

Hogs have improved some during the last week, being around 25c higher. The advance has been due to fair shipping demand and reduced receipts incident to the quarantine. Most of the bears who were predicting lower prices still remain unshaken in their belief, holding to the opinion that receipts in the future will be large enough to put the market down. The bulls, however, have been hoping that industrial conditions and export demand would improve in time to at least hold the market somewhere near its present level.

Sheep Records Broken.

Fat sheep and lambs have made further advances during the last week, breaking all previous records for the month of November. As explained before in these columns, the advance has been due to the quarantining of the states containing the most of the fat sheep and lambs available for the market at the present time. As it happened the states not under quarantine were pretty well shipped out and the supply at market points had been so light that prices have been forced upward. What will happen later on when the quarantine is raised is a question still awaiting a solution. As a rule somewhat lower prices are anticipated when that time comes.

Human Health and Animal Disease

THE anxiety that has been expressed in several quarters in regard to the effect upon human health of the present outbreak of the foot-and-mouth disease is regarded by government authorities as somewhat exaggerted. The most common fear is that the milk supply might become contaminated, but in view of the precautions that the local authorities in the infected areas are very generally taking, there is comparatively little danger of this. Milk from infected farms is not permitted to be shipped at all. The only danger is, therefore, that before the disease has manifested itself some infected milk might reach the market. For this reason experts in the United States Department of Agriculture recommend pasteurization. As a matter of fact, however, pasteurization is recommended by the department, anyway, for all milk that is not very high grade and from tuberculin-tested cows.

It has been demonstrated by experiments which have been made in Denmark and Germany that pasteurization will serve as a safeguard against contagion from the foot-and-mouth disease just as readily as it does against typhoid fever, but in any event it must be thoroughly done—the milk must be heated to 145 degrees Fahrenheit and held at this temperature for thirty minutes.

In this country the foot-and-mouth disease has been so rare that there are few recorded cases of its transmission to human beings. In 1902 a few cases were reported in New England, and in 1908 in a few instances eruptions were found in the mouths of children which were believed to have been caused by contaminated milk. In both of these outbreaks the sale of milk was stopped as soon as the disease was found among the cattle. As long, therefore, as the disease can be confined by rigid quarantine to certain specified areas the danger from this source is very small. Should the pestilence spread all over this country and become as general as it has been at various times in large areas in Europe the problem would become more serious. Under any circumstances, however, pasteurization would be an efficient remedy. Where pasteurization is not possible, and where there is any reason to suspect that the disease may exist, the precaution of boiling milk might be advisable. Simple directions for pasteurizing milk at home, however, are contained in Circular 127, which will be sent free on application to the United States Department of Agriculture.

Cows affected with the malignant form of the disease lose practically all of their milk. In mild cases, however, the decrease may be from one-third to one-half of the usual yield. The appearance of the milk also changes; it becomes thinner, bluish and poor in fat. When the udder is affected the milk frequently contains coagulated fibrin and blood, so that a considerable sediment forms, while the cream is thin and of a dirty color. These changes, however, occur only when the disease is in an advanced stage and, as a matter of fact, the disease is not permitted to pass into an advanced stage, as any stricken animal is at once slaughtered.

Men who come in contact with diseased animals may also become infected. In adult human beings the contagion causes such symptoms as sore mouths, painful swallowing, fever and occasional eruptions on the hands, finger tips, etc. While causing considerable discomfort, however, the disease is rarely serious. Where it is very prevalent among animals, some authorities believe that it is fairly general among human beings, but that the disturbances it causes are usually so slight that they are not brought to the attention of the family physician. There is, however, a very good reason for everyone giving the diseased animals as wide a berth as possible, namely, that otherwise they may easily carry the disease to perfectly healthy herds. Federal inspectors engaged in the work of eradicating the pestilence are thoroughly equipped with rubber coats, hats, boots and gloves, which may be completely disinfected, and others who lack this equipment are strongly urged not to allow their curiosity to induce them to become a menace to their own and their neighbors' property.

The disease, in short, is dangerous because of the loss that it occasions to property, and not because of its effects upon the health of mankind. At present all infected herds are being slaughtered as soon as they are discovered, the carcasses buried and the premises thoroughly disinfected. Until all danger of infection has been removed in this way the local authorities quarantine the milk.

Those who wish additional precautions are recommended to use pasteurized milk, but, as has already been said, this recommendation holds true whether or not there is any fear of the foot-and-mouth disease.

Another State Quarantined

Latest advices in the foot and mouth disease are that it has made its appearance in Montana, the first outbreak west of the Missouri river. This state is now under quarantine, making a total of fifteen states now quarantined by the government.

Eighteenth Annual Meeting

United States Live Stock Sanitary Association

POSTPONED

Many Federal and State Officials are engaged in controlling Foot-and-Mouth Epidemic, consequently your Executive has agreed it is best to hold our meeting later than dates originally announced. Notice of new dates will be given as far in advance as possible.

S. H. WARD, President.

JOHN J. FERGUSON, Secretary-Treasurer.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Percheron Stallions

Our old friend, Fred Chandler of Charlton, Ia., still has a number of 1, 2, 3 and 4-year-old Percheron stallions that he will sell at this time. These are home-grown products, thoroughly acclimated and grown, developed and handled in a manner that insures their going out and proving valuable to anyone who buys them. They have splendid bone, lots of scale and will grow out into big, strong fellows, the kind that are in such demand on the American farm today. Mr. Chandler is located just east of Omaha, and you can rest assured he will make it worth your while if you will pay him a visit. For further particulars write him, mentioning the Twentieth Century Farmer.

Polled Durham Bulls

With this issue we are starting an advertisement for W. G. Unitt of Seward, Neb., who is offering several choice Polled Durham bulls for sale. We looked these bulls over a few days ago and must say that they are good, big, strong, mellow, typy fellows. They are from 13 to 14 months old and are sired by Violet Prince No. 320697, x70311. These bulls have simply been grown along and are in just nice breeding condition. They are big enough and strong enough to go out and do active service and good enough to go into any pure-bred herd. If you are in the market for a bull of this kind we would advise you to write Mr. Unitt at once, mentioning the Twentieth Century Farmer.

Immune Poland Boars

Thomas F. Walker & Son of Alexandria, Neb., still have a number of extra choice immune Poland-China boars for sale. These spring boars are sired by Blue Valley, Columbus Wonder and Blue Valley Orange, three as good boars as are to be found at the head of any herd in the country. If you are looking for a boar with size and bone, combined with quality and smoothness, we feel sure that you can find what you want right here. For a number of years the object of this firm has been to breed a hog with all the size possible and still retain the quality. We believe they have come about as near combining these two qualities to a superlative degree as any breeders we know of. Get in touch with them at once for information as to what they have to offer, mentioning the Twentieth Century Farmer.

Wineland Farm Jerseys

H. C. Young, proprietor of Wineland Farm Jerseys, Lincoln, Neb., has a number of very choice young bulls that he is offering for sale at the present time. As we have often said before, we consider that Mr. Young has one of the very best Jersey herds in the west. Along with this, he has a dairy and breeding plant that enable him to carry on his breeding operations to the best possible advantage. He has been breeding Jersey cattle for over twenty years and his herd today, in almost its entirety, represents his own breeding. From the beginning he has had a distinct type in mind and has followed out his ideas along this lineup to the present time. He has been breeding for size, combined with milk production and the general qualifications necessary to a good dairy animal. The young bulls he is offering for sale are of a type and character that should commend them to anyone wanting anything in this line. Besides these, he will also sell a few females of different ages. Get in touch with him at once if you are interested, mentioning the Twentieth Century Farmer.

Kuper's Shorthorns

We called on Henry Kuper, the well known breeder of Shorthorn cattle at Humboldt, Neb., a few days ago and spent some time in looking over his splendid herd. Mr. Kuper will hold his regular annual sale of Shorthorns at Humboldt on November 8 and will have a lineup of well-bred, highly useful cattle that should receive the attention of breeders and farmers in general. Anyone who knows Henry Kuper knows the high class of cattle he breeds. The usual rule is that the class of cattle a man buys for breeding stock is a pretty good indication of the type and character of cattle he is endeavoring to breed at home. At least it should be. No one ever saw Henry Kuper buy a poor animal in a sale. Unless he thinks he is getting something that will help to improve his herd he simply lets them alone. As a result of his pursuing this policy and by careful attention to mating, breeding and developing his cattle he has succeeded in building up a herd that will take rank with any in the state. As to type, they are big, smooth, uniform, with plenty of bone along with it. They carry blood lines that represent ancestral lineage that cannot be beat. He is going to sell forty-two head in his coming sale, consisting of twelve bulls and thirty females. Practically all these cattle are sired by imported bulls, and the larger part of them are either daughters or granddaughters of imported cows. They have not been pampered, but are in just good breeding condition. If you are in the market for something good you had better get your name on his mailing list for catalogue and watch these columns for further announcements. Kindly mention the Twentieth Century Farmer when writing.

Holsteins for Sale

Dr. B. B. Davis, proprietor of Friesland Farm Holsteins, near Omaha, Neb., has a number of very choice cows and heifers for sale at the present time. It goes without saying that these cattle are absolutely gilt-edge in every respect. If they were not they would not find a place in this herd, for Dr. Davis is one of the most discriminating breeders in the business today. He has always made it a practice to cull his herd very closely, and as a result he has today a class of cattle that will take rank with any in the country, both in point of breeding and in individual makeup, as well as performance. The reason he is offering these cattle for sale is because of crowded barn room. They are not cattle that he has gone out and picked up, but represent the natural increase from his own herd, and this in itself should strongly recommend them to prospective buyers. Besides these females, he also has a few good sons of King Segis Lyons that he will sell. Get in touch with him at once if you want something in his line. His address is Room 200 Bee Building, Omaha, Neb. Kindly mention the Twentieth Century Farmer when writing.

Sale Dates

Poland-China Hogs

February 6—O. J. McCullough, Clarks, Neb., sale at Central City, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb

Duroc-Jersey Hogs

January 27—Willard Robbins, Lyons, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 22—John C. Tighe, Stanton, Neb.
January 23—William Morgan, Wayne,
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday, Rising City, Neb.
March 1—Harry Tidrick, Windside, Neb.
March 12—Edgar Taylor, Plainview, Neb.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt,

JERSEY CATTLE

A Pure-bred **Jersey**

bull counts for more than the dam in grading up. You should be developing some 400-pounds-of-butter cows. The thoroughbred bull is worth all he costs on grade or full-blood Jersey cows. Like begets like.
THE AMERICAN JERSEY CATTLE CLUB
324 W. 23d St., New York City.

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and yearly milk and butter records. HAL C. YOUNG, Lincoln, Neb.

POLLED DURHAM CATTLE

POLLED DURHAM BULLS

Three unusually good, double standard Polled Durham bulls for sale. Color rich red. Age 13 to 14 months. Sired by Violet Prince 320697, x 7311. Priced to sell.
W. G. UNITT, SEWARD, NEB.

Twentieth Century Farmer Advertisers Make Sales

Yutan, Neb., Nov. 6, 1914.

Twentieth Century Farmer,
Omaha.
Dear Sirs:—
Please stop my adv. on Duroc male pigs. Am all sold out. I find a very good demand from your paper.
Yours truly,
GEO. W. SCHULZ.

DUROC-JERSEY HOGS

BOARS! BOARS! BOARS!

Several fall boars and a few choice spring boars for sale, sired by BELLE'S CRIMSON WONDER, COL. CHIEF, GOLDEN MODEL 4th and BELLE'S BIG WONDER, out of Crimson Wonder bred dams. I am offering these boars at bedrock prices for quick sale. A. R. BARNES, Petersburg, Neb.

IMMUNE DUROC JERSEY BOARS

40 spring and fall boars, all immune. 30 of the spring boars are sired by B. & K.'s Col. Gano, full brother to King Gano, that was recently sold for $800; five by Model's Hope by Golden Model 2d. Fall boars by Golden Modeler by Golden Model 15th. Choice pigs at reasonable prices. Farm adjoins town. Call or write
R. P. McGUIRE, Wisner, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.
F. E. MERRICK, OSCEOLA, NEB.

Duroc-Jersey Boars

Two top fall boars and several extra choice spring boars for sale, sired by Model King by Valley King and Gano Wonder by Col. Gano. These boars are all right, and I am pricing them worth the money.
E. M. YOUNG, Cook, Neb.

DUROCS AND RED POLLS

20 sows for sale, mated with Cremo and Buddy K 4th Wide Awake. Also a choice lot of fall and spring males. Priced to sell. Red Polls of all ages. Everything guaranteed.
GEO. W. SCHWAB, Clay Center, Neb.

35 TOP BOARS

35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st. Prince Munice, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

DUROC BOARS

I have a number of choice spring boars for sale, sired by Sweet Rose's Wonder, Chief's Model, Col. Chief and others. Prices reasonable.
HENRY STUTHMAN, Pilger, Nebraska.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

POLAND-CHINA HOGS

Immune Poland-China Boars

Splendid lot of big, smooth spring boars, sired by BLUE VALLEY, COLUMBUS WONDER and BLUE VALLEY ORANGE. If you want herd headers with size and quality, we have them. THOS. F. WALKER & SON, Alexandria, Neb.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

Our Advanced Registry Office for the year ending May 1, 1914, shows that 9,116 cows (nearly one-quarter heifers), produced within a seven-day period 3,672,371 pounds milk containing 130,339 pounds butter-fat, averaging 3.55 per cent. The average for each animal (not mentioning the calves that sell at from $100 to $20,000 each) was 27 quarts of milk per day and 16¾ pounds of the best commercial butter in seven days. These figures show why the dairymen prefer Holsteins.

Send for FREE Illustrated Descriptive Booklets.
The Holstein-Friesian Association of America, Box 179, Battleboro, Vt.

Poland-China Boars

Blue Ribbon boars with great length and bone; some weigh 325 lbs. Sired by Blue Ribbon Hastings, Big Iowa, Big King Nebraska Mouw and High Mogul. All immuned. W. J. Eavey, Geneva, Neb.

HAMPSHIRE HOGS

HAMPSHIRE BOARS

Hampshire spring boars for sale; sired by De Kalb's King 100, a son of the famous Major. They are very growthy, and all priced to sell. Also have Aryshire bull calf for sale.
WILLIAM PAMP, Benson, Neb.

BECKENDORF'S HAMPSHIRES

Spring boars for sale. Also my herd boar, De Kalb King No. 53. For prices write
IRA BECKENDORF, Walnut, Ia.

When writing to advertisers please mention Twentieth Century Farmer.

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.
A few good sons of King Segis Lyons are still left.
DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

AYRSHIRES

WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb.

PERCHERON HORSES

At ordinary prices, farm-raised registered Percheron studs—1, 2, 3 and 4 years old. Kind disposition because well cared for. You would admire their big bone first, then their immense weights because they are developing big like their imported sires and dams. And you will receive true old-fashioned hospitality on your visit at Fred Chandler's Percheron Farm, just east of Omaha.

FRED CHANDLER, Route 7, CHARITON, IOWA.

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JAMES T. POWERS

"Tuxedo—first, last, all the time. The only pipe tobacco that satisfies me."

James T. Powers

THE most enjoyable smoke is a pipe. But many men deny themselves this pleasure because they have had unhappy experiences with pipe tobaccos.

Likely you have paid 35 cents to 50 cents for a tin of "fancy mixture," and it burned your mouth or throat, or was unpleasantly strong.

Too bad—but you got the wrong tobacco. The hundreds of thousands of men who have tried

RICHARD CARLE

"Tuxedo is my idea of what a good, wholesome smoke should be. I'm for it—always."

Richard Carle

Tuxedo

The Perfect Pipe Tobacco

have found the answer to their smoke problems. Tuxedo is the *mildest* tobacco made. It cannot bite the tongue or dry the throat.

And it's economical. There are *40* pipefuls in a ten-cent tin. You can't get any better tobacco because nothing better grows than the mellow, perfectly aged Burley leaf used in Tuxedo.

If you try Tuxedo for a month and cut out other smokes, you will not only have had the best month of smoking you have ever had in your life, but you will have made a mighty big saving in your pocket-money!

SAM BERNARD

"A tin of Tuxedo is my constant companion. I like it especially because it has never given me a bit of throat trouble. The smoothest smoke ever."

Sam Bernard

RALPH HERZ

"I want Tuxedo in my pipe. Then I'm sure of satisfaction and not afraid of tongue bite. Mild and cool—there's no other tobacco like it."

Ralph Herz

YOU CAN BUY TUXEDO EVERYWHERE

Famous green tin with gold lettering, curved to fit the pocket 10c

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Illustrations are about one-half size of real packages.

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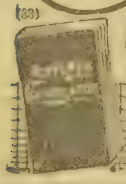

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and inspected Red Clover. Also Mammoth, Alsike, Alfalfa and Sweet Clover of choice quality.

TIMOTHY

Blue Grass, etc., at low prices. Now is the time to buy

Ask for samples and copy of our bargain price list for farmers. Large illustrated catalog, free.

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LUMBER AT WHOLESALE

Lumber, Posts, Cement, Barbed Wire, Nails. Pay after goods are inspected and found of proper grade.

H. F. CADY LUMBER CO., OMAHA, NEB.

Bright and Breezy

What She Wanted

A woman in the country recently advertised in the local papers for a "handy man."

"What I want," she said to the first applicant, "is a man that will do odd jobs about the house, run errands, one that never answers back and is always ready to do what I want."

"Ah," said the applicant as he turned away, "it's a husband you're looking for, ma'em."

Proof

In a certain local store a lusty-lunged auctioneer was holding forth in flowing terms on the virtues of a particular brand of cigars he was endeavoring to induce his audience to purchase. Holding up a box of cigars, he shouted:

"You can't get better, gentlemen, I don't care where you go, you can't get better!"

"No," came a cynical voice from the back of the crowd, "you can't. I smoked one last week, and I'm not better yet."

Wrong Kind of Bird

Uncle Jim Sugarfoot killed a fine rabbit for the entertainment of Parson Heavegrace, who was expected to dinner, but as rabbits were out of season he thought to avoid what might prove an embarrassing situation by making the parson think it was chicken.

"Brother Heavegrace," said Uncle Jim, when it came time for a second helping, "what paht of de bird would you like now?"

With a merry twinkle in his half-closed eyes Parson Heavegrace replied:

"If you all don' mind, Ah think Ah'll take de gizzard."

Natural History

An English lady, recently selecting a hat at a milliner's, asked, cautiously:

"Is there anything about these feathers that might bring me into trouble with the Bird Protection society?"

"Oh, no, madam," said the milliner.

"But did they not belong to some bird?" persisted the lady.

"Well, madam," returned the milliner, pleasantly, "these feathers are the feathers of a howl, and the howl, you know, madam, seein' as 'ow fond he is of mice, is more of a cat than a bird."

Prattle of the Youngsters

Identifed

Four Years (in Sunday school)—We've got a new baby at our house.

Rector (not recognizing him)—And who are you, my little man?

Four Years—I'm the old one.—Life.

That's What It Means

"The people of London are noted for their stupidity," wrote a school boy.

"Where did you get that idea?" asked the teacher.

"Please, miss," was the reply, "it says in the text book 'the population of London is very dense!'"

Rather Be a Teacher

Playing "teacher" is one of the most common expressions of the ambition which every little girl has at some time during her school life to become a teacher when she grows up. Usually this ambition is confided to playmates and parents, but occasionally an instructor who has won the love of her young charges hears it. A Minnesota teacher relates how she was shocked not long ago by the ambition of a little girl.

"When I get big," the child declared shyly, "I'm going to be a teacher."

"That is splendid, Sally," said the teacher. "But why do you want to become a teacher?"

"Well," was the astonishing reply, "I must either be a teacher or a lady, and I'd rather be a teacher."

Health Prevention Parade

He was a little boy of 6 years who was "serving" his first term in school. The honor was thrust on him to ride in a gaily decorated float in the Disease Prevention day parade, given under the auspices of the city officials. As he was hurrying away from home after his noon meal, anxious to be early on the school grounds in order that he might not miss anything, a playmate shouted at him:

"Hi, Willie, what's your hurry?"

Willie, his chest inflated, strutted up to the other with all possible dignity and replied:

"W'y, don't you know the teacher 'pointed me t' be in the health prevention parade?"

New Kind of Nest

In a class in arithmetic the word "average" was encountered. The teacher, wishing to make sure that the word was understood, asked the meaning of the word. One boy raised his hand:

"Please ma'am, it's what a hen lays an egg on."

"Wha-at!" exclaimed the astonished teacher.

"Well, that's what my book says," replied the boy.

The teacher requested him to bring the book and show her the statement to which he referred. He got his reader and pointed to the sentence:

"The hen lays one egg a day, on an average."

Unnecessary

Baby was being prepared for her christening. Little Maggie inquisitively wanted to know all about it, and why baby was being taken to church.

Mother, rather at a loss to explain, said: "We're taking her to church to ask God to take care of her and make her a good girl."

"H'm," answered the mite contemptuously. "She's so small I should have thought we could have managed that ourselves."

SPREADERS $64.75 UP

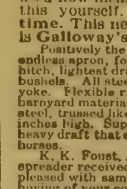
RAISE BIGGER CROPS

My New No. 8 Low Down Manure Spreader

used now means bigger crops next year. You know this yourself. Manure spreading time is all the time. This new No. 8 Low-Down Manure Spreader is Galloway's greatest spreader.

Positively the best spreader on earth. Double chain drive, endless apron, force feed, front wheels cut under load; close hitch, lightest draft of any low-down machine. Capacity 60-70 bushels. All steel gear, complete with double-trees and neck-yoke. Flexible rake; high speed beater pulverizes finely any barnyard material. Steel wheels; gears coupled with channel steel, trussed like a steel bridge. Box rests on rear trucks, 42 inches high. Superior in every respect to new fangled freaks of heavy draft that eat you up for repairs, annoy you and kill your horses.

K. K. Foust, Ashley, Ohio, writes: "Please find draft for spreader received October 5th. Assure you I am more than pleased with same. It has proven all you claim and more. By buying of your company, I saved $21.80 and got just what I was looking after."



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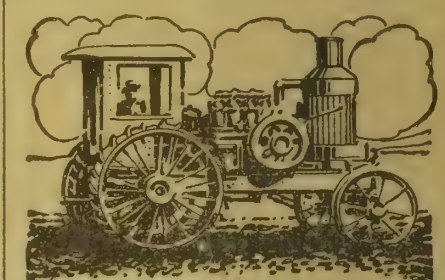

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If not, you may some day. Begin now to size up the various makes and types of tractors.

An unprejudiced description of many leading makes of tractors is given in a booklet just published showing 80 photographs taken at the big tractor show at Fremont, Neb., August 17-22.

Prof. E. C. Gee of the Texas Mechanical College says: **"I consider this booklet a valuable addition to our technical library and I believe it is worth any farmer's time to study the book through. If the farmer has any use for a traction engine at all, he can get a short, unprejudiced description of the principle engines that are now on the market, from this booklet."**

Only a few thousand of these booklets were printed for distribution among the tractor men who were at Fremont. Our supply is not large, but we are willing to dispose of them at exactly printing cost—

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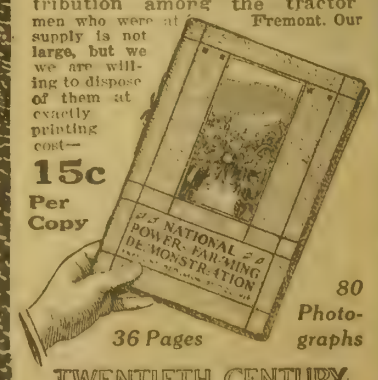

36 Pages *80 Photographs*

TWENTIETH CENTURY FARMER
OMAHA

NOV1914

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Every-Day Notes of a Missouri Farmer

By C. R. Esthaven

NO, THIS has not been a particularly prosperous year in this part of Missouri. Our local paper is now running four notices of foreclosure. That is a thing we hate to see, but it should not be taken too seriously. Sometimes these foreclosures are not such a bad thing, after all. For instance, we know of a case where a man purchased a small place in this vicinity about six years ago, giving a trust deed or mortgage for the entire purchase price. He has kept the interest and taxes paid and has had the free and unrestricted use of the place all these years, and in case of a foreclosure now he would not be seriously damaged. When he made the deal six years ago he figured that the land would increase in value to such an extent that by the time the loan was due he could sell at a good profit.

* * *

But times have changed. The price of land has not continued to go up by leaps and bounds during the recent years as it did ten, or even six, years ago. Methods of farm finance that were successful in those days are no longer successful, and will not be sucessful in the future. At least that is our opinion. Here is another instance in point: During the present summer in our district court the final settlement has been made in the estate of a wealthy farmer who passed to his reward about a year ago, after living in this county forty years. At his death he was the owner of 480 acres of land, worth $150 an acre. Against this estate of $72,000 was a mortgage of $8,000—a comparatively small amount. But in the settlement of the estate the interesting fact was discovered that when the farm was purchased forty years ago the price was $9,600, or $20 an acre, and that this man paid down upon it only $1,600, giving a mortgage for the balance of $8,000; and that after forty years this same mortgage, several times renewed, was the mortgage still in force. All that the owner of this farm had done during those forty years was to keep up taxes and interest. In return he had the use of 480 acres, and the cash value of the farm automatically increased to seven and one-half times its original amount.

* * *

This old settler's experience was but typical of the times. Likewise the instance we first cited will become typical of the time in which we shall live for the next few years. A new order of farming is at hand. The man who expects simply to live upon a farm and hold it against the mortgage for the unearned increment will get fooled hereafter. Only the farm occupant will remain farm owner who makes the operation of the farm itself a paying proposition. Nor is this change to be deplored. It will bring about a healthful evolution in farm methods. The soil will be treated with greater consideration; fewer acres will remain idle; there will be less waste; more intensive methods will prevail and much nearer the maximum efficiency will be attained.

* * *

One of the most important changes, we believe, that will thus come in farm methods will be a general substitution of the silo, not only for fodder shock and stalk field, but to a large extent for the summer pasture as well. This change has taken place in the east already, for there farm dairies are successfully operated with the cows remaining in their stalls the year round. Silage and soil feeding may be made to take the place of pasturage with a great saving. In ranging over the average pasture, especially in the condition that has prevailed in this section the last few years, the cows not only waste much energy, but still further shorten already short pastures by their incessant tramping, and likewise eat great quantities of weeds that lower both the amount and quality of the milk. The same ground in silage corn and soiling crops would keep double the number of cows in much better condition.

* * *

It is true that this will require a double amount of labor. But here is another angle from which to view that point: The same amount of land will then support double the number of cows or other animals and furnish work for double the number of men, and, therefore, support double the number of families.

* * *

These and other changes that are bound to come are not changes that will materially increase the cost of equipment. The silo, which we consider the most important thing involved in all this process, need not appall us by its cost. Even the most expensive silo, when properly constructed and properly filled, will be found as profitable an investment as any item in the farm equipment. And, more than that, the same purpose can be accomplished in some sections by a pit silo that need cost little besides the farmer's own labor.

* * *

The silo and the cow! That is a combination that makes our land richer every year. You haul very little fertility off your farm when you take cream or butter to town. Fruit of all kinds takes away even less. Our Missouri soil, that is so good for pit silos and cows, is the best in the world for fruit, too. True, we've had it pretty dry for a year or two. And most every kind of destructive bug and worm and fly has run or crawled or aviated rampant over these hills this summer, but with all that we have more faith than ever in this favored region—this fat wrinkle in the corn belt in which the old Missouri has found its course, and we are here to say we've a whole lot to be thankful for this Thanksgiving time.

* * *

Our cellar was never filled with a better store of the wholesome and substantial things that contribute to the fiber of good, old-fashioned folk. We have not the slightest fear of famine. Brighter sunshine never cheered the human race, and fresher, sweeter air never filled their lungs than the winds that sweep over leagues and leagues of peaceful farms just to visit and caress our hilltop home. From the terrors of war and pestilence and famine we feel strangely secure here in the very midst of the greatest nation in the world—the only great nation not involved in a depopulating and pauperizing war. Our only fear is that individually and as a nation we shall become forgetful of the Giver of these good gifts.

* * *

Let us pause to bare our heads and open our hearts in gratitude and praise to Him who alone can foresee the future of our farms, the future of our nation and the future of each life, and Who has vouchsafed to us abundant provision for our daily bread, a safe and peaceful home entrance to a Life Beyond.

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Farming By Tractor Power in the Corn Belt

How One Nebraska Man Operates a Big Farm Successfully

By H. J. Gramlich

WHEN it came forth with the statement that farm units were becoming larger throughout the corn belt of the United States, the 1910 census sprung a surprise. Nebraska statistics seemed to prove the conditions in this state to be no exception to the general run. In traveling through the farming districts of eastern Nebraska one is surprised at the number of abandoned farmsteads. In many cases a prosperous neighbor has bought an adjoining farm and works the land with equipment maintained upon his home farm. It has been proven that farms can easily become too small for economical and efficient operation where the ordinary run of farm crops are produced. In other words, specialization is a necessity to the success of the small farm.

In Lancaster county there is a sp'endid example of farming on a large scale carried on in a successful manner. C. J. Warner of Waverly operates 960 acres of farm land, besides some 400 acres of pasture ground. The work on this large farm is done by sixteen horses and a kerosene engine. The illustrations show the big tractor at work in a wheat field. It is drawing three eight-foot binders and one seven-foot. The engine moves at the rate of two miles per hour. Thus, when all goes well, seven and one-half acres of wheat are cut and in the bundle at the expiration of sixty minutes. The picture was taken on an exceedingly hot day, yet there were no panting horses to bother with at the end of each round. Instead, the engine merely gave an extra grunt and went on its way.

Mr. Warner starts this machine as soon as practical in the morning, stops long enough at noon for the men to eat their dinner, which is brought right to the field, and then cuts until dusk in the evening. As a rule from twenty to thirty minutes covers the time lost at noon.

This season the wheat harvest was dry and the rig worked remarkably well, giving but little bother of any kind. Each binder has a steering apparatus attached to its tongue. As the machine approaches the corner the engine crowds right around next to the grain and each binder operator guides his machine so as to cut a full swath as it comes around. The mechanism for attaching these binders to each other and guiding them independently is furnished by the harvester company and costs approximately $25 per machine. The approximate acreage of each crop annually on this farm is as follows: Wheat, 400; corn, 125; alfalfa, 150; timothy and clover, 125.

Each Binder Cuts a Full Swath

It is Easy to Operate 960 Acres with Plenty of Machine Power

Sometimes managers of small farms find themselves swamped with work. They can appreciate the obstacles that surmount such a farm as this. The day the picture was taken Mr. Warner had a man with four horses on a six-foot binder cutting some small lands, and a gang of men were stacking alfalfa in a nearby field. Besides, there were sufficient shockers to keep up fairly well with the binders. In 1913 the wheat on this farm averaged thirty-two bushels; this season it threshed a trifle over twenty-three bushels. A threshing machine is owned on the place and consequently no delay is caused in threshing. The engine does virtually all of the plowing which is done upon the farm.

Mr. Warner is a progressive farmer, ever ready to try new inventions which may reduce labor and a believer in clover and alfalfa when the weather elements are sufficiently favorable to permit a stand to catch in the wheat field.

Why Serum Treatment Sometimes Fails

Hog Raisers of Nebraska Should Have Protection From Crooked Serum Manufacturers

WHEN the Live Stock Sanitary board was created in Nebraska this paper felt that the farmers and stock growers of the state would receive some needed assistance, particularly in relation to the manufacture and sale of serum and virus and also its application. Farmers generally throughout the state shared in this opinion.

The board has rendered some good service, and by placing in the field a field veterinarian a great deal of assistance has been given to farmers in hog cholera work. The board adopted some rules and regulations for the manufacture and sale of serum and virus that looked good to us, and we predicted that splendid results would be obtained by their adoption. They said that all plants offering serum or virus for sale in the state must have a government license if they were allowed to run after August 1, and that all serum offered for sale by a plant not having a government license must be tested under direction of the board.

Samples of serum offered for sale were submitted for test. The results of this test were published in our issue of October 31. This report showed that the test of some of the samples submitted proved the serum to have no potency whatever, and consequently it was no more protection to a hog than so much water. The Live Stock Sanitary board wrote to these parties and told them not to offer this poor serum for sale. The question is, was it offered for sale and was it destroyed by the manufacturers? One of these manufacturers told the board they could not prevent him from selling it, which may be true.

Nebraska Farmers Want Protection

A representative of this paper urged the board to make a test case of this party and find out whether or not they had any authority under our existing laws, but for some reason they did not see fit to do it. We believe the farmers of Nebraska want the board to have the necessary authority to carry out its orders and plans. We also believe that if our farmers and stockmen know this board is powerless they will tell their representatives in the legislature in no uncertain way that they want needed legislation passed at the coming session.

The plain truth of the matter is that Nebraska farmers just now have no protection whatever from crooked and unscrupulous manufacturers of serum. The board did not, because they could not, confiscate and destroy the poor serum shown by test to be no good. Serum is being sold by some plants without government license, in violation of the rules made by the board. True, most of the plants in the state have government licenses.

In former issues we have explained what a government license is and means, but we are going to repeat. A license from the government simply means that the plant has the equipment with which it can make good potent serum. The government prescribes how the serum should be made and says how it must be tested, but this test is made by the manufacturer. Charts and books are provided by which a complete record of the test must be kept, yet there is no way by which the crooked manufacturer is caught. If his serum does not test out he can easily make the chart show all right. So we say there is nothing to protect the Nebraska farmer from a crooked manufacturer.

Serum Should Be Really Tested

The Twentieth Century Farmer long ago took the position that all serum offered for sale by government licensed plants should be tested by men in government employ and sold in bottles on which is a government label showing the date of the test and by whom tested. Serum offered for sale by plants not having government licenses should be tested by someone in the employ of the state in which it is made and bottled and labeled the same as the other. We have not changed an iota in this respect and believe it is the only solution of the question of how to know potent serum is being sold to the farmers.

We do not know whether or not our government authorities have given the matter of their providing for the testing of all serum much consideration, and we do not know what the Nebraska Live Stock Sanitary board thinks about it, but we do know that both the government and the board at the present time have not the funds to carry out this idea, even if they thought it best. Do the farmers want this serum tested by some authority before they buy it? If so, get busy with the members of your live stock sanitary board and tell them so, and then tell your representatives in the legislature and in congress that you want these authorities given sufficient funds to carry this work along. You may think these fellows won't listen to you, but they will. In Nebraska there is no law or rule

for state license of a serum plant. Anyone can start a plant and sell serum without a license. This doesn't look like regulation to us. Until the rule requiring all plants doing business in the state to have a government license is enforced we believe there should be some kind of a license granted by the state and at least some supervision made by the state.

Poor Serum is No Protection

We believe in the serum treatment, when it is properly made and properly administered. There is, however, one thing sure, and that is when a farmer gets a batch of poor serum, uses it on his hogs and finds he has no protection whatever, he is naturally skeptical and is apt to say it is no good and the whole deal a fraud.

The law in Iowa is that before manufacturing or offering any serum or virus for sale any person or firm must first obtain a license and execute a bond for $1,000. The conditions of the bond are that if upon test any product sold or offered for sale by the manufacturer is found not to be up to the standard of potency prescribed by the chief veterinarian at the agricultural college the bond shall be declared forfeited and the license of such manufacturer revoked. The authorities get samples of the serum sold or offered for sale at any place they can and test it.

We do not think the Iowa provisions fill the bill, but until we can have all serum tested by the government or state men, wouldn't it be wise for the Nebraska officials to throw some safeguard around the buyers of this product and try to give them some protection?

Another protection would be publicity. If the Live Stock Sanitary board will furnish this paper with the names of manufacturers who are selling serum that has fallen down in the test, or the names of any who refuse to submit samples of their serum for test, we will gladly publish them. We have in our possession now a bottle which contained serum sold by a Nebraska manufacturer not having a government license in July, after the board had ordered that no serum should be sold by a plant of that kind except it be tested. This bottle shows a series number that never was submitted to the board for a test. Who knows, except the man who made this serum (and perhaps he doesn't), whether or not this serum was any good or not? It does not appeal to us that any manufacturer who doesn't comply with the orders of the board regarding the test wants to do the square thing.

In a recent issue we mentioned the necessity of some license or regulation for parties who administer serum and virus that farmers may know the man whom they employ is qualified to do the work as it should be done. We also spoke of the necessity of reports from operators and herd owners that the authorities may keep a close check on the results obtained all the time. These reports would show what serum is giving the best results, as well as showing what operators know their business.

Know What Serum You Get

We believe farmers are to blame in one thing at least in this connection, and that is in not knowing what serum is being used. First, a hog raiser should inform himself by making careful inquiry about serum plants and manufacturers. He should do this before he wants to buy, so that when he does want to buy he will not have to make any inquiry or trust this very important matter to someone else. He should say to the one doing the work for him, "I want such and such serum," and insist that it be obtained

Many operators are using certain serum, the manufacturers of which are sending two bills, one to be shown to the hog raiser and the other (showing the price about ½-cent c. c. less than the first) according to which settlement is to be made by the operator. We call this graft, for in addition to this profit these operators are charging regular mileage and per diem.

Numerous complaints have reached this office of poor results from using serum. We have written these parties asking them what serum was used and in practically every case we could not find out. They would say the veterinarian who did the work took all the empty bottles with him and would not tell them what serum it was. If the hog owner insists on the serum he wants being used and sees to it that it is used, and the system of reports we suggest be adopted, this difficulty will be done away with and far better results will be obtained.

It is to the interest of the honest manufacturer to know when good results are not obtained from the use of his serum, and it is to the interest of the honest veterinarian to have all these cases looked into that mistakes (if mistakes they be) will not occur in the future.

How to Get a Good Crop of Spring Pigs

Helpful Hints on Caring for the Breeding Stock in Such a Way that Strong, Healthy Litters Will Be Farrowed

DURING the next month the greater portion of the sows for next spring's pig crop will be bred; the foundation, so to speak, for this crop will be laid. To a very large extent the success of the pig crop depends upon the condition of the herd at breeding time and their handling during the winter.

We cannot but believe that farmers are facing some prosperous times in the hog business. When Europe gets to the end of the war it will have to have pork. Not only will it renew buying as before the war, but its breeding animals, as well as its surplus, will be largely wiped out, giving to the American farmer an increased market for some time to come.

Under ordinary conditions our hog crop is a very profitable one, and consequently a very important one. We believe that farmers the coming year should pay particular attention to the raising of any kind of foodstuffs, be it grains or meat. The demand can hardly help being strong, and in consequence the price will be satisfactory to the seller.

Every spring there is more or less complaint of sows farrowing weak or dead pigs and of sows eating their pigs. This is practically all the fault of the man handling and feeding the herd. If they are not properly handled and properly fed you should not expect good results.

Sows Must Be in Good Condition

The question then arises, how should they be handled and fed for good results? In the first place, at breeding time the sows should be in the best of condition, not too fat, clean of lice and worms and in such condition that with proper handling and feeding they can be made to gain gradually from breeding time to farrowing. The boar should be strong and vigorous, fed a good balanced ration, not too much corn. We find many men who want a boar in a thin condition at breeding time. This is a mistake; have him in good condition with the right kind of feed and keep him that way. Stronger pigs will result if you do.

One of the very important things to do to handle a brood sow properly is to give her plenty of exercise. The best way we know of to give her this exercise is to let her have the run of an alfalfa field and a cornfield. Make her go to the cornfield all winter for all the corn she gets. If you have picked the corn or the hogs have eaten it all, haul ear corn into the field and scatter it. You may think they will get too much, but they won't, provided, of course, you give them plenty of other feeds, such as shorts, tankage, oats, alfalfa hay or meal, etc.

Many times have we seen brood sows kept all winter in a small lot with the principal ration corn, and the owner expecting a good, strong crop of pigs. In practically every instance have we noted at farrowing time a bunch of weak pigs, some of them so weak they could not make it.

The more general fencing of farms with woven wire is going to produce stronger pigs at farrowing time, for the simple reason that sows are going to be turned into the fields to follow the cattle and pick up waste feed of different kinds, in that way getting the needed exericse.

Right Kind of Hog Houses

Good, sanitary, well ventilated sleeping quarters for brood sows have much to do with getting them in the right condition for farrowing. We have seen hog houses erected at a cost of several hundred dollars, practically worthless because there was no ventilation. When a bunch of hogs nest in one of these houses they will come out into the cold air covered with steam and coughing. You cannot expect your brood sow to be right if she has conditions of this kind to combat.

How often we find the fellow who says he doesn't want much bedding for his hogs, because if they have lots of bedding they will pile up. The truth of the matter is that exactly the opposite is true. Give the hogs plenty of good, clean bedding so they can lie down in comfort and be warm and you will find they will not pile up. Do not expect a bed of this kind to last for a month or two, or perhaps longer. Bedding should be changed often, at least once in a week or ten days, and oftener if the weather is damp. Some hog raisers urge against keeping too many sows together or letting very many sleep together. We have had as many as eighty sleep in the same house with no bad results at all, but this house was both well bedded and well ventilated.

One of the important things to do is to know the sow has all the pure water she wants to drink. This is not always easy to do in the winter time; hence especial attention must be given to the water supply during the cold, freezing weather. An automatic waterer arranged so it won't freeze is the best thing to use.

Salt is Important

Salting the hogs should not be neglected. A self-feeding arranged box or trough should be in every hog house, full of salt so the sows can get what they want of it when they want it. Charcoal made of wood or cobs helps. The hogs relish it and it does them good. If wood ashes are obtainable, mix the ashes with the salt and charcoal.

Care should be taken to see that bred sows don't have to step over a board or partition of any kind, causing their udders to strike. It may produce abortion. Sometimes sows are made to abort by being run over or kicked by fattening cattle. We don't believe it a good practice to let sows have too much of their feed by following fat cattle. If you want your brood sows to pick up after the cattle, have enough of them following the cattle so they will have to get a considerable part of their ration from some other source.

Every time the bedding is changed the floors should be thoroughly swept, so all the dust is removed and then well disinfected; this will materially assist in keeping the lice under control.

It is discouraging to have a nice bunch of sows all bred, and then at farrowing time have the pigs come weak and perhaps have the sows eat their pigs. This disaster can almost entirely be avoided if the feeder will do his part. His part consists in providing the sow with the necessary variety of feeds that she may balance her ration, and in having her take plenty of exercise. The best way to have her take the necessary exercise is for her to take it voluntarily, hunting for feed. In this way she won't become in the least exhausted.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
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REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha, Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 110,0000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

It is quite a skillful piece of work, even with an expert feeder, to make a good hog out of a runt, but most any kind of a careless, indifferent feeder can make a runt out of a good pig.

We notice many stubble fields being burned. Whenever we see a fire going over a stubble field we wonder of how many bushels of grain that farmer is robbing himself because of the soil being robbed of the fertilizer contained in the stubble.

Complaints have come to us that authorities do not enforce the law requiring the carcasses of hogs dying of disease to be burned, yet these same parties acknowledge they would not "squeal" on a neighbor. How do you expect authorities to know about these violations of the law if someone doesn't tell them?

There is considerable being said now about the dairy and corncrib combination in the production of pork. Experiment stations and other sources of feeding tests are very pronounced on milk and corn as pork producers. The South Dakota station, in a feeding experiment of sixty-two days, covering a two-year period, found that a bushel of corn yielded 11.9 pounds of pork, and when an average of 163 pounds of milk was fed with the bushel of shelled corn an average of 17.7 pounds of pork was the result, an increase of 5.8 pounds of pork in favor of the milk combination. This is encouraging to the farmer who has decided to run the farm dairy, sell the cream and feed the milk.

Credit and Overbuying

Is the average farmer enough of a bookkeeper? In other words, does he check up carefully to know just where all his money goes and to be sure best methods are being followed in all his buying? The farmer is a very busy man and cannot take very much time for bookkeeping, but we believe it would be time well spent if he would occasionally take a day off and see in which direction he is going—see if he is investing his money in the direction from which he will receive the most beenfit.

In our issue of October 31 we discussed present methods of buying and selling farm machinery, saying that farmers generally could pay cash for their machinery, and that they should pay cash and not require the manufacturer to wait one, two or three years for his pay. There can be no question but that if machinery could be handled on a cash basis it could be sold for a less price than if sold on either short or long time, and both the farmer and manufacturer would be benefited.

One of the large machinery manufacturers, in discussing our editorial on this subject, says: "Men seem to be more willing to buy luxuries or semi-luxuries, and pay cash for them, than they do to buy profit-making or satisfaction-giving articles which are more in the nature of necessities."

It has always been our opinion that farmers or others will very seldom over-buy if they are obliged to pay cash for the article they buy, but they may be induced to overbuy if they can get time on the article purchased.

If machinery is more largely sold for cash, the farmer must cooperate with the manufacturer and dealer and not ask them to wait for their money, but show a willingness to help abolish the credit system in the implement business. The manufacturer and dealer should, by more generally fixing a cash price as a basis for selling, try to get the business on a cash basis. When the time does come that the business is on a cash basis there will be less financial failures among implement concerns and less unused machinery lying in the fence corners. We believe that farmers should consider fully the benefit they will derive from any purchase. Look carefully into the proposition and see whether or not the article you contemplate buying is really needed.

There are many new things in the machinery and other lines being placed on the market all the time. All these new devices should be given the attention of the farmer. Let him find out how much time the article may save him or how much his production will probably be increased by its use. Don't buy something new just because you can get it on time.

How about luxuries or semi-luxuries? Many times the automobile is referred to as a luxury for the farmer. An auto can be a luxury for one farmer and a necessity for another, depending on conditions surrounding different men. Then again, one man's idea as to what is a luxury or a necessity may be very different from that of another.

Here is a farmer with some boys and girls all working hard, who owns an automobile, using it on a summer's evening to take the family for a ride, to enjoy and be benefited by the cool evening air. Many would call this a luxury. Possibly the health of some members of this family make this ride an absolute necessity. Certainly health is the first necessity. If the automobile can be made a health-giving machine, doesn't it become a necessity? These are questions that must be settled by the farmer himself, and he should give them some consideration. He should so try to live and raise his family that they will not be ready for the scrap pile before they are 50 years of age.

There are without doubt many pieces of farm machinery that may be both health-giving and money-making. Take both these things into consideration when thinking of making a new purchase.

The meeting of the United States Live Stock Sanitary association to be held in Chicago December 1, 2 and 3, is called off on account of the postponement of the International Live Stock Show. No date has as yet been set for the meeting of this association. Many matters of importance pertaining to live stock sanitary work were to be taken up and discussed at this meeting, among the more important being the subject of uniform inspection and shipping rules in the various states. It was intended to have a meeting of the various authorities making these rules and regulations following the meeting of the sanitary association, so of course this meeting will not be held. It is intended to have a meeting of the sanitary association as soon as the foot and mouth disease lets up, so that veterinarians and others can have time to attend. Due notice of both meetings will be given.

Concentrated Slaughter

The present destruction of horses in the army service of the European war is not yet seriously felt in this country because of the large surplus that was on hand. This present drain, however, if kept up for another six months, will manifest itself in a scarcity of the kind of horses demanded by this foreign trade and a very strong advance in prices for all kinds of good, serviceable horses will follow.

This is the idle season of the year for horses in this country; consequently large numbers of horses are offered for sale in the autumn season that will again be demanded for work next spring. This demand will be met with a very different feeling as to values and prices. The thousands and tens of thousands of horses that are leaving this country in a steady, constant stream to fill the ranks of the greatest horse slaughter that the world has ever known, will eventually have reached the limit of the surplus, and will then be bidding against the home demands of not only this country, but every horse-producing country where the better class of horses are raised.

The horse market will soon have reached the point where a few dollars' increase in price will not stimulate activity in supply. There is a steady home demand that is being met by a uniform horse-breeding industry which may be depended upon, but for an expediency such as the foreign demand has introduced its influences have only one result, that of taking up the surplus and stimulating prices all along the line of the improved horse-breeding industry.

Starting on Grain Feed

There is considerable risk of founder and even death by a careless, extravagant use of grain when first starting the sheep or lamb on feed. In small bunches there need be no particular risk if the feeding is properly handled. With sheep it is always best to have the grain distributed evenly in the troughs before the sheep are let into the feed lot. In this way they get an even start and there is not much danger of any getting an overdose or more than their just apportionment.

With lambs not used to grain feed and where large numbers are thrown together, it is a very difficult thing to work them onto a full feed without getting some of them foundered. Sheep feeders complain of loss each year in getting their lambs started on feed. Some lambs are very slow in taking hold and are slow eaters, while others are greedy and get more than their share. In starting lambs in the cornfield, where they get the corn blades and gradually the ear, and are obliged to shell the corn from the cob, there is usually no loss.

The farm feeding of sheep or lambs on a small scale is a very easy matter and should be a satisfactory and safe business, as they can be changed from one pasture to another, get their grain feed twice a day and gather a large part of what they consume from the waste of the farm. A bunch of lambs thus handled is about the easiest money to be made in the feeding line.

Disease Still Spreading

The fight against the foot and mouth disease is still on. No let-up has been made by the government. Hundreds of new inspectors have been put to work cleaning up infected yards, cars, etc., and tracing animals that have gone through infected centers into the country.

In many localities the authorities seem to be getting the better of the disease, while in others it is spreading to some extent. It has made its appearance in the state of Washington, where 105 cattle were slaughtered in one herd last week. The trouble in this state was traced to the Union Stock Yards at Chicago.

The direct losses incurred are enormous. Already the government has expended $750,000 in its work. The states in which the disease has made its appearance have spent vast sums, but the big item is the loss to the farmer in the quarantined districts and the owner of the herds affected.

We wish to emphasize again the importance of the farmers and stock growers, giving every assistance possible to the officials in their work. Let officials do what they may and make every effort possible, the disease cannot be brought under control and finally wiped out unless the farmer and stock grower puts his shoulder to the wheel and says he will do his part.

If symptoms of the disease should show up in your herd, don't delay getting a veterinarian at once and know whether or not your stock have the dread disease. It will be far better to let the officials handle the trouble than for you to go alone, for if any of your stock are affected it will be sure to go through the herd, and the loss in the end would be sure to be great.

Reserve the Best

The producer of live stock of any kind, where breeding is made a feature of the farm operations, cannot afford to sell his best young breeding prospects. This is the basis of herd and flock improvement with all skilled breeders. Some pure-bred live stock owners and handlers depend on buying their best breeding animals, both male and female. This class of breeders cannot, in the strict sense of the term, be estimated as leading breeders; dealers will more properly define their position.

The choice young females of whatever kind of stock you are handling should be carefully selected and reserved to take their places in the herd or flock. The hereditary tendency of the mother should be taken into consideration in the selection of the young females for this reserve. Occasionally there are some individual specimens that take strongly after the sire, and without the backing of a good quality mother might not be desirable as breeders in the herd. The qualities of excellence that are handed down by good specimens of both sire and dam are a better backing than where the outstanding qualities come from only one side of the parentage.

The idea to be conveyed is that to become a breeder on the farm, outside of fat stock or feed lot operations, you must have a herd of cattle distinctly of your own creation, so far as mating or the conduct of its breeding and improvement is concerned. This is the secret of happiness and contentment on the farm and ranch with many persons. The ambition of the producer should be to improve by breeding; thus by his ingenuity, study, experimentation and observation make each generation better and more valuable than its predecessor.

Estimate the Feed Supply

It does not pay to keep more stock than you have feed to supply and keep in good, thrifty condition. This may be more or less dependent on the extent and severity of the winter season and the amount of waste vegetation scattered by the stock in open weather through the winter. On some farms stock is confined almost entirely to the prepared feeds that must be supplied them. In such cases the amount consumed is greater and the expense more.

It is not always bad management to buy rough feed to winter more stock than the farm is capable of producing. This, however, is of a speculative nature and must be governed by ideas and principles of trade, independent of the legitimate operations of the farm. The general feed resources of the farm are the real basis of operations for the farm owner to figure on maintaining.

The successful and satisfactory management of animals on the farm is to have every animal kept in good selling condition, either as a stock and breeding animal or as a meat-producing animal. The situation of more stock than feed at this season of the year, just starting into winter, is a ruinous one for the owner. It is always wise to be on the safe side. It pays to figure liberally in feed supply so that there will be some left over, rather than be a few tons of hay short and be obliged to buy from a neighbor when prices are high.

In harvesting and laying in a feed supply make your estimates based upon the most severe conditions of winter. Zero weather demands almost double the feed to keep up the animal heat that is used in mild or moderate temperature. Rough feeds are consumed ravenously by the fodder and hay-eating animals under the extremes of cold.

A stunted calf was formerly called a buttermilk calf, because once a week, on churning day, the hand-fed calves got all the buttermilk they could hold. This alternate gorging and fasting, a full stomach, then an empty one, discouraged calf equilibrium and resulted in the pot-bellied or buttermilk stunted calf, a feature of unthriftiness peculiar to the old days of calf raising on the farm.

In our last week's issue we made mention of the fact that unless government inspectors working on scabies in cattle in Nebraska were paid by the state, on account of the big demand on the government in fighting the foot and mouth disease, these inspectors would be removed and the quarantine lifted. We are in receipt of official information from Washington that on and after November 20, 1914, this quarantine is removed. It is to be hoped that bad results will not follow this action. Farmers and ranchmen in this district have had the benefit of the work of the government for years and should take hold of the work themselves and do what is necessary not only to prevent the spread of the disease, but to work for its absolute eradication.

The pet lamb is usually the illustration of thriftiness, a life of peace and plenty. There is always a display of congeniality and friendship on the part of the pet lamb that secures for it a good living. Its instinct for milk has identified it with the dairy department of the farm and its persistency in its demands is always directed to the Marys of the household, whose sympathy is most easily aroused, and the result is a big, fat, playful lamb very much in contrast to the buttermilk calf.

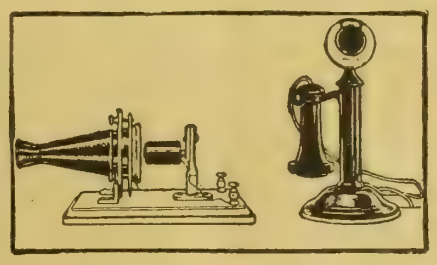
Alfalfa hay, to be most effective for feeding purposes, should be cut as soon as it commences to bloom, and be well cured in winrow or shock, then carefully stacked free of moisture and protected by some kind of waterproof cover. It is usually the damage received after curing or stacking that so seriously reduces its feeding qualities. This is most sensitively felt in milk production, where the quality of the hay increases the yield of milk as perceptably as does the green grass of spring time.

There is no kind of hay, straw or fodder feed that will equal alfalfa for the colt or idle horse. It is safe to risk wintering them on alfalfa, with a very light allowance of corn. One or two ears of corn each day, with alfalfa hay in rack or crib, where access is had throughout the winter season, guarantees a good growth of colt and a rejuvenating influence on the overworked or out-of-condition horse.

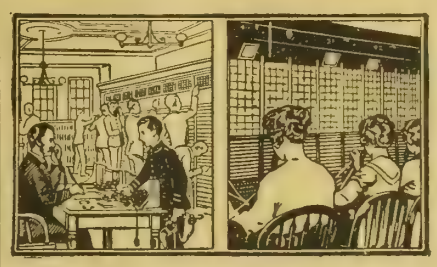
It is a bad practice to feed idle horses the same as if working. The common team horses on the farm should be turned out in a dry lot or barnyard to exercise every day, and when idle lessen the grain feed. Plenty of good hay, straw, water and exercise will usually keep the horse in a thrifty condition.

How the Public Profits By Telephone Improvements

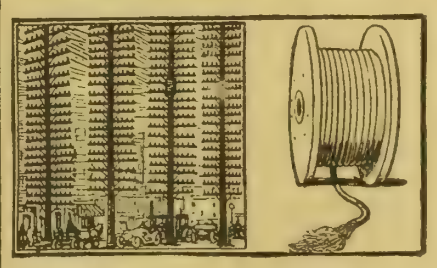
Here is a big fact in the telephone progress of this country:



Original Bell Telephone 1876 — Standard Bell Telephone To-day



Early Telephone Exchange — Typical Present-day Exchange



If City Wires Were Carried Overhead — 800 Wires in Underground Cable

Hand in hand with inventions and developments which have improved the service many fold have come operating economies that have greatly cut its cost.

To appreciate these betterments and their resulting economies, consider a few examples:

Your present telephone instrument had seventy-two ancestors; it is better and cheaper than any of them.

Time was when a switchboard required a room full of boys to handle the calls of a few hundred subscribers. Today, two or three girls will serve a greater number without confusion and very much more promptly.

A three-inch underground cable now carries as many as eight hundred wires. If strung in the old way, these would require four sets of poles, each with twenty cross arms—a congestion utterly prohibitive in city streets.

These are some of the familiar improvements. They have saved tens of millions of dollars.

But those which have had the most radical effect, resulting in the largest economies and putting the telephone within everyone's reach, are too technical to describe here. And their value can no more be estimated than can the value of the invention of the automobile.

This progress in economy, as well as in service, has given the United States the Bell System with about ten times as many telephones, proportionate to the population, as in all Europe.

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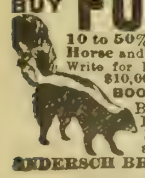

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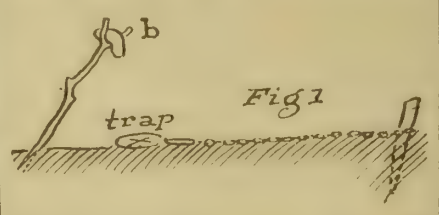
Big Profits for Boys in Trapping

Some Good Sets and How to Make Them

Figure 1 illustrates a simple efficient set, which consists of sticking a forked stick in the ground at a slant that will throw the bait ("b") directly over the trap.

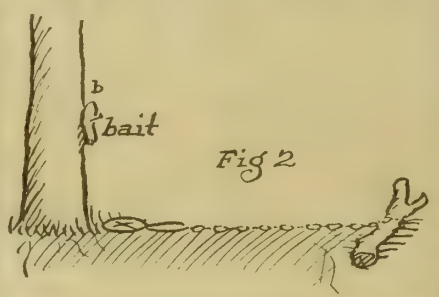
The trap should, of course, be secreted by covering it with leaves or grass, and if two or three traps are



distributed around the point over which the bait hangs the chances of capture are made much better.

The most ideal place for this set is in the water's edge, the stick extending out over the trap, which is secreted in the shallow water. Figure 2 is a similar set, the bait being nailed to a post or tree directly above the trap. The height of the bait from the trap must be according to the size of the animal being trapped for, but on account of dogs, wolves or animals of larger size one may find it necessary to put the bait high enough that any animal attempting to get it will step in the trap before reaching the bait. However, we prefer to place the bait about a foot or fifteen inches from the ground, as this is the right height for most animals caught for their fur.

Another good way of baiting a trap is to form a pen like the one shown in the deadfall (described and illustrated), bringing the front parts of the enclosure close enough to-

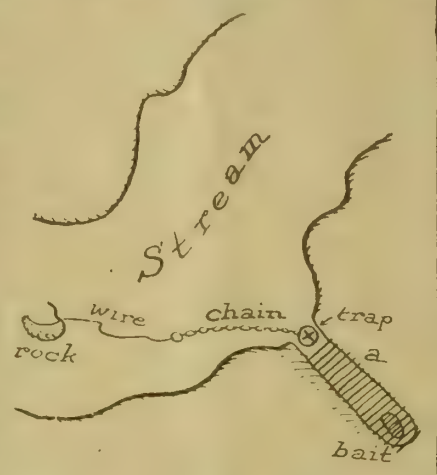


gether to admit a trap with the jaws extended. The pen is baited and covered the same as in the deadfall and the trap set at the mouth of the enclosure. A shallow depression should be made in the ground, so the trap will come just level with the earth when set. Light leaves, grass, moss or fine dust should be sprinkled over the trap, especially the pan. Where the ground is frozen before one has made these pens very satisfactory substitutes can be formed by laying up small pens of bark, chunks, etc., placing the bait in the rear end of them and leaving an opening in front for the traps.

A hollow log is an admirable place for a trap, as almost every animal passing near it will go through it. If a live bait, such as a bird or a rabbit, can be secured and fastened about half way between two openings in a log it will form one of the most attractive baits, especially for mink. A hollow log lying in water so that about one-half of the hollow contains water is another fine place for a trap, either baited or unbaited.

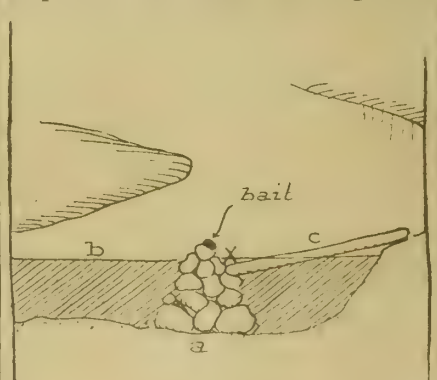
By carefully observing where animals have been passing under roots or through a drift one can place traps and secrete them with good success. Another fine place for a trap is where the animals, especially mink or muskrat, show by their tracks that they frequent shallow water. Traps may be set in such spots, they being slightly settled into the mud and some light leaves soaked in water and allowed to cover th trap, especially the treadle, or pan. The trap should not be placed where the water is so deep that the animal being trapped will swim over it, but should be only far enough below the surface of the water for the animal to touch the pan with its feet in walking.

One set made especially for raccoon consists of setting a No. 1½



trap along a pole or log in shallow water. When Mr. 'Coon comes along feeling for crawfish he is pretty sure of being captured. If a piece of fresh, bright tin is placed on the pan of the trap the 'coon usually is attracted by it, thinking he has found a clam, with the result that, when he reaches down after the expected food, he is captured.

A set especially for mink is herewith illustrated. A trench from twelve to eighteen inches ("a") is dug in a shallow bank along a stream or pond, the end next to the stream being dug deep enough to admit sufficient water to cover the trap. At the rear end of the trench a piece of fish, chicken or a live bait, such as a bird, rabbit, etc., is fastened. The trench is covered with small sticks to prevent the animal entering from



above. At the point marked "X" a trap is set in the water, and if Mr. Mink passes that way you are almost certain to capture him.

It should be explained here that such water sets should be made with the chain of the trap attached to a wire, the wire being tied to a rock and tossed out in the water several feet from the bank. When the animal is captured it cannot drag the rock ashore, and consequently seeks the water, soon drowning itself by the weight of the trap. This should not be neglected, as such animals often gnaw their feet off, thus escaping from the trap, if they are where they can reach the bank. The accompanying illustration merely shows method of attaching wire and rock to the chain. The rock should be tossed out straight from the bank, chain and wire being drawn tight.

Another fine set for mink consists of placing a small, cone-shaped heap of rocks a few feet from the bank of some stream ("a"), letting them extend a few inches above the water line ("b"). A small pole ("c") reaches from the bank to the rock heap, the end on the rocks resting two or three inches under water. At "X" the trap is set, while the bait is arranged a few inches above the trap. This will be found highly satisfactory, especially for any animal that passes along streams.

Blackleg in Cattle

The Missouri State Board of Agriculture and state veterinarian, Dr. D. F. Luckey, at Columbia, are receiving messages and letters concerning outbreaks of blackleg in young cattle, indicative that the disease appears to be more prevalent than it has been for a number of years. Secretary Jewell Mayes calls special attention to the following interview by Dr. Luckey:

"The symptoms of blackleg are very easily recognized by anyone who has ever seen a case. As a rule the disease appears in a lot of young cattle when on good feed or pasture and making rapid growth. As a rule it affects the fattest calves in the lot. It runs a very rapid course, lasting as a rule from twelve to twenty-four hours, and almost invariably results in death. The calf first shows lameness. Within a few hours a swelling appears on some part of the body and generally on one of the quarters. Rubbing the swelling causes a crackling sound beneath the skin. When the animal is skinned the affected portion appears bruised as if it had been hit with a club. These symptoms are unmistakable.

"The carcasses of blackleg calves should be thoroughly burned in order to destroy infection and prevent the spread of the disease. If these carcasses are not burned the infection will remain on the premises for years and make cattle-growing unprofitable unless all young cattle are regularly vaccinated.

"Whenever there is an outbreak of blackleg all the young cattle in the community should be vaccinated. In the event that a case is lost in a herd, and a little time would be required to secure the vaccine, it is advisable to reduce the feed so that they will shrink slightly. They are not so apt to develop blackleg while shrinking as while gaining in weight. Three days after the vaccine is administered they may be put back on full feed or good pasture."

Farmers and stockmen are invited to communicate with State Veterinarian Luckey or the board in case blackleg is breaking out and free advice is desired.

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Obedience

If you're told to do a thing,
And mean to do it really,
Never let it be by halves;
Do it fully, freely!

Do not make a poor excuse,
Waiting, weak, unsteady;
All obedience worth the name
Must be prompt and ready.

If a task is once begun,
Never leave it till it's done;
Be the labor great or small,
Do it well, or not at all.
—Phoebe Cary.

The Editor's Corner

Stories are coming in fine now, and we are very glad so many of you are taking an interest in the stories and the picture contests. There were some interesting things to be noted in some of the stories that we were not able to publish, to which we want to call your attention.

For instance, there were two little girls that sent in stories having the very same plot. In each, a little girl went out in the woods after having been forbidden by her mother to do so, was lost and finally rescued by her father, when she decided never to disobey her mother again. Now from the different circumstances in these stories we feel sure that both were original and not copied from any book, but this kind of story is so easy to write that you can see why they do not win prizes.

There was a story about a puppy that jumped out of a boat and sank to the bottom of the pond. This seems strange, as we have never seen a puppy that could not swim. It takes what very literary people call the "element of probability" out of the story.

There was one about a little girl who sat in the long grass, with her straw hat showing, and was mistaken for a coyote by her grandfather and nearly shot. He told her to be careful about sitting in the long grass. We hope he will be careful, too, and not fire at things unless he is sure they are wild animals and not children. A great many accidents happen this way.

Most of the stories were about pet animals, and there were a number of good ones. There was one about a Hallowe'en frolic, and there were two descriptions of trips. There was also a very good story telling the trials and troubles of a school blackboard.

Keep the stories coming, children; we enjoy them all.

HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write plainly at top of story your name, age, address and the title of the story.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Prize Story.)

A Walk

By Rodney Mayhew, Aged 10, Crawfordsville, Ia.

Last spring my cousin Beulah was down here and we took a walk through the woods. My sister Helen played she was the mother, Beulah was the daughter and the cat was the baby; I was guide and the dog was a mountain lion.

You Grown-Ups Are So Funny!

We started at the northeast corner of the field, and soon came to the pond, which we called the Great Salt Lake. Then we went on till we came to a hill, which was not very high, but was steep, and we called it a mountain, and when we got to the top we met the mountain lion. Beulah was scared so bad she didn't know what to do.

We stopped and rested and then went on down the side of the mountain into a forest (as we called it), and while we were in the forest we ran across a strange tree. It was all covered with thorns, even the trunk. We went on through the forest, and when we got out we were beside a slough, which we called a river. We went up the river a way and then crossed it and went home.

(Honorable Mention.)

The Runaway

By Lester Krotcher, Aged 9, Orchard, Neb.

One day I was sitting under a large oak tree beside a road that ran north and south east of the tree. I was about asleep when I heard a noise that kept coming nearer and nearer and louder and louder. I looked toward the north and saw a team with a wagon coming as hard as possible up the road. There is a hill just south of the tree nearby, and when they started up the hill I hollowed, "Ho! Ho!" and started to run as fast as I could to catch them. They had almost stopped when I got to them.

The Balky Horse

When I got there I stopped them and untied the lines, which were fastened on the wagon. Then I turned them around and started north again, for I thought as they came from that direction I would meet their master. I drove about half a mile and stopped. There are crossroads there and I did not know which way to turn. Soon I saw a man coming up the road and drove toward him; it was his team. He thanked me and gave me a dime and told me he wanted to do me a favor some day. I told him how and where I had caught them.

Additional Stories

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On Saturday Night

How pleasant is Saturday night,
When I've tried all the week to be good;
Not spoken a word that was bad,
And done all the good that I could.
—Selected.

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For Themselves

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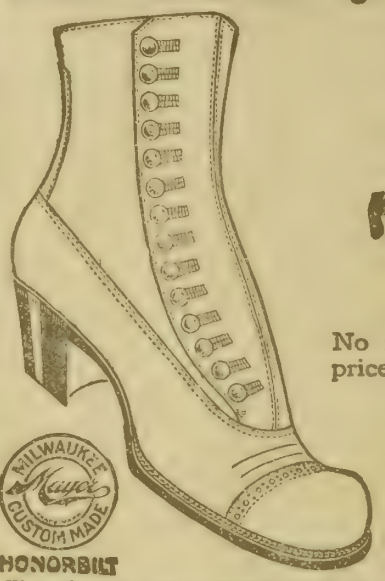

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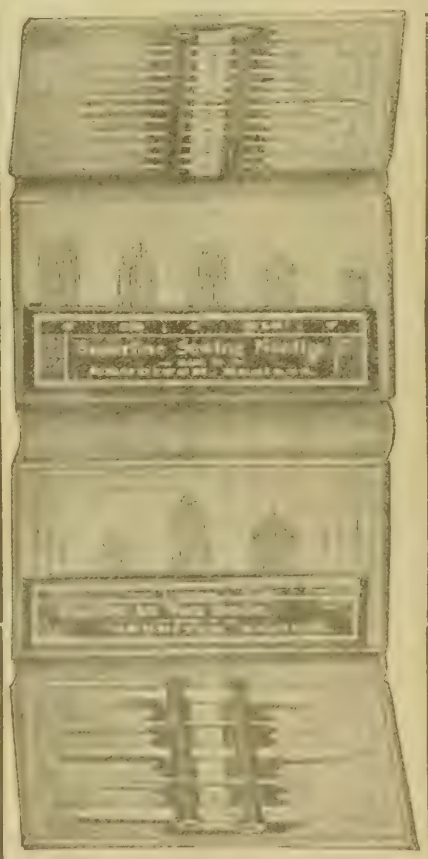

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Styles for Home Dressmaker

6954—Ladies' Dressing Sacque. This is made with panel front and back, and with a small waist at each side, gathered at the lower edge where the plain sides are attached. Insertion may mark all seams. The sleeve may be long or short. The pattern, 6954, is cut in sizes 34 to 44 inches bust measure. Medium size requires 2⅞ yards of 36-inch material, with 8 yards of insertion and 2¼ yards of ribbon.

6943—Dolls' Set of Clothes. This set consists of a suit for a boy doll and a dress for a girl doll. The pattern also provides for the hats and a pair of bloomers. The pattern, 6943, is cut in sizes for dolls measuring from 14 to 26 inches long. To make the set for a 24-inch doll requires 1 yard of 27-inch for the blouse and hat and ½-yard of 27-inch for the trousers, ¾-yard of 27-inch for the skirt and ⅝-yard of 27-inch for the bloomers.

6937—Ladies' Waist. This waist has the yoke and back in one, the fronts gathered along the shoulder and a flat vest in one with the large turnover collar. The plain sleeves are full length and end in a cuff at the wrist. The pattern, 6937, is cut in sizes 34 to 44 inches bust measure. Medium size requires 1⅞ yards of 36-inch striped goods and ¾-yard of 36-inch plain.

6921—Ladies' Apron. In the popular bungalow style, suitable for a working dress. A square yoke is used in front and back with a small, flat collar. Sleeves are full length or shorter, and the skirts are gathered along the top. The fastening is in the back. The pattern, 6921, is cut in sizes 34 to 44 inches bust measure. Medium size requires 4⅞ yards of 36-inch material, with ⅜-yard of 27-inch contrasting goods to trim.

6452—Children's Night Drawers. In cold weather night drawers are the best garment for all children, and even in warm weather they are best for many. In this model there is a seam down the front, a center back closing, and an opening across the waist in the back. The pattern, 6452, is cut in sizes 2 to 12 years. Medium size requires 4⅝ yards of 27-inch material.

6356—Girls' Dress. Linen, gingham or serge can be used to make this dress, with the collar, cuffs and belt of contrasting material. The dress closes at the front and can be made with either the long or short sleeves. The pattern, 6356, is cut in sizes 4 to 12 years. Age 8 years requires 2¾ yards of 36-inch material and ¾-yard of 27-inch contrasting goods.

6924—Ladies' Dress. Simple and smart: this dress has back and yoke in one piece, a long shoulder with bishop sleeve attached and made long or short. The front of the blouse is tucked at each side and has a center closing, open neck and low collar. The skirt has three gores. The pattern, 6924, is cut in sizes 34 to 44 inches bust measure. Medium size requires 4 yards of 44-inch material, ½-yard of 27-inch contrasting goods to trim.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Of Interest to Our Women Readers

She's a Wonder

She's a woman small and cheery,
Young long, yet seldom weary,
If a man may judge by what he thinks he sees;
She is neat and quite the lady,
Still unwed, but not old maidy.
She's a wonder and a marvel, if you please.

She is crisp of speech and forceful—
I am sure that she's resourceful;
To depend upon herself she likes, I think.
She can face a crisis surely;
Full of courage, yet demurely—
She can meet each moment's need as quick as wink.

I believe she falters never
When she makes a great endeavor—
But at least she never fails, you can be sure!
She has tact to match her power
Which she uses every hour,
And her patience through the ages would endure.

No, she is no queen whose glory
Is a grand historic story,
And she is no fabled heroine, you'll find.
It is not so hard to reach her—
She is just a young school teacher,
And the wonder is she makes our Thomas mind! —Selected.

Our Home Chat

Co-operative creameries in some localities have been installing laundry machinery as a side line, the clothes of the patrons being washed by the same power that operates the creamery machinery and the deliveries being made at the same time as the cream deliveries. State Dairy Commissioner Scholes of Montana is urging the installation of such machinery in all the small creameries in that state. He says that a whole basketful of plain clothes may be washed, run through a centrifugal drier until just damp enough to iron and sent back on the wagons that brought the morning's milk, the cost being somewhere in the neighborhood of 50 cents. This is not much more than the cost of the materials that would be used in doing the washing at home, and would mean a great deal to the busy mother who has the cooking for a large family to do, a half dozen children to look after and the care of the poultry and the hundred and one other duties of a home keeper on her hands. Why don't you, if there is a co-operative creamery in your locality, look into this matter of co-operative washing? Perhaps you can arrange for it in your neighborhood.

* * *

There is an international farm women's congress, which has been holding annual meetings for the last few years, in connection with the Dry Farming congress. This year they have severed their connection with the dry farming people, announcing that, since there are farm women even in wet districts, they believe they should be independent. They state that the government stands ready to create a farm women's bureau in connection with the Department of Agriculture whenever the women say they want it. They are urging all farm women in all parts of the country to communicate with their senators and representatives, requesting that they vote for the bill when it comes up in December.

* * *

Have you ever noticed in the children's verses written for the picture contests how frequently the idea of punishment enters in? And in so many they seem to anticipate punishment for the most trivial offenses, and to feel that it may be expected at any moment, even when no disobedience is intended. In other words, the idea of justice seems to enter into the thought of punishment very seldom. This would be more noticeable, too, if you were able to read the many verses, and also the stories, there is not room to publish. We wonder what it indicates?

HOME EDITOR.

Our Weekly Recipe

DOUGHNUTS — One cup of sugar, well beaten yolks of six eggs, one cup of sweet milk, one tablespoon rich sweet cream, vanilla, two teaspoonsful baking powder, flour enough to handle, but do not make them too stiff. Cut and fry in deep lard. They are greatly improved by being dipped into powdered sugar immediately upon being removed from the lard.

Your Child's Mouth

Recently I had occasion to spend a night in a chair car on a railway train—a ride more interesting than comfortable. Early in the evening a woman boarded the train with a little girl perhaps 3 or 4 years old. Soon after taking their seats the mother gave to the child some gum. The child chewed the gum, looked around her for a while and then went to sleep, still chewing the gum. As might be expected of a child permitted to go to sleep thus occupied, she slept with her mouth open, and all night long a few flies crawled in and out of the child's mouth.

Now, of course, this was an unusual occurrence, for most children do not sleep all night in rooms light enough for flies to be about. But did you, mother of little folks, ever give real and serious thought to the gum habit? Laying aside all that might be said about the ill effects of the gum if it were always fresh and sweet; passing by all questions of annoyance to others by the constant motion of the child's lips, did you ever think seriously of the filth that enters the mouth with the gum?

The following is not unusual: A child is given a stick of gum; he puts it into his mouth, where it stays until he wishes to eat something; he takes it out and places it on his plate, perhaps, but more likely on his chair, in his pocket or in some nook or corner of the cupboard. There, if in an exposed place, flies crawl over it, leaving the filth which they always carry. If the gum is in his pocket, hard telling what it gathtrs there—dirt, ravelings, remnants of fish bait, bits of weed seed, etc. After the meal is over back goes the gum into the child's mouth. There the gum, the dirt it has gathered and particles of the lad's dinner are mingled together. This process goes on for days or weeks, with the same gum very often. Then some day Johnnie can't find his gum; he is disappointed, but he finds Mary's, and that does just as well. Mary soon misses her gum, and is consoled by Johnnie telling her that he has found his, which she may now have. So she places in her mouth a bit of gum which may have been chewed by her brother that day, and perhaps by your neighbor's lad the day before.

The chewing of gum is not the only bad habit of carrying dirt into the mouth, perhaps is not even the most common one among school children. Most teachers prohibit any great amount of gum chewing in school hours. By sending a few wads to the waste basket, they at least cause the child to have a cleaner substance in his mouth the next time he chews gum. But who can find the teacher capable of preventing her pupils from placing their pencils in their mouths? She may try to the best of her ability and may succeed in a measure, but if she is to stop the bad habit entirely she must have the co-operation of you, mothers of the boys and girls.

But, you may say, a pencil is not such a dirty thing. Perhaps not when it is first carried to school. But if Mary places her pencil in her mouth, making it wet, it is capable of gathering a great deal of dirt in the course of a day. Suppose she drops her pencil, moist at the end. Maybe some boy, fresh from the barn, has just walked past her desk. She picks up the pencil and soon into her mouth goes, not only the pencil, but particles of filth from the barn, with perhaps disease germs from sick chickens or pigs.

Possibly some day an exercise must be written. Johnnie finds his pencil has disappeared; he has no other and must appeal to the teacher. She gives him one which may have been used the day before by your neighbor's Susie, who was suffering from a sore throat. Susie placed the pencil in her mouth, left a few germs and into Johnnie's mouth they go. Next morning you wonder where in the world Johnnie got such a cold, and why his throat should be sore, when you are sure his feet have been kept dry.

In this day, when the law is taking steps to abolish the evils of transmission of germs from mouth to mouth on railway trains; when schools are demanding that children have individual drinking cups; when this matter of sanitation is taking such rapid leaps and bounds, ought not the mothers of our lads and lassies to wake up and do their part? Teach your child that he should not place his pencil in his mouth; teach him that he should not chew gum after it is more than a day old, and then never after he has laid it down in any place where it is not protected from dirt. Teach him never on any account to use the gum his little friend has first chewed. Watch carefully to learn whether he is in the habit of biting his nails or sucking his fingers. Maybe he does not do these things often, but only when he is nervous. This is often the case with girls, much more often than with boys. But it is even harder to break the boy of the habit if it has been formed, for boys do not so readily respond to appeals for cleanliness. But if teachers and parents will co-operate, even the most stubborn case of nervous finger-and-pencil chewing may be cured.

It is important, of course, that your child should eat only pure, wholesome food. But this food cannot do its best in nourishing his body if it is to be mixed with germs from decayed teeth, or germs gathered and placed in the mouth in the ways herein discussed.

Iowa. GENE HARRISON.

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"My home cares were very heavy, for besides a large family of my own I have also to look out for an aged mother. There was no one to shoulder my household burdens and this thought nearly drove me frantic when I realized that my health was breaking down.

"I read an article in the paper about someone with trouble like mine being helped by Grape-Nuts food and, acting on this suggestion, I gave Grape-Nuts a trial. The first dish of this delicious food proved that I had struck the right thing.

"My uncomfortable feelings in stomach disappeared as if by magic and in an incredibly short space of time I was again myself. Since then I have gained twelve pounds in weight through a summer of hard work and realize I am a very different woman, all due to the splendid food, Grape-Nuts." Name given by Postum Co., Battle Creek, Mich.

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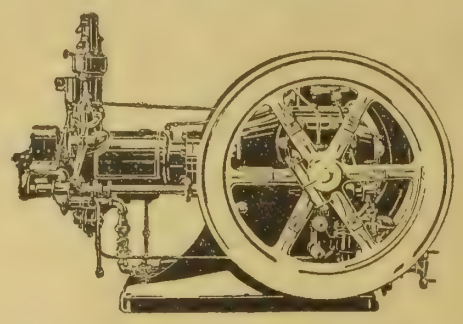

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Why not let your hogs rid themselves of lice, mange and other skin diseases in the **natural way.** Let them rub against a *Rowe New Idea Rubbing Post* 30 days at my risk. **I'll furnish the Posts and the Oil and pay the freight.** The trial won't cost you a cent. You simply watch results and pay if pleased.

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W. V. BENNETT,
Room 4, Bee Building, Omaha, Neb.
Canadian Government Agent.

Germans in Southern Chile

By Frank G. Carpenter

SALDIVIA.—Should Germany succeed in the present war and dominate the world, there are two parts of South America which may become German colonies—one is in southern Brazil. It consists of several states populated by Germans. It has towns and cities governed by officials who speak German. It has German newspapers and there are German signs over the stores. There are German factories and breweries, and the best businesses of the country are owned by Germans. That region is sometimes called West Deutschland, and it has more good land than Germany in Europe.

The other great region is situated here in the lower part of Chile, and it might be called South Deutschland. It is far below Valparaiso and not far from the Strait of Magellan. The Germans began to come here sixty-five years ago, and so many have immigrated that some of the towns are now more German than Spanish. The first settlers were from Hamburg. They arrived in 1850 and were 120 days on the way. They numbered seventy men, ten women and five children. That colony was followed by others, and by the close of our civil war there were more than 1,400 Germans who had settled here. They came as pioneers and had to cut their homes out of the woods. They chopped down the forests and built log cabins and planted wheat fields and orchards. They have now cleared a large part of the country, and have many fine farms. They are more prosperous and thrifty than the ordinary Chilenos, and many have become rich.

Have Great Sawmills

Some of them have great sawmills, and are shipping lumber to all parts of Chile. Others raise wheat, potatoes and apples, and not a few are engaged in merchandising. Owing to their enterprise the region promises to become one of the richest and most prosperous parts of the republic.

Already many large towns have grown up, such as Osorno, Puerto Montt and Valdivia. Valdivia is the metropolis. Lying 500 miles south of Santiago, in the heart of the woods, it is surrounded by new farms and clearings. Its port is the principal one of south Chile, and at it machinery of all kinds, and especially agricultural implements, are landed. The city has now 20,000 people, and it is rapidly growing. It had a fire a few years ago which swept away the buildings of wood and tin which then existed, and in their places we now find a new city, built along modern lines and up-to-date in every particular. Many of the buildings are of reinforced concrete and of two or three stories. The shops have plate-glass windows, coming down to the pavements, and the window displays are better than those of our towns of the same size at home. The streets are wide and the pavements about twice as broad as those of Santiago. The whole tone of Valdivia is white, and the concrete construction make it look like a substantial municipality built of Berea sandstone.

More German Than Chilean

Indeed, Valdivia is more German than Chilean. The signs over the stores are in German, and there are German cafes, in which you get excellent beer made by the Germans. This beer is famous throughout the republic, and it is shipped north and south on the steamers. The chief hotel here has a French name, but it is run by a German, and Germans own the greater part of the town. One of the leading exceptions is the chief importing establishment. This is American. It belongs to W. R. Grace & Co., having a pretentious two-story building, covering the whole of one side of the plaza. This store is filled with American machinery, from windmills and reapers and thrashers to hand sewing machines and notions. It has also American canned goods and textiles.

When I arrived in Valdivia at night I expected to find everything closed up as tight as a drum, as is the custom in nearly every Spanish-American city along the west coast. It is so of Lima, the capital of Peru. That town has 150,000 population, and is the chief business center of a country of several millions. Nevertheless, at 7 o'clock in the evening its streets are deserted. Its stores are closed, and you walk between blank walls. Santiago is double the size, and its merchants go to bed with the chickens. Down here at Valdivia the town is alive after dark, and Saturday night the stores are open till late in the evening. The place is lighted by electricity, and crowds walk the streets and promenade back and forth in the plaza.

Use Barges on River

Valdivia is situated on the Valdivia river, which flows from the Andes down to the Pacific. The town is about twelve miles from the mouth of the river, where lies the port of Corral. All goods are landed at Corral, and carried up to Valdivia in barges. I took a steam launch and rode down to look at the port. The stream is about half as wide as the Potomac at Washington. We first sailed by lumber yards, boat-building works, sawmills and other wood-working establishments. A little later we wound our way among low hills covered with woods, passing through a maze of fine scenery. The stream is of an emerald green; and it flows between dark green banks and low hills as precipitous as those of the Rhine between Mainz and Cologne. Had the hills been covered with vineyards, we might have imagined ourselves on a launch on the Rhine, for there were many Germans on board. The port of Corral has only a few hundred people. Its buildings are small, the wharves are poor, and much of the unloading is done out in the harbor. There were two steamers at anchor during our stay, and on our way to the porte we passed barges carrying coal and machinery up the river. Only small vessels call here, and since the railroad has been completed a large part of the freight is carried that way.

Chile Unusual Country

Southern Chile is far different from the other parts of the country. Chile, in proportion to its width, is one of the longest lands in the world. If it could be laid upon the United States with its northern end at Philadelphia, it would reach almost to the Pacific, and still its average width is not greater than from New York to Albany. The upper part of the land is a desert, as bleak and bare as that of the Sahara. The middle part, extending from some distance above Santiago to a day's ride by train north of where I am, is one of the richest farming regions on the globe. It is known as the Great Central valley and its vast tracts of irrigated land will grow everything produced in southern California. South of this valley and extending from Concepcion to the Strait of Magellan, is a long, narrow strip which is covered with woods.

The climate and rainfall of Chile are varied. In the northern part of the country it never rains. In the central valley the water drops only at long intervals, but down here in the south they have a rainfall of 100 inches and upward per year. Valdivia has 103 inches, and further south there is more. In some places the rain is said to fall thirteen months every year. This is not true. Still there are seasons when the water pours down, and other months when the sky is clear, and there is no rain at all. The latter condition has prevailed during my stay.

Northern Part Treeless

Northern Chile is treeless. Central Chile has groves of eucalyptus and South Carolina poplars, and its irrigating ditches and streams are lined with magnificent trees. All of the trees of that region have been planted. The central valley has naturally no trees, although the land is so fertile that if you set out an oak it would grow within fifteen years to the height of the virgin oaks of our forests. A eucalyptus will reach to a height of seventy-five feet in a decade.

Southern Chile is just the reverse of the

north. It is a land of forests and almost as well timbered as was the eastern part of the United States when our first settlers came. It has so much wood that Chile, notwithstanding the arid lands of the north, is said to have in proportion to its area more forests than any other country of the world. I rode through green fields with stumps scattered through them, all the way from Concepcion to Temuco. Further south men were cutting farms out of the woods, and here and there the wheat was growing among the burned timber, some of which was still standing. Here was a forest where the trees had been stripped to their bark close to the ground, and there was one made of the skeletons of trees killed in that way. In the latter instance the bark had dropped off and the trunks and branches were as white as so many bones

Lumber of Poor Kind

At nearly every railroad station are lumber yards containing piles of fence posts, ties and building materials stacked up awaiting shipment to the north. The lumber is not good in comparison with ours. It is full of knots and cracks. The boards are narrow and they are nothing like the fine wood which comes to Chile from California and Oregon and Washington. The most of the trees here are antarctic beech and pine. There are also hard woods. The forests are thin and there is much underbrush among the trees. It is impossible to clear the land as we do, on account of the trouble in getting rid of the stumps. Some of the farmers are now importing stump pullers from the United States, and not a few are using dynamite. Ringing and burning the trees leaves a great deal of dead timber, and the cultivation cannot be well done until the dead trees are out by the roots.

After the land is cleared it looks nothing like similar land in the United States. The fences are of barbed wire, but there are no large fields in clean cultivation and fine barns and houses as in the United States. The most of the buildings are log cabins of one story, roofed with straw or slabs. They are put up in a rude way, and but few of them have gardens or flowers. There are some good homes owned by the Germans, but the native Chilenos live but little better than savages. They seem to be camping out, rather than settling down to build up a country.

The most of the new land is devoted to wheat. This is the chief cereal of Chile, the country producing something like 9,000,000 bushels per year. Some cattle are raised, but here in the south the animals are ragged and lean, and their meat is chiefly used for making charque, or dried beef. In the central valley the animals are much better, and here and there you find Herefords and Durhams.

Heavy Work by Oxen

The heavy work of the farms, both north and south, is done by oxen, the team being increased according to the character of the labor. A half dozen yokes of oxen may be used in hauling out timber, and it takes a long team to drag the wheat on carts over the mud roads to the stations. The oxen are yoked by the horns, and they push rather than pull. The yoke is fastened to the tongue of the cart, and by pushing against the yoke the cart is forced onward. The animals in front of the first yoke which pushes the tongue, have ropes reaching from their yokes to the cart. This method of working seems cruel, although the natives claim it is not. When yoked up the oxen cannot move their heads from side to side, and they are driven with long goads, which end in sharp spikes. These goads are often so mercilessly used that the blood runs down the sides of the beasts.

The cultivation of the farms here is now largely done with American machinery. I see American windmills and American plows and reapers and thrashers almost everywhere. The wire for the fences is furnished by our steel trust, and there is scarcely a farm that is not now using more or less tools imported from the United States.

At the same time the old methods move along side by side with the new. Much of the grain is still thrashed out by mares on thrashing floors. In this process the ground is pounded hard, and the sheaves of wheat are cut open and spread over it. Then a drove of mares is driven around and around to tread out the grain. The winnowing is done by throwing the straw into the air, and the bagging is by hand. Adjoining a farm where this may be seen, you may find an American thresher, and the wheat may be cut, thrashed and bagged in the fields.

Chile has no elevator system. After thrashing all grain is taken at once to the railroads and shipped. It is put up in sacks of 200 pounds and loaded on flat cars. There are but few warehouses. At some of the stations the grain in sacks is piled up in the open, being covered with canvas.

Poor Opportunities for Americans

I have been asked to write something for Americans who wish to come to this region to settle. It seems to me that the opportunities are poor, and they can do better at home. The government would like colonists, and on the frontier free lands may be had to the extent of 123 acres for each head of a family, and seventy-four acres for each son who is of age. Contracts have been made with foreign colonists by which their steamship passages from Europe to Chile were advanced, and free railroad transportation given to the place of settlement. In some cases the government has given each family a yoke of oxen, 150 boards for the building of a hut, and something like fifty pounds of nails for fastening the boards into place. This has been on the condition that the colonist establish himself at once on the land given him, and that he work it steadily for at least six years. He contracts to pay back without interest the amount of passage money received, and also not to sell any of the stuff he gets from the state, nor to mortgage the property or dispose of it until after the six years have passed.

Under such conditions a few colonies have been established, but altogether the number of foreign settlers is small, and of the thousands of families that have come here, those who remain may be numbered on your fingers and toes. I do not believe that there are any great opportunities for North Americans without capital in Chile. It might be different with those who have money and buy the lands sold by the government at auction. At such sales one-third of the purchase price has to be paid immediately and the rest in ten yearly installments, the place being mortgaged until all is paid. At the auctions the lands are sold in large tracts, some containing over 1,200 acres. The owner agrees to fence the land within three years after purchasing it. He is obliged to give, free of charge, any ground needed for roads built by the government, and he must give rights of way for any railroads if required to do so by the state. Within twenty years, 6,000,000 or 7,000,000 acres have been so auctioned off, and it is said that there are still government lands to the extent of about 13,000,000 acres already surveyed that may be disposed of by colonization or by auction in the future. That amount of land would cover a territory more than half the size of the state of Ohio.

Indians Hold Some Lands

In addition to the public lands are the reservations occupied by the Indians. There are 182 of these and they cover altogether good lands to the amount of 100,000 acres. There are also lands that may be sold for colonization, and special terms are given to those who bring in colonists. Such men have a right to the free passage of their immigrants from Europe and to the allowances given to government colonists already mentioned. It is provided that they may be given also a milch cow, a mare, a merino sheep, a pig and three fowls and a sawmill for each certain number of families. In some cases the colonists have rude houses built for them, and in others certain carpenter's tools are furnished. The amount of land so allotted to each family is greatly in excess of that given by the government, and when the country is mountainous the number of acres may be doubled. The land necessary to found a village is also supplied if there are mechanics among the immigrants.

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The Blue Valley Creamery

is a PROTECTION to the Cream Producer

You cream-producing Farmers ought to know that the Blue Valley Creamery Company, as a market for your butter-fat, offers you the most absolute protection for full profit, highest price and prompt pay. Such a reliable market as that is a great asset to you and your business because it allows you to sell direct and not through the cream collector. It cuts out all the element of uncertainty and does away with the necesity of dividing your receipts with somebody else.

When you figure out what it costs you to produce cream, the time and money it costs you to care for your cows, why should you share your profits with anybody? When you add the cream collector's charges and profits to cost of maintenance and production, do you get enough money out of it to pay you for your trouble? That's why we advise you to sell to the Blue Valley Creamery Company and get the maximum price and the maximum profit, both of which are as sure as the rising of the sun. Any good business farmer will see the value of these facts at a single glance.

And another thing—some of you farmers who are making butter are operating along the lines of greatest resistance. You can make more money with far less labor if you will sell you cream to us and let us make the butter than to attempt to make it and distribute it yourselves. Distribution costs money and if it isn't well organized, it's a waste and not a profit. Figure both of these points out in dollars and cents—get down to brass tacks—contrast the profits you make now with the profits you can make by dealing with us, and it will require no further argument from us. Facts speak for themselves.

The *Blue Valley Creamery* System has a remarkably fine standing throughout America. It makes the best butter and sells to the best trade. It gets the best price for its butter and can afford to pay the best prices for cream. That company, therefore, is your logical market. There isn't any other market that is anywhere near as good. And every can of cream you ship to a Blue Valley Creamery nets you your maximum profit. These statements being facts, what further argument is necessary? Write to us today and get the detailed information.

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Cream is always shipped by baggage or express and low shipping rates have been fixed for 5, 8 and 10 gallon cans. The shipping charge includes the return of your empty can. Ask your local express agent or railroad agent about rates to our nearest creamery. If he can't give you the rates just drop us a postal card and we will see that he is informed. Our wagons meet all trains. Ship on any train that carries express or baggage.

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Write today, for our handsomely illustrated and interesting short story, entitled, "The Fable of the Cow." It is free for the asking.

Ship a can of cream to us today and try the Blue Valley System. Address our nearest creamery.

Blue Valley creameries are located in wholesale market centers where there are a number of railroads, thus enabling each creamery to get a large volume of cream within a reasonable shipping distance and serve a large number of cream producers. Creameriees are located at Chicago, Ill.; St Joseph, Mo.; Indianapolis, Ind.; Sioux City, Ia.; Detroit, Mich.; Grand Rapids, Mich.; Hastings, Neb; Parsons, Kans.; Springfield, Ill.; Clinton, Ill.; Cedar Rapids, Ia. Ours is a business creamery system built up to meet hand separator conditions, thereby paying highest prices for cream.

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Gentlemen—Send me FREE copy of "The Fable of the Cow."

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

THE body of a fowl is made up of flesh, fat, bone and feathers, or, if you want to say it another way, if reduced to the principal elements, of each, water, protein, fat and ash, of which water constitutes far more than half. Water is found in all foods given, as also is ash, which is mainly phosphate of lime. Protein and carbohydrates are most important substances to be supplied in the food. Protein goes to form the flesh, skin, brain and nerves, and is found in all the grains and in peas, beans, hay, etc. Carbohydrates are the sugar and starches found in the grains, etc., and are an important part of the egg. This element makes heat and energy, while protein principally nourishes, but too much protein induces a spindling condition, while too much of the sugar and starch foods weakens finally by making too much fat. This is why the fowl more than another animal demands a variety of food and will not remain healthy and do justice to its owner on just one kind of food or grain. It makes little difference how we get the protein, fat and ash materials, so we get the right amount, except that this is known, that protein is more easily digested and assimilated if fed in animal matter than if fed in grain, while both fat and protein elements are more easily digestible if fed in grain than if fed in vegetables or fruit. But, after all, the main thing is neither to overfeed or underfeed of either, and to keep the fowls contented while feeding. Prof. Rice, noted poultry authority, says in American Poultry Advocate:

"Reproduction is based upon a higher law than merely a satisfied stomach. Unless hens feel happy no amount of feeding will induce them to lay. It is because of this law of contentment that many flocks of hens, feeling the privacy, safety and freedom of their unpretentious home, are producing eggs abundantly in the dead of winter on simple but wholesome food, while many flocks kept in expensive houses and fed elaborate rations are practically unproductive."

Loss in Dressing Chickens

Experiments made to determine loss in weight by killing and dressing showed that the total loss in weight was 20 per cent of the live weight when made upon some chickens kept without feed for thirty-six hours before killing. These were killed by breaking their necks, were not bled or drawn and were dry-picked. When prepared for the oven some of these, weighing five pounds and one-half when alive, weighed but two pounds and fifteen ounces. After deducting the price paid for dressed fowls over that of the price per pound if sold alive, even at this large loss, deducting time spent in killing and getting ready, the price exceeded that brought by selling the fowls alive. In selling fowls it is well to make some experiments of this kind and then note which pays you best.

Cold Storage Eggs

From this on until March and after, all the hens of the United States will not lay enough eggs to supply the demand of one consumer out of six in the country. Most of these will be eaten at home or in the home markets.

Yet millions of eggs will be eaten and purchased this winter at reasonable prices, and these eggs will be good if you demand the right kind, though they be cold storage eggs. The United States government has tried to educate the people up to this fact, though few heed the telling.

High-grade cold storage eggs are well candled and stored from the best stock of eggs the hens lay in the early spring months. The best of these arrive in the cold storage houses perfectly fresh and are kept in that state until needed. When these eggs are taken out to go into general circulation they are again candled by expert operators who pass each egg before an electric light, rejecting all that have become imperfect. The eggs passing this severe test are labeled as best grades, and if you call for best grades you will get good eggs, even if they are cold storage.

Short Poultry Notes

In constructing a poultry house, try to secure the largest pen room at the lowest cost, and remember, if you keep heavy fowls to provide them ladders on which to reach the roosts. A board with cleats nailed across it at intervals is good enough.

* * *

Some hens never cackle after laying. Usually the hen that lays the most eggs never says a word about it. Again, some hens that lay brown eggs at the beginning of a clutch lay very light eggs toward the end of it.

* * *

Every bird entered in competition at poultry shows must be the bona fide property of the person who enters them, and the owner be ready to make affidavit to the same if called upon to do so.

* * *

Any exhibitor at poultry shows found guilty of faking or showing borrowed birds shall be read off competition lists and shall forfeit all prizes that may have been awarded him at the particular time when found guilty or yet due.

* * *

When one has perfected a certain type of fowl and wishes it entered in the American Standard of Perfection the owner must send in a petition sixty days before a meeting of the American Poultry association praying admittance for the variety, and giving all facts connected with its origin and breeding.

* * *

Why is it that few and fewer are the geese we see on exhibition at the fall fairs? Are geese losing out? Nothing is so cheap to keep on the farms as geese. Few are the farms that do not show up one good spot for raising a good standard goose breed. Think of the price the eggs of such geese bring, even single; think of the value in pairs; then there are the premiums at the fairs and poultry shows where so few geese are shown.

* * *

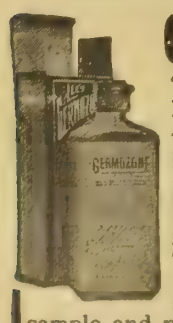
The interest in winter poultry shows increases fast each year. Little towns now have their winter and spring poultry shows. That most people, country and town alike, keep standard-bred poultry is the main reason for this. Those who keep any breed in the standard finally desire to know all there is to know of this breed, and how near to standard they are keeping their fowls. The nearby village poultry show gives them this chance, as good judges are selected to look after these shows. It gives you the chance to compare your stock with others; it builds up your interest in the business; you get new ideas on housing, feeding and caring for your fowls in ways to insure vigor. Go to all the poultry shows about, then take in some held in the large cities. Here you will come upon breeds of geese, turkeys, ducks or other fowls that it may pay you to keep.

* * *

In selecting an incubator, read the catalogues of the various firms. Some of these catalogues are full of poultry information outside of showing off the goods for sale. Then make your selection of the machine that appeals to you as nearest your idea of what constitutes an easy machine to handle, with some regard to the size your flock can soonest fill with fresh eggs. Early chicks for market or show room are best, and on some farms are much the healthiest of all chicks hatched. If the hens will not set in February and March, the incubator will—of that you are sure. While the incubator has developed into a more perfect machine for doing its work than the brooder, yet there are successful brooders on the market in plenty.

* * *

The Department of Agriculture, Washington, D. C., has put out a colored egg-candling chart to enable the housewife and farmer to learn the true look of a good egg, a bad one or an egg in the various stages of badness. The chart includes pictures of eggs in all stages, from absolutely fresh on to eggs with yolks settled to one side, including eggs ready to hatch chickens, and eggs with that green look in the white that denotes millions of bacteria unfit to take into the stomach. These charts are given free as long as the supply lasts.



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GEO. H. LEE CO., Dept. 7, Omaha, Nebr.
Makers of Lee's Lice Killer, Mandy Lee Incubator, etc.

Wonderful Egg Producer

Any poultry raiser can easily double his profits by doubling the egg production of his hens. A scientific tonic has been discovered that revitalizes the flock and makes hens work all the time. The tonic is called "MORE EGGS." Give your hens a few cents worth of More Eggs and you will be amazed and delighted with results. A dollar's worth will double this year's production, so if you wish to try this great profit maker, write E. J. Reefer, poultry expert, 540 Main St., Kansas City, Mo., who will send you a season's supply of MORE EGGS tonic for $1 prepaid. So confident is Mr. Reefer of the results that a million dollar bank guarantees if you are not absolutely satified your dollar will be returned and the MORE EGGS costs you nothing. Send a dollar today or write Mr. Reefer for his free poultry literature that tells the experience of a man who has made a fortune out of poultry.

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GOVERNMENT JOBS NOW OPEN TO men and women; $65 to $150 month; over 15,000 appointments coming; no layoffs; summer vacations with full pay; common education sufficient. Full directions showing how to get position—free. Write Franklin Institute, Dept. D 94, Rochester, N. Y.

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SEEDS

SUDAN GRASS—NORTHERN GROWN seed, hardy and free from Johnson grass. Write for free sample and prices. Henry Field, Shenandoah, Ia.

NO 1—WESTERN NEBRASKA-grown Feterita seed for sale from grower. Write J. E. Warrick, Hastings, Neb.

ALFALFA SEED DIRECT. SAMPLE and growers' price on application. J. L. Maxson, Buffalo Gap, S. D.

SUDAN GRASS SEED FOR SALE. John L. Abernathy, Purcell, Okl.

ALFALFA SEED—NORTHWEST NEbraska high land seed, white blossom sweet clover seed; alfalfa hay, all cuttings; prices and samples free. Schwabe Bros., Chadron, Neb.

SUDAN SEED—GUARANTEED PURE —5-10 lbs., 35c pound, prepaid. C. Clemmons, Anadarko, Okl.

SWEET CLOVER SEED—THE TRUE, white blooming variety. (Melilotus Alba.) Write for free sample of new crop seed and latest prices. Henry Field, Shenandoah, Ia.

PATENTS

PATENT YOUR IDEAS; THEY MAY bring you wealth; 64-page Patent Book free. Fitzgerald & Co., 808 F St., Washington, D. C. Established 1880.

IDEAS WANTED—MANUFACTURers are writing for patents procured through me. Three books with list 200 inventions wanted sent free. Advice free. I get patent or no fee. R. B. Owen, 75 Owen Bldg., Washington, D. C.

MONEY ON PATENTS—I SECURE your patent for you, or return my fee. Write for free booklet on "How to Obtain Your Patent and Make Your Profit Thereon." Mansell F. Mills, Registered U. S. Patent Att'y., 212 Commercial Nat'l. Bank Bldg., Washington, D. C.

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200 TYPEWRITERS, ALL MAKES, rebuilt like new, $12 up. Written guarantee. Write for list. Butts Typewriter Exchange, 1807 Farnam St., Omaha, Neb.

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FOX TERRIER, ALL AGES; BEST rat, pet or watch dogs. T. H. Kaldenberg, Pella, Ia.

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FERRETS—GOOD HUNTERS, RATters. F. Breman Co., Danville, Ill.

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GOVERNMENT FARMERS WANTED —Ages 21 to 50. Make $125 monthly. Write Ozment, 39-F, St. Louis.

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LIGHT UP YOUR HOME AND BARNS with the best and safest Out Door Acetylene machine. Write for prices. Edward Hayne, Ottawa, Ill.

RATE—Five cents the word per issue. Cash must be sent with all orders. Count every word, initial and numeral, including address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred five thousand farmers are regular pain-in-advance subscribers to TWENTIETH CENTURY FARMER. If you have any wants, or if you have anything to sell, insert an ad. in this department.

POULTRY—Langshans

BLACK LANGSHAN COCKERELS. Write Jake Hetrick, Wahoo, Neb.

Leghorns

PURE-BRED SINGLE COMB BROWN Leghorn cockerels, $1 each. Ben Meyer, Oakland, Neb.

ROSE COMB WHITE LEGHORN cockerels, $1 each, six for $5. Mrs. Nellie Coder, Elwood, Neb.

850 SINGLE COMB BROWN LEGHORN hens, pullets, cockerels, 75c to $2 each. E. Dooley, Selma, Ia.

SINGLE COMB WHITE LEGHORN yearling hens, $1 each; satisfaction guaranteed. Will Henderson, Central City, Neb.

ROSE COMB BROWN LEGHORN cockerels, very fine; now six for $5. G. C. Randall, Village View Farm, Stella, Neb.

FOR SALE—S. C. W. LEGHORN AND S. C. B. Minorca cockerels; prices right. Mrs. Emma Duerr, Dorchester, Neb.

FOR SALE—300 S. C. WHITE LEGhorn pullets, half to two-thirds grown, 75c each; 100 R. I. Red pullets, $1.50 to $2 each; 200 R. I. Red White Plymouth Rock, White Leghorn and Buff Orpington cockerels, $2 to $5 each. Keystone Poultry Farm, Guy E. Schreff, Mgr., Lincoln, Neb.

Light Brahmas.

LIGHT BRAHMA COCKERELS, hens; reasonable. Mrs. M. Wall, Eddyville, Neb.

Orpingtons.

PRICE LIST FREE—SINGLE COMB Buff Orpington, Toulouse geese, Indian Runner ducks. Peter Brehm, Harvard, Neb.

ORPINGTONS—BUFF OR WHITE—Stock for sale. Price list free. Frank Lewis, Gibbon, Neb.

WHITE ORPINGTON COCKERELS. William Langbehn, Avoca, Ia.

PRIZE-WINNING BUFF ORPINGtons, reasonable. Mrs. Cook, Eddyville, Neb.

BUFF ORPINGTON PULLETS, $10 per dozen; line breeding compels sale; best stock from range. Mrs. Minnie Tatro, Geneva, Neb.

BUFF ORPINGTON CHICKENS, $1 to $5. Mrs. Belle Merrick, Osceola, Neb.

Plymouth Rocks.

50 FANCY BARRED ROCK COCKERels, $3 to $10; immediate sale; best blood in America; money back guarantee. Dr. George A. Flippin, Stromsburg, Neb.

WHITE ROCK COCKERELS, $1.25 TO $1.50 each; the white kind. Mrs. George Hellbusch, Belgrade, Neb.

BUFF ROCKS—SHOW OR UTILITY birds, sired by Southwest District Show winner. Mrs. James Christopher, Carleton, Neb.

FIFTY LARGE, THOROUGHBRED Barred Plymouth Rock cockerels; elegant birds, $1 each. Miss Voorhees, Sweetwater, Neb.

WHITE ROCKS—CAN SPARE FEW nice, classy cockerels, from $2 to $5. Write me before you buy. R. A. Neitzel, Falls City, Neb.

650 BARRED ROCKS, BRED BY IOWA King; won grand champion sweepstakes at Iowa State Show, 1914. A. D. Murphy & Son, Essex, Ia.

BARRED PLYMOUTH ROCK COCKerels and pullets for sale; large, heavy bone, deep, narrow barred, good laying strain; guarantee satisfactory; show birds a specialty. G. W. Feuerstein, Fremont, Neb.

BARRED ROCK COCKERELS. MRS Iver Johnson, Stanton, Neb.

CHOICE BARRED ROCK COCKERels, ready to ship on approval. Arthur Gillette, South Omaha, Neb.

FOR SALE—WHITE ROCK COCKERels, $1 each. Address Lonnie Boyd, Arapahoe, Neb.

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SINGLE COMB RHODE ISLAND RED cockerels, birds of fine quality and breeding. Write for details and prices. A. F. Magdanz, Pierce, Neb.

ROSE COMB REDS FOR SALE. Cockerels at reasonable prices; satisfaction guaranteed. Fred Gregorius, Humphrey, Neb.

LARGE-BONED, FULL-BLOOD ROSE Comb Rhode Island Red cockerels, $2 each, guaranteed. Highland Farm, Hedrick, Ia.

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BOURBON RED TURKEYS—TOMS, $4; hens, $3; trios, $10; old trio, $12. Mrs. D. W. Shipp, Belleville, Kan.

BOURBON RED TURKEYS FOR sale. Clinton Myers, Fairbury, Neb.

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FOR SALE—HIGH-GRADE BOURBON Red turkeys, toms and hens; also Rhode Island Red cockerels and pullets. Write for particulars. F. M. Kern, Springville, Ind.

Wyandottes.

SILVER-LACED WYANDOTTES—A specialty of English strain. A few fine cockerels and pullets for sale from a pen of as good layers as the best, barring no breed. W. H. Mead, 404 East 10th St., Fremont, Neb.

SILVER-LACED WYANDOTTE cockerels. Mrs. Ed Ackerman, Stanton, Neb.

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G. A. FRANKFORTER, BREEDER OF Golden-Laced Wyandottes; high-class cockerels for sale. Manning, Ia.

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INDIAN RUNNER DUCKS, $1 EACH. Vern Johnson, Meadow Grove, Neb.

FOR SALE—ROYAL BLUE STRAIN Rouen ducks. James Cassell, Fremont, Neb.

INDIAN RUNNER DUCKS. MRS. Derrick, Battle Creek, Neb.

MAMMOTH PEKIN DRAKES, $2 each. Our stock won all prizes at State fair. Roy Thompson, Normal, Neb.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Sheandoah, Ia.

COCKERELS, ALL VARIETIES; ducks, geese, turkeys. Erle Smiley, Poultry Judge, Beaver Crossing, Neb.

CHOICE COCKERELS FOR SALE—We can supply choice cockerels for your next season's breeders of all popular breeds of chickens, geese and ducks, also bantams and fox terrier pups. Logan Valley Poultry Farm, Wayne, Neb.

TURKEYS, DUCKS, GEESE, CHICKens, rabbits, butter and eggs wanted. Ship direct to Perry & Co., Omaha, Neb. Estab. 1896. Reference, Merchants National bank. Prompt pay. Write for quotations.

BIG MAMMOTH BRONZE TURKEYS, White Runner drakes, Light Brahma cockerels; Shetland ponies. Frank Healy, Bedford, Ia.

THE 110,000 FARM FAMILIES WHO regularly read this page are anxious to buy their breeding stock early this year. A nickel a word a week is the cost of advertising what you have to sell.

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PRODUCTIVE STATE AND DEEDED lands; crop payment or easy terms; along the Northern Pacific Ry., in Minnesota, North Dakota, Montana, Idaho, Washington and Oregon; no isolated pioneering. Free literature. Say what state interests you. L. J. Bricker, 442 Northern Pacific Ry., St. Paul, Minn.

Arkansas

LITTLE RIVER VALLEY LANDS—Rich and cheap, on railroad. Sessions Co., Winthrop, Ark.

FREE GOVERNMENT LAND—NEAR 500,000 acres in Arkansas now open to homestead entry; guide book, with lists, laws, etc., 25c; township map of state 25c additional. L. E. Moore, Little Rock, Ark.

Australia

VICTORIA, AUSTRALIA, WANTS settlers. Special inducements; government land; railways; free schools; cheap irrigation; 31 years to pay for farms adapted to alfalfa, corn, grains, fruit, etc.; climate like California; ample markets; reduced passages; special excursion being arranged. Free particulars from F. T. A. Fricke, government representative from Victoria, 687 Market St., San Francisco, Cal., Box 57.

California

WE HAVE A FEW HOMESTEAD LOcations and timber claims in northern California, cheap. Full particulars on application. W. T. Smith Co., 1111 City National Bank Bldg., Omaha, Neb.

ON APPLICATION A BEAUTIFULLY illustrated book descriptive of the resources of Yuba and Sutter counties (in the fertile Sacramento valley) will be mailed free. Address M. N. Sheldon, Secretary Sutter County Commission to P. P. I. E., Marysville, Cal.

Colorado

ON THE GREAT BURLINGTON Route, 100 miles from Denver, at Akron, Colo., a town with every modern convenience, I have 12 selected quarters that I will sell at a big sacrifice, because I need the money to protect other property. These lands are fine and near the town. Grain, vegetables, root crops and alfalfa make great records there; only $10 per acre; easy terms; disease microbes can't live there; they can't stand the air. Life here is worth living for every member of the family. Other particulars on request. A. C. Torgeson, care Deneckes', Cedar Rapids, Ia.

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FOR SALE OR EXCHANGE FOR IMproved property, famous Wauchula citru and truck lands. J. C. Holbrook, Bartow, Florida.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

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WANTED—TO HEAR OF GOOD farm or unimproved land for sale. Send description and price. Northwestern Business Agency, Minneapolis, Minn.

LANDS—Minnesota

WRITE FOR FREE LISTS AND LITerature on Chisago and Pine counties, Minnesota, lands; railway fare refunded to buyers. St. Croix Valley Land & Loan Co., Drawer G, Rush City, Minn.

Nebraska

UNCLE JIMMY AND AUNT MARY have reached the age limit, so must give up farming the old homestead. As it's all they have, they have to get it in money and payments. It's offered at a whole lot less than it's worth, for they need the money quick. It's in Holt county, 160-acre homestead and 160 timber culture adjoining, near town; school house on land; river running through; rich, level land; improved; low rate interest; good terms. See or write W. P. O'Brien, 410 Bee Bldg., Omaha, Neb.

160 ACRES GOOD, BLACK, SANDY land, six miles south of Elsie, Neb., for sale. Price, $1,200; worth double the amount. C. H. Metz, Owner, Spokane, Wash.

Real Estate Loans

FARMERS, DO YOU NEED MONEY? We negotiate for farm loans, 5 years at 6 per cent and ten years at 5 per cent; dealing direct with borrower; 2½ per cent straight commission. Correspondence solicited. Security Farm Loan Association, 30 North Dearborn St., Chicago, Ill.

6 PER CENT MONEY—MONEY 6 PER cent. Loans may be obtained for any purpose on acceptable real estate security; liberal privileges; correspondence solicited. A. C. Agency Company, 758 Gas-Electric Light Bldg., Denver, Colo.; 446 Pierce Bldg., St. Louis.

Wisconsin

UPPER WISCONSIN—BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

Wyoming

IF INTERESTED IN SECURING A fertile farm at a low price, in a well settled community, where climate, soil and water are good, write Federal Land Company, Cheyenne, Wyo.

ATTENTION GERMAN FARMERS! My four improved farms to rent on the crop-sharing plan, which will easily double your present income and more, with no additional labor or investment. These farms are situated about seven miles from Millbrook, twenty miles from Laramie, Wyo.; an up-to-the-moment city of 10,000 people, with the State university there and the experiment station on the way. Roads are fine and the rural free delivery stage goes by every day; school within a mile and telephone, too; good, comfortable houses, barns and other buildings. These farms have plenty of water to irrigate with and good, pure water in wells for other uses. They are partly in alfalfa and have been farmed for several years. Can farm a quarter here as easily as an eighty where you are; no diseases to attack stock; hog cholera unknown; climate particularly suited to growing children and those having asthma, throat or lung trouble. Here you can have plenty of cheap feed to fatten stock and have a money-making dairy. Butter-fat brings from 33 to 38 cents per pound; four to five cows will far more than support the family; plenty of cheap pasture. Applicants should have horses, implements and cows. For further particulars write A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

FOR SALE OR EXCHANGE—320 acres, six miles from Millbrook, twenty miles from Laramie, half-mile to school; rural route and telephone; all good, level land; all irrigated; first-class water right; 30 acres alfalfa; good seven-room house; fair barn and other buildings. Price, $65 per acre. 160 acres, seven miles from Millbrook, twenty miles from Laramie, one mile to school; rural route, telephone; all but twenty acres under cultivation; good five-room house, large barn, granary, milk house and other buildings; first-class water right; very best soil. Price, $75 per acre. 320 acres, eight miles from Millbrook, nineteen miles to Laramie, 1½ miles to school, two miles to postoffice; five acres of alfalfa, 20 acres other crops; good fences; no buildings; fine, level farm; can all be plowed; all irrigated. Price, $55 per acre. 80 acres, seven miles from Millbrook, twenty miles to Laramie, 1½ to postoffice, half-mile to school; seventy acres under cultivation, balance good land; all irrigated; first-class water right; splendid producing land. Price, $65 per acre. I represent all the above as owner and have several other farms, some larger. Will exchange for improved farms in Iowa or eastern Nebraska that are offered worth the money. A splendid opportunity for those wanting to change to better climate. A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

Better Than Other Papers

So. Omaha, Neb., Nov. 17, 1914.

Twentieth Century Farmer:—

The Twentieth Century Farmer did us as well, if not better, on stock and eggs last season as any other.

Arthur Gillette.

Mr. Gillette is a breeder of high class White Rocks and a few ads in this paper last season proved to him it was one of his best papers.

Latest Improved Rubbing Post

By eliminating profits and expense, we are able to furnish you our POST ATTACH

HOG OILER FOR $5.50

CASH ACCOMPANYING YOUR ORDER

Medicated Vermin Oil at 15c per gallon. We guarantee our Post Attach, Acme and other varieties of Hog Oilers to rid your hogs of lice, mange and skin diseases. Order at once. Do not put it off. Your hogs cannot sleep or thrive for the lice chewing them night and day. Agents or Oil Salesman wanted. Address

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White's Weather Prophet forecasts the weather 8 to 24 hours in advance. Not a toy but a scientifically constructed instrument working automatically

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Made doubly interesting by the little figures of Hansel and Gretel and the Witch, who come in and out to tell you what the weather will be. Handsome, reliable and everlasting.

AGENTS WANTED

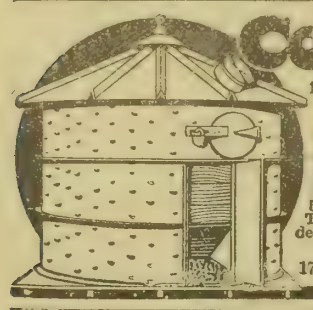
Size 6½ by 7½, fully guaranteed. Sent postpaid for $1.00

DAVID WHITE, Dept. 69, 419 East Water St., Milwaukee, Wis.

Bargain Day on Cuts.....

You can buy any cut in the Twentieth Century Farmer for 8 cents per square inch, cash with order—not less than 75 cents for any one cut. It is advisable to write at once, as we have only one of each kind. Address,

Twentieth Century Farmer
Omaha, Neb.



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We want to send you this Combination Grain Bin all freight charges prepaid. You can pay us for it when you get it. The special perforations make it suitable for ear corn, shelled corn, kaffir, wheat, etc. Rain cannot beat in or small grain fall out. Fireproof—rat proof. Sectional—portable. Made of best quality puremetal, galvanized. 3 and 5 ply metal joints bolted together make it strong and rigid. Order today. The advancing price of grain will pay for it the first season. Prompt delivery guaranteed. Special prices on larger sizes. Circular free.

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OMAHA, NEBRASKA

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Free State Fair Admission

S. T. S., Iowa: Your little squib denouncing free admission to state fairs certainly hits the proper chord. One farm journal editor has been trying for some time to start something that no one else ever thought of, and he has hit upon about the most absurd proposition anyone ever heard of on the above named subject. Why should the taxpayers in the outlying counties of the state be taxed to support a free fair when a very small majority of them or their families can attend? It would be a great boon to the population of Des Moines and other cities where state fairs are held, for it would give every man, woman and child in these cities ten days of fine entertainment absolutely free of charge. You can depend upon it they would all be there, and why not? The state is paying the expense.

But how about the remote cities and towns and the surounding country? Few of these people would get any benefit from the extra tax necessary to put the state fair on a free basis. There would be just as much reason in a proposition to put the theaters of Des Moines or Lincoln on a free admission basis and have their respective states, through the taxpayers, defray the entire expense.

This proposition does not look good to any taxpayer outside of the state fair cities who has taken time to give the subject a little thought, and it is safe to say this same editor would never have proposed such a one-sided and preposterous thing had he lived outside the state fair city.

Editor's Note—To the writer of this letter we want to say, "Thank you." It is always encouraging to the editors of any publication to know that their readers are with them. At the same time we are always glad to know when the opinions advanced do not meet with your approval, and why. By writing occasionally and expressing your opinions you can be of great service to us in helping us to make the Twentieth Century Farmer of more value to you.

Lice On Hogs

C. L. J., Nebraska: Will you state in the columns of your paper an effective remedy for hog lice?

Answer—Many of the different commercial dips are good lice remedies. Crude oil is used successfully by many hog raisers. Different automatic hog oilers are good to use. In addition to any of these remedies, be sure to clean the bedding out often and thoroughly disinfect the hogs' sleeping quarters.

Fattening Horse for Market

S. E. C., Nebraska: I am a reader of your paper and would like to ask a few questions. What kind of ration would you suggest to fatten a horse for market? He is coming 6 years old, tall, rangy and thin in flesh; black, with white stripe in face; three-quarters Shire and weighs about 1,300 pounds. Have cane, corn fodder, wheat and oat straw, corn and oats. Would you advise feeding oilmeal? Should I work him husking corn or let him stand in the barn?

Our colts coming home from pasture are troubled with warts on their lips and mouths. They have run in the hills on grass pasture. How should they be treated?

What should be done for hard, dry hoofs that break and crack?

Answer—In fattening horses for market the first thing to do is to be certain that they are free from either internal or external parasites and in good, healthy condition.

A good ration for fattening is corn and alfalfa hay, with some oats and bran. Hay should always be fed with the grain, as this gives the necessary roughness to aid in digestion. Feed from ten to fourteen ears of corn morning, noon and night. Mix oats and bran, about one-quarter of the mixture being oats and three-quarters bran. Feed about three quarts of this twice a day, between the corn feeds. Hay and water should be supplied in as large quantities as the animals will consume. Oilmeal will aid in fattening and will give the coat a good gloss and make the skin soft. This ration is for rapid fattening.

Light work during the fattening period is better than no work at all, but it must be light work when the horse is receiving so much heating food. Be sure, also, that the horse has access to salt.

If you will apply to the university farm, Lincoln, they will send you their bulletin No. 28, "Feeding Alfalfa to Horses." This is a short and practical record of a number of experiments in feeding horses for work and fattening, using alfalfa hay and other rations. It is written by H. J. Gramlich, and the experiments described were made not only on the university farm, but by horse breeders and dealers in Nebraska.

Warts may be removed with a knife, but there is danger of infection from this treatment. Arsenic mixed with lard in the proportion of one part arsenic to four of lard form a salve which may be rubbed on and around the warts once a week and will cause them to fall off. These warts usually are not harmful if allowed to remain.

For dryness of hoofs, keep the horses' feet well wet. Let him stand in wet clay a good part of the time, and oil his hoofs occasionally. All horses should have a good foot soaking quite frequently.

Hunting the Quail

A Reader, Indiana: The sound of the guns is now in the land, the hunting season is on and the poor little, innocent, helpless quail hide and cower away, but to little good to themselves in the end. The state in which this is written allows from November 10 to December 20 to hunt the quail except where farmers, under the order of the game commissioner, have turned their farms into game preserves, which many have done. What a shame, for the hunting of quail should be prohibited entirely everywhere. The law should be to feed and save them. What if the hunter is not allowed to kill over fifteen a day, what does that amount to in saving them? What if not allowed to snare and trap? A gun kills faster. A quail on the market is worth, maybe, 25 cents. Alive and on the farm, so ornithologists claim, it is worth several dollars a year to the farmer because of the harmful grubs and weed seeds it eats. It is well enough to lengthen the rabbit season, for rabbits breed fast, and when the snow lies long they knaw the berry bushes and destroy orchards, but let us save the quail.

Be Careful in Buying Trees

FRUIT tree orders should never be placed carelessly or haphazard. You would not dream of buying a pure-bred animal from a breeder until you knew he was reliable, even though the stock was there to show for itself. You would want to know you could trust the breeder to give you all he claimed he was giving you. In buying trees you are much more at the mercy of the seller. You can tell nothing about the fruit the tree will produce for years after you have purchased it. You have to rely absolutely on the honor and honesty of the nurseryman.

It is a very common thing for traveling salesmen to travel around taking orders, and very often the parties giving the orders know nothing of the nursery represented, nor about the varieties so glibly extolled. Under such circumstances it is wise to refuse the order. You do not know if the trees have even the reputation of a reliable dealer back of them. They may have a nursery inspection certificate and still be worthless seedlings, for the certifi-

cate refers only to diseases, and no man but he who cut the scions and budded or grafted the trees, or saw it done, can know if they are true to name.

Trees may be true to name and yet be not worthy of planting. Many nuresrymen propagate from trees growing in the nursery rows. Be sure the nursery you purchase your trees from propagates only from fruiting trees, and selects only the best of these. There are nurseries that know that stock must be such stock to be worth the money they are asking you to give for them, and would no more think of selling you any other kind of a tree than they would of stealing your pocketbook. Try to discover such a nursery as convenient to you as possible and then deal with him the same as you would in dealing in any other line. Would you purchase a high-priced bull from a traveling salesman of whom you had never heard and who represented a breeder you knew nothing of until this agent called on you? Glowing printed matter is easily obtained, fine pictures of big apples tell no story, testimonials from unknown parties are not evidence, and any man who grows a row of seedling apples can get a nursery certificate of inspection.

Do not feel that you should buy cheap trees. I know of many orchards being planted to practically worthless stock because the trees were sold cheaper than other reliable nurserymen were selling the same stock these were supposed to be. What is a few cents' difference in the cost of a tree compared with ten years' culture and the use of the soil and the loss of the crops that would have been produced during the next ten years required to reproduce the orchard? The cost of the tree is such a trifle compared with all this that we can never be too sure of the quality.

L. H. COBB.

On a Colorado Farm

ONE of our subscribers in Morgan county, Colorado, sends us the accompanying photograph of himself and family and the irrigating ditch that spells prosperity in that section of the country. The grain field picture was taken on July 2 last and the grain threshed seventy-one bushels to the acre. He does not say what it was, but it appears to be an oat field.

Irrigation has done wonderful things for this and other parts of the United States. There is no public work now being pushed by the government of more practical value to the American people than the great reclamation projects.

Nebraska Farmers' Congress Program

The Nebraska Farmers' Congress is distinctly a farmers' organization. It means all that is implied in the words "Farmers' Congress." Every farmers' organization is entitled to send ten delegates. Every farmer should see that his organization is represented.

Should you belong to no organization, you are welcome. Come and take part in the congress and its discussions.

The interests of 8,000 rural school children will be considered in this meeting. Of course, you are interested in this. You cannot afford to miss this meeting. Come and stay until the end.

When you arrive in Omaha go to the Rome hotel, register at the secretary's desk and present your credentials.

W. S. DELANO,
Secretary.

Program

MONDAY, DECEMBER 7.

Registration of delegates at headquarters, Hotel Rome.

TUESDAY, DECEMBER 8.

9 a. m.—Solo, Miss Margery Shackelford; violin solo; address of welcome, Hon. James C. Dahlman, mayor of Omaha; response, Hon. George Coupland, president Nebraska Farmers' Congress; address, "Co-operative Creameries," Dr. B. H. Hibbard, professor rural economics, University of Wisconsin.

1:30 p. m.—Solo, Mrs. C. A. Christianson; introduction of resolutions; appointment of committees; address, "Tuberculosis and Uniform Live Stock Shipping Laws," Dr. L. C. Kigin, state veterinarian, and E. Z. Russell; discussion, open to all.

3 p. m.—Report of legislative committee; discusison, open to all.

7:30 p. m.—Carnal's Male Chorus; bass solo, E. S. Travis; motion pictures (Tuberculosis in Nebraska Cattle and Nebraska Water Power), explained by Dr. G. E. Condra; address, "Conservation of Nebraska Water Power," Hon. J. J. McAllister, president State Water Power commission.

WEDNESDAY, DECEMBER 9.

9 a. m.—Music; vocal solo, Miss May Campbell, Clarks, Neb.; introduction of resolutions; report of committee on improvement of rural schools; discussion, open to all.

1:20 p. m.—Solo, Miss Verna Fowler; violin solo; introduction of resolutions; address, "Farmers' Mutual Insurance," Hon. W. E. Straub, Lincoln, Neb.; discussion, open to all; report of committee on resolutions.

7:30 p. m.—Music, South Omaha High School Orchestra; motion pictures, "Nebraska Apples, Poultry, Better Babies," explained by Dr. George E. Condra; "Farmers' Organizations—Aims and Purposes," Hon. C. H. Gustafson, Mead, Neb., president State Farmers' Union; Hon. R. M. Tyson, Tobias, Neb., secretary Farmers' Equity society.

THURSDAY, DECEMBER 10.

9 a. m.—Solo, Mrs. Guy H. Phinney; violin solo; address, "Torrens' System of Land Registration," Hon. A. E. Sheldon, Lincoln, director Nebraska legislative reference bureau; discussion, open to all; reports of officers; reports of committees; discussion.

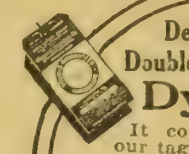
1:30 p. m.—Solo, Miss Ethel Buxton; violin solo; election of officers; address, "Co-operative Buying and Selling," Hon. O. E. Wood, Lincoln, Neb., state organizer Farmers' Union; discussion, open to all; reports of committees; discussion.

7:30 p. m.—Ladies quartet; Macks String quartet; motion pictures—films to be selected by audience from these reels: Horses, Beet Sugar, Irrigation, Wheat and Corn; address, "Relation of State Soil Survey to Agricultural Development," Dr. George E. Condra, University of Nebraska; address, "Rural Telephones," Hon. Frank E. Liston, Hooper, Neb.

Musical program arranged by James E. Carnal, teacher of voice culture and director of Omaha School of Music.

Hay and Straw Quarantine

The provisions of the federal quarantines declared on account of the foot-and-mouth disease have been somewhat modified in so far as they apply to shipments of hay and straw. The new regulations provide that hay and straw cut prior to August 1, 1914, and baled prior to October 1, 1914, may be shipped without disinfection from any of the quarantined areas, provided that it has been stored away from cattle, sheep or swine. Hitherto it was necessary that hay should not only have been cut before August 1, but that it should also have been baled before that date.



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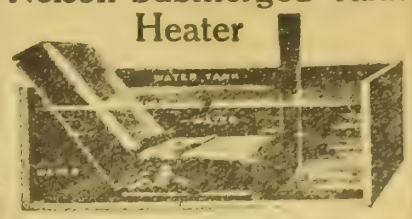

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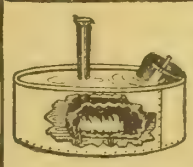

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Right from our fisheries.
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500 lbs. or more .....$3.25 per 100 lbs.
Salt Trout, first class, 50-lb. keg..$5.50
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Attractive variable route fares including the "Land of the Sky"
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Review of Live Stock Market

By A. C. Davenport

THE opening of the Chicago stock yards for the receipt of live stock for slaughter only, instead of simplifying matters, has rendered the situation still more complicated. It has really divided the markets of the country into two classes—packers' markets and shippers' markets.

How this could come about will be readily understood when it is remembered that it takes all classes of buyers as well as all kinds of stock to make a real market. In the case of cattle and sheep, buyers of feeders as well as of fat stock for shipment to outside killers have a most important influence on market values, absorbing, as they do, much of the surplus on days of heavy receipts and thus competing with the big local packers and preventing them from breaking the market as much as they might if they had everything their own way. In the case of hogs, about the only competition that the big packers have to meet is offered by the shippers, the latter term being applied in general to that class of buyers who buy on orders from the smaller packers and butchers that are to be found in all sections of the country. The shippers as a rule buy light to medium weight hogs of good quality, passing by inferior and rough hogs of all weights. Competition from this source forces the big packers to bid up strong on the good kinds or be satisfied with the less desirable kinds left by the shippers.

The country during the last week has had a good object lesson as to the effect of the shipping trade upon the market. The shippers have been unable to operate on the Chicago market and some others because of the quarantine preventing the shipment of stock out of those markets. This has left the trade at such points entirely in the hands of local packers. As a result, official reports from the Chicago market last week quoted prices on the best cattle $1.00@1.25 lower, and called upon the country to choke off receipts, as it was exceedingly hard to sell even at the decline. Missouri river markets, like Omaha, St. Joseph and Kansas City, that are open to shippers and feeder buyers, while feeling the influence of the break at the quarantined markets, have not suffered in anything like the same degree. In fact, at some of the points on the river, prices are right up to, or even higher than Chicago, which under normal conditions should be the highest, being closer to the big consuming centers.

The influence of shippers is especially noticeable in the hog trade. Chicago and other markets that are closed to the shippers have been around 30@50c per hundred lower than the open markets. One Missouri river market complained last week that hogs were selling 40@50c lower there than at some other river markets that were open to the shippers.

This does not necessarily mean that the packers are buying hogs for less than they are worth, but with equal propriety might be taken as an indication that the shippers being restricted to a few markets are paying more than the hogs are worth.

This brings up the old question always at issue between the bulls and bears as to present and future values. During the first two weeks of the month the bears were a little worried and the bulls were jubilant as prices went soaring upward. During the last week the tables have been turned and the bears have recovered their nerve and are again predicting lower prices. They base their belief on the fact that the market, with several of the big hog states shipping little or nothing, did not score any phenomenal advance. Hence they reason that when the quarantine is raised and hogs are coming forward without restraint the runs will be large enough to break down prices. The report that cholera is spreading in some localities owing to a shortage of serum is a bullish bit of news. However, the first effect of a cholera outbreak is to increase the receipts and that is just what the bears have been wanting to bring about the expected decline.

In the case of cattle all predictions are declared off. It takes a wise man to keep track of the market from day to day without trying to tell what it will be a few weeks or months hence. Industrial conditions at the big eastern consuming centers have not tended to increase the demand for high priced beef, and packers are all complaining that their coolers are full. So many widely differing influences are at work that there is no telling what turn the market may or may not take. One thing is certain and that is that current prices, considering the quality of the cattle coming to market, are really high. They may not be as high as the producer would like to see, but from the sluggish movement of the beef they are evidently as high or higher than the consumer feels that he can stand.

Sheep and lambs, while not selling as high as they were a short time ago, are still extravagantly high for this time of the year. Prices are in fact so high that from all points come complaints of reduced consumption of the product. The inclination of consumers to limit their buying is in reality at the bottom of the weakness developed in the trade last week. Shippers in the states free from quarantine have taken advantage of the high market to dispose of marketable sheep and lambs. However, a very large percentage of the fat stock usually available at this season of the year is tied up in the quarantined states and cannot be moved until the quarantine is raised. When that time comes a good many sheep men anticipate that there will be a lot of stock thrown on the market and it would be something unusual if prices did not show more or less depression.

Burn Refuse in Orchards

Dead and diseased wood in the orchard should be removed and burned as soon as possible. The Nebraska College of Agriculture finds that if the orchard is kept clean of such refuse the problems of insect and fungus control are much easier.

Alfalfa Acreage Booming

The alfalfa acreage in Missouri is booming this year as it never has before. The pioneer growers and the campaign of publicity, along with the lectures at the farmers' institutes and agricultural meetings, have stirred our people to the importance of having some alfalfa on every farm. If all the land that will raise alfalfa in the poorest alfalfa county were planted in alfalfa, that would be the county with the largest acreage in Missouri. "Uncle Al" and his friend, "Uncle Si," are the fellows that make the bank cashiers grin like 'possums, for they make the money, the real profits, these days!

Good Dairy Rations

The best rations for the dairy cow, according to the most recent investigations of the Nebraska College of Agriculture, are as follows for a 1,200-pound dairy cow of the proper sort and producing thirty pounds of milk daily:

Ration No. 1—Twelve pounds of alfalfa, thirty-five pounds of corn silage, four pounds of ground corn and three pounds of bran.

Ration No. 2 (Where silage is not available)—Fifteen pounds of alfalfa, six pounds of ground corn, eight pounds of corn stover and two pounds of gluten meal.

Ration No. 3 (where neither silage nor alfalfa is available)—Twelve pounds of millet, twelve pounds of sorghum hay, two pounds of ground corn and three pounds of oil meal.

Care of Storage Batteries

The storage battery should not be left in a temperature below zero. In cold weather it should be taken from the automobile and placed in a basement so that water will be kept from evaporating from the cell.

Before removing the battery it should be fully charged.

The storage battery should be kept filled with pure rainwater or distilled water. Water from the average city main contains iron, which has a tendency to short circuit the cell.

Once a month during the winter the battery should be placed in the car and be charged from the generator or recharged in some garage.

If the voltage drops below 1.7 volts the plates will warp or buckle, due to the formation of lead siphide, which will ruin the cell.

Corn Substitutes

Hogs will consume with profit kafir or sorghum seed where the supply of corn is limited. At the North Platte, Neb., experimental farm cane seed was found to be one-half as valuable as corn, bushel for bushel. With ground cane seed figured at 50 cents per bushel and alfalfa hay at $8 per ton, pork was produced at a cost of $5.78 per 100 pounds. Where the cane seed and corn were fed in equal parts the cost of pork was reduced to $4.30 per 100. In the latter case corn was figured at 47 cents per bushel, which was the current market price at the time the experiment was conducted. In this experiment, with hogs selling at $5.90 per 100 pounds, cane seed brought 55 cents per bushel and corn 82 cents per bushel. With hogs at the present high values, both corn and cane would show a higher feeding value. Milo maize, where fed experimentally at North Platte with three-fourths corn, proved equally as valuable as barley and nearly as valuable as corn.

Fall Care of Vegetables

Do not expect to keep vegetables successfully in an unpartitioned cellar containing a furnace.

If no cave or portion of the cellar is available, dig a trench as long as desired and about a foot deep. Providing proper drainage is maintained, cabbage, potatoes, celery, carrots, beets—in fact, all of the root crops—may be stored in it. For storing apples, the hole should be deeper. Usually the apples are protected by being surrounded by straw before soil is placed on them. The outer leaves of the cabbage should be removed and the tops should head downward. Beets, carrots and salsify may be buried mature to be bleached and later stored where it will not freeze. Parsnips may be left unpulled, but if buried in a trench may be more easily handled. Many persons believe that the flavor of the parship is improved by being allowed to freeze before burying.—Department of Horticulture, Nebraska College of Agriculture.

Propellers of Aeroplanes

The propellers of aeroplanes such as are used in the present European war may be made of selected ash, which is both strong and light, and will not split under vibration or shock, or of built-up layers of spruce with mahogany centers. The framework of the machines, too, is generally made of wood, spruce being much used on account of its straight grain and freedom from hidden defects.

Substances for Preserving Wood

A surprisingly large number of substances, ranging all the way from the condensed fumes of smelters to the skimmed milk of creameries, have been tried or suggested as mans of prserving wood from decay. Most of them, however, have been found to have little or no value for the purpose. Certain forms of coal tar creosote and zinc chloride are the most widely used wood preservatives.

RED POLLED CATTLE

RED POLLED CATTLE

Both sexes; good as any in America. Call or write me your wants. W. F. Schwab, Clay Center, Neb.

JERSEY CATTLE

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and yearly milk and butter records. HAL C. YOUNG, Lincoln, Neb.

GREAT SHORTHORN SALE

AT

12 BULLS HUMBOLDT, NEB., DEC. 8, '14 28 COWS and HEIFERS

There will be 8 bulls by **IMP. SCOTTISH SENTINAL** and 4 by a son of **GOOD CHOICE.** They are a strong, useful lot and several are of herd heading character. The females consist of 8 open heifers by **IMP. SCOTTISH SENTINAL,** and 20 cows from three to five years old all safe in calf either to **IMP. SCOTTISH SENTINAL or SCOTCHMAN,** a splendid son of this bull. Practically every animal in this sale is either a son, grandson, daughter or granddaughter of both imported sires and dams. One of the attractions is the great breeding cow, **IMP. SOBRIETY 2d,** safe in calf to **IMP. SCOTTISH SENTINAL.** No better bred lot of Scotch cattle will be sold this season, and along with this breeding they have the scale, and every animal is a "doer." They are in just good breeding condition. For catalog address

Auctioneer, H S. Duncan. **H. H. KUPPER, Humboldt, Neb.** Fieldman, C. E. Hall.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Kuper's Shorthorn Sale

With this issue of The Twentieth Century Farmer, we are starting the advertisement of H. H. Kuper of Humboldt, Neb., who will hold his annual sale of Shorthorn cattle at that place on December 8. This offering will be on a par with any offering Mr. Kuper has made in the past. When we make this statement, we feel that we have said enough to the men who are acquainted with Mr. Kuper and his herd in years past. But to those who are not, we want to say that this will be a first class offering of genuinely good, useful, richly bred cattle. These cattle are not in show-yard condition, but are in just moderate flesh, and have not been pampered. They are the kind that if given proper care and treatment will go out and make good in any man's herd. The salient feature in this offering is the fact that the larger part of them (in fact, nearly all of them) represent the natural increase of Mr. Kuper's herd. For years he has been breeding for scale along with quality, not losing sight of pedigree. In fact, he has one of the choicest bred herds in the country. Several years ago Mr. Kuper went out and carefully selected several imported matrons to use in his herd, and the larger part of this offering represents either the first or second generation from these cows, mated with the best imported bulls. The offering itself will consist of twelve bulls, eight open heifers, twenty head of cows, from 3 to 5 years old. Eight of the bulls are sired by Imp. Scottish Sentinel, and four by a son of Good Choice. One of the bulls by Imp. Scottish Sentinel is out of a Victoria cow, and one is out of a daughter of Good Choice. The balance are out of daughters of Imp. Strowan Star and out of daughters of imported cows. The eight open heifers are by Imp. Scottish Sentinel. The cows are all safe in calf to Scotchman, a splendid son of Imp. Scottish Sentinel, with the exception of a few, and all these are bred to last named bull. One of the attractions of the sale will be the great breeding cow, Imp. Sobriety 2d. This cow is a regular breeder and has never produced anything but a heifer calf. She is safe in calf at this time to Imp. Scottish Sentinel. In regard to the bull, Scotchman, mentioned above, to which a number of the cows are bred, will say that he is by Imp. Scottish Sentinel, out of Imp. Winifred 4th. She came from the herd of William Duffy, and was shown by him in Scotland. This certainly shows a richness of breeding in the bull, Scotchman, that is hard to duplicate. If you are looking for some really useful cattle, would advise you to write Mr. Kuper for catalogue and arrange to attend this sale. Kindly mention The Twentieth Century Farmer when writing.

Taylor Sells March 2

Edgar Taylor, the well known breeder of Duroc Jersey hogs at Plainview, Neb., has changed his sale date from March 12 to March 2. Mr. Taylor has one of the good herds in northern Nebraska and will have an offering to put up that will be worth while. He will have forty-five head of yearling sows and gilts, carrying as good blood lines as it is possible to secure. Keep this date in mind and watch these columns for further announcements.

Durocs or Red Polls

If you want a Duroc Jersey boar or a Red Poll bull or a few females, you had better get in touch with George W. Schwab, proprietor of Pleasant View Farm at Clay Center, Neb. Mr. Schwab always has a choice lot of breeding stock on hand, and will be pleased to give you any information you may desire. At present he is offering fifty immune boars at from $25 to $35 for immediate shipment; also 100 immuned sows bred to Buddy K 4th Wide Awake, Cremo and others at from $30 to $50. Besides these he has a few extra choice boars and sows that he is pricing somewhat higher. This is an unusually good opportunity to secure the right kind of stock at remarkably low prices. Besides Durocs and Red Polls, he also makes a specialty of Percheron horses and has a splendid lot of big, growthy young stallions coming on. In fact, everything on this farm is a pure-bred, no matter whether it be horses, cattle or hogs. Get in touch with Mr. Schwab and make known your wants, mentioning the Twentieth Century Farmer.

Duroc Jersey Boars

Ed M. Kern of Stanton, Neb., still has a number of first-class Duroc Jersey spring boars for sale. These pigs are in good breeding condition and are absolutely immune, having been given the double treatment. They are sired by Sensation Wonder 2d, Golden Model 4th, Golden Model 31st, Prince Muncie Colonel and others. He is pricing them worth the money and will treat you right. Better get in touch with him at once, mentioning The Twentieth Century Farmer.

Immune Duroc Boars

R. P. McGuire of Wisner, Neb., will sell you an immune Duroc Jersey boar worth the money. They are big, smooth and certainly carry the right blood lines. The larger part of them are sired by B. & K's Colonel Gano, a full brother to King Gano, the sensational Iowa boar that recently sold for $800. Also several by Golden Model's Hope by Golden Model 2d. Besides these spring males, he has several big, strong, smooth fall boars sired by Golden Modler, a son of Golden Model 15th. Get in touch with him, mentioning The Twentieth Century Farmer.

Immune Poland Boars

We wish to call attention of our readers in this issue to the advertisement of S. McKelvie of Fairfield, Neb., who is offering immune Poland China boars for sale. Mr. McKelvie is too well known among breeders of Poland Chinas in the west to need any particular mention at our hands. The fact that has these boars for sale and that they are absolutely immune, should be sufficient for anyone wanting anything in this line. These boars are being priced right down at bed rock, in order to move them quickly. If you want to get in on something good, here is your opportunity. Kindly mention The Twentieth Century Farmer when writing.

Sale Dates

Poland-China Hogs

February 6—O. J. McCullough, Clarks, Neb., sale at Central City, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb

Duroc-Jersey Hogs

January 27—Willard Robbins, Lyons, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 22—John C. Tighe, Stanton, Neb.
January 23—William Morgan, Wayne,
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb
February 26—C. A. Freiday, Rising City, Neb.
March 1—Harry Tidrick, Windside, Neb.
March 2—Edgar Taylor, Plainview, Neb.

Shorthorns

December 5—C. A. Saunders, Manilla, Ia., sale at South Omaha.
December 8—H. H. Kuper, Humboldt,
January 12—A. C. Shallenberger, Alma, Neb., sale at South Omaha.

A PILE OF INQUIRIES

THIS AD

McCULLOUGH'S BIG POLANDS

We have a splendid lot of Poland-China spring boars for sale. Sired by Smooth Big Bone, Columbus Again and Expansion Again. These boars have been grown right. They are big and smooth with lots of bone. For particulars write **O. J. McCULLOUGH, CLARKS, NEB.**

BROUGHT THESE RESULTS:

CLARKS, Neb., Nov. 1, 1914.

Twentieth Century Farmer,
Omaha, Neb.

Gentlemen:

I am writing you to let you know that the ad in the Twentieth Century Farmer did the work for me. It certainly brought me a pile of inquiries and sold all of my boars for me.

Yours truly,
(Signed) O. J. McCULLOUGH.

For live stock rates and information, write

G. E. HALL, TWENTIETH CENTURY FARMER

DUROC-JERSEY HOGS

BOARS! BOARS! BOARS!

Several fall boars and a few choice spring boars for sale, sired by BELLE'S CRIMSON WONDER, COL. CHIEF, GOLDEN MODEL 4th and BELLE'S BIG WONDER, out of Crimson Wonder bred dams. I am offering these boars at bedrock prices for quick sale. **A. B. BARNES, Petersburg, Neb.**

IMMUNE DUROC JERSEY BOARS

40 spring and fall boars, all immune. 30 of the spring boars are sired by B. & K.'s Col. Gano, full brother to King Gano, that was recently sold for $800; five by Model's Hope by Golden Model 2d. Fall boars by Golden Modeler by Golden Model 15th. Choice pigs at reasonable prices. Farm adjoins town. Call or write **B. P. McGUIRE, Wisner, Neb.**

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.

F. E. MERRICK, OSCEOLA, NEB.

DUROC HERD BOARS

Two fall boars of herd heading character; price $50 for quick sale. Also several top spring boars sired by Model King and Gano Wonder. I will guarantee to please you.

E. M. YOUNG, Cook, Neb.

IMMUNED BOARS AND SOWS

Fifty immuned Duroc-Jersey Boars, ready for service. $25 to $35 and up. 100 immuned sows bred to Buddy K 4th Wide Awake, Cremo and others. $30 to $50 and up. Ready for immediate shipment.
GEO. W. SCHWAB, Clay Center, Neb.

35 TOP BOARS

35 extra choice spring boars for sale, sired by Sensation Wonder 2nd, Golden Model 4th, Golden Model 31st, Prince Munice, Col. and others. They have all been given the double treatment. Prices reasonable. ED. M. KERN, Stanton, Neb.

KANE'S DUROCS

A splendid lot of growthy spring boars, priced to sell. Sired mostly by Wonder's Chief and out of sows with top blood lines. I will guarantee to please you. D. W. KANE, Wisner, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

DUROC BOARS

I have a number of choice spring boars for sale, sired by Sweet Rose's Wonder, Chief's Model, Col. Chief and others. Prices reasonable.
HENRY STUTHMAN, Pilger, Nebraska.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

POLAND-CHINA HOGS

Immune Poland-China Boars

Splendid lot of big, smooth spring boars, sired by BLUE VALLEY, COLUMBUS WONDER and BLUE VALLEY ORANGE. If you want herd headers with size and quality, we have them. **THOS. F. WALKER & SON, Alexandria, Neb.**

12 of the Useful Sort Poland-China Boars, Early Farrow

Absolutely immune, passed through the cholera in the early summer, this is worth half the price I am asking for the pigs, a low price is made to close them out. **S. McKELVIE, Fairfield, Nebr.**

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

British Holstein butter gained highest honors at the last dairy show of the Royal Dublin Society in Ireland. In addition to taking the prizes in special classes, this butter won on its producers a gold medal awarded for the best butter in the show. It is sometimes ignorantly asserted that the Holstein is a poor butter cow, in the face of the fact that the world's record for butter production for all periods of official testing (except the 365 days) are held by pure-bred registered Holstein cows, and the year's record was exceeded by only one cow of another kind.

Send for **FREE** Illustrated Descriptive Booklets
The Holstein-Friesian Association of America, Box 179, Battleboro, Vt.

Poland-China Boars

Blue Ribbon boars with great length and bone; some weigh 325 lbs. Sired by Blue Ribbon Hastings Big Iowa Big King Nebraska Model and Mogul. All immuned. W. J. Eavey, Geneva, Neb.

HAMPSHIRE HOGS

HAMPSHIRE BOARS

Hampshire spring boars for sale; sired by De Kalb's King 100, a son of the famous Major. They are very growthy, and all priced to sell. Also have Aryshire bull calf for sale.
WILLIAM PAMP, Benson, Neb.

BECKENDORF'S HAMPSHIRES

Spring boars for sale. Also my herd boar, De Kalb King No. 53. For prices write
IRA BECKENDORF, Walnut, Ia.

When writing to advertisers please mention Twentieth Century Farmer.

PERCHERON HORSES

BRILLIANT blood, jet blacks, rich greys. Registered Percheron studs—1, 2, 3 and 4 years old. I grow great big fellows with extraordinary bone and heavy quarters—I love a good horse. Come visit at my plain, old-fashioned Percheron farm that has the goods, and lots of them. Don't let anyone tell you that they have Percherons just like Fred Chandler's. Just east of Omaha.
FRED CHANDLER, Route 7, CHARITON, IOWA.

POLLED DURHAM CATTLE

POLLED DURHAM BULLS

Three unusually good, double standard Polled Durham bulls for sale. Color rich red. Age 13 to 14 months. Sired by Violet Prince 320697, x 7311. Priced to sell.
W. G. UNITT, SEWARD, NEB.

AYRSHIRES

WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. **LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb.**

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.
A few good sons of King Segis Lyons are still left
DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

Makes $1281.00 For You The First Year—And $750.00 Every Year After!

On Every 40 Acres

Don't Let Stumps Stand in the Way of Big PROFITS! PULL THEM OUT!

Send me your name. I want to mail you my free book. It tells many facts that will interest you if you have stumps on your land. You will be glad you wrote me.

My book shows how much money stump land robs you of. It tells what the government says about this *loafer* land. It shows how stump land can quickly be turned into *money* land—*money crops*. It *proves* that on 40 acres, you can make $1,281 the first year—and $750 *every* year after the stumps are pulled.

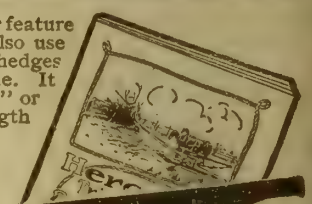
5 Minutes to a Stump—an Acre or More a Day

The book also tells all about the Hercules Stump Puller. It proves to you that the Hercules pulls any size stump in five minutes or less. Makes no difference how big, 4, 5 or 6 feet across the top—with roots 15 to 20 feet down—the Hercules pulls them out *with the roots and all*—really *clearing* the land once and *for all*. It proves that you can pull an acre or more of stumps a day and shows how others have pulled stumps with the Hercules, at a cost of about 4 cents per stump! The

HERCULES

All-Steel Triple Power STUMP PULLER

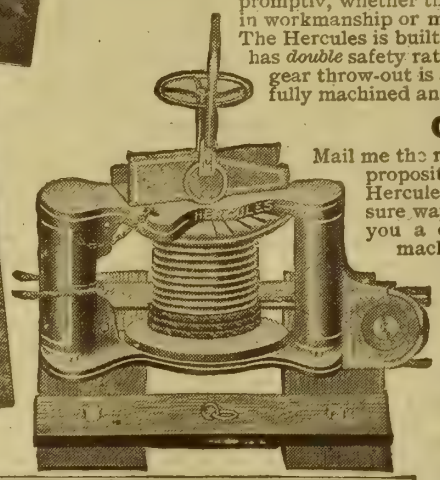
has conquered every stump it has ever been hitched to. Its triple power feature gives it more pull than a locomotive and my book proves it. You can also use the Hercules as a single or double power puller, for work on green trees, hedges and small stumps. The Hercules is the *only all-steel* stump puller made. It has four times the strength of any "semi-steel" or "new process steel" or cast iron puller made—and is 60 per cent lighter. We know the strength of the Hercules, that is why it is



Guaranteed for 3 Years

If any casting of your Hercules All-Steel Triple Power Stump Puller breaks, any time within three years, whether the fault is yours or the machine's, I will absolutely replace any such part free of all cost to you. There are no conditions to this guarantee whatever. Any casting will be replaced promptly, whether the machine breaks by accident or through any flaw in workmanship or material.

The Hercules is built low to the ground, is self-anchored or stump-anchored, has *double* safety ratchets, which insure the safety of operator and team—the gear throw-out is simple and sure—and *every* part of the Hercules is carefully machined and polished to reduce friction and lighten draft.



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Dear Sir:
Please send me free book about the Hercules Triple Power All-Steel Stump Puller. Also your low price to first purchasers.

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HERCULES PORTABLE ONE-MAN PULLER FOR USE WITHOUT TEAM

This is the portable one man puller on the market. By pulling 100 pounds on the sweep one man can develop a pull of 50,000 pounds on the stump. When stumps are out a 14-year old boy can move puller. No heavy lugging or dragging.

The Hercules Portable excels all other hand machines, because it is so light, strong and easy to handle. It develops more power with 6 ft. lever than any other machine with 10 ft. lever. The ideal machine for the man who has no horses. Write for particulars.

5 DEC 1914

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, December 5, 1914 | Number 730

NISCO

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Gives reasons why "Nisco" and "New Idea" are the "Best Spreaders on Wheels." Shows why our machines are practically trouble-proof. Settle the spreader question for all times by writing us Today.

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WHEN COMMUNICATING WITH Advertisers on this page, kindly mention Twentieth Century Farmer, thereby favoring both advertiser and publisher.

Bright and Breezy

Conflicting Evidence

"So your husband kept house and cooked his own meals while you were away. Did he enjoy it?"

"He says he did; but I notice that the parrot has learned to swear during my absence."

Didn't Recognize Him

Mother—Johnny, stop using such dreadful language!

Johnny—Well, mother, William Shakespeare uses it.

Mother—Then don't play with him; he's no fit companion for you.

Appropriate

"What sort of a tablet shall be erected over your grave when you are gone?" they asked of the man who had long suffered.

"Well," said the cheerful victim of stomach trouble, "I think a dyspepsia tablet would be as appropriate as any."

Simple English

"Yes," said the earnest professor, "what we want in literature is direct and simple English."

The listeners gravely nodded.

"Direct and simple," they echoed.

"Those conglomerated effusions of rapid intellects," the professor went on, "which posed in lamentable attitudes as the emotional and intellectual ingredients of fictional realism fall far short of the obvious requirements of contemporary demands and violate the traditional models of the transcendent minds of the Elizabethian era of glorious memory. Plain and simple English is the demand of the hour."

Whereupon everybody applauded and went home.

Unsanitary Legislation

Parents of Wayne, a suburb of Philadelphia, are required to report promptly any case of contagious disease, in compliance with the regulations of the local board of health. In accordance with this order, Health Officer Leary received this postcard recently:

"Dear Sir: This is to notify you that my boy Ephriam is down bad with the measles as required by the new law."—Harper's Weekly.

That Explains It

One day the 5-year-old daughter of the house was looking through a picture book, when she suddenly glanced up to her mother.

"Mamma," said she, with a very serious expression, "don't men ever go to heaven?"

"Why, of course, my dear," answered the mother in a surprised voice. "What makes you ask?"

"Because," responded the little girl, turning to the book again, "I have never seen any pictures of angels with whiskers."

"That's easily accounted for, darling," was the smiling rejoinder of mother. "While men do go to heaven, they only get there by a very close shave."

Prattle of the Youngsters

Safe

"Do you boys expect to catch anything in that filthy pond?"

"No, sir. We've been vaccinated."—Life.

Case of Quantity

Teacher—Give distinction between a banquet and a feast.

Kenneth—A banquet is where you get a taste of things and a feast is where you fill up.

Another Occasion

Three-year-old Willie, while eating his dinner, was asked if he would have some pudding.

"I don't care for any now," said he; "wait until my next appetite."

We Generally Do

A teacher asked her class in spelling to state the difference between the words "results" and "consequences." A bright girl replied:

"Results are what you expect, and consequences are what you get."

He Knew the Trio

"Who is that lady dressed in black, mother?" asked Bobby, as he sat with his mother on a ferry boat.

"That is a Sister of Charity, my boy," replied his mother.

Bobby pondered deeply for a moment, and then he said:

"Which is she, mother, Faith or Hope?"

A Practical Joke

A small boy seated on the curb by a telephone pole, with a tin can by his side, attracted the attention of an old gentleman who happened to be passing.

"Going fishing?" the old gentleman inquired good-naturedly.

"Nope," the youngster replied. "Take a peek in there."

Investigation showed the can to be partly filled with caterpillars of the tussock moth.

"What in the world are you doing with them?"

"They crawl up trees and eat off the leaves."

"So I understand."

"Well, I'm fooling a lot of them."

"How?"

"Sending 'em up this telephone pole."—Judge.

Fair Exchange

Who can tell the working of children's minds, or how, all unwittingly, we may make ourselves appear unjust in our dealings toward them?

This was brought home to Mr. Hewit the other day as he took his young hopeful, aged 6, for a constitutional. The youngest was evidently thinking hard, for he was silent—which was unusual.

"Daddy," he said, looking up suddenly, "I think I want to get married!"

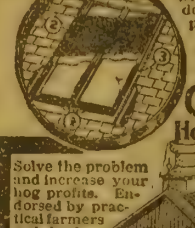
"Do you, my son? And who to, may I ask?" answered the proud parent, looking at him.

"I want to marry granny."

"Do you, indeed? And do you think I would let you marry my mother—eh?"

"Well, why shouldn't I?" retorted the tender logician. "You married mine, didn't you?"

Direct Sunlight Means More Hog Profits for You.



You can't raise winter pigs without sunshine. Side windows can't give it. Young pigs must not be exposed to cold. You need sunshine direct on floor of the pens.

CHIEF Sunshine Hog House Windows

Solve the problem and increase your hog profits. Endorsed by practical farmers and leading farm papers. Only window of its kind. Cost little, worth much. Keeps pigs healthy, pens sanitary and reduces your feed bill.

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Two men can run it. Saves ½ the labor. Takes a feed with division board.

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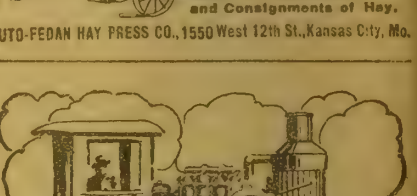

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An unprejudiced description of many leading makes of tractors is given in a booklet just published showing 80 photographs taken at the big tractor show at Fremont, Neb., August 17-22.

Prof. E. C. Gee of the Texas Mechanical College says: **"I consider this booklet a valuable addition to our technical library and I believe it is worth any farmer's time to study the book through. If the farmer has any use for a traction engine at all, he can get a short, unprejudiced description of the principle engines that are now on the market, from this booklet."**

Only a few thousand of these booklets were printed for distribution among the tractor men who were at Fremont. Our supply is not large, but we are willing to dispose of them at exactly printing cost—

15c Per Copy

36 Pages 80 Photographs

TWENTIETH CENTURY FARMER
OMAHA

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

What is the Matter with Our Rural Schools?

V—There Are Two Many Incompetent Young Teachers Whose Ambitions Are Directed Toward City Schools

By Ben F. Robinson

AFTER all, the essential factor in the success of a school is the teacher. The building, with its equipment, the text books and other supplies are only means to an end, and in themselves are helpless. It is only when they are played in the hands of a competent man or woman that they become effective. In fact, a district had better be poorly equipped physically, but with a good teacher in charge, than to have all conceivable devices with which to work entrusted to one incompetent of using them advantageously.

It is true that even the poorest teacher will do better work with necessary materials at her command than she can possibly do if these things are lacking, but it is equally true that a good teacher will do better work under identical circumstances; in fact, some seem to succeed under the most adverse conditions, while others would do good work in Paradise. This implies, then, that it is largely a matter of personality. Socrates, you know, taught the fundamental truths to youth with whom he came into contact upon the streets, and the greatest of all Teachers carried no text books. We are not advocating a reversion to these methods, for they would not do today. We plead for a splendid modern building thoroughly supplied with working materials; but, above all, do we plead for teachers of age, character and native ability as being by far the most important factor in any educational system, whether rural or urban?

It is difficult to write in specific terms because of the difference in people and communities. It is hardly advisable to employ statistics extensively, for figures are often dry and uninteresting, despite the fact that they sometimes reveal startling truths. For these reasons, then, we avoid the specific as much as possible and refrain from the use of statistics except when they are absolutely essential to our purpose. If the readers care for these things they are easily obtainable; indeed, each school district is a specific case and requires to a certain extent individual treatment; and each teacher is a specific individual who should possess and develop a specific personality.

What Constitutes Good Teachers

But there are still some general characteristics that all good teachers should possess, and since rural teachers need to be of the kind referred to, let us enumerate and discuss together some of these characteristics, doing it all in the name of the farmer's child whose interest we seek.

First, I want the rural teacher to have native ability. I don't want her teaching in our district just because she has to and can't do anything else. If she can teach better than she can do anything else, it is still no proof that she can teach, for some people are not much good at anything. However, some do have distinct talent for teaching, and if given an opportunity this talent will soon display itself. Some conscientious girls try hard, but fail, because they do not know how, and no amount of normal training and pedagogical reading can give them what nature failed to provide. Misfits are everywhere; they are bad enough in business, trades and professions, but they are the poorest sort of speculation in educating our children.

Study your teacher: watch her carefully: talk over her with your county superintendent, and when convinced that she has missed her calling don't retain her just because she is poor. The public school is not a charitable institution.

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It aims at the greatest good to the greatest number. There are too many young folk just out of high school or college who go out into the country to teach a year or two until they can get something else to do. They may have no special adaptation for the work at all; or, having it, do not develop it, since they are expecting to quit at the first opportunity. This is unfair. Think it over.

Preparation Needed

Second, I want the rural teacher to be prepared from an educational standpoint. Time was when the person who taught school was thought to be quite proficient in the matters of information. To say that one had taught school was to imply that he was "smarter" than the ordinary individual. This may have been true, but it is still no proof that he actually knew a great deal, for the educational standard of teachers has risen and they are still deficient enough both in knowledge of the subjects they are required to teach and of the people and things about them.

Yes, we have established normal training high schools all over the state; we have in Nebraska four big normal colleges and one great university, all of which you farmers are helping to support, so it seems there is no lack of opportunity. It seems that our teachers ought to be qualified, yet it remains that many are not. Either the course of study or the social environment while at college seems to unfit them for rural teachers and to make them dissatisfied with the country. At any rate, consultation with boards of education convinces one that there are dozens of these graduates after almost every position in village or city schools. Their trend seems to be that way.

Should Have Practical Knowledge

The rural teacher needs a knowledge of farm life, of practical agriculture, that has come from contact with such li —not a lot of theoretical stuff gathered from some abstract text book discussion, although a scientific knowledge of the sorts of plants and animals is a commendable thing. She must not be too dainty. If she can render classical music, quote Latin phrases and plant the flower design upon Haviland china, I have no objection. These things are accomplishments. But she will win her way more readily into the heart of the farmer's wife if she can bake the bread, prepare a wholesome meal and wash up the china afterward.

There is little danger of a teacher's knowing too much about the subjects she teaches. I should not, however, refuse to employ her because she did not have a list of all the higher branches upon her certificate. The point is that she must have a good general knowledge of the branches she teaches. When other things are equal, better have a teacher with a good second grade certificate than a poor first grade, for the second grade probably covers all the branches taught in your district under present conditions.

Then I want her to be a mature person, to be developed, not a frivolous, giggling gum-

(CONTINUED ON PAGE TWENTY-ONE.)

Building the Right Kind of Hog House

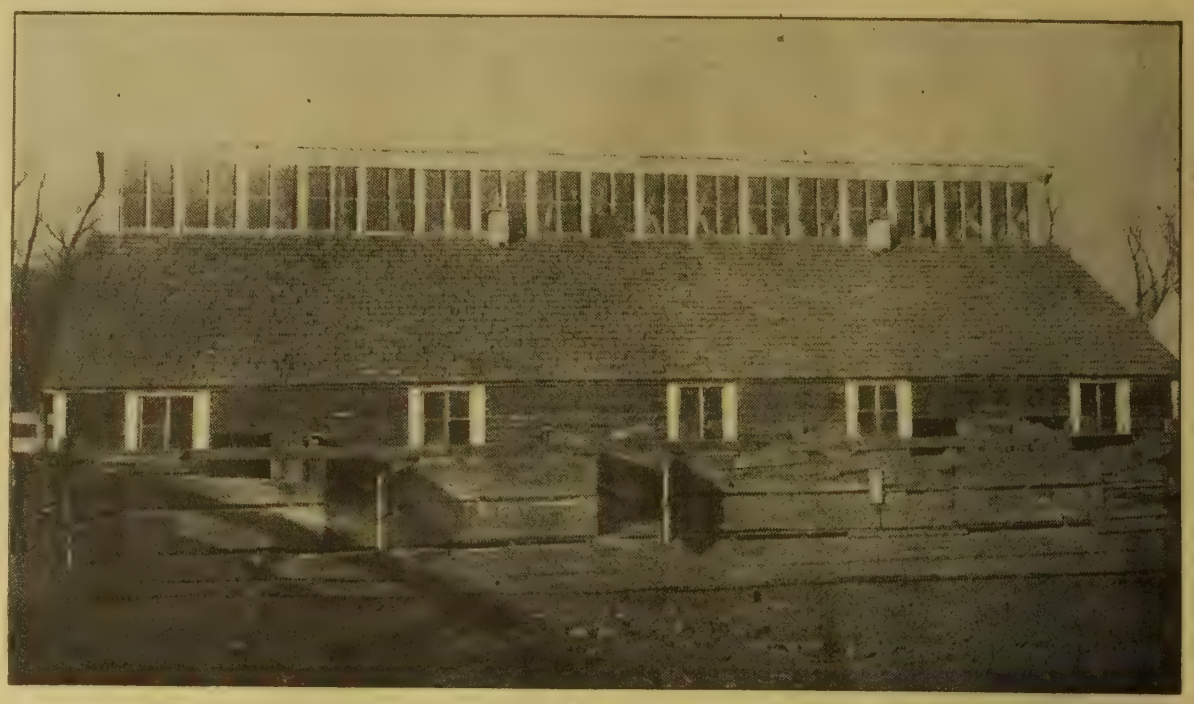
Sunlight, Drainage, Ventilation and Feeding Facilities May Be Secured Without Great Expense

DURING the winter the right kind of a house for your sows has considerable to do with their getting into shape for farrowing a good, strong litter. Proper ventilation and sunlight are important factors. If you don't have proper ventilation your sows are liable to colds and possibly pneumonia on account of the steam rising from the hogs in the house.

At farrowing time the right kind of house is of much importance. A building can easily be arranged to be used for both wintering the sows and a farrowing house. We are showing in connection with this article three pictures of houses, all of which are in actual use for both wintering and farrowing.

In the house represented in illustration No. 1 there are ten pens, each 7x8 feet, with a six-foot alleyway. The building itself is 22x36, with a six-foot platform on the west, south and east sides. Note that the building is low, having a minimum amount of air space, making it easy to heat. We see far too many hog houses too high, and consequently too hard to heat.

The distance from the floor to the high point of the roof in this house is thirteen feet. In the latitude of Omaha this allows the sun's rays through the upper row of windows to strike in the middle of the back row of pens the middle of March, when the house is built facing the south, as it should be. The windows on the south side are placed low, being protected on the inside with a few iron rods; this arrangement furnishes good sunlight for the little pigs in the south row of pens.



No. 1—A Farrowing House With Plenty of Sunlight and Good Ventilation

We have had no experience with windows placed in the roof of a farrowing house, but have no hesitancy whatever in saying we believe them a good thing. One thing we know, and that is if we were building a hog house today we would look up this proposition of windows in the roof. You cannot get too much sunlight in your farrowing pens. It not only strengthens the young pig and makes him grow, but it is a fine disinfectant. Disease germs cannot live when in contact with the rays of the sun.

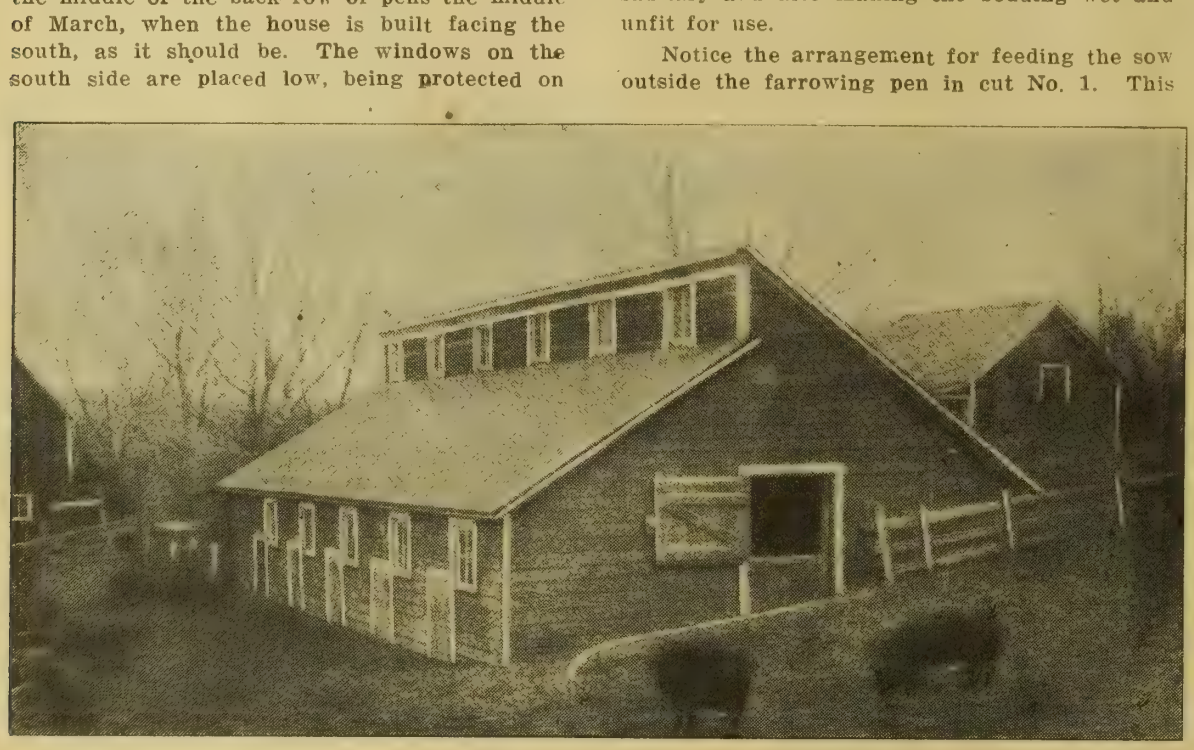
Feeding Arrangements Important

We believe that fully nine out of ten farrowing houses are so built and arranged that the sow is fed in the same pen in which she and the pigs sleep. This is a bad practice. First, if the sow is compelled to eat her feed in the pen with the pigs she is very liable to step on one or more of them when up eating, either crippling or killing some of the pigs. Most sows are fed more or less slop while suckling the litter, and when fed in the farrowing pen this slop is apt to be spilled on the floor, making it unsanitary and also making the bedding wet and unfit for use.

Notice the arrangement for feeding the sow outside the farrowing pen in cut No. 1. This pen is six feet wide and has a door opening from the pen into the farrowing house and also into the yard. The herdsman using this kind of arrangement can open the door between the feeding pen and the farrowing pen, letting the sow outside, then close and fasten this door so none of the pigs can get out and in the way to get crippled or killed. No slop or other filth can get into the nest.

Let us right here remark that this outside pen arrangement gives the herdsman an excellent opportunity to observe conditions before feeding. A good feeder will always look at the pigs before giving the sow her feed. When the sow is in her outside pen the herdsman can go back into the house and scare the pigs around and make careful observation for scours, and then feed the sow accordingly. Many a good pig has been ruined by giving the sow a full feed at the wrong time.

Note the two little ventilator boxes through the roof in front of the windows on the front or south side. There are two similar ones on the north side which do not show in the cut. These ventilators are 8x8, running to about two feet from the floor. When arranged in this way the foul air is picked up from the floor and taken out. If you will make this arrangement (and it is very simple) you won't have frost hanging from the ceiling on cold mornings in the winter,



No. 2—A Farrowing House With Poor Drainage, No Ventilators and Not Enough Sunlight

No. 3—A Farrowing House With Insufficient Sunlight, No Ventilation and No Outside Feeding Floor.

melting during the day and the water dripping on your hogs, wetting the floors and spoiling the bedding.

Note that no ventilators are to be seen in either of the other houses shown. We have seen hog houses erected at a cost of many hundreds of dollars that are almost useless in the winter time because of either no ventilation at all or of improper ventilation.

Large Expenditure Not Necessary

We believe too much money is invested by many of our hog growers for farrowing houses. We have seen many of them that were erected at a considerable cost and used for practically no other purpose. The farrowing season is but a small part of the year. A farrowing house should be constructed so it can be used all the time. Most farrowing houses have stationary partitions. We much prefer movable ones. Make your partitions movable, so you can, if you want, make the whole floor into one room, or pen.

Every farmer should have a feeding floor on which to feed the grain to his hogs. It saves feed and is sanitary. Why not, in making your farrowing house, have movable partitions for the pens, and when not in use for farrowing take out the partitions and use the floor as a feeding floor?

We have had no experience with cement as a floor for hog houses. We have, however, talked to men who have used cement and who are strong in its praise. Some say they think it best to cover the floor space with boards at farrowing time, which can be cheaply and easily done. The boards can be easily removed and laid up for use next time, the partitions removed and the cement floor made a splendid place on which to feed.

Floors and Partitions

One very important matter to be given consideration in making a hog house floor is that there must be no circulation of air under it. If the wind can blow under the floor you can hardly pile enough bedding into the pen to keep the pigs warm. Another thing to avoid is rats. A cement floor will get away from both these difficulties.

In making the partitions for the pens a guard rail, for protection to the little pigs, should be placed on each partition. This guard rail is best made by using a 2x8 eight inches long nailed to the partition so the rail (a 2x4) is nailed on top and at the outer edge. This will make the guard eight inches from the partition and leave a four-inch space between the rail and the partition for a pig to crawl out should he get caught behind the old sow when she lies down.

No. 4—Sunlight and Plenty of Bedding Make Hogs Contented and Profitable.

Drainage Means Sanitation

In arranging to build a hog house sanitation is one of the most important things to consider. In order to have good sanitation we must have good drainage. Notice the lack of drainage around the house shown in cut No. 2. The dirt has evidently been dug away to make a place to set the house. What will happen should a big rain come? It is possible, if a sufficiently high wall is not made on the upper side, for water to run into this house. This always makes bad work.

Note the arrangement of the windows in the upper row. These windows are so small and there are so few of them that the north row of pens get practically no sunlight. There seem to be no ventilators at all in this house. If filled with hogs in cold weather and the doors closed, frost would hang in bunches on the ceiling. There are doors along the front leading from the farrowing pens, but are so close to the ground that no room could be had for a platform to be placed for feeding purposes. The floor of any hog house should be raised somewhat above the ground surrounding it.

House shown in cut No. 3 does not have sufficient sunlight in the back row of pens; it has no ventilators, no outside feeding floor on which to feed the sows when the pigs are little. We think the outside walls too high, making too much air space inside, which in cold weather must be heated. This house wothout doubt cost considerable more money than No. 1, but for actual service we don't think compares with it.

The ground around house No. 3 undoubtedly drains well; the location looks good. There are other buildings and trees on the north side, protecting it from cold winter winds and snows. This house could be made into a very good, serviceable structure with the outlay of a small amount of money. Double the window space in the upper row of windows, place a feeding floor on the south, east and west sides, having doors leading from each of the farrowing pens to these feeding pens, and put in about six ventilators, three on each side.

Cut No. 4 shows a bunch of hogs lying comfortably outside. There is plenty of bedding evidenced by the hogs all being stretched out. Hogs with this kind of treatment will make far better returns for the farmer than will the bunch that can find no place, day or night, where they can stretch out in comfort.

Proper Handling of the Annual Meat Crop

By M. Coverdell

IT IS surprising how great a majority of our farmers do not understand butchering—or, at least, do not do it.

This ought not to be so, as the job of butchering is not a long nor difficult one, and in case a professional butcher is employed his charges represent a considerable amount, which ought to be saved by the farmer.

In spite of all that has been said and done, it seems that farmers will skimp the meat-harvesting, run short of meat the following summer and be compelled to pay sky-high prices for packing house products—material which the farmer can put away at this time at less than one-half what he then pays.

So harvest plenty of hog, and rest assured that, if you by chance have a surplus next summer, there will be plenty of your neighbors to liquidate that surplus at a goodly profit. Or one can engage it to the home merchants at a price considerably below that of the packing houses and still realize a handsome profit.

Preparing for Butchering

As in other undertakings, everything seems to go wrong if one is not in complete readiness for the butchering job.

A cold, raw day being the most ideal for butchering, we like to arrange it on the sheltered side of some building or shed. Where the weather is being continuously cool, so one can tell in advance of the day the butchering will be done, it is best to make all arrangements for the job the evening before.

Grind all the knives, make gambrel sticks, arrange for hanging the hogs, have the materials handy for building a fire, put the water on and have a good platform on which to scrape the hogs.

Water the hogs well, but keep all feed from them the evening before butchering day, so the animals will bleed freely when killed, and to prevent tainting of the meat by contact with the gases contained in full stomachs and intestines.

Use Care in Killing

We endeavor to keep the animals quiet during the killing process to insure best results and the highest quality of meat. While the experienced hand rarely ever fails to do effective work with the axe by striking the animal directly between and a little below the eyes, shooting the hog is preferable. We use small caliber (.22 Rim Fire) rifle or revolver for shooting the hogs. The ball does practically no damage to the meat, is sure death and costs but a trifle. With the axe one is sure to damage some meat and at the same time not do as neat a job of killing.

Sticking the hog should be done just as soon as the animal drops. With a keen-pointed knife the thrust should be made in front of the breast bone, to open the jugular vein. Make the thrust straight in, else the knife may penetrate the shoulder, causing damage to the meat by the clot of blood collecting at that point.

To Secure a Good Scald

While some use water brought to a temperature of 170 degrees for scalding, a little experience enables one to dispense with the thermometer altogether—in fact, the writer never did use one. Where the water is a little too hot one must be careful not to leave the carcass in too long, else the hair will become "set" and be difficult to remove. If the hog is too large to scald well in a barrel, a tank, vat or molasses pan will serve the purpose; or, hay or old pieces of carpet, blankets, etc., may be spread over the carcass and scalding water poured over it.

We scald the fore part of the hog first, turning the body almost continually, to prevent the water from cooking the skin and to insure uniform scalding. The body is pulled out of the water occasionally to see if the hair is being loosened. As soon as the fore part of the body is scalded, draw forth that part and immerse the hind part of the hog. Turn the body as before, and make every second count in removing the hair from the head, feet and forequarters, as this is much easier done than after the skin cools. Scrape skin clean of all dirt. A few handfuls of ashes added to the water used for scalding will cause the "scurf" and dirt to be easily removed from the body during the scraping process. A small quantity of lye likely would serve the same end.

When the hair is all scraped from the body the hog is hung in the usual way, the tip of the

CONTINUED ON PAGE NINETEEN

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Bloomington, Ill., 406 Willard Ave., A. E. Hildebrand, Manager
Minneapolis, Minn., 3159 Park Ave., H. E. Dimond, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha. Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 110,0000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

We are bound to have some rough weather soon. Better not delay too long getting a team shod. Delay in this may result in a lame horse or even worse.

Gophers have been playing havoc with alfalfa fields this fall when allowed to have their own way. A little poison mixed with a little time will save a lot of this valuable feed next year and also save your temper when mowing.

The "big shed" is undoubtedly covering many thousands of dollars' worth of expensive farm implements. Just a little figuring will show this kind of a shed far more expensive than one made of lumber or other building material.

The runty pig is the one to keep your eye on. He is the one that is the most susceptible to disease. The cause of this may be worms, lice, mange or some chronic trouble. If you cannot get him squared away to growing soon, use an axe and burn the carcass; it's cheaper in the end.

What evidence have we of cheaper meat within many years to come? Where are the countries that are in position to increase production of cattle, sheep or hogs above their present production and present demands? When consumption is stopped or checked a declining condition of business and trade must follow.

Animal Disease Prevalent

Reports received at the Nebraska state veterinarian's office show a considerable number of fatalities among horses and cattle due to cornstalk disease, according to Dr. L. C. Kigin, state veterinarian. Cattle are also dying from mould poison where they are allowed to eat mouldy silage.

Reports also show some fatalities among range cattle on pasture. This is probably due to a fungus growth. Dr. Kigin advises an entire change of feed as being the only remedy in cases of this kind. Watch your cattle and horses closely and do not wait when you see any of them sick. Get not only the sick ones, but the well ones as well, onto different feed, no matter what you are feeding them.

When putting either cattle or horses into the stalk field be careful to not make too abrupt a change in their feed. Start slowly. The first day leave them in a couple of hours, the next day a little longer, and so on until they get accustomed to the change. Probably the two most important things to see to in this connection are salt all the time and pure water whenever the animal wants it.

A disease quite prevalent in the state among cattle is mycotic stomatitis, a disease sometimes mistaken for foot-and-mouth disease. With this disease the muzzle of the animal cracks and bleeds, the teeth become loose, sometimes so loose one can pull them with the fingers, the feet becoming sore in the cleft and around the hoof, pus sometimes forming. Often the feet are so sore the animal cannot walk. Slobbering is noticed, the fluid being dark and streaked with blood and pus.

When animals are affected with the foot-and-mouth disease there is much more slobbering than with mycotic stomatitis, the fluid being clear and shining in the sun like a diamond. When an animal is affected with the foot-and-mouth disease there is no cracking of the muzzle. There is, however, a peculiar smacking of the lips. Mycotic stomatitis is not contagious. Generally after a few hard freezes the trouble disappears. The disease is seldom fatal. Should this disease be noticed in the herd, the first thing to do is to make a change of pasture. Feed the animals affected a sloppy food, and be sure to have a good, comfortable, well bedded shed or barn for them to stay in. Access to water all the time is absolutely necessary. With no other treatment the animal will usually get well.

Farm Crop Contests

The spirit of the farm contests is increasing rather than diminishing. The boys' acre corn contest, which started several years ago, was not thought at the time to be possessed of much lasting merit, but it has steadily held its place in all kinds of agricultural organizations and associations. Commercial clubs and business interests have joined with public sentiment in an effort to bring the yield to a higher standard than from thirty to forty bushels of corn per acre, with which most farmers are satisfied.

It has generally been turned over to the boy to demonstrate what the land is capable of yielding in crop by making the small test of what can be produced on one acre. As this is too small a proposition for the full grown man, it has been left to the boy to demonstrate what the producing value of land is under special care. If the boy under a system of good cultivation, which he adopts, can double and treble the general yield on the farm, he has certainly become the greatest benefactor to farm interests that it is possible for the country to recognize and honor.

The boys' one-acre corn test is steadily gaining in popularity because it is being strengthened each year by its uniformly high rating of yields above that of the land owner and business manager in crop production. What is the secret of the high yield of the one-acre, boy-produced crop? What is the actual expense of producing this crop that yields two and three times more corn than that grown under the ordinary supervision of the common farmer? If land is capable of yielding eighty bushels of corn per acre, why be satisfied with half a crop—forty bushels? Why is the boys' eighty bushels per acre not the cheapest corn produced by one acre, or any number of acres?

Infection from Meat

Some people are wondering whether or not there is danger of their contracting the foot-and-mouth disease, about which so much is now being said, by eating meat coming from the packing houses. There is practically no danger whatever from any meat coming from any of the large packing houses. All animals slaughtered at these plants are inspected on foot by inspectors, and the carcasses after slaughter are immediately inspected by men in government employ, making it impossible for any of this meat to be contaminated with the disease.

Local butchers killing their own meat do not have the benefit of these inspectors. However, there is no danger in eating any meat if it is thoroughly cooked.

The most probable way by which this disease may be communicated to human beings is by their coming in direct contact with an animal having the disease or by drinking milk not pasteurized coming from a diseased cow. It is claimed by authorities that adults very seldom, if ever, contract the disease in this way. Authorities say that when adults do contract the disease it is not serious. It usually takes the form of a small fever sore in the mouth, with possibly a small eruption on the fingers. In the case of small children it may take a more serious form.

To be absolutely safe, thoroughly cook all the meat you eat and pasteurize the milk you drink, especially if you are not sure this milk comes from animals that are clean and healthy.

American Apples

It is quite apparent from reports of fruit experts who have traveled the world over that the United States is the best apple-producing country so far opened up to this industry. The growing of apples for the export trade is one of the features of fruit production that will be developed very rapidly in the future. Like many other features of commercial industry, the foreign wars have temporarily put a check on any further immediate extension.

The United States has attained an enviable position in the quality of apples it has been able to produce and put into the world's market. The modern methods of grading and handling the apple crop have had much to do with the exploiting of this industry before the produce trade of the world.

The keeping and shipping quality of the apple has thus been protected and enhanced in the interests of the American product. Wherever the American apple has been brought into competition with that of other countries it has taken preference and sold at a much higher price.

The disposition in this country is to increase the acreage in orchards. Wherever improved orchard management has been adopted, cultivation, pruning, spraying and the sorting and grading for uniform quality and attractive shipping package, there has been no product from other countries that is able to take rank with the American apple.

There was a time that the apple-growing industry of this country seemed to be centered in the Pacific states, but the last few years have awakened a new life in apple-growing all over the central west and old eastern states, where the apple orcharding industry had practically died out, owing to lack of business methods in selling the product and the neglect in protecting the trees from insect and fungus disease that threatened their destruction. The revival in tree growth by system in cultivation and management of the orchard has had results little less than miraculous.

The physical development of the orchard has been closely followed by business organization for the handling of the product that has popularized this fruit wherever it has entered into trade. The latest feature completed is a co-operative selling organization to dispose of the by-products, which include canned and evaporated fruit and other forms of apple utilization. There are more than fifty different by-products of the apple manufactured and offered for sale.

Apple orcharding in this country is only getting started; it is only in its infancy in the matter of development and extent of acreage devoted to the industry.

Disease is Checked

Encouraging reports are issued rom the Department of Agriculture egarding the fight against the foot- nd-mouth disease.

The quarantine against Canada as been lifted. This quarantine as made, not because of the pres- nce of the disease in the Dominion, ut on account of the danger of in- ection from infected cars. This ause for alarm now seems to be ver. Prompt action by officials in illing a bunch of infected cattle in he state of Washington prevented ny spread of the disease whatever n that state.

The quarantine now on different tates will undoubtedly be raised by istricts or parts of states as rapidly s conditions will warrant. We ust remember, however, that the rouble is not over, and won't be for ome time. Government officials elieve it will require six months of nergetic work to see the last of it.

The most affected states are Ohio, llinois, Indiana and Pennsylvania. lthough the disease first made its ppearance in Michigan, where it pread rapidly, so effectively and arefully has the work of cleaning up een carried on that the state is now ractically clean.

One thing must be borne in mind. he disease is still in the country, nd on account of its very infectious ature may break in new localities. lose quarantine and stringent meas- res are yet necessary. Government nd state officials should have the earty co-operation of all parties in- erested.

Milk Material

How can you hope for the produc- ion of milk when you do not pro- ide the cow with suitable feed from hich to manufacture the milk? Is t reasonable to expect a liberal flow f milk from the cow fed on musty, tack-fired, discolored hay and a tinted allowance of grain feed? How ould these conditions compare with he same cow fed on all the bright reen alfalfa hay that she could con- ume from morning until night, week n and week out, and, besides a lib- ral feed morning and evening of ornmeal, shorts and bran, with a ittle oilmeal, the whole mixture oistened with warm water, just to uit her taste? Would you be skep- ical if such reverse feed conditions would increase the milk flow from 25 to 50 per cent? It is a question of giving the milk factory suitable material from which to manufacture milk, material that has available milk properties for this machine to work up. Too many cows are starved until they do not represent half their ability to yield milk.

Dehorning the Calf

The best plan of dehorning cattle is to dehorn the calf. Most breeds of cattle grow horns and most cattle owners prefer to have the cattle hornless; consequently to have the cattle that you want it may demand an operation in order to get them to suit your fancy. The dehorning of a grown animal is often a pretty difficult job; it is always an unpleasant operation for both animal and owner. The sore head and the treatment of the head to protect it from the annoyance by flies, unless operated on in cold weather, is a part of the disagreeable feature of dehorning of grown cattle.

All this unpleasant treatment may be avoided by the use of caustic potash on the new-born calf. The time to use the calf dehorner is while the calf is yet a few days to 2 weeks old. The embryo horn can be killed at an older age, but the easiest age is from four days to ten days old and before the horn button has become attached to the skull. It will be observed that there is on the calf of all horned breeds of cattle a little horn germ that is loose in the skin where the horn develops. This little embryo horn resembles a button to the touch of the finger in its early stage, and can be moved with the skin by a pressure of the finger.

The treatment recommended is caustic potash or "stick potash." This can be had at any drug store at very small cost, and one stick if taken care of will dehorn a dozen calves. Rub the potash on the horn button, first removing the hair for a space as large as a half dollar; apply it carefully by rubbing directly on the button. The potash should be moistened slightly and rubbed over the skin covering the horn button, until the skin shows distinctly the effects of the caustic. One application should kill the horn germ. It is necessary to wrap the stick of potash with something to protect the operator's fingers. There is some danger of putting on too much and causing the oozing of water to trickle down over the face of the calf, with a chance of its getting into the eyes. This only occurs where too much is used. Better give two treatments ten days apart in case it is necessary than to overdo it by causing too much of this discharge.

One Worm-sick Hog

Will Infect Your Entire Herd

Mr. Sidney R. Feil, President of the S. R. Feil Co., is a Registered Pharmacist, a graduate of the Cleveland School of Pharmacy and the National Institute of Pharmacy. He has been engaged in laboratory work for more than 25 years. For many years engaged in compounding veterinary remedies.

Take No Chances!

A single worm-sick hog is liable to infect your whole herd. You know that wormy hogs have little vitality and so are easier victims of cholera and swine plague. That scrawny, worm-sick hog—the one with the rough coat, white eyes and harsh cough, is a positive danger to all the rest in your herd. Take no chances. **Feed SAL-VET** and be assured your hogs are free from these dangerous pests and much less liable to fatal diseases. Let me feed them 60 days on SAL-VET at my risk—let me prove the value of this wonderful worm destroyer and conditioner. Let me prove that you can't afford to be without it. If it fails to do what I claim, it won't cost you a cent. Thousands have found it so profitable to feed SAL-VET that they feel they cannot afford to be without it. The hog that is wormy usually eats more than it can digest, is ravenous, ill-natured — discontented and unthrifty. It is a profit-eater instead of a profit-maker.

$125 Profit in Four Weeks.
"Four weeks ago, just before I received my SAL-VET, I offered to sell my hogs for $25.00, but could not do so. Since feeding SAL-VET, they have passed many worms, some of them ten inches long, and they made such gains, that I would not sell them now for $150." Dan. MacAloney, Tenney, Minn.

SAL-VET Saved His Hogs.
"Hogs all around me are dying with cholera. We have lost none yet, and all are doing well since feeding SAL-VET."—Frank Bally, Alto Vista, Ia.

Rid Them of Worms.
"I had a bunch of twenty-eight hogs that coughed continually, and refused to eat. After feeding them SAL-VET a while, the coughing ceased entirely, they recovered their appetites, and grew rapidly."
Jacob Brennecke, Jackson, Mo.

Gives SAL-VET the Credit.
"Am still feeding SAL-VET to my hogs and sheep all the time. Last week, I was in Chicago with a carload of hogs which had had constant access to SAL-VET—they came within a nickel of the top." Donald E.E. Asay, Mgr. Burr Oak Farm, Mt. Carroll, Ill.

TRADE MARK

SAL-VET

REG. U.S. PAT. OFF.

The Great Worm Destroyer — *Live Stock Conditioner*

Is not a food; it is the medicated salt which contains no antimony — which rids all stock of stomach and intestinal worms—aids digestion—allowing animals to get the utmost good of rations fed, instead of having the feed absorbed by myriads of these parasites. I want you to try SAL-VET on your own stock—in your own barn-yard, at my risk—I want to prove to you that your hogs will gain faster on no more feed—look better, act better, and be in healthier condition, less liable to disease and sell better. Here is my offer:

Don't Send Money—Just the Coupon

Tell me how many head of hogs and other stock you have; I'll ship you enough SAL-VET to last them 60 days. Simply pay the freight on arrival—feed the SAL-VET according to directions. At the end of 60 days report results. If SAL-VET has not done all I claim, I'll cancel the charge—you won't owe me one cent. Here is a chance for you to see with your own eyes, without risking a cent, what this wonderful preparation will do; see it stop your losses from worms; see it save you money—save you feed and make money faster by shortening your feeding period.

SIDNEY R. FEIL, Pres.

THE FEIL MFG. CO., Chemists

Dept. TF CLEVELAND, OHIO

THE FEIL MFG. CO.,
Dept. TF 12-5-14 Cleveland, Ohio

Ship me enough SAL-VET to last my stock 60 days. I will pay the freight charges when it arrives, agree to report results promptly in 60 days and at that time pay for it if it does what you claim. If it does not, you are to cancel the charge.

Name.....
P. O......
Shipping Station.....
State.....
Number of Sheep.....*Hogs*.....
Cattle.....*Horses*.....

Look for This Label
on top of all SAL-VET packages. Don't be deceived by imitations. Don't buy "Sel" this or "Sal" that. Get the original genuine Sal-Vet.

PRICES

40 pounds	$2 25
100 pounds	5 00
200 pounds	9 00
300 pounds	13 00
500 pounds	21 12

No orders filled for less than 40 pounds, on this 60-day trial offer. Never sold by peddlers nor in bulk; only in Trade-Marked SAL-VET packages. Shipments for 60 days' trial are based on 1 lb. of SAL-VET for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular sized packages.

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Railway Fare to Omaha Within 100 Miles Refunded on All $10 Purchases and Over

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$15 Men's Suits, hand tailored, made of all wool materials consisting of blue serges and fancy mixtures; on sale at..... **$8.98**

$15 Men's Overcoats, in all lengths, silk serge lining..... **$8.98**

$7.50 Sheepskin Lined Coats..... **$4.45**

$5 and $4 Young Men's and Boys' Overcoats, ages 2 to 16; $2.98 and... **$1.95**

$5 and $4 Young Men's and Boys' Suits, peg-top Knickerbocker pants; $2.48 and..... **$1.75**

$5 Men's Stetson Hats, in light and black shades.... **$3**

$1.50 Men's Heavy Fleeced or Ribbed Union Suits at..... **79c**

$2 Men's and Ladies' Overshoes of the best quality rubber, double sole and heel, at... **$1.10**

$1.50 Ladies' Felt fur trimmed leather sole Slippers, at..... **89c**

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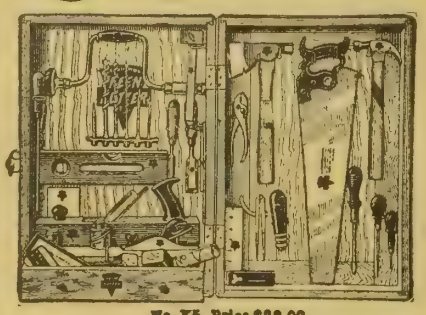
Tom Profit Gives

—goin' to give Mattie's biggest boy a Keen Kutter tool cabinet fer Christmas. He's got the makin's of a good woodworker in him, an' *then* mebbe he'll let *my*

KEEN KUTTER
Tool Cabinet

alone. And I'm goin' to give his pop a Keen Kutter knife an' a Keen Kutter Junior Safety Razor. Mother'll furnish the things fer the rest of 'em, but *I* want to pick that knife and that razor. Not that Mother could go wrong with that Simmons quality an' guarantee, but I *like* to do a little Christmasshoppin'. Keen Kutter goods are safe to buy 'cause the dealer's always authorized to return the money if any piece doesn't turn out satisfactory. Well, a Merrie Christmas to you—an' many of 'em.



No. K5, Price $26.00
Tool Cabinet, complete with 28 tools

Tom Profit.

KEEN KUTTER

That Red Ball Means Longer Wear—Greater Comfort

"Ball-Band" Rubber Footwear, the kind that bears the Red Ball, is made over a natural last, to make a snug, easy fit more certain. Points that are weak on other footwear are reinforced and made the strong points of "Ball-Band."

Look for the Red Ball

"BALL (Red) BAND"

You can expect more days wear from "Ball-Band" Rubber Footwear.

Our free booklet, "More Days Wear," will tell you how to get all this value out of the goods. Send for it. If no store in your vicinity sells "Ball-Band" write us, mentioning your dealer's name, and we will see that you are fitted.

MISHAWAKA WOOLEN MFG. CO.
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"The House That Pays Millions for Quality"

MAKE BIG MONEY PULLING STUMPS

Pull the stumps from your fields and replace them with big crops. Don't pay taxes on idle land.

The Hercules All Steel Triple Power Stump Puller

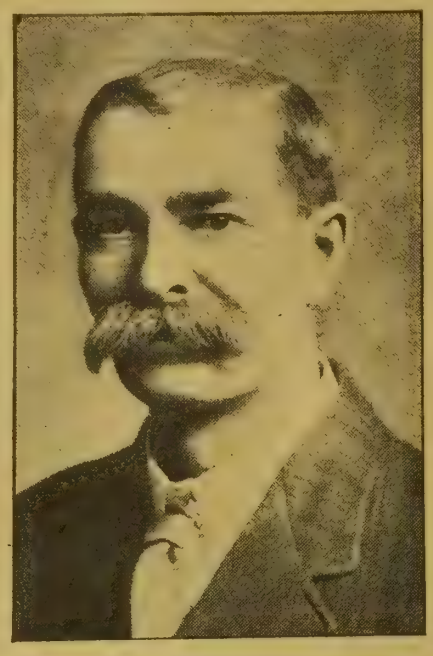
pulls an acre of stumps a day. Pulls biggest stump in 6 minutes. Guaranteed against breakage for 3 years. 30 days free trial. Send name for book, free—and special low price offer. Address Hercules Mfg. Company, 956 23d St., Centerville, Iowa, U. S. A.

Breeding Pure-Bred Shorthorns

Methods Pursued by H. H. Kuper

A TRIP through the country among the breeders of pure-bred stock reveals every degree of ambition and ability in the men and quality in the animals. The personality of the breeder and his fitness for his work determine his failure or success. Pedigree is all right in its place, but it is not the whole of the breeding business. The buyer must know a good individual when he sees it and have the courage to buy the best, not only as to pedigree, but as to individual quality, when he is laying the foundation of his herd.

The ability of the breeder is not advertised alone by the space taken



H. H. KUPER.

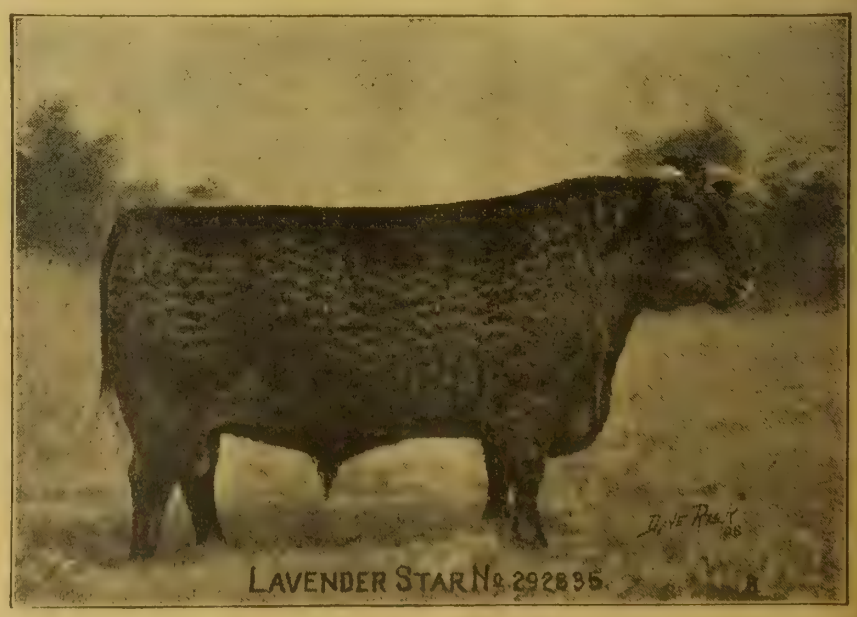
in live stock or agricultural journals, but also in the quality to be found in the herd or flock itself. Here lies the whole story of success or failure. It is not necessary to go over a man's papers, studying the pedigrees and reading the family history of the herd, to know whether or not he is a success as a breeder. The herd itself is an open book of information and tells the story much more quickly and in a manner much more satisfactory to a judge of animals than can be lined out through long pedigrees of imported sires and dams with high-sounding names.

The pure-bred breeding business is a splendid proposition for anyone who has the skill and ambition and the desire to engage in it. Its possibilities are without limit. No special conditions or equipment are required that cannot be provided by any farmer. The requirements are simply the foundation stock and the skill and ability to improve.

An example of successful breeding of fine stock from an ordinary farm herd may be found in Henry Kuper of Humboldt, Neb. Mr. Kuper was an old-time dealer in common cattle. He learned the business when a boy on his father's farm. Then he conceived the idea of breeding pure-bred cattle, believing them to be more profitable than the ordinary animals in which he was dealing. He commenced by buying the cheaper class of pure-bred animals and bought and sold hundreds of these cattle before his determination became fixed to rank among the foremost breeders of Shorthorns, his favorite breed.

Mr. Kuper began buying pure-bred Scotch cows from the best herds in the country in 1902 and has since confined his purchases and breeding strictly to Scotch blood. Each herd bull in his possession has been an improvement on the preceding one. Among them have been Baron Surmise, bred by Owen Bros. of Homestead, Ia.; Strowan Star, imported by Carpenter & Ross of Ohio, and imported Scottish Sentinel, his present herd bull. He now owns four imported cows; these, with their daughters and granddaughters, comprise the greater portion of the Kuper breeding herd at the present time.

Mr. Kuper is a well known figure at all the sales of good, pure-bred Shorthorn cattle. He is a fearless bidder when there is anything offered that he feels would be of benefit to his herd. He believes in buying the best, and as a result he believes in paying good prices. It takes no more to keep a good animal, he says, than a poor one. A good animal advances the quality of the herd, while a poor one retards it. Consequently every animal he buys



Bred by George Bothwell of Missouri, a Former Herd Bull in the Kuper Herd.

is one that he believes will advance the quality of his herd.

The Kuper herd is composed of practical cattle that have been grown up under good, common-sense methods of development. The calf is raised on its mother; this is the established system. When about 5 months old it is weaned and put on such feed as will induce it to take hold of the proposition of feeding itself, independent of its mother's milk. A good pasture is always provided and plenty of fine clover or alfalfa hay is kept in racks where the calf has access to it. A light grain feed is given, consisting of meal, shorts, bran, oats and shelled corn, changing these feeds in their various combinations so as to give the calf a little variety and encourage appetite. The calf is never stall-fed, pampered or even stabled, unless for protection from severe storms.

All cattle on the farm are provided shed room and protection under roof, if they desire it, but very little stall or stable confinement is practiced. Plenty to eat in way of rough feed is at all times kept in open racks or hay cribs throughout the feeding season.

The breeding cows and young growing cattle, bulls and heifers are run on the grass throughout the grazing season, from spring until autumn, without other feed or special care, unless unfavorable weather conditions should demand it. This herd is produced, grown and developed into breeding age under the common, natural provisions and care that the ordinary farmer provide and should provide for carrying his cattle through the various seasons in order to secure a good, healthy growth and development of bone, so essential with the young in making desirable and useful animals.

The Kuper herd of Shorthorns are being bred with special reference to size, smoothness and a strong, heavy bone. It is readily observed that the tendency among the cattle of the country is to lighter bone, a disposition to smaller growth. The overfeeding and pampering system under which many cattle are produced and grown from infancy to maturity is charged with influencing in this direction; also the other extreme of stinting in feed, and the abuse in care tends to a stunting and checking in growth, which the animal never recovers from, even in its later years and under better care.

Automobile Necessary Machine

III---The Cut-Price Automobile

WE can all remember the days when demand was far in advance of supply in the motor-car market, and men stood in line and waited for the factories to produce the cars which they feverishly fought to buy.

Those days are past. Automobiles are now built and sold on a business basis, and the factory behind orders is rare indeed.

Every now and then some manufacturer over-produces or some dealer finds himself in danger of having a number of cars left on his hands. Either condition usually results in a cut in price.

But seldom is it advisable for a buyer to avail himself of any such automobile "bargain."

A cut in price is a frank confession that the article is, in some degree, unsalable. And, nine times out of ten, the fault is that of the car, the manufacturer or the dealer. Somewhere, something is wrong. As a result, a car may often depreciate from ten to twenty per cent before it leaves the salesroom floor. Depreciation is the largest item of automobile expense. But legitimate depreciation should not set in until the buyer has at least had time to drive his car home.

Cut-price merchandising is not always followed by business collapse but business collapse is always preceded by cut-price merchandising—in the automobile market as well as in any other line of manufacture and sales.

There are manufacturers who have continued in business despite cut-price methods, but they are few. There are dealers who make a habit of sacrificing part of their legitimate profit, but they have done so at the expense of service and unqualified prosperity. In nearly every case it may be definitely agreed that a cut in price is a frank confession that the original list price was too high.

Buyers who are really well posted know that, in their locality, there are cars which are regularly sold at less than list price. Sometimes they forget that this knowledge is general and that others reckon the value of such cars, not by list price but by the cut price. And there is always the haunting fear that, when a price is reduced for the ostensible benefit of one buyer, it may have been even more reduced for his neighbor.

On the other hand, there are plenty of dealers in any trading center who have acquired reputations as list-price salesmen. Their products are invariably standard. In the long run, it pays to do business with them.

The man who buys a car from a legitimate, list-price dealer has a right to expect considerably more than the mere car in return for this price. The dealer will, if necessary, teach him to drive his car and will provide him with ample instructions regarding its care. He will see to it that the car is adjusted and in perfect running order. For a reasonable time he will keep it so, free of charge.

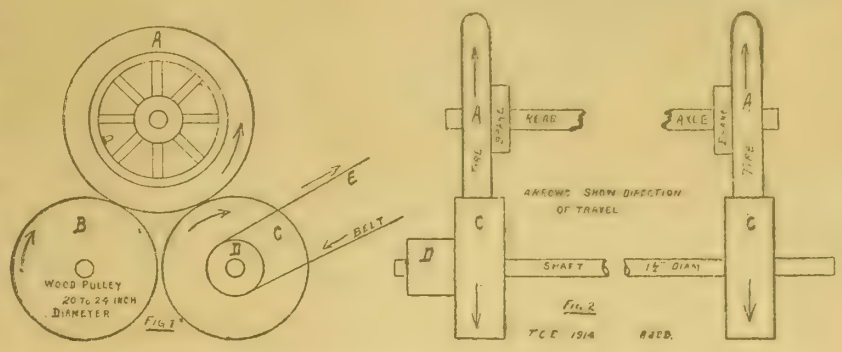
Such a dealer will give his customers service in repair work. He will keep a capable staff of mechanics and a well equipped shop. Either he will himself carry a stock of the most commonly used repair parts or he will be in close touch with a repository from which they can be secured at a very reasonable cost. He will, in short, prove himself the prophet, priest and friend of every customer and will do all this because he can afford to do so.

Each car he sold has paid him a legitimate profit. A part of this profit he can afford to devote to service, the insuring of his stability in business and the cementing of business friendships, which will result in sustained and increased future sales success.

Use of Auto for Power

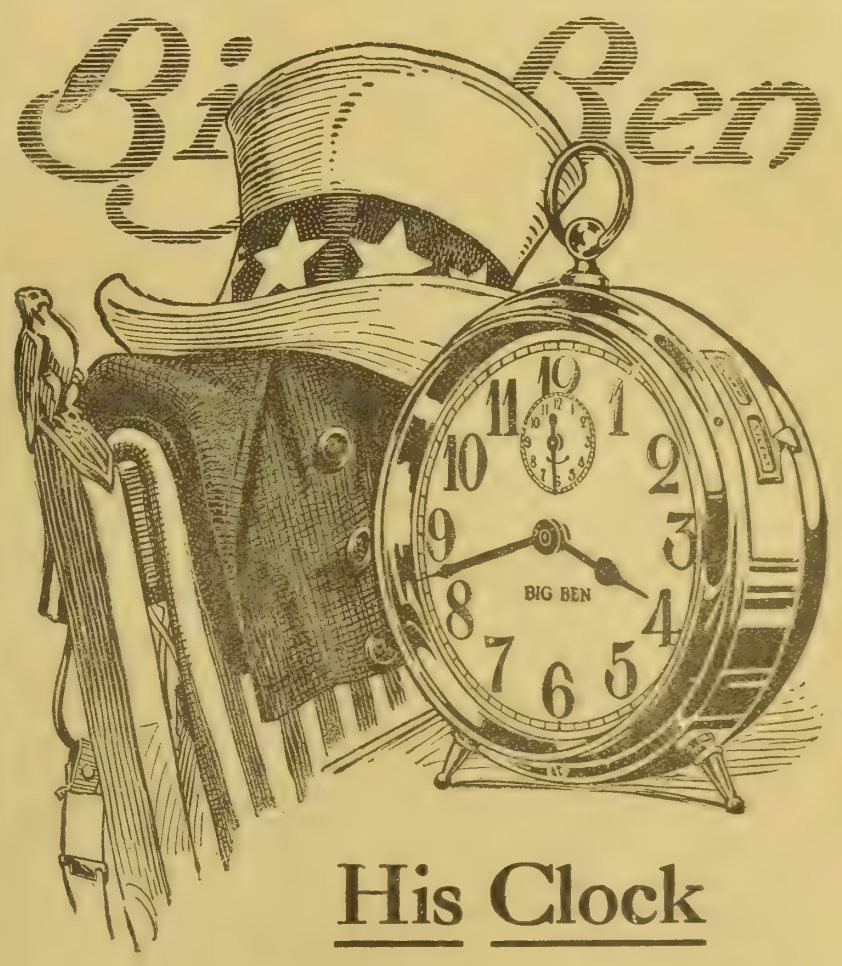
I have a 20 H. P. car. I was thinking of hitching it to a little two-hole corn sheller. Do you think it will hurt it any? Do you know where such a pulley could be gotten to be put on the car?—R. P. C., South Dakota.

The most satisfactory arrangement for using your automobile engine for power is described by the sketch shown in Figures 1 and 2. The rear wheels of your car are represented by A. The wheels, B and C, represent common wood pulleys, of which there are four, each pair being located as shown in Figure 1 and far enough apart so that both rear wheels of the automobile rest on the wood pulleys, see Figure 2. The two pulleys marked C are connected by a piece of shafting, see Figure 2, the wheels being fastened to each end of the shaft by a key or set screw, and the small pulley marked D is for belt to drive your corn sheller or other farm implement where power is required. The two pulleys, B, can rotate on a bearing or shaft, or can also be fastened to shaft; one of these pulleys is shown in Figure 1, and in Figure 2 they are located ahead of the two pulleys marked C. The shaft for each pair of pulleys should be long enough to allow a good bearing on the ends. The pulley D can be located at any point between the two pulleys C.



The most convenient and substantial construction of this power transmitting device is to set the pulleys below the floor line in the building,

(CONTINUED ON PAGE TWENTY-TWO.)



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Uncle Sam asked Santa Claus to buy American goods—suggested "his clock"—*Made by Westclox, La Salle, Illinois,*—and now it's Big Ben for 'most every one on his Christmas list.

Send your "Merry Christmas" by Big Ben—he'll ring it gladly and put heartfelt warmth into his jovous, tuneful greeting.

What's more, his greeting is just as cheerful the next morning, and the next and every *other* morning through the years. He makes his call suit you,—either steady for five minutes or he starts and stops at half minute intervals for ten.

To Uncle Sam $2.50—in Canada $3.00. If your dealer doesn't stock him a money order addressed, *Big Ben, La Salle, Illinois,* will send him, in a special Christmas package, your card enclosed, and charges paid, whenever and wherever you say.

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Tell us in what part of the country you are interested and we will answer your questions regarding climate, crops, stock, land, etc., in that section.

Automobile Department:

We have secured the services of an experienced automobile man, who will be pleased to answer any questions asked by our readers as to troubles with or management of any make of car.

Our Readers' Exchange:

Inquiries regarding crops or stock, veterinary or mechanical matters will receive our prompt attention. Tell us what is perplexing you. If we do not know the answer we will submit your questions to someone who does.

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Twentieth Century Farmer

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Stories of Our Young People

A Plea for the Teacher

If I were a youngster and were going back to school,
I don't believe that I'd annoy the teacher, as a rule;
For teachers have a serious time; they're busy day by day
Discovering the shorter cuts that lead to wisdom's way.
And sometimes when you hold tomorrow's lesson in great dread,
Your teacher's working hard upon the lesson just ahead.
She's always striving earnestly her duty to fulfill
And hoping you'll all like her—which I'm confident you will.

Remember that her feelings may be very much like yours
Regarding the restraints which every studious mind endures,
She'd very much prefer a vastly longer holiday;
No doubt she's fond of skating or of riding in a sleigh.
Don't picture her a tyrant with a hard and haughty heart;
She'll try to help you like her if you'll only make a start.
Don't bother her with mischief and with foolish little jokes;
A teacher values kindness just the same as other folks.

—Washington Star.

The Editor's Corner

There were a number of worthwhile stories among those for which we have no room this week. There was a story of a coon hunt in Missouri, two excellent descriptions of picnics held last summer, an exciting adventure of a girl with a tiger (it was really rather of a fairy story), an adventure at sea in a small boat, a party, stories of cats, dogs and a pigeon, and a fire in the school house.

Two or three prize winners wrote in saying they had received their books and liked them very much. We are always glad to know that you are pleased and appreciate your taking the trouble to tell us about it.

Quite often the writers in the story or picture contest departments write me nice letters, telling something about their homes and friends. These letters are always welcome, and I am sorry I have not the time to give them personal answers. So many of you have written a number of times that you seem like old friends, and as I open your stories or verses I keep hoping they will be good enough to win a prize. However, the prizes have to go to those who send in the best, regardless of whether they are old friends or new, and the new are always welcome.

HOME EDITOR.

(Prize Story.)

Jack, the Captive

By Willie Westruck Aged 14, La Bonte, Wyo.

It was a very cold day in November, when little Jack sat at the window of the blockhouse looking out at the beautiful snow.

"May I go out and play?" said Jack to his mother.

"Yes, my little boy, but put your big coat on."

Jack was soon out playing in the snow with his little sister.

"Oh!" said Jack, "there is a large snowdrift over there; let's go to that one."

But they had not been playing there long when someone grabbed Jack by the shoulder. He looked up and saw it was a large Indian. Jack pulled a hunting knife from his belt and struck the Indian with it.

"Now, will you let me go?" said Jack. The Indian would have killed Jack, but the chief laughed and said:

"He is a brave pale-face. Heap much fight. Bring him along."

Jack wondered where his sister was, but he soon saw her running near the house, screaming with all her might. A shot rang out, and a second and third and fourth, and four Indians dropped, never to rise again.

"Hurry," said the chief. "Bring along the boy."

"If we killed him," said the Indian whom Jack had struck with the knife, "we could make better time."

"No," said the chief, "bring him along."

Before the Indians got through the wood every one was killed except the chief, who had to steal a horse and make full speed to the camp. Even the Indian that held Jack was

Picture Contest No. 19

Write a verse of four lines about this girl and the colt. Tell us something interesting about them, and tell it in verse. To the two children writing the best verses books will be given for prizes. Verses are judged according to general merit, such things as quality of verse, subject matter, spelling, writing and neatness being taken into consideration. Verses should be addressed to Picture Contest Editor, Twentieth Century Farmer, and should reach this office not later than January 2, 1915. All be sure to send in verses and let us have a large number of good ones. Awards in picture contest No. 18 will be announced in the next issue.

The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

killed. Jack ran into the woods with all his speed.

"I had better not go home for a couple of days," said Jack, "because they will watch, and if I appear I might be shot."

So Jack killed a rabbit with a rock and had his supper in the woods. He went home in about three days and found his sister playing near the house. His mother and father had never expected to see him again, as his sister said, "They killed him when he was captured."

Jack lived to be 95 years old, but he never forgot his fight with the Indian.

(Honorable Mention.)

My Old Cat

By Clyde Camerer, Aged 12, Granby, Mo.

I wonder if any of the boys or girls have a cat as old as mine. She is 11 years old. I am just one year older than my cat. A man gave her to papa when she was a tiny little kitten, and he brought her home for me to play with, and I have certainly spent many happy hours with her and her kittens. She had four kittens last summer, but they all died when they were a few days old.

Mamma says when I was small she would give me a cup of bread and milk, and I would always share it with my cat if she did not watch me. I would take a spoonful and then give her one. I see that she gets plenty to eat every day, for I like to take good care of my pets, and have trained my dogs to respect cats as their equals and live in peace with them. She is a good mouser and will catch big rats. Not many cats will tackle a rat. She has brought in squirrels, frogs, moles, gophers and two live snakes about two feet long.

One morning mamma saw a mouse run upstairs and she said:

"We will put old puss in the house tonight and she will catch the mouse."

The next morning, as mamma was putting on her shoes, old puss came running around her feet, and she pushed her out of the way. And pretty soon puss brought the mouse and laid it at her feet, as much as to say, "I have caught the mouse for you." The mouse was cold and stiff, for she had caught it some time during the night.

A Family of Birds

By Mingo Mahara, Aged 10, Waterloo, Ia.

One day last summer we all went to pick some corn. We picked five rows and then we were going down another row when my sister older than I saw a bird's nest. My little sister and I were in the wagon. Papa and mamma and my brother were picking corn. We were pretty near the end of the field when we saw the nest. It was on a cornstalk, with weeds running up it, and had four pretty blue eggs in it. I was so afraid we were going to run over the nest that I stood by it until we went down another row; then I got back into the wagon and drove the horses again.

The next day I went over there and there were four little birds in the nest. I'll bet the old birds were happy; they just sang and sang all day long, and I was as glad as the birds themselves were about the little birds. This is a true story.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

My Pet Lamb

By Gora Layton, Aged 13, Peculiar, Mo.

My father owned about 200 sheep, 100 of which were big, nice lambs except one, which always was a little one. When he sold the sheep we all wanted to keep the little one for a pet. After we sold the sheep the little lamb got very lonesome. I have a shepherd dog that serves as a very good playmate for him. There are not very many dogs that are so kind to sheep.

I don't believe my lamb has grown an inch in the last year. He follows the cows around all the time.

Going to School

By Flossie Ogburn, Aged 9, Hubbard, Neb.

I go to school in town. My grandpa takes us—my brother, aged 6, and a neighbor boy. Our grandpa is 73 years old. I am in the third grade. We have gone to school two months and have not missed a day or been late.

We see lots of wolves on the way. One morning, when we were getting ready to go, a wolf came into the barnyard and caught a duck and started across the field. Our dog named Dixie ran after him and barked. The wolf dropped the duck and ran away. The duck laid there for a while and then came back to the house. It was not badly hurt and was soon well. In about two weeks papa shot the wolf while it was chasing the ducks again.

Additional Stories

Stefling Jeppeson, Malcolm, Neb.; Hilma Nelson, Sextorp, Neb.; Elbridge McVey, Stockham, Neb.; Minnie Stoltzenburg, Holstein, Ia.; Paul Thompson, Creston, Ia.; Ernest Robinson, Winfield, Kan.; Mary Clutter, Liberty, Mo.; Henry Jenkins, Halls, Mo.; Opal Davis, Monett, Mo.; Vera Myers, Rago, Colo.; Emma Ehrett, no address.

President Wilson's Advice to Boys

I dare say you think that schoolmasters are often a bit hard on you in requiring you to do things in order that you may pass the tests of the school, but I want to warn you that when you get out of the school you are going to have harder schoolmasters than you had before. For the world requires that we ake good, no matter what happens, and the man that does things amounts to a great deal more than the man who wishes he had done things and who promises he will do things. The men I am sorry for are the men who stop to think that they have accomplished something before they stop at the grave itself. You have got to have your second wind in this world and keep it up until the last minute.—President Woodrow Wilson's Address to Boys.

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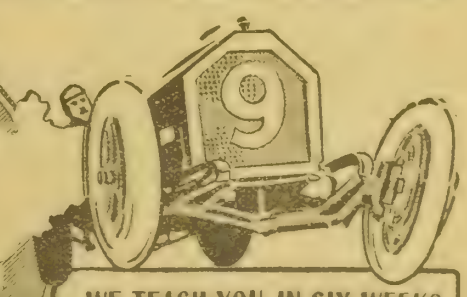

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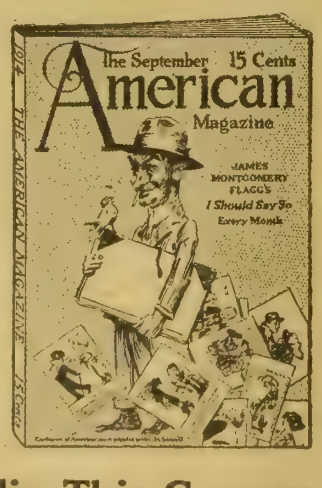

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Styles for Home Dressmaker

6978—Ladies' Dressing Sacque. Perfectly plain in every detail, this dressing sacque will be found very useful to the woman who wears it while working. The fronts are plain and the back may be seamed or not as preferred. The closing in front extends from neck to hem. There is a handsome pointed collar or a small rounded one may be used. The plain sleeves are full length. The pattern, 6978, is cut in sizes 34 to 44 inches bust measure.

6961—Ladies' Skirt. This model illustrates one of the very new walking skirts. It has a deep yoke to which the other four gores are attached. There is a reversed box pleat in the back and a ripple, due to the cut, at the sides. The panel of the front extends all the way to the waistline. This skirt may be made in round length, or shorter. Lower edge measure 2¼ yards. The pattern, 6961, is cut in sizes 22 to 32 inches waist measure.

6974—Ladies' Waist. A new idea is shown in this charming waist in the back, which is in cape form, although this part may be omitted and the plain underback used alone. The front is plain, with center closing and open neck with high, turnover collar in the back. The sleeves may be long or short. The style is excellent for crepe fabrics and other soft materials. The pattern, 6974, is cut in sizes 34 to 44 inches bust measure.

6983—Ladies' Dress. Very simple this frock is, also very distinguished in style. It has loose sleeves cut in one, with the side bodies and a center front and back in jacket effect. There is a flare collar at the neck. The sleeves are shirred from wrist to elbow. The one-piece circular skirt is quite full at the lower edge and the girdle is separate and shirred and draped. The pattern, 6983, is cut in sizes 34 to 44 inches bust measure.

6970—Girls' Dress. A handy slip frock is here shown, made with the neck cut out in front and back and with small box pleats extending the full length of front and back. This frock has no opening except at the neck and is slipped on over the head. With it is worn a one-piece guimpe, fastening in front and with a pretty collar and long or short sleeves. The pattern is cut in sizes 6, 8, 10 and 12 years.

6962—Boys' Suit. There are so few novelties in suits for boys that this model is most welcome. It has little trousers open at the knee and a jacket which meets at the neck, but hangs open below, extending well over the hips. The neck is trimmed with a small turnover collar and the sleeves are plain. There is a vest which is quite high at the top and which buttons down the front. The pattern, 6962, is cut in sizes 4, 6 and 8 years.

6984—Ladies' House Dress. Altogether plain and practical, this frock has a bodice which closes in the center of the front and ends at the neck in a small turnover collar. The bishop sleeves may be full length or shorter, as preferred. The seven-gore skirt closes at the side of the front and is gathered across the back and joined to the blouse. Wash materials are best for a dress of this kind. The pattern, 6984, is cut in sizes 34 to 44 inches bust measure.

Of Interest to Our Women Readers

If I Had Known

If I had known what trouble you were bearing,
What griefs were in the silence of your face,
I would have been more gentle and more caring,
And tried to give you gladness, for a space;
I would have brought more warmth into the place—
If I had known.

If I had known what thoughts despairing drew you
(Why do we never try to understand?),
I would have lent a little friendship to you,
And slipped my hand within your lonely hand,
And made your stay more pleasant in the land—
If I had known.
—Mary Carolyn Davies in Woman's Home Companion.

Our Home Chat

There was a rhyme in a picture book I had when a child about an old man who vowed he could do more work in a day than his wife could do in three. So, instead of resorting to useless argument his wife suggested that they exchange work for a day. And she went to "drive the plow," while her husband was left to do the housework, as well as care for the poultry and pigs, milk the cow and do the spinning. She was able to accomplish her work, but he experienced all kinds of difficulty with the unaccustomed duties he was called upon to perform and in the end entirely forgot to "wind the ball of yarn his wife spun yesterday."

That old rhyme has often come to my mind when I have heard men and women discussing the duties of their wives or husbands and saying how much harder their own work was. I imagine that when the old woman in the rhyme came in from the field she was pretty lame and sore and glad to get back to the pigs and chickens and spinning, but being a woman, of course, she would not own up. No doubt she had a much clearer conception of the difficulties confronting her husband in his work and had more respect for him that he was able to perform it so easily.

As for him, he considered her wonderful because she could manage so many varied duties without forgetting them, and

He vowed by all the stars in heaven
And all the leaves on a tree,
That his wife could do more work in a day
Than he could do in three;
He vowed by all the leaves on a tree
And all the stars in heaven,
That his wife could do more work in a day
Than he could do in seven.

And without doubt they were both happier for the more thorough understanding they had of each other's duties and responsibilities.

What a good thing it would be if real people could exchange work occasionally; how it would help us to appreciate little daily problems with which each has to contend—things that no one can understand who is not in direct touch with our work. Of course, such arrangements are not practical under ordinary circumstances, but a good imagination and a little observation will often enable us to understand much better than we do, and with a better understanding there is sure to come deeper appreciation and sympathy.

When death, accident or any calamity forces the wife into the husband's place as the wage earner, or compels the husband to care for the children and manage the house, either one in most cases is successful. We can generally do the work of others if we have to, but we are glad that we do not often have to, and we should each make that work as easy as possible by encouragement and sympathy.

HOME EDITOR.

Our Weekly Recipe

DUMPLINGS—These are delicious with chicken:

One egg.

One cup sweet milk.

Two cups flour.

Two teaspoonsful baking powder.

A pinch of salt.

Boil five minutes without lifting the cover.

The School Teacher's Side

As this page is read by patrons of the rural schools, allow a country teacher to write a few lines in regard to the condition, at least in my school and community.

I teach in a rural school and have lived in the country most of my life. I thoroughly believe there are no happier, more prosperous people in the world than the farmers of today. But the farmer is behind in one thing, and that one thing is something that concerns him more than anything else—the school.

How many schools are poorly ventilated? Mine is well heated and ventilated, but it is one of a very few. How many have the essentials of a good school, namely, dictionary, encyclopaedia, good maps of the world—one of the United States, one of Europe and Asia—a good globe (what is more essential than a good globe to give little Mary and Joe an idea of this world?) What will teach patriotism more than a red, white and blue flag, which to even look upon seems to inspire those little hearts to love their country? What will interest those little tots, so used to mother's love and petting, more than a good story told from a good book, so poor tired teacher will not have to rack her brain looking for suitable stories? Have you reference books for your pupils? Does your teacher have a good chair and a good desk? A teacher needs a big desk with plenty of drawers to keep her endless number of papers, and last, but not least, an organ.

Another thing a teacher needs is co-operation. How many of you treat the teacher nice? I venture to say almost all. But how many work with her? How many speak lightly of her before the pupils? All, though I venture it is done in fun. If "teacher" keeps May after school, do you get mad, or reproach May?

One time I was discouraged in a pupil. I tried every way to get her interested; all seemed in vain, but I won her (oh, how great was my joy!) by four letters, L-O-V-E. Oh, teacher, that reads this—love them, love them. I believe it is the most wonderful thing in the world. I did this with the help of her parents, who respected me. I did it with the help of the school, who seemed to grasp it sooner. Now I firmly believe she loves me.

I truly love them all, from kind-hearted Peg to dirty, mischievous John, and I believe they love me. One thing I believe not only rural schools, but also city schools, lack is that element of love.

Parents, if something happens at school, talk it over with the teacher. I believe she will listen to your side. Don't tell it to the neighbors. And show your teacher a little love and respect and she will return it tenfold; visit with her, invite her home and, above all, visit her school.

I would like to have your opinion on this, but this is my idea for school, not to try to be saving, but employ as good a teacher as within your power; keep your school room up-to-date, work in co-operation, be courteous to the teacher (she is only a common person). Teachers, your part is to work with the community, be sociable to all, treat its young people well and in school do your best; learn to love each and every one of your pupils; be slow to anger; laugh and smile whenever it is possible. Create a desire for higher accomplishments; get as good an education as possible, and I believe your school will take care of itself, providing you are not "stuck-up."

I hope the rural school will grow, grow, grow, and her teachers do their best.

A NINTEEN-YEAR OLD RURAL TEACHER.

We are glad to get this letter, giving us the teacher's view of the situation. Sometimes it is pretty hard for such young girls as this teacher to do her duty by the children entrusted to her; sometimes she is frivolous and indifferent. But when she tries to do her best and comes to us with her heart full of love for her pupils and for her work, do we always do our best to help her? HOME EDITOR.

A layer of sawdust spread on a floor before oilcloth is laid will increase the latter's lasting quality and provide a soft tread.

Helpful Hints for the Home

Vaseline is a salve which can be put to many uses in the treatment of burns, scalds, chafing and wounds.

If sweet potatoes are packed in dry sand and kept in a warm storeroom they will keep all winter. Care must be taken that they do not touch one another.

If you want nicely flavored butter, with the buttermilk well worked out, try putting in a teaspoonful of clear honey to about three pounds of butter. You cannot taste the honey, and it improves the butter.

Place a box of fresh lime in the cellar and it will remove dampness. Change the lime as fast as it becomes air-slaked.

Tea or coffee stains may be removed from linens by pouring boiling water through them, and for blood stains peroxide will take them out.

License for Dressmaking

A Nebraska correspondent asks us whether she will have to have a license to open a dressmaking shop in Wyoming and how much it would cost to get it. No, licenses are not necessary for such enterprises.

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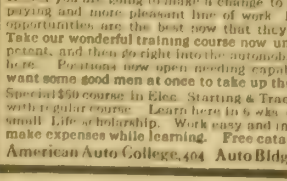

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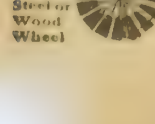

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Bravest of the South American Indians

By Frank G. Carpenter

TEMUCO, Chile—Temuco is one of the live towns of southern Chile. It is about 4,000 miles south of Panama, situated in a wooded country back from the coast. When I first visited it, about fifteen years ago, it was on the edge of the fronntier. It was surrounded by Indians and its wide streets, lined with log cabins, were rivers of mud. The country roads were almost impassable and the stumps still stood in the streets. Today Temuco has more than 20,000 population and it is an up-to-date South American city. Its one-story houses of brick and stone are covered with stucco, painted in the brightest of colors, and they stand upon wide streets, well paved with cobbles. The streets cross one another at right angles. The town is laid out checkerboard fashion, with a large plaza in the center. The plaza is filled with flowers and trees and the band plays there of a Sunday.

Temuco is the chief supply point of an extensive farming district. The chief crop is wheat, and much of it is planted and harvested with American machinery. There are many large stores, and in them I see plows from Moline and windmills from Chicago. The International Harvester company does a big business at this end of the continent. Its thrashers and reapers are to be frequently seen, and much of the machinery is moved by American engines. At the same time the old tramps on the heels of the new. The oxcart crowds the automobile, and cattle, yoked by their horns, toil through the streets pulling great loads. The place is a mixture of savagery and civilization. The streets are filled with well dressed men and women of a half dozen nationalities, and there are also Indians in ponchos and Indian girls riding astride, galloping along on their ponies.

Indians Are Araucanians

The Indians of Temuco are the famed Araucanians. They have reservations nearby, and their farms lie in blocks surrounded by those of new settlers from Europe and of the modern Chileno. The rude homes of the Indians are scattered over the country. I have visited several of the reservations and have watched them reaping their grain with American reapers and threshing it with American thrashers. I have met some of the braves, and a few of the squaws, and am therefore able to give a faint moving picture of the last of the race as it is in this good year 1914.

But first let me say a word of the Araucanians of the past. You have all heard of the Incas, who once ruled from Ecuador far down into Chile. They had in their dominion Ecuador, Peru, Bolivia and the northern part of this country. They tried to capture the south, but when they reached the lands of the Araucanians they were met by the decree, "thus far shalt thou go and no farther." The Araucanians kept the Incas out of about all the land below Santiago, and it is claimed now that they were never really conquered by either the Incas or whites.

Stubborn Set of Fighters

There is no race which has caused the Spaniards so much trouble as the Araucanians. For three generations they waged a successful war against the Spanish invader, destroying his forts and besieging his cities. They killed Pedro Valdivia, the man who founded Santiago, and it was only inch by inch that his successors drove them toward the south. When they were finally overpowered by great numbers they refused to be the slaves and hirelings of the conquerors. They continued their fighting, off and on, and today they maintain their own identity. They have their own farms, and they lead lives apart from the descendants of the white-skinned invaders, who robbed them off the empire they once possessed. I say empire, for the Araucanian possessions comprised the best part of the Chile of today. Much of it was farmed by them. They grew crops of corn and potatoes, and in the far north they had llamas and alpacas which they got from the Incas.

The Araucanians of that day were very much like our Indians of eastern North America. They did a little farming, but most of them lived by hunting and fishing. They were warlike Indians, and were always ready to fight for their rights. When the Spanish came in the armies raised against them were large. Valdivia was frequently attacked by thousands of Indians, and at one time an army of 10,000 Araucanians besieged Santiago. That was about fifty years after the discovery of America. The Spaniards had surrounded the city with palisades, but the Indians tore them down and set fire to the houses. Indeed, it was only through the leadership of Ines Suarez, a beautiful girl, who might be called the Joan d'Arc of Chile, that the Spainards of this part of the world were not then wiped from the face of the earth. This girl was the mistress of the commander Valdivia. In the absences she assumed the leadership of the troops. She put on a coat of mail, and with her little Spanish army drove the Indians back. During the siege she captured six of the Indian chiefs, and it is said she cut off their heads with her own hands.

Natives Opposed Settlers

During the wars with the Araucanians the Spaniards had much the same experiences that our forefathers had in the days of the colonists. The Indians surrounded the settlements and killed every white man they could get away from his fellows. They bottled the Spaniards up in Santiago and forced them to live on rats and the roots of wild plants. The Spaniards had their starving times similar to those that our colonists had at Jamestown, and during one of these Valdivia, who was the Captain John Smith of Chile, wrote to Charles V of Spain that fifty grains of corn were a good day's ration, and that the corn was eaten both meal and bran. Valdivia carried his fighting far south of Temuco. It was right here that he was once attacked by 40,000 warriors, and saved himself only by charging the Indians with a company of cavalry. The Indians were frightened by the horses, and in the battle 1,000 of them were killed and 400 were taken prisoners. In former campaigns the Indians had tortured the whites, and Valdivia, in order to terrify them, ordered that the right hands and noses of the prisoners should be cut off. After that they were allowed to go back to their tribes.

Fighting of this kind went on for years and during it Valdivia was captured and tortured to death. He was carried, naked and bound, through the woods to an Indian camp, and certain authorities say that the Araucanians poured molten gold down his throat.

But the story of these Indian wars would take many pages. The braves had their great chiefs in the persons of Lautero and Caupolican, now honored by statues in the Chilean capitol. It is enough to say that they were gradually subdued by the Spaniards and their lands were taken from them just as we have taken the lands of our Indians. They are much like our Indians now, being settled upon reservations or upon individual farms, which they are not permitted to sell. The race of the past has been decimated by drunkenness and disease, and it grows fewer every year. It comprises now less than 75,000, and of these about 30,000 are scattered over this province of Temuco and the country adjoining.

Have Divided Reservations

Most of the holdings are in reservations set aside by the government. The lands are not held in common, but are divided among the families, so many acres being given to each person. A baby gets the same amount of land as an old man of 60. If one of the family dies there is a new subdivision of the land allotted to that family, and if the whole family disappears the lands revert to the government. Most of the holdings are patriarchal. The oldest male member of the family controls the property, and when he dies another is selected to take his place. The people have a loose tribal relation and are practically ruled by their chiefs under the Chilean government.

During my stay I have visited some of these Araucanian reservations. The land about is rolling, and that of the Indians is comparatively free from trees. It looks not unlike parts of Ohio and Indiana, and there is nothing to indicate that it is on another continent, and more than a thousand miles south of the equator. The soil is a rich black loam, much of which is now covered with wheat ready for harvest. I am surprised at the extent of the Indian farms and the crops. The farms are mostly worked by the whites or half-breeds, who are hired by the Indians for a share of the crop. On one Araucanian farm I saw a white man plowing and upon another an intelligent Chileno was threshing wheat, using an American thresher. That Indian farmer had about 200 acres in wheat, and his sons were harvesting this with the aid of white men. They used McCormick headers, pushed along through the fields by oxen, yoked to the machine by their horns. The heads of the grain dropped into a wagon, in which they went to the thresher. In this work a white Chileno did the driving and the Indians urged the oxen onward with goads, tipped with iron. The oxen were so cruelly treated that the blood ran down their backs. The white driver told me that he got a percentage of the crop for his work.

Great Dog Lovers

On the edge of this wheat field were a number of Indian huts. Every family had a half dozen dogs, which rushed at me when I came near. At the same time the women scolded and the men scowled as I took photographs of the girls. The Araucanian houses are seldom more than fifteen feet square. Their walls are of boards and their ridge roofs of thatch. There are no windows, and the light comes in through the rude door at the front. There are no yards or gardens about the houses and no conveniences of any description. The only furniture is a bed made of poles, or two or three beds in case the man has more than one wife, which is by no means uncommon. In one of the huts I found two fires going, and over each fire was a wife who cooked for her own brood of children. The floor of the hut was Mother Earth, and it was littered with farming utensils and clothing and saddles and harness. From the rafters hung ears of corn, strings of onions and long strips of dried meat. The place looked like a junk shop.

The sleeping arrangements of this home consisted of two closetlike rooms, partitioned off from the body of the hut by poles and skins. In each was a low platform covered with sheepskins. Each platform was the sleeping place of one of the wives and her share of the children.

Smoke Thick Enough to Cut

I was interested in the cooking. Their fires were in holes in the ground inside the huts, and the smoke was so thick that it could be felt. It had blackened the walls and roof, and when I took hold of a rafter my hand was covered with soot. The cooking utensils were iron pots, resting on stones over the coals. Each pot had a stew, consisting of mutton cut up in small pieces and seasoned to taste. They were roasting potatoes and green corn in the ashes, and the smell was delicious. A great deal of red pepper is used, and it is said that they have a way of killing sheep and peppering and salting its lungs while it is dying. They hang the sheep up by its four legs and stuff the windpipe with this salt and pepper. While the animal gasps under the treatment, they cut the jugular vein and a stream of blood is turned into the windpipe in such a way that it washes the salt and pepper into the lungs. After the death of the sheep its lungs are taken out and eaten raw, having thus been seasoned to taste. At all meals the men are served first. The women act as the waiters, and I eat what is left.

The Araucanians look much like the North American Indians. They are about the best type of the Redmen of this continent and their features are much stronger than those of the Aymaras or Quichuas, who live high up in the Andes. The younger men are straight and well formed. The girls are good looking, and

when young they are plump. They age rapidly, however, and at 40 they have as many wrinkles as a withered apple. These woman have copper complexions and jet black hair. They have square faces with low foreheads and high chek bones. They are proud of their hair, which is long, thick and straight. They bind it up in two braids and wear it down their backs or tied around the crown of the head, so that the braids stand out like horns over the face. The braids are often decorated with silver heads, and their ends are sometimes joined by a string of silver balls.

Fond of Jewelry

The Araucanians are fond of jewelry, and as in many semi-savage countries, the jewelry of the women is the savings bank of the family. The most common ornaments are of silver made in earrrings and breastpins. Some of the earrings drunken, swaying husband. The liquor used here is pure alcohol and the women drink almost as much as the men.

Christians Have Missions

There is some Christian work going on among the Araucanians. The Catholics have one mission and the British and Canadian Protestants another. There are mission stations at Temuco, Quepe and Cholchal, with churches, hospitals and industrial schools. The missionaries have translated Genesis, the Acts and a part of the book of Revelation in the Araucanian language, and have reduced that language to writing.

The Araucanians themselves have no literature, but they have traditions which have come down from generation to generation. Many of them hold to the superstitions of their forefathers, believing in the Great Father and in good and evil spirits. They think every man has

A Chief and Some of His Wives

are of solid silver plates as large as a playing card, with ear-hooks attached, others are discs. Some of the women have silver chains around their necks, and others have their breasts decorated with silver beads. They have also rings on their fingers and beads of silver sewed to the red cloth an their ankles. In the threshing scene which I have described the bags were held by an Indian girl who wore a silver breastpin as big as my two hands; and another nearby had on a coronet of silver coins. These girls wore short skirts and waists, and they had also bright colored blankets over their shoulders fastened with silver buckles in front. The Indian men delight in bright colored ponchos.

The most of the Araucanians drink to excess. I saw some who were sodden with alcohol. On my way to the reservation I drove past an old brave who was so full of liquor that he swayed this way and that on his pony. His squaw rode on the same pony behind him. She was dressed in a bright colored blanket and a red skirt, but her head was bare and her long, black locks floated out on the breeze. Her feet were also bare, and I could see that it was only by pressing her bare heels tight against the flanks of the horse that she was able to keep on, holding the while to the waist of her

a good spirit and an evil spirit always with him and that these two spirits keep up a constant fight with his soul. The evil spirit is supposed to follow him even to his grave. For this reason a dead man is seldom buried at once, and when he is put into the grave the people make noises to frighten the evil spirits away. There are medicine men and witch doctors who are supposed to be able to ward off the evil spirit, and keep it from harming a man and his crops.

The witch doctor is always called in when an Indian grows sick and if he should recover it is supposed to be due to the skill of the doctor. If not, the doctor claims that the patient has been bewitched and he may point out the man or woman who has bewitched him. In the latter event, the relatives of the deceased are liable to attack the person so charged.

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ATTENTION GERMAN FARMERS! My four improved farms to rent on the crop-sharing plan, which will easily double your present income and more, with no additional labor or investment. These farms are situated about seven miles from Millbrook, twenty miles from Laramie, Wyo.; an up-to-the-moment city of 10,000 people, with the State university there and the experiment station on the way. Roads are fine and the rural free delivery stage goes by every day; school within a mile and telephone, too; good, comfortable houses, barns and other buildings. These farms have plenty of water to irrigate with and good, pure water in wells for other uses. They are partly in alfalfa and have been farmed for several years. Can farm a quarter here as easily as an eighty where you are; no diseases to attack stock; hog cholera unknown; climate particularly suited to growing children and those having asthma, throat or lung trouble. Here you can have plenty of cheap feed to fatten stock and have a money-making dairy. Butter-fat brings from 33 to 38 cents per pound; four to five cows will far more than support the family; plenty of cheap pasture. Applicants should have horses, implements and cows. For further particulars write A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

FOR SALE OR EXCHANGE—320 acres, six miles from Millbrook, twenty miles from Laramie, half-mile to school; rural route and telephone; all good, level land; all irrigated; first-class water right; 30 acres alfalfa; good seven-room house; fair barn and other buildings. Price, $65 per acre. 160 acres, seven miles from Millbrook, twenty miles from Laramie, one mile to school; rural route, telephone; all but twenty acres under cultivation; good five-room house, large barn, granary, milk house and other buildings; first-class water right; very best soil. Price, $75 per acre. 320 acres, eight miles from Millbrook, nineteen miles to Laramie, 1½ miles to school, two miles to postoffice; five acres of alfalfa, 20 acres other crops; good fences; no buildings; fine, level farm; can all be plowed; all irrigated. Price, $55 per acre. 80 acres, seven miles from Millbrook, twenty miles to Laramie, 1½ to postoffice, half-mile to school; seventy acres under cultivation, balance good land; all irrigated; first-class water right; splendid producing land. Price, $65 per acre. I represent all the above as owner and have several other farms, some larger. Will exchange for improved farms in Iowa or eastern Nebraska that are offered worth the money. A splendid opportunity for those wanting to change to better climate. A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

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SUDAN GRASS—NORTHERN GROWN seed, hardy and free from Johnson grass. Write for free sample and prices. Henry Field, Shenandoah, Ia.

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LIGHT UP YOUR HOME AND BARNS with the best and safest Out Door Acetylene machine. Write for prices. Edward Hayne, Ottawa, Ill.

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"Sold Out Three Times Over"

Beatrice, Neb., Sept. 13, 1914.

Twentieth Century Farmer:

We received answers from all parts of the country except New England and the Pacific coast. There were enough orders to have sold us out three times over.

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POULTRY—Langshans

BLACK LANGSHAN COCKERELS. Write Jake Hetrick, Wahoo, Neb.

FULL BLOOD BLACK LANGSHAN cockerels, $2 each, guaranteed. H. Osterfoss, Hedrick, Ia.

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ROSE COMB WHITE LEGHORN cockerels, $1 each, six for $5. Mrs. Nellie Coder, Elwood, Neb.

850 SINGLE COMB BROWN LEGHORN hens, pullets, cockerels, 75c to $2 each. E. Dooley, Selma, Ia.

SINGLE COMB WHITE LEGHORN yearling hens, $1 each; satisfaction guaranteed. Will Henderson, Central City, Neb.

FOR SALE—300 S. C. WHITE LEGhorn pullets, half to two-thirds grown, 75c each; 100 R. I. Red pullets, $1.50 to $2 each; 200 R. I. Red White Plymouth Rock, White Leghorn and Buff Orpington cockerels, $2 to $5 each. Keystone Poultry Farm, Guy E. Schreff, Mgr., Lincoln, Neb.

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BUFF ORPINGTON CHICKENS, $1 to $5. Mrs. Belle Merrick, Osceola, Neb.

CHOICE COCKERELS, ROSE COMB Buff Orpingtons; prices reasonable. Fred Husmann, Leigh, Neb.

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WHITE ROCK COCKERELS, $1.25 TO $1.50 each; the white kind. Mrs. George Hellbusch, Belgrade, Neb.

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BARRED PLYMOUTH ROCK COCKerels and pullets for sale; large, heavy bone, deep, narrow barred, good laying strain; guarantee satisfactory; show birds a specialty. G. W. Feuerstein, Fremont, Neb.

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MARKET PLACE

POULTRY—Plymouth Rocks

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BOURBON RED TURKEYS—TOMS, $4; hens, $3; trios, $10; old trio, $12. Mrs. D. W. Shipp, Belleville, Kan.

FOR SALE—HIGH-GRADE BOURBON Red turkeys, toms and hens; also Rhode Island Red cockerels and pullets. Write for particulars. F. M. Kern, Springville, Ind.

FOR SALE—TURKEY TOMS, $4.50, $3 50 and $3; hens, $2.50, and an extra hen, $3. Going to leave the farm. Eliza Smith, Route 1. Aurora, Neb.

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SILVER-LACED WYANDOTTES—A specialty of English strain. A few fine cockerels and pullets for sale from a pen of as good layers as the best, barring no breed. W. H. Mead, 404 East 10th St., Fremont, Neb.

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COLUMBIAN WYANDOTTES—BEAUtiful, luscious for table, winter layers. S. D. Fitchie, 501 E. 16, University Place, Neb.

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INDIAN RUNNER DUCKS. MRS. Derrick, Battle Creek, Neb.

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TOULOUSE GEESE, $5 PAIR, $7 TRIO. C. W. Humes, Waterloo, Neb.

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SEVERAL NEW SAFES, GOOD FOR home or office, below cost. Write Dr. Bradbury, Dentist, 1506 Farnam, Omaha.

DOGS

FOR SALE—SCOTCH COLLIER PUPS —Parents heelers, $5 each. Eugene Burkett, Herman, Neb.

Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

Twentieth Century Farmer: In your November 7 issue I note a letter from a specialty fancier of Barred Rocks, giving his ideas on the pullet line. I fully agree with this party as far as the pullet line is concerned, but believe that more can be said about the cockerel line. Undoubtedly he has compared a good pullet strain with a poor cockerel strain.

After several years' experience with both lines of Rocks, I believe that the cockerel line can be brought to just as high a state of perfection for utility purposes as can the pullet line. The beauty of the cockerel line is in the male and the beauty of the pullet line is in the female. We have ten or twelve females to one male; hence we have a greater percentage of better appearing or exhibition colored birds in our pullet mating. True enough, the pullets as they are mated for the breeding of the pullet line have more of the beautiful of the breed in them.

Now let us notice them in the show room. Is not the choice specimen of exhibition cockerels just as rare and beautiful as is the pullet? To be sure, it takes dark females to produce these rich-colored males, but what about the extremely light, silvery, colorless males of the pullet line? They look no better in their class than do the cockerel-bred females.

As far as utility is concerned, there are many cockerel-bred strains that are just as good layers as the average pullet line. The fact of the matter is that the average breeder has been selecting the larger females of the cockerel line for the purpose of producing more massive males, while the pullet line has been allowed to decrease in size. It is among the smaller and more active birds that you will find the best layers. The American Poultry association has cut the weight of the exhibition pullet from six and one-half pounds to six pounds because so many breeders have complained they could not keep their pullets up to six and one-half pounds. Select the medium sized and more active birds of the cockerel line and you will have better layers, just as you will in the pullet line. We urge that all breeders of Barred Rocks maintain and strive to improve both the cockerel and pullet lines. ARTHUR GILLETTE.

South Omaha, Neb.

Ducks and Turkeys

Reader, Wyoming: You ask about the hardiest, home-staying turkey. The White Holland gets that name among breeders who have kept several breeds. It is considered of quiet, contented disposition and gets the credit not only of laying more eggs than other breeds, but of excellent meat quality and maturing in its first year. As to your question about ducks, will say that ducks are considered hardy and take on few diseases to which young chicks are subject. A duck's legs are its weakest part. Feeding it too heavily, and especially if sand and the right amount of fresh water are not given, is nearly sure to bring on indigestion. The legs go lame, give out entirely and the duck dies. The Indian Runner duck is not so large as the other standard breeds of ducks and does not fatten readily. That it is the

Poultry and Fruit Growing

The combination of poultry raising and fruit-growing has a number of advantages.

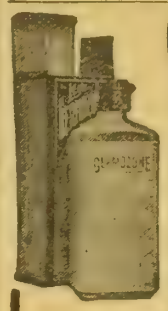
In the first place, with land worth up to $200 an acre, it is certainly economical to combine the poultry yard with the orchard, or part of the orchard, simply to utilize your ground to the best advantage.

Then, besides making double use of this part of your farm, the combination offers the advantage of furnishing the shade that is absolutely necessary for your birds in the summer time, especially if you are breeding a white variety. The direct summer sun will give the very whitest bird a yellowish color around his hackle and on his wing feathers.

Not the least benefit of such a combination will be that the poultry will help rid the fruit trees of the many insects and worms that ordinarily do considerable damage to trees. At the same time this supplies your birds with the necessary meat part of their diet.

And poultry manure is the richest of fertilizers outside of expensive commercial fertilizers. You will find that when there are trees in the yard where poultry are constantly kept the trees will grow faster and produce fruit earlier and in greater quantities than if poultry are not confined in the same yard.

Always plant trees in the middle of the poultry run so the birds will not find it easy to fly up in the lower branches and from there to the top of the fence.



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Get the Eggs NOW While Prices are High

GILBERT HESS, Doctor of Veterinary Science, Doctor of Medicine

This is the time of the year when the price of eggs is high and your hens ought to be making up for the small egg crop during moulting.

But hens need a tonic during the winter months, because the lack of exercise and green stuff and also close confinement impairs the digestion, makes the system sluggish and the egg organs dormant. With the knowledge I have gained in a lifetime experience as a veterinarian, doctor of medicine and successful poultry raiser, I have succeeded in compounding a scientific preparation that will make poultry healthy, make hens lay and keep the egg organs vigorous and active.

Dr. Hess Stock Tonic

Your cows, horses and hogs are pretty apt to get out of fix during winter, because grain, hay and fodder do not contain the natural laxatives and tonics so abundantly supplied in grass. Lack of exercise is another thing that retards good health.

Dr. Hess Stock Tonic contains tonics that improve the appetite and tone up the digestion, laxatives for regulating the bowels, and vermifuges that will positively expel worms. I guarantee it. 25-lb pail $1.60; 100-lb. sack $5.00; smaller packages as low as 50c (except in Canada, the far West and the South).

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks, or if kept in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans, 1 lb. 25c; 3 lbs. 60c (except in Canada and the far West). I guarantee it.

Dr. Hess Poultry PAN-A-CE-A

contains ingredients for toning up the digestive system and enriching the blood. It also contains tonics for toning up the dormant egg organs and making hens lay, internal antiseptics for preventing and remedying gapes and other ailments, also bone and shell forming ingredients. Every single ingredient in my Pan-a-ce-a (printed on every package) bears the recommendation of the U. S. Dispensatory and other high authorities. Now read this carefully:

So sure am I that Dr. Hess Poultry Pan-a-ce-a will make your poultry healthy and make your hens lay that I have authorized my dealer in your town to supply you with enough for your flock, and if it does not do as I claim, return the empty packages and get your money back. Buy now on that guarantee.

Sold only by reputable dealers whom you know, never by peddlers. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50 (except in Canada and the far West). Pan-a-ce-a costs only 1c per day for 30 fowl.

My new poultry book tells all about Pan-a-ce-a. It's free.

DR. HESS & CLARK, Ashland, Ohio

THE BROODER OF PROVEN MERIT

When you use this brooder you do not *hope* for good results—you are *sure* that it will raise your chicks. It is not an experiment—it has "made good". Thousands of poultrymen in all parts of the world testify to this. They know because they have tried it! The

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is the machine for you if you value a record of actual performance above mere claims of efficiency; if you desire to raise the most and best chicks at lowest cost.

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101 Acres, $4,700. Easy Terms. Stock, Tools and Crop Included.

[illegible] cows, 2 calves, pair horses, poultry, [illegible] tools, dairy utensils and crops go with this splendid New York farm if taken [illegible] 2 miles [illegible] produces fine general crops, [illegible] for 30 cows; 15 acres wood; 50 fruit trees, [illegible] maples; 2-story 8-room dwelling, big cellar, telephone, running spring water house and barn, basement barn, 40x60; only one mile to [illegible] pike; must go; everything for $4,700, easy terms. Full details and travelling directions, page 1 "Strout's New Winter Farm Bargains," copy free. STROUT FARM AGENCY, Station [illegible] W. [illegible] New York

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New Principles in Incubation. Every feature automatically regulated — heat, ventilation and moisture. The Mandy Lee is certain, simple, easy to operate. No chance for mistakes, simply follow plain rules. Chicks large and vigorous, the kind easily raised. Write for free books on incubator and Lee's famous Germozone, Lice Killer and Egg Maker.

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egg layer of the duck family quite likely accounts for this last.

Metal or Wooden Incubators

Subscriber, Nebraska: I have used both wooden and metal incubators. I have never found a difference in hatching quality. Quite likely in case of fire the metal might be safest, but wooden incubators are now made safe against fire unless the operator is grossly careless. Some operators declare that some of our wooden incubators are not extra heat holders because of thin walls. I have not found this true, and in cold weather I found it easy to add extra protection by hanging comforts or blankets about the incubator and placing a folded comfort on the top. This last I find best to do, even up to warm weather, if the regulator is r ' placed on top the machine. Even in this case one can manage to place a covering on top and about the regulator.

The Guinea Fowl

L. A., Nebraska: Yes, the guinea fowl will pair if enough of both sexes are kept. It is the hen that gives that funny, shrill cry that sounds like "Come back, come back." The male is quieter, and when calling usually says something like "Tick, tick." He is larger than the hen. There are two kinds of guineas—white and pearl. The latter has those round spots like white pearl buttons strewn over its coat. It is said that crossing the two produces a bird that is so near like a grouse in taste when cooked that you could not distinguish the two apart unless told. Guineas usually begin laying in April and continue laying the spring and summer through. They hide their nests, and several incline to use the same nest. When leaving the nest they make a peculiar noise that will enable you to locate it easily if on the watch. Guineas are safe in the garden because they do not scratch like chickens; they merely sprint about, picking up more insects in an hour than a hen would in a day. It is best to set the guinea eggs under hens and in a deep box, as the little ones run away as soon as hatched. They must be fed soon after hatching. The guinea egg holds a fine flavor.

Chickenpox and Egg-Eating

Mrs. B., Nebraska: If your sick chickens show hard, warty lumps on the eyes, comb or about the mouth, then it is genuine chickenpox and not real roup bothering them. Kill off the afflicted or quarantine them. Feed the flock plenty of sulphur in a mash feed and thoroughly disinfect poultry houses and grounds. The egg-eating habit is not always brought about by hens eating eggs broken in the nest or from eating eggshells. I have never had it start in this way. It is true that any hen will readily eat every broken egg she can find, although she would not think of touching one not broken. Hens that are fed on evenly balanced ration, with some meat scrap, seldom, if ever, become egg-eaters, especially if kept on range. Shut the active breeds up and sometimes they get into bad habits. Sometimes keeping hens penned without male birds present will lead to egg or feather-eating. Don't give all the skim milk to the hogs, or buttermilk either; give it to your chickens; they will be healthier and not so apt to take on the habits you tell of. If you provide plenty of oyster shell and grit you will not find so many soft-shelled eggs.

Short Poultry Paragraphs

Squabs cannot see until 8 days old. A good weight for dressed squab is eight pounds to the dozen; while some go over this, they will often come under this weight.

* * *

Any kind of a fowl—chicken, duck, goose, etc.—that shows a wry tail and crooked back, both or either, is disqualified from entering the show ring, no difference how high it ranks in given points.

* * *

The Wyandotte received its last name from a coasting vessel of that name. It was given to them in 1883 when entered in the American Standard of Perfection. Before that, according to their color, they were American Seabright, Mooneys and a number of other names.

* * *

Bear in mind that healthy chickens need no medicine or stimulants of any kind, even to make them lay, and that the fat fowl is the lazy fowl. Close confinement tends to teach the hens' bad habits, such as egg or feather eating, and the hen that gets good exercise turns food faster into eggs than the hen movin about in a listless way from one short corner to another.

* * *

If you have found your chickens, one or two at a time, lying about or in the coops with the head and neck eaten off, you may conclude that an opossum did the work. If a dozen are piled together, with a hole in the head or throat, then a mink or weasel has been about. A rat in a coop will kill a large number and gnaw at any part of the body, then drag some away if it is possible to get them out of the coop. Minks and opossums seldom, if ever, drag away a fowl after killing it. Groundhogs will drag away chickens they kill and will drag away a lamb as surely if given the chance.

* * *

The North Dakota experiment station has been making investigations into fowl tuberculosis. Their findings point to old chickens as showing a peculiar susceptibility to the disease. The young, if kept in lighted, well ventilated houses, show a strong immunity from the disease. The conclusion to be reached in yards where this trouble is to be found is to keep none but young stock, killing off the old birds.

Careful Not to Injure Park Trees

It is said that the German invaders of Belgium, whatever else they may have destroyed, have been careful not to injure park trees. The cavalrymen, so a report goes, are forbidden to tie their horses to trees for fear that the animals will gnaw the bark. Germany was the first nation to apply forestry on a large scale, some of the crown forests having been under scientific management for over a hundred years.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Lower Rio Grande Valley

Mr. Editor: Will you please put this letter in your valuable paper? It is designed to prevent farmers and others from investing in a losing proposition.

The lower Rio Grande valley in Texas is a good place to stay away from. Why do I say that? Because at first sight it is a most alluring proposition to a prospective land buyer, or, as they call them there, "land suckers," and a most disappointing reality to the actual settler. Never before had it been my lot to live among a people who, for the most part, were disappointed and anxious to sell out and get away, and they are getting away as fast as they can. Nearly every train lately pulls one or more "emigrant cars" leaving the valley. Many of those leaving have lost about all the money that they invested there. Now you are ready to say, "What is the matter, is not the valley productive?" Indeed it is. Very productive; I never saw more productive soil anywhere. It will produce a good crop of corn, that can be followed by a crop of sorghum cane for hay. Then that can be followed by a crop of "truck" as a winter crop. What, then, is the trouble if all this can be done? In the first place, the land in the brush is sold for from two to four times its real value and the markets for most crops are local and, therefore, very limited. The irrigation systems for the most part are very unsatisfactory, and unless the government takes hold of the proposition they are likely to remain so. Farmers have gone to the water offices with guns demanding water to save their crops, and there are many claims for damages on account of crops being ruined for a lack of water.

People are leaving the valley by the score; almost any day one may see "emigrant" cars leaving the valley. One man remarked: "If all the people who want to leave the valley could get away there would not be enough left to bury the dead."

There are many pests in the valley. Fleas by the million, ants and birds make it hard to get a good stand of corn and the weevil destroys all kinds of seed crops. You can hardly buy seed of any kind for planting that is not weevil-eaten. There are many other pests that make living there unpleasant.

The climate suits some and others cannot live there. The winters are mild, the summers hot, but there is generally a cool breeze from the gulf. The wind and dust were fierce all through the months of June, July, August and a part of September. No one pretends to keep a house clean on account of the dust.

I will say, further, about the price of land: Many good farms under cultivation can be bought for from $100 to $150 per acre. The drinking water in the valley for most part is very poor. The truck business is a snare and a delusion and he who undertakes it is not wise, for if he persists in it he is sure to "go broke." The fruit business is in the experimental stage, with the chances against it. The way the chances for making money in the valley are misrepresented is something fierce.

I have just returned from the valley after a residence of several months and I have investigated the matter pretty thoroughly, and the above is a correct statement of conditions as I found them, and I could write much more of the same nature, but this ought to convince any sane man that the valley is a good place to stay out of at present. Many farms can be rented there by just paying the water rent—that is, the renter pays the irrigation company for water, whether he gets it or not, and the owner gets nothing.

Any further information can be obtained by addressing W. L. JONES,
Williamsburg, Ia.

Editor's Note—The information given in this letter tallies with the report of Prof. G. E. Condra of the University of Nebraska. Also with the investigations of one of the editorial staff of the Twentieth Century Farmer, who looked into the matter of water rights here a few years ago.

Corns On Horses' Feet

E. D., Iowa: Please advise me how to care for corns on horses' feet. Is there any cure or a temporary help?

Answer—Corns are caused by ill-fitting shoes or by wearing shoes too long. Remove the shoe and cut away the corn with a sharp knife. Bathe with weak carbolic acid solution; then put on a poultice of bran and linseed. The horse must not be shod or used or allowed to stand on a hard floor until it is completely healed. Then have him reshod in properly-fitting shoes, with a piece of leather used as a protection.

Southern Land Information

Sixteen of the southern states have formed an organization, called the Southern Settlement and Development Association, for the purpose of making southern opportunities better appreciated. They claim that land in the south can be bought at prices which will bring very large returns to those who will handle it intelligently. Under present conditions, land in the south can probably be bought at a lower price than it is probable again in the future. Their literature may be obtained by writing the Land Department of The Twentieth Century Farmer.

Missouri Farmer Needs Corn

A. B., Bowling Green, Mo.: I understand that a part of Nebraska, Kansas, and Iowa, have a good corn crop, so I thought perhaps you were in position to tell me what part of Nebraska and perhaps the other two, also would be glad to have the names of some men who handle and ship corn and also would be glad to have the names of some farmers who raise large corn crops. Would like to have the list of shippers' names and growers separate. For any or all of this information, I will be very grateful as I want to buy some corn.

Note—Nebraska and Iowa both have a good corn crop as a whole. D. R. Ellis, Secretary of the Nebraska Farmers' Co-operative and Educational Union, Omaha, is in touch with a large number of farmers having corn and other farm crops for sale. He will answer any inquiries of this kind free.

Hay Quarantine Modified

The regulations governing the shipment of hay, straw, and similar articles from states quarantined on account of the foot-and-mouth disease have been modified so that hay cut before August 1, 1914, may be moved freely without reference to the time when it was baled. Hitherto it was required that in addition to being cut before August 1 the hay should have been baled before October 1. The provision, however, that since being cut the hay should have been stored away from all cattle, sheep and swine, remains in force.

In the case of hay that has been cut since August 1 or which has not been kept away from contact with any possible source of infection, disinfection under Federal superision is required. This disinfection should be accomplished by fumigation with formaldehyde gas.

Fall Planting of Fruit Trees

The planting of trees and small fruits in October and November was quite generally practiced in the eastern states years ago, on the theory that when there was a liberal rainfall in the early autumn season the chances for growth were much better than with spring planting. The idea was that the ground would have plenty of time to settle firmly around the roots before freezing weather, and that when spring opened up the tree would be in good shape to start off in a vigorous growth.

The conditions, however, are not always the best for fall planting, especially in the western districts, as excessive dry, windy autumn weather often prevails, and to an extent that leaves the soil very dry and not in the best condition to encourage plant or tree growth. In fact, the fatality under such circumstances has been very discouraging with tree planting. The opposite condition, that which now prevails practically all over the central western states, has offered excellent advantages for a successful fall planting of trees and bushes, which has been extensively embraced by many of the interested orchardists who are planning for extension of their fruit growing resources or the replacing of old orchards.

The autumn planting season applies equally well with grapes and all small fruits and can be practiced so long as the weather holds good and the ground is in condition for planting.

Proper Handling of Annual Meat Crop

(CONTINUED FROM PAGE FIVE.)

nose reaching to within four or five inches of the ground. I notice that some advise leaving the head on till the hog is being cut up, but we remove that member as soon as the body is hung and rinsed off with hot water, followed by a dash of cold water.

The intestines then are carefully removed and the slit down the belly is spread apart and held open by small sticks, so the body will thoroughly cool. When the meat is completely chilled the carcass is cut down and laid on a clean scaffold of boards for being cut up.

After removing the leaf lard and ribs, a four-inch strip is cut directly down the center of the back and the backbone is removed. The hams, sides and shoulders next are cut and the feet removed. Place the meat in a cool spot till all animal heat is gone, then salt well, rubbing it in pretty thoroughly.

Packing Meat for Winter

Let the meat lie over night without any further handling. The next morning give the meat another light salting as it is being packed in the barrel.

The meat is placed in the barrel in layers, it being packed closely together. We have preserved it in this manner through the entire winter and well up into the following summer—to meat-smoking time.

It should be added here that the hams and shoulders ought to be closely trimmed and the trimmings made up into sausage, as this meat will be useless after passing through the curing process and shrinking so much as it dries out.

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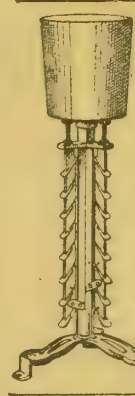

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Better Sheep at State Farm

What Nebraska College Should Do

NEBRASKA is now exhibiting some ambition in laying the foundation for sheep improvement in the state. The animal husbandry department of the College of Agriculture has introduced some very interesting and valuable sheep feeding experiments, involving the purchase of 250 high grade mutton-bred lambs of good quality. This feeding enterprise is now installed under the feeding management and direction of Prof. H. J. Gramlich of the animal husbandry department, and will be worked out under the usual out-door feed yard accommodations. It is designed to carry out five separate tests in feed combinations, using fifty lambs with each flock. The experiment will last 100 days and is for the purpose of comparing a ration of alfalfa hay with one of corn silage and also a medium with a heavy feed of corn in connection with alfalfa and corn silage. At the North Platte station a similar experiment has been started with 300 western lambs to show the results under western Nebraska conditions.

Nebraska has from the beginning of the range sheep feeding business been prominent with its big yards full of sheep. The most active demand now is with the farmer feeder, the small feeder who wants to feed the produce of his own farm to the most economical and profitable advantage. The state farm feeding experiments will come more nearly satisfying this demand for information than can be had from any other source. The keeping of a dozen or so of sheep and the feeding of them under any system or test is not accepted as a practical demonstration. It presents too much of the breed-flock management to suit the practical feeder.

One of the greatest demands in this department of the state farm, is a sheep breeding division. There is great need now for such a division to be established, and upon a basis that would be a credit to the state. The state of Nebraska could not do a more commendable thing than to purchase the foundation for half a dozen flocks of sheep, representing that number of the most popular breeds. of sheep in the country. These purchases should be made in view of getting the best in quality, pedigree and reputation of flocks.

A college or state farm that deals in inferior, common or undesirable animals, or maintains them, unless for slaughter, is not only doing the cause of pure-bred animals an injury, but is of no service to the state from the standpoint of the pure-bred breeding industry. The state farm of any state should be to the farmer and stock raiser a place of reference, a source of information on all matters pertaining to agriculture and live stock, breeding and feeding.

The pure-bred flocks and herds kept at the state farm should be of a quality and reputation that would be recognized throughout the state as equal to, if not the best in the state. Nothing serves a better purpose for the advertising of a state farm, animal husbandry department and agricultural college than the sale of its superior breeding animals. This statement is vouched for in Nebraska by the produce of Katy Gerben and other noted producers that the state farm has bred and raised. What is true of one department should be made true of all.

The suggested reform cannot be brought about by any other system of breeding up; it may be helped. Time is too valuable a factor for the equipment of such an institution by this process. Buy the best, then keep it on the upward tendency by skillful breeding, feeding and management. Nebraska cannot afford to offer any apologies, for any department, when it comes to its equipment and resources for successfully producing the best in blood and breeding. Nothing but the best should be purchased.

Beet Top Poisoning.

The time has arrived when we will expect to be called on to determine the cause of death of animals that have been largely fed upon beet tops, says Dr. I. E. Newsome of the Colorado Agricultural college.

Every fall many sheep and cattle are lost, due to a misunderstanding of the method of feeding tops. Too often cattle and sheep are required to make practically their whole ration of tops, and may die as a result.

There seem to be three explanations. The first is that the tops get moldy in the piles, thus setting up severe digestive disturbances; another is, all tops contain oxalic acid to some extent and this may be poisonous when taken in too large quantities. The third is that the crown of the beet may contain a substance, probably sugar, which is injurious, more especially to sheep. In many cases where a number of animals have been lost, the removal to new feed has been sufficient to effect a cure of the remaining animals. Beet tops are of some value when used as an auxiliary to the ration, but as an entire ration they become dangerous.

Southern Feeders

The basis for feeding plans depends upon the crop supply, and the crop supply depends upon the favorable or unfavorable conditions of weather governing through the crop-growing period. Thus we see the corn belt districts of the United States placing practically all their faith in the successful maturing of a big crop of corn as the key for feeding operations. This is the result of the custom over this district of placing corn in the front as the main feeding crop.

In the south the big farm crop is cotton, and in recent years, since the cattle-feeding industry has developed, there is great interest among the prospective feeders in the success of the cotton crop. The cotton seed products are to the Texas cattlemen what the corn crop is to the feeders of stock in the upper Missouri valley corn states.

Texas cattle owners are now quite jubilant over the prospect of wintering their cattle cheaply on wheat pastures and with cottonseed meal, finishing them for the early spring market. These conditions have developed within recent years, and the cotton crop is now regarded as of much feed importance to the southern cattle handler as the corn crop is to the corn belt farmer and feeder.

A bale of cotton in the rough weighs about 1,600 pounds. After it is ginned the cotton weighs 500 pounds, leaving about 1,100 pounds of seed. In one ton of cottonseed there are about 1,250 pounds of meal, the balance being hulls. The extensive use of cottonseed meal in the feeding operations of the entire country suggests the possibilities of the development and growth of live stock feeding over the southern states, where but comparatively few cattle are now kept.

Protection for Farm Papers

Every farmer has papers of more or less value that should be placed where they cannot be lost. He has his deeds, insurance papers, tax receipts and many other papers that should never be destroyed.

Some farmers have a safety deposit box in some bank in the city, others have these papers in a little tin box in the vault of the bank at which business of that nature is transacted; others have them carefully tied up and placed in a pigeonhole or drawer in the desk at home, while others may have them and may not, depending on whether or not they can be found when wanted.

Some of our farmers are breeders of pure-bred live stock of different kinds. These are very valuable animals, all recorded, each one having a certificate of registry, which is in possession of the owner of the animal. The pure-bred stock breeder also keeps a herd register of his animals. The certificates of registry, pedigrees of animals not yet recorded and the herd register are very valuable to the owner, and serious consequences would result should any of them be lost or destroyed.

We have visited many breeders of pure-bred live stock and had occasion to consult the herd register and some certificates of registry. Generally we have found these very valuable papers kept in the desk. Very seldom do we find the farmers with a fireproof safe in the house.

It is very inconvenient for the pure-bred stock breeder not to have his certificates of registry at home. He must also have his herd register at home. How many of us stop to think what the actual loss would be if these papers and books should be misplaced or destroyed by fire? In many cases the record of many of these valuable animals would be absolutely gone and in consequence the value of the animal reduced to just what it would weigh out.

The item of outlay for a small fireproof safe, large enough for the farmer's needs, would not be large. It is just the same as insurance on your buildings or live stock. Can any farmer afford to do without this protection, especially the man with a valuable herd of pure-bred live stock?

What is the Matter with Rural Schools?

(CONTINUED FROM PAGE THREE.)

chewer, whose highest ambition is to be the best dancer in the neighborhood or to have more fellows than the other girls have, whose supplimentary reading is the fashion magazines, and whose delight is to lock the door on Friday evenings and to hurry back to town, losing herself to the community until the following Monday.

I tell you, teaching is not mere child's play. If done right it is a job for a full grown man or woman, and you country people must get that kind if possible.

More Men Teachers Needed

And I wish we had more men teaching. Many counties employing from eighty to a hundred teachers have fewer than ten men. Often the man can win a big boy and keep him in school where a woman cannot.

But whether man or woman, the rural teacher must be familiar with rural life. She must know the character of country children and, above all, must love the country and believe heart and soul in its future; she must delight to visit the farm homes, to attend the little church and become a part of her little community. Country people are more sociable than town and city people; they are more appreciative, and yet teachers want to get into graded schools. Of course, they have to start in the country. It is very unusual for a girl to get into the graded school until she has taught a year or two in the country. She isn't good enough, you know, for city people, so she practices on your children and brings the town the benefit of what she learned at your expense. This isn't right, and farmers ought not to stand for it. If a teacher is number one, better pay her $5 or $10 a month more than the town school can pay, or than she can earn as a seamstress, clerk or stenographer, and keep her with you. There is nothing gained by changing every six months or year, or yet every two years. Every new teacher is a speculation, and when one has proven her worth, why speculate any more?

No teacher can do her best in any school the first few months or year; she must know conditions; she must know the pupils' parents and patrons, and they must know her. They must get acquainted in order to help each other. How fine a thing for a teacher to graduate from the eighth grade the lads and lassies whose first day at school was spent under her kind direction and whose childhood has passed serenely under her guiding influence. How proud she is of them, and they of her. Why, they actually cry when they have to leave her and go to town school, and she, too, sheds a tear in joy of work well done. "Oh!" you say, "this is visionary." It isn't, either. I have seen the thing happen a time or two and I know what I am writing about. It might happen in your district under proper conditions.

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Review of Live Stock Market

By A. C. Davenport

THE live stock business of the country has been moving along in a sort of humdrum fashion with practically no new developments during the last two weeks or more. The quarantine on account of foot and mouth disease continues a big handicap and really has been the dominating influence in the trade ever since its establishment.

As noted before in these columns conditions are more or less abnormal and the markets have been forced out of their natural course by the necessity of protecting them against the danger of disease infection. While the states and markets under quarantine remain practically the same as a week ago there are strong hopes among live stock men that the very near future will witness a release from quarantine of at least some of the territory now covered by it. Operators at the big market centers are especially anxious that the government should release territory a little at a time as rapidly as conditions will warrant instead of holding it all under quarantine and releasing the whole territory at one time. It is feared that the latter policy would bring a flood of shipments to market centers that could hardly result otherwise than in breaking prices down badly.

As regards cattle values there is really nothing to be added to the statement made a week ago. The market has fluctuated to some extent and prices are just at the present time quite a little higher at most points than a week ago. Still the trade has not been overly brisk owing to the somewhat limited demand for the product at big consuming centers.

Reduced Consumption of Beef

The newspaper talk about diseased cattle has had a very marked influence toward reducing the consumption of beef, the public not appearing to realize that the rigid government quarantine is the very best protection in the world against the possibility of meat from diseased animals being offered for sale. While the markets have not been to the liking of sellers still it must be borne in mind that prices compared with other years have ruled high.

Hogs have fluctuated to a considerable extent, but without any great change in final results. The bears in the hog trade appear to be increasing in number, while the bulls have been losing much of their confidence. The former are pointing out that every day that the quarantine continues will make it still more difficult to maintain prices. The fact that the market is only about holding its own, while several of the big hog states are unable to ship anything, is in their minds a good indication that when the quarantine is raised and all the hog states are able to ship their natural quota prices must break sharply. A good many operators on the market are advising their friends located in unquarantined states to ship out their hogs as fast as they are ready for market on the ground that present prices are good and that there is no hope for future values being any better while there are several reasons for believing that they might be a good deal lower.

About the only bull argument one hears advanced by hog men is based on the prevalence of hog cholera, which is carrying away a good many hogs in some localities. The quarantine, which has been extended so as to include a good many manufacturers of serum, is making it more difficult than ever before to fight the disease. Still, reports up to the present time do not indicate losses of sufficient importance to warrant a belief that there will be any shortage noticeable in receipts.

Sheep Men Are Benefited

The sheep men in unquarantined states with fat sheep or lambs ready for market seem to have been benefited largely by the quarantine. So much of the fat stock has been tied up in quarantined states that there has been a shortage of desirable offerings above the quarantine lines. As a result prices have been better than for some time previous at this season of the year. It is needless to add that wherever it has been possible to do so sheep men with fat stock on hand have unloaded freely at highly satisfactory prices.

Sheep men take very much the same view of the future as do the majority of hog men, that is they figure that when the quarantine is raised and the large number of sheep and lambs now tied up in quarantined states is released a much lower range of prices must be expected. It might be added in this connection, however, that the expectation of lower prices is limited more especially to lambs, as the number of sheep on feed is not believed to be very large and prices on that grade of stock ought to hold up better than in the case of lambs.

Stock men are already beginning to figure on the probable effect of the foot and mouth disease upon future supplies of live stock. It is pretty generally agreed that coming in the fall the quarantine has prevented feeders from putting in as many stock and feeder cattle and sheep as they otherwise would have done. Had the disease broken out early in the season the effects must have been more far reaching, but as it is a good many are estimating a shortage in the number of cattle on feed east of Chicago as fully 50 per cent in many localities, as compared with last year. Most of the states under quarantine were already reporting fewer cattle on feed than usual and the quarantine has prevented such states from getting additional supplies from the west.

While the quarantine has to all appearances decreased the number of cattle going on feed, it has also temporarily held back fat stock. It has also had a tendency to decrease the consumption of beef as noted above. These two influences must have some influence on final results, but still all indications point to a big decrease in the supply of fat cattle for the first half of 1915.

Automobile Necessary Machine

(CONTINUED FROM PAGE NINE.)

or, if used outside, then set the frame carrying the four pulleys and bearings either in a platform that will be large enough for the entire length of car so it can be moved around; or, if in a permanent place, then set the mechanism underground. The device as shown is not very expensive and will not injure the automobile.

Those that have used only one rear wheel of their automobile for transmitting power have found that the compensating gears in the differential on the rear axle soon play out and cause trouble. This is because the compensating gears in the differential case of a rear axle are designed only for turning corners, and if only one rear wheel is used, then they are doing double duty; whereas, if the automobile is used as we have described, the gears we refer to have no work to do because they then operate as one common unit and not as a planetary as when used otherwise. Another advantage is that the automobile can be run onto the power jack, and when the work required has been done the automobile can be used for pleasure or business without taking off or putting on pulleys, wheels, etc.

The size of the driving pulley, D, on which the belt, E, runs can be varied to meet the speed required on the machine you are furnishing power for. For example, if you want to run a cream separator at high speed, then put the belt over one of the pulleys, C, and then run the auto onto the power jack. One tire of the rear wheels will then rest on top of the belt and it will be the same as belting direct to the auto wheel, yet the other auto wheel will also transmit its share of the energy or power.

This device also permits the use of the transmission of the auto to start up, or for heavy work you can set the shifting lever of the transmission in low. Further information will be cheerfully furnished by this department.

What Causes Blisters?

I have a steam traction engine and the fire box has several bulges around the lower part just above the mud ring; also a few similar blisters have started on the crown sheet. The fire sheet is all right. The blisters or bulges are about the size of a base ball cut half in two. I have had a boiler man look at my boiler and he says it will have to have a new fire box and crown sheet. Can you tell me what to do or if there is any way to fix it without going to the expense of a new fire box? Also, what is the cause of the blisters?—A. J. N., Nebraska.

The blisters you refer to in your fire box were caused by negligence in handling the boiler. Improper cleaning or blowing off, especially if dirty water has been used, has allowed the sediment, which is mostly lime and mud, to become baked to the crown sheet and has settled on top of the mud ring. The result of this prevented circulation of water and the heat from the fire has partially burned the metal or made it red hot, which, when under pressure, was bulged out. Sometimes fractures in the shell are caused which usually result in serious damage.

You did not mention any leaks either in the blisters or stay bolts, so we will take it for granted that there are none. The fire box and flue sheet can be repaired by putting in a new section of plate to take in the affected sections. A better plan would be to repair the damaged sections by the autogenous welding process. Each of the bulges or blisters can be driven back into place, additional metal added with welding torch and then chipped off smooth. This operation, if properly done, will not show or leave any defects. It is possible that a few stay bolts will have to be replaced, but the replacements of the entire fire box (unless it is otherwise defective) is not necessary.

We can furnish, upon request, names of firms who handle repairs such as you describe.

Can Have Ignition Changed

My father and I have decided to let you settle an argument for us. Dad claims that our 10 H. P. gas engine, which has a make and break sparker, cannot be changed to a jump spark like an automobile engine has got. I claim it can, and we want you to tell us if you can, or send us the name of someone that is able to tell us.—L. H., Iowa.

Your ignition can be changed with very little trouble or expense. If you will supply us with maker's name and model we will give you all the instructions necessary to make the change, and any automobile man or gas engine mechanic will be able to change your ignition system from make and break to jump spark. When you give us the information necessary we will gladly tell you approximately what it will cost.

Cracked Cylinder

I forgot to drain the water out of my gas engine and the cylinder has a crack on the bottom about twelve inches long and the outside jacket is pushed out about one-quarter of an inch. Is there any way to fix this? A new cylinder will cost about $80. I have tried some black paste which I bought, but it will not hold the water after the engine gets hot. I need the engine and must do something right away.—M. D. L., Nebraska.

The broken water jacket can be welded and made as good as new. We have sent you the names of three firms that we know of who do this kind of work; by writing them they will advise you approximate cost.

Recharging Magneto

Please tell me if the magneto on a Ford car can be recharged or strengthened without taking the engine apart and putting in new magnets.—C. N. B., Nebraska.

The magneto on your Ford car can be recharged without any trouble whatever unless the circuit is in trouble. Any garage equipped with a magnet-charging device can do the work in less than one hour.

Unitt Offers Boars

In another column of this issue of the Twentieth Century Farmer will be found the advertisement of our old friend W. G. Unitt, of Seward, Nebraska, who is offering Duroc-Jersey males for sale. Mr. Unitt is one of our old time breeders, who has made a decided success of the Duroc business. He has one of the best equipped stock farms in Nebraska, and is amply prepared to give his hogs the care and attention that they should have. He has been consistent at all times in his breeding operations, and has been producing a type of hogs that certainly has met the popular demand. He has a lot of big, smooth, heavy-boned, good-footed boars for sale at this time that should meet with favor. These boars are immune and are certainly being priced worth the money. If you are in the market for something in this line, we would advise you to get in touch with Mr. Unitt at once mentioning the Twentieth Century Farmer.

Shores EXTRACTS, SPICES, AND REMEDIES. SHORES-MUELLER CO.

A MONEY-MAKING JOB FOR YOU!

WANTED NOW

FARMER OR FARMER'S SON

With rig or auto to call on regular trade with the big Shores Line of Family Medicines, Spices, Extracts, Toilet Articles, Veterinary Remedies, Oils, Etc. Our new, successful plan for increasing business assures you of over $150.00 per month profits. Ask about it. No experience necessary. Don't worry about capital, but write quick.

Shores-Mueller Co., Dept. 60 Cedar Rapids, Ia.

HIDES TANNED

We save you fully 50% when you ship us a cow or horse hide to be made up into a coat or robe for you. Write today for free catalog, giving prices and all information. Address

COWNIE TANNING COMPANY

103 Market St. Des Moines, Iowa.

Twentieth Century Farmer advertisers are reliable. They could not use these columns if they were not. When you write to them be sure your name and address is written clearly, and mention this paper.

Tell Tomorrow's Weather

White's Weather Prophet forecasts the weather 8 to 24 hours in advance. Not a toy but a scientifically constructed instrument working automatically.

An Ideal Xmas Gift

Made doubly interesting by the little figures of Hansel and Gretel and the Witch, who come in and out to tell you what the weather will be. Handsome, reliable and everlasting.

Size 6½ by 7½; fully guaranteed. Sent postpaid for $1.00

AGENTS WANTED

DAVID WHITE, Dept. 69, 419 East Water St., Milwaukee, Wis.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Stuthman's Durocs

One of the choicest offerings of Durocs to be sold this winter will be that of Henry Stuthman, of Pilger, Nebraska, on February 5th. Mr. Stuthman has the goods this year and is going to put in some attractions that will make his brother breeders sit up and take notice. One of these is the great sow Sweet Rose Second. The offering will be bred to R. C. W.'s Topper, Grand Model Eighth, and Sweet Rose's Wonder. His hogs are coming along in fine shape, and you can depend he will have the goods on sale date. Keep his herd in mind and watch these columns for further announcements.

Red Polls For Sale

The old reliable breeder of Red Poll cattle, W. S. Schwab of Clay Center, Neb., has a number of choice bulls of serviceable age for sale and will also spare a few females. Mr. Schwab is one of the oldest Red Poll cattle breeders in the west, and also one of the largest. As far as individual make-up is concerned, and also blood lines, there are no better in America. The cattle he is offering for sale represent the natural increase from his herd, and they are guaranteed to be absolutely right in every way. He is pricing these cattle worth the money, and we have no hesitancy in recommending them to any of our readers who are looking for something in this line. Get in touch with him for further information, mentioning The Twentieth Century Farmer.

Duroc Herd Boar

If you are looking for a Duroc-Jersey herd boar, we would recommend that you write to A. W. Lamb, Albion, Neb. Without a question of doubt, Mr. Lamb has one of the very best herds of Durocs in the west. He is a constructive breeder in the strictest sense of the word, and as a result of years of careful mating and breeding he has developed a uniformity of type throughout that is mighty hard to beat. In the first place, he has one of the most intensely bred Crimson Wonder herds in the country. This in itself should be a sufficient guarantee as to what might be expected here. The boars he is offering for sale are big, strong, rugged individuals, ready for immediate service. They are the kind that will raise the standard of your herd. If you do not believe it, a visit to this herd will convince you of the truth of this statement. If you cannot visit him and make your selection in person you can feel perfectly safe in spending him a mail order, for we will guarantee that he will treat you right. When writing kindly mention the Twentieth Century Farnam.

Kuper Shorthorn Sale

This is the last call for the sale of Shorthorn cattle to be held at Humboldt, Neb., on December 8, by Henry Kuper of that place. This will be one of the choicest offerings of richly bred cattle to be sold in Nebraska this season. The offering will contain forty-two head, consisting of twelve bulls and thirty females. Eight head of the bulls are sired by Mr. Kuper's herd bull, Imp. Scottish Sentinel, one of the best breeding bulls in the country. The other four bulls are sired by a splendid son of Good Choice. The bulls sired by Imp. Scottish Sentinel are out of cows sired by Imp. Strowan Star and out of imported dams. Among the females there will be eight open heifers, also sired by Imp. Scottish Sentinel. Besides these heifers there will be twenty head of cows in the offering, ranging in age from 3 to 5 years old, everyone a richly bred, producing individual and all safe in calf either to Imp. Scottish Sentinel or the Scotchman, a splendid son of Imp. Scottish Sentinel. Scotchman is out of the dam Imp. Winnifred Fourth. This cow has been a wonderful producer as will be seen by her progeny in the herd. She came from the herd of William Duthie of Scotland, and was shown there by him, so it will be seen that the bull Scotchman has a line of ancestry of unquestionable merit. There will not be an individual offered in this sale that is being sold for any particular fault, and every animal is guaranted to be a breeder. There will be more daughters and granddaughters of imported sires and dams offered in this sale than any sale to be held in the west this year. These cattle will not be in high flesh, but will be in just good breeding condition. They have never been pampered a minute in their whole life and as a consequence they are pretty sure to go out and make money for those who buy them. If you are looking for this kind of cattle write for catalogue and arrange to attend this sale. Kindly mention the Twentieth Century Farmer when writing.

Poland-China Boars

If you are in the market for a great big, smooth Poland-China spring male, we would advise you to get in touch with W. J. Eavey of Geneva, Neb. If you are looking for size, length and bone, you can surely get it here. He has them sired by Blue Ribbon Hastings, Big Iowa, Big King, Nebraska Mauw and High Mogul. These boars are all immune and are guaranteed to be right in every way. Better get in touch with him at once before these good boars are all gone. Kindly mention The Twentieth Century Farmer when writing.

Sale Dates

Poland-China Hogs

February 6—O. J. McCullough, Clarks, Neb., sale at Central City, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb

Duroc-Jersey Hogs

January 27—Willard Robbins, Lyons, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 22—John C. Tighe, Stanton, Neb.
January 23—William Morgan, Wayne,
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday, Rising City, Neb.
March 1—Harry Tidrick, Windside, Neb.
March 2—Edgar Taylor, Plainview, Neb.

Shorthorns

December 8—H. H. Kuper, Humboldt,
January 12—A. C. Shallenberger, Alma, Neb., sale at South Omaha.

DUROC-JERSEY HOGS

IMMUNE DUROC JERSEY BOARS

40 spring and fall boars, all immune. 30 of the spring boars are sired by I. & K's Col. Gano, full brother to King Gano, that was recently sold for $800 [illegible] by Model's Hope by Golden Model 2d. Fall boars by Golden Modeler by Golden Model 15th. Choice pigs at reasonable prices. Farm adjoins town. Call or write
R. P. McGUIRE, Wisner, Neb.

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.
F. E. MERRICK, OSCEOLA, NEB.

DUROC BOARS

50 cholera proof Duroc-Jersey boars, ready for service, $25 to $35. 100 cholera proof [illegible] bred to Bully K 4th, Wide Awake, Crimson [illegible] from $20 to $30 for immediate shipment.
GEO. W. SCHWAB, Clay Center, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

HENSLEY'S DUROCS

30 spring boars for sale; sired by Golden 36, Golden Model 4th, B. & R.'s Wonder chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

POLAND-CHINA HOGS

Poland-China Boars

Blue Ribbon boars with great length and bone, some weigh 325 lbs. Sired by Blue Ribbon Hastings, Big Iowa, Big King Nebraska Mouw and High Mogul. All immuned. W. J. Eavey, Geneva, Neb.

HAMPSHIRE HOGS

HAMPSHIRE BOARS

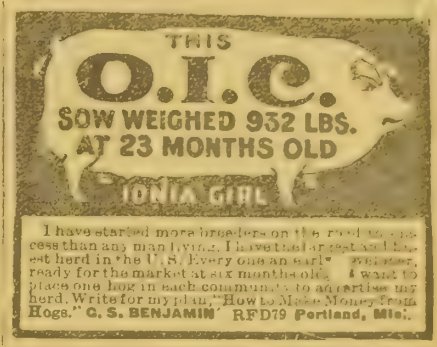
Hampshire spring boars for sale; sired by De Kalb's King 100, a son of the famous Major. They are very growthy, and all priced to sell. Also have Aryshire bull calf for sale.
WILLIAM PAMP, Benson, Neb.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

Superintendent Smith of the Geneva Experiment Station says the average production of butter-fat per cow in New York State is about 100 pounds per year. The State College in Ithaca has a cow descended from common stock on one side and from a line of purebred Holstein sires on the other. This cow has produced 479 pounds of fat in a year.
This is interesting as proof that intelligent improvement of grade herds can multiply the butter yield by four and five.

Send for **FREE** Illustrated Descriptive Booklets.
The Holstein-Friesian Association of America, Box 179, Battleboro, Vt.



I have started more breeders on the road to success than any man living. I have the largest and best herd in the U. S. Every one an early [illegible], ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN** RFD79 **Portland, Mich.**

RED POLLED CATTLE

RED POLLED CATTLE

Both sexes; good as any in America. Call or write me your wants. W. F. Schwab, Clay Center, Neb.

JERSEY CATTLE

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and [illegible] milk and butter records. HAL C. YOUNG, Lincoln, Neb.

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.
A few good sons of King Segis Lyons are still left.
DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

POLLED DURHAM CATTLE

IMMUNE DUROC BOARS

A corking good lot of big, smooth, heavy boned Duroc boars for sale, sired by Col. Wonder 1st and out of sows by Nebraska Proud Chief and Unitt's Choice Goods. Priced to sell.
W. G. UNITT, Seward, Neb.

PERCHERON HORSES

BRILLIANT blood, jet blacks, rich greys. Registered Percheron studs—1, 2, 3 and 4 years old. I grow great big fellows with extraordinary bone and heavy quarters—I love a good horse. Come visit at my plain, old-fashioned Percheron farm that has the goods, and lots of them. Don't let anyone tell you that they have Percherons just like Fred Chandler's. Just east of Omaha.
FRED CHANDLER, Route 7, CHARITON, IOWA.

AYRSHIRES

WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. **LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb.**

GREAT SHORTHORN SALE

AT

12 BULLS **HUMBOLDT, NEB., DEC. 8, '14** **28 COWS and HEIFERS**

There will be 8 bulls by **IMP. SCOTTISH SENTINEL** and 4 by a son of **GOOD CHOICE.** They are a strong, useful lot and several are of herd heading character. The females consist of 8 open heifers by **IMP. SCOTTISH SENTINEL,** and 20 cows from three to five years old all safe in calf either to **IMP. SCOTTISH SENTINEL** or **SCOTCHMAN,** a splendid son of this bull. Practically every animal in this sale is either a son, grandson, daughter or granddaughter of both imported sires and dams. One of the attractions is the great breeding cow, **IMP. SOBRIETY 2d,** safe in calf to **IMP. SCOTTISH SENTINEL.** No better bred lot of Scotch cattle will be sold this season, and along with this breeding they have the scale, and every animal is a "doer." They are in just good breeding condition. For catalog address

H. H. KUPER, Humboldt, Neb.

Auctioneer, H. S. Duncan. Fieldman, C. E. Hall.

You Smoke a "Better" Tobacco--
Why Not Smoke the Best?

WALLACE IRWIN

Wallace Irwin, writer and lyricist, author of "Letters of a Japanese Schoolboy," etc., says:

"Tuxedo is always welcome. A pleasant smoke, a mental bracer—the ideal tobacco."

Wallace Irwin

THE tobacco you now smoke you consider "better tobacco than you ever smoked before." Naturally you keep trying until you find a "better" one.

But it stands to reason that since there *is* a difference in tobaccos, you may be missing *still greater* pleasures in a *still better* smoke—in the BEST smoke, in fact.

Tuxedo is the best smoke because no better tobacco leaf grows, and no process of treating tobacco leaf equals the original "Tuxedo Process."

HENRY HUTT

Henry Hutt, whose "American Girl" creations have made him famous, says:

"A pipeful of Tuxedo puts new life into me. The mildest and purest tobacco grown."

Henry Hutt

Tuxedo

The Perfect Pipe Tobacco

JAMES W. LOYND

James W. Loynd, superintendent of the Prudential Insurance Co., at Philadelphia, says:

"I could not smoke a pipe until I smoked Tuxedo. I found it a cool—mild—even-burning tobacco of delightful flavor. As a solace and relief after a strenuous day, it is the 'Real Thing.'"

James W. Loynd

We know that Tuxedo is made of the BEST tobacco—rich, mellow, perfectly aged Kentucky Burley. None better can be *bought*, because none better is grown.

It is treated by the famous *original* "Tuxedo Process" for removing the sting and bite of natural vegetable oils.

Tuxedo was born in 1904. Its first imitator appeared two years later. Since then a host of imitations have sprung up.

No *other* tobacco can give the unique pleasure of Tuxedo because no other maker has yet been able te equal the Tuxedo quality.

GEORGE E. PHILIPS

George E. Philips, Mayor of Covington, Kentucky, says:

"A good pipe, and Tuxedo to fill it, and I'm satisfied. The tobacco in the little green tin has no rival as far as I am concerned."

Geo. E. Philips

YOU CAN BUY TUXEDO EVERYWHERE

Famous green tin with gold lettering, curved to fit the pocket 10c

Convenient pouch, *inner-lined* with moisture-proof paper . . . 5c

In Glass Humidors, 50c and 90c

THE AMERICAN TOBACCO COMPANY

WM. COATES

Wm. Coates, Chief Engineer of the Pittsburgh Fire Department, says:

"Tuxedo is mild, with no tongue-bite and no throat irritation. I like it as well as any tobacco that I have ever used."

Wm. Coates

Illustrations are about one-half size of real packages.

W. HAYDEN COLLINS

W. Hayden Collins, prominent in real estate and member of the Chamber of Commerce of Washington, D. C., says:

"I've compared Tuxedo with other tobaccos, much to the advantage of Tuxedo. It leads by a wide margin in purity and mildness."

W. Hayden Collins

UNIV. OF ILLINOIS

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

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Cabot's Conco Board

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—the only wall board with a core of wood slats—the strong, durable, fire-, heat-, cold-and moisture-resisting wall board.

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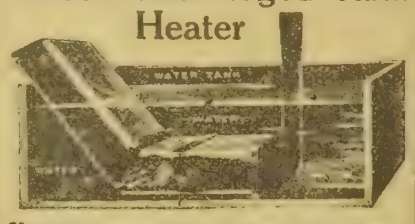
Nelson Submerged Tank Heater



Note the construction. No heat goes to waste. All the heat is under water. Can be used in any size tank. Will burn coal, wood, corn cobs or any rubbish. Two weeks' free trial. Then if you do not think it is worth double the price we ask for it, return same to us at our expense. If not sold by your dealer, drop us a postal—now—while it is fresh in your mind, for catalog and prices.

NELSON MFG. CO.,
26 Wall Street, Deerfield Wis.

GOOD MEN WANTED

at once to learn the auto business Big future for you or anyone who makes himself an auto expert You learn here by doing the work yourself. Lifetime opportunity to learn the highest and most expensive auto work ever given Omaha's NEW Auto Training College, the largest ofits kind in the west, conducted by experienced Automobile men of Omaha, giving the highest and finest practica lauto training work to be found anywhere where Experienced repairmen come and take exactly same course to become expert perts. We teach work. You get higher training here than you can at any regular auto repair shop, we have equipment that they don't have, and intructors who teach you principles that they don't even know

American AUTO College

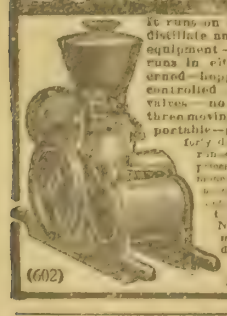
$900 to $3,000 a YEAR, Salary or Bus. Profits in Repairshop or Garage, or as Salesmen. Factory Testers, Chauffeurs, Repairmen, Starter Experts or Garage Manager If ever you are going to make a change to get into a higher paying and more pleasant line of work DO IT NOW, the opportunities are the best now that they have ever been Take our wonderful training course now until you are competent, and then go right into the automobile business from here. Positions now open needing capable men, and we want some good men at once to take up this work

Special $50 course in Elec Starting & Tractioneering FREE with regular course. Learn here in 6 wks or more Tuition small Life scholarship. Work easy and interesting Many make expenses while learning. Free catalog at once.

American Auto College, 404 Auto Bldg., Omaha, Neb.

20 Days' Free Trial

Introduces the SANDOW Kerosene Engine



It runs on Kerosene (coal oil), gasoline, distillate and alcohol without change in equipment—starts without cranking—runs in either direction—throttle governed—hopper and tank-cooled—speed controlled while running—no cams—no valves—no gears—no sprockets—only three moving parts—light weight—easily portable—great power—starts easily at forty degrees below zero—complete ready to run—any one operate them—how fast it runs—how it governs—not put down on easy-back trial—10 years iron clad guarantee. Sizes, 1 1/2 to 15 horse-power. Write postal today for free catalog which tells how Sandow will be mailed to you. Prepay express. Please agents and Sandow's commissions by dealing direct with Factory. (602)

(602) Detroit Motor Car Supply Co. 2500 Canton Ave., Detroit, Mich.

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Prattle of the Youngsters

Hurry

Little Elsie—Mamma, I've got an awful pain.

Mamma—That's too bad, dear.

Little Elsie—Please give me some medicine on a lump of sugar. Quick, mamma, before the pain goes away!

Familiar Material

The teacher had been teaching the class different kinds of cloth.

"Now, Johnny," he said, "what is your coat made of?"

"Of my father's pants," responded Johnny, promptly.

Up to the Owner

A well known man recently lent his grandson money to purchase a motorcycle. The money was to be paid back by installments, the machine to remain the property of the grandfather until the last payment had been made. The other day, while out riding the boy met his grandfather and jumped off his motorcycle.

"Say, grandfather," said the boy, "who does this machine belong to?"

"It belongs to me until you have made the last payment. That was the agreement, you know. But why do you ask?"

"Well, I just wanted to make sure," remarked the boy, with a grin. "Your motorcycle needs a new tire."

A Problem

While instructing his class regarding the early days of the New England states a school teacher asked:

"Do you know that the house of burgesses in those days was so powerful that it controlled the clothes worn by the men? A man who earned $13 a week and one whose salary was $50 were compelled to show a distinction in the clothes they were wearing and not to go beyond their means."

A bright scholar in the rear of the room piped up:

"Teacher, what would a man do if he were out of work?"

A Pleasant Way to Help

"Mamma," lisped the cherub, while a smile of seraphic sweetness illuminated his baby face, "do you know that sometimes I help Catherine's mamma?"

"That's nice," prompted the proud parent. "And what do you do to help her, dear?"

"Oh," replied the cherub, "when Catherine's naughty, I punish her."—Youth's Companion.

Children of Larger Growth

Little Marion and her next door neighbor, Donald, were engaged in an absorbing conversation.

"Who are these anarchist people?" asked Marion.

'Why," returned the boy, "they want everything everybody else has got, and they never wash themselves."

"Oh, I see," replied the little miss, a great light dawning, "they is the little boys growed up!"—National Monthly.

Quite True

During the Sunday school exercises the teacher turned to Austin and said:

"Now let me hear if you can say the golden text."

Mr. Ormond, who was seated near by, heard the question and listened attentively to his son's answer. Austin hesitated for a moment and then answered:

"Whatsoever a man sews always rips."

Bright and Breezy

Its Usual Place

The judge looked at the prisoner keenly for a few moments and then said:

"It strikes me forcibly I have seen your face before."

"That's where I always wear it," replied the prisoner sullenly.

Then the court laughed, and it took some time to restore order.

These High Prices

The minister of a small Missouri town called the grocer on the 'phone the other day and gave the following order:

"Send a dollar's worth of meat out to my house; if there is no one at home, just poke it through the keyhole."

A Charitable View

She was a dear old lady close approaching her hundredth year, and the country rector visited her each week to comfort her fast-closing days. He had been explaining the story of the flood and telling in detail how all creation save Noah and his family was washed away and drowned in the waters.

"Was they all drowned, sir" asked the dear old dame.

"All of them," said the rector solemnly.

"Dear, dear, dear!" she sighed sympathetically. "Well, sir, we can but hope it wasn't true."

Not Wanted

A New Jersey teacher who had been greatly annoyed by revelry in the hotel where she had spent part of her last vacation took the precaution this time, in writing to another hotel which had been recommended to her, to inquire whether it had a bar. She received the following reply:

"No, we haven't any bar, and if that is the sort of woman you are we don't want you. The place for you is at Yardley's, farther up the road."

Honest Dollars

"Have you ever earned a dollar in your life?" the judge sternly asked a prisoner charged with vagrancy.

"Yes, your honor," said the defendant, "I voted for you at the last election."

All in Day's Work

Old Gentleman (who has just finished reading an account of a shipwreck with loss of passengers and all hands)—I am sorry for the poor sailors that were drowned.

Old Lady—Sailors! It isn't the sailors—it's the passengers I am sorry for. The sailors are used to it

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Twentieth Century Farmer

THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Grange on Rural Credits Legislation

System of Land Mortgage Credits Necessary to Place Agriculture on Level With Other Industries

THIS paper has advocated delay in rural credits legislation until the farmers, through their national organizations, could be in position to say what kind of legislation would be best for the farmer. During the last session of congress a number of rural credit bills were introduced in the senate and house. When the federal reserve bank bill was pending, congressmen from rural districts demanded something which would be a direct help to the farmer. Fortunately, nothing was done. This has given opportunity for the farmers to consider carefully the question of rural credits legislation in their local unions, granges and societies, and later in their national meetings.

The national meeting of the Grange was held recently at Wilmington, Del., at which a special committee was appointed to go to Washington to confer with members of the senate and house committees interested in rural credits legislation. The members of this committee were Herbert Quick of Georgia, J. D. Ream, master of the Nebraska State Grange; Western Starr of Maryland, J. A. McSparran of Pennsylvania and H. Harlan of Idaho.

The resolutions finally adopted by the Washington conference are clear-cut, dealing with some of the fundamental things which must be taken into account in the enactment of a rural credit law. The resolutions follow:

Resolved, That it is the judgment of this conference that some effective system of land mortgage credits is necessary in order to place agriculture upon a level with other forms of industry, and that federal legislation is essential to the establishment of this result.

We also believe that effective state legislation along the same lines is possible.

We approve the general principle of rural credits based on farm mortgages.

We are opposed to the principle of direct loans by the government.

Favor Regional System

We approve the widest field of operations as furnishing the largest sources of credit, the widest market for bonds based on mortgage loans and as tending to lower the rates of interest on such loans.

We, therefore, favor the regional program of selling agencies as opposed to the system of local marketing of bonds.

We approve the provisions of section 30 of the so-called Bulkley bill, providing for purchase of bonds by the government.

We do not approve the proposition that land banks may receive deposits for commercial uses.

Believing that rural credit land banks should be controled in the interest of the borrower rather than of the lender, we recommend that the co-operative principle be preserved in the organization and administration of such banks.

We call attention to the value of a uniform system of registering land titles in all states as a condition favorable to the successful development of a land mortgage system of rural credits, and recommend this proposition to the several states.

We believe the need for a more effective system of rural personal credit is as great as the need for better land mortgage facilities, but that the fundamental difference between these forms of credit makes it impossible to administer both principles in the same system of bank organization.

We are not prepared to recommend any specific plan.

We do, however, recommend to the congress such further investigation of the subject as may develop informed opinion and lead to effective legislation.

Opposed to Government Loans

W. T. Hobbs, the sixth member of the resolutions committee, presented a minority report, which was defeated, urging direct government loans and the appointment of a special committee by this congress to report to the next congress suitable legislation for personal credits.

The resolutions, as adopted, embody, in addition to the positive indorsement of one section of the Hollis-Bulkley bill, the positive disapproval of the provisions of the Moss-Fletcher bill for the marketing of farm loan bonds by the local banking unit, and approving the regional feature, as proposed in the Hollis-Bulkley bill.

The conference also adopted a resolution appointing a committee to organize a permanent rural credit league, and the chairman, W. T. Kegley of Washington, appointed Herbert Quick, W. T. Creasy of Pennsylvania, Western Starr of Maryland, J. W. Hobbs of North Carolina and George P. Hampton of Washington, D. C.

The plan proposed by the Grange is opposed to bankers' intervention and contemplates co-operation among the farmers similar to that in France and Germany. It requires careful study and thought to adapt a European system of rural credits to meet the needs of the American farmer. Conditions in this country are radically different, and so are the people. No co-operative credit system can be the success it has been in France and Germany until our farmers learn how to co-operate. Co-operation in this country is passing through the kindergarten stage. The rapid growth of the co-operative farmers' organizations in the Missouri valley states shows that our farmers are apt learners. Farmers who believe in co-operation have no reason for being discouraged because of mistakes and failures. It has taken hundreds of years to teach the European farmers the necessity of co-operation.

Co-operative Organization Necessary

Rural credit legislation to be effective and accomplish what its advocates desire must give relief to the borrower who needs money to carry on his farming operations successfully. To accomplish this it must provide for long time loans at the lowest possible rate of interest which will give the man who has it in him to make good a chance to do so. We believe this can be best done through a co-operative organization.

In the days gone by when there was plenty of government land to be homesteaded it did not require much capital to get title to 160 acres of land. Then farming was done with a few simple tools and capital did not play a large part in agriculture. At the present time, because of the increased price of land and the use of improved machinery, more money is needed to buy and equip a farm. One of the worst things that can happen is for the farm land of this section to pass out of the hands of the men who till the soil. This would mean landlordism. We believe it is up to the farmers themselves to work out their own salvation, and we have the confidence to believe they will do it. One of the most hopeful signs of the times is the growth of the co-operative movement among the farmers of the corn belt states.

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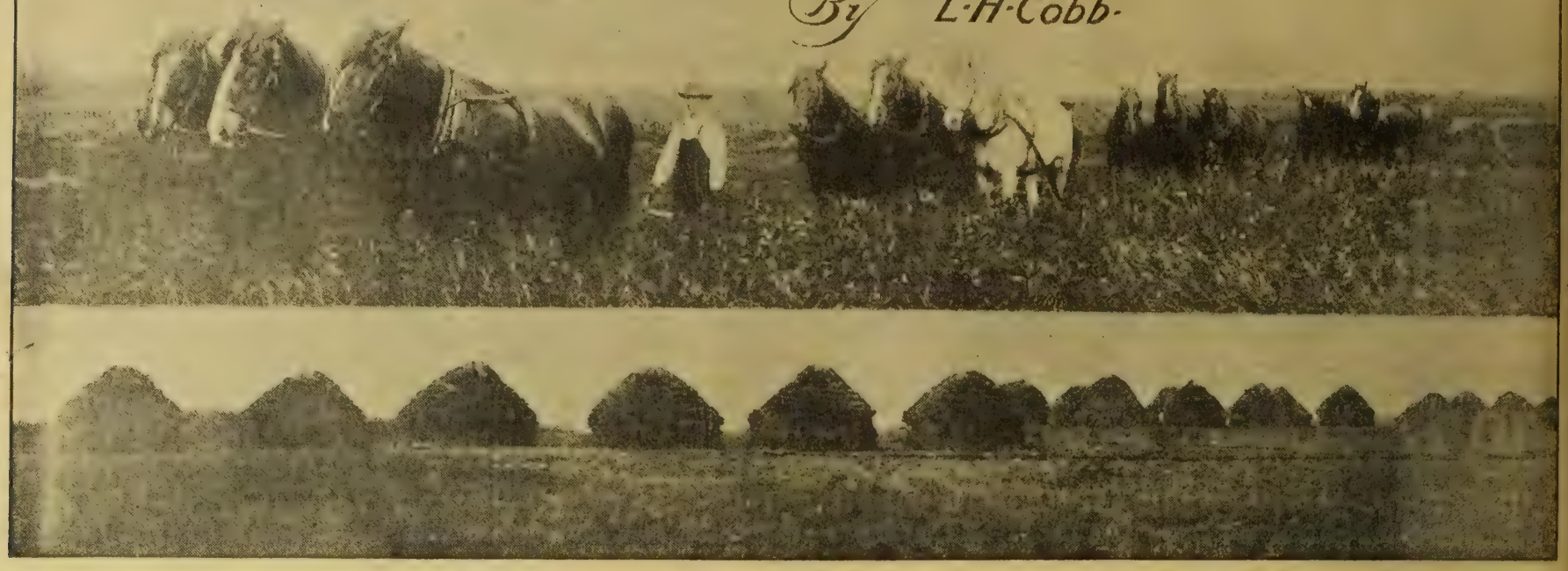
The Lure of the Distant

By L. H. Cobb.



"From the vast grain fields of Canada, the appeal comes to us."

THERE has always been, and always will be, a shifting from place to place of a part of the population. In some it is the love of adventure, the restless desire to conquer the difficulties of nature, the pioneer spirit. In others it is an inherent discontent with life and a hope to discover some place where everything will be right; the rolling stone that gathers no moss. In still others it is the spirit of enterprise that refuses to be cramped by local conditions and seeks wider fields for expansion. And, lastly, there is the great army of young men and women who must enter upon life's duties and seek the best opening they can fin To all these comes the lure of the distant.

Urgent, insistent, the call comes from every quarter; from the orange groves of Florida and California, from vast grain fields of Canada, from the apple orchards of the northwest, from the deserted farms of the east and the irrigated desert farms amid the Rockies, the appeal comes to every one of us. Every phase of climate, of natural conditions and of life are spread before us and we can take our choice.

We live in the corn belt and dream of these remarkable lands, while in each of them are countless souls dreaming of and longing for homes here in the corn belt. The man in Florida longs for the apple orchards and alfalfa fields of the northwest, while the man in Idaho dreams of a land where orange blossoms scent the air and the Frost King never blows his icy breath. The man in the vast Canadian wilderness longs for the comforts and social privileges of the old New England home, while the farmer on the rocky New England homestead longs for the rich, level prairie lands of the great northern valleys.

While this lure of the distant is of untold value in raising civilization to higher levels, and harmonizing the many and various elements of our population, yet we must guard against it and weigh well our reasons before making a costly move, often entailing great hardships.

Lured by Promise of Wealth

The first great lure that appeals to us is the promise of wealth. We read of the fabulous profits made in these lands and we straightway lose interest in the more moderate profits we know are made in our own locality, yet often equally good showings can be made by our near neighbor. We read of a thousand dollars being realized from an acre on a southern truck farm. A Kansas City paper had an acre cultivated one season as an experiment, under the direction of an experienced gardener and marketer, and kept a careful record of results. This acre was in the suburbs of the city—$1,600 the sum realized.

We read of the poor man's chance, where ten acres is all one man can cultivate, and where he can pay for his ten acres in a year if he has a good season. A farmer and his half-grown son rented an eighty-acre farm and secured an option on it provided they could pay a fourth of the purchase price by the end of the year. They worked hard and the season was good. They harvested $2,400 worth of various products, half the price of the farm. Two reasonably good years followed and the farm was paid for. While these things were occuring the lure of the distant was drawing hundreds from all around them. Often more than half of those who followed the lure were back in a couple of years, poorer and wiser, yet some of those who accompanied them to the promised land had found it all they had expected.

There are so many things to be taken into consideration when striving for great success anywhere that few really succeed. Moderate success will come to anyone who will combine thrift and industry, but it is only to the man capable of utilizing every facility that these great successes come. The man who knows how to take advantage of every opportunity, who can produce and market equally well, who can see future effects from present causes and turn them to his profit, who studies nature and prepares to meet her conditions—this is the man who makes the record profits, and it is not wise to base expectations on his success unless you are perfectly sure you can measure up to his ability and have his experience. The lack of a single item of his ability or experience may have a decided effect on the results.

Your crops may be as good as his and you may lose your profit because you do not know how to market them to the best advantage or to turn them into cash through feeding stock. You may be all right on the marketing and feeding, but do not know the soil conditions and cul-

"If I have a personal dislike for stock raising, I am foolish to go where the live stock business is the main industry."

tural methods required in that locality. You may get the crops and be able to realize on them, but flood or frost, or some other disaster of this nature, may overtake you, something you had never thought of, and for which you had nade no provision. Insects you knew nothing about and were unprepared to fight might destroy your crops. All these things the other man has thought of, has considered well and has made every provision possible to avoid, combat or minimize the results.

Man Counts More Than Location

When the lure of the distant falls upon us we must remember it is the man more than the location or natural conditions that makes for success. In every land there are advantages and there are drawbacks. When we are reared in a country and its conditions become familiar to us it is no small matter to break away and start in a new land where the conditions are different. Too often we rush away with marvelous expectations, and when the reality faces us we become discouraged and homesick, returning in a few years to the old home, losing the result of years of labor in the move. It costs to shift from place to place. It pays to be sure of the conditions before making a change and then resolve to make it go, with no thought of turning back.

Your expectations will be greater than you will realize, no matter how well you may prepare yourself. It will take time for us to appreciate all the advantages, for they do not appear so prominent at first, while the disadvantages will magnify themselves and are apt to be very irritating, though no greater than those you have ceased to think of back home because of their familiarity. Especially is this true of middle-aged or older people. The young can adapt themselves more easily, but older people feel the effect of change much more keenly.

Should Follow Inclination

The lure of the distant is apt to cause us to lose sight of our personal likes and dislikes to an unwise extent. If I have love for growing fruit, have a keen insight into the needs of the trees and vines I grow, love them so well that the first sign of disease is noted, I would be foolish to go to a country where growing live stock was the only profitable use to which I could apply my time, especially if I had a personal dislike to stock-raising. The profits might be marvelous to those who were adapted to the work, but I would be sure to fail. I should locate where the work I loved would produce results. No man can get the best out of himself trying to force himself to do a line of work that does not appeal to him. If he is a very strong character he may succeed, but he would succeed much better in some line where he could use the natural enthusiasm of a congenial employment.

"Countless souls are dreaming of and longing for homes here in the Corn Belt."

Health Conditions Influence Many

Sometimes it is the climate that draws us. Healthfulness is another lure; educational and social privileges also attract. Subordinate as these usually are to the great lure of profit, yet they are and should be considered, though it is not an easy matter to realize fully a country's advantages in these lines, as so much of this is superficial, or measured only by comparisons. Climatic conditions can be learned, but how they will appeal to you cannot be known without actual experience.

To the newcomer the continual rain for six months at a time, day after day, common to the northwest coast country, is dreadful, but the old inhabitant thinks little of it, and I have had some tell me they really enjoyed it. The intense heat of the mid-day sun of Florida is unbearable to the northerner, but it is cool in the shade, and the evenings and mornings are cool, so he can take it easy for a few hours in the middle of the day as the native does, and do his work in the morning and evening, and then have five months of winter extra, the Florida promoter explains. The burning summer heat of the Arizona desert lands drives many an immigrant out the first year, but those who remain become acclimated and do not feel its effects to such an extent.

Then what would be a cause of great suffering to one would be but an inconvenience to another. If we consider all these things well we are ready to make the change with a good prospect of making good, for we know what to expect, and these discomforts cannot magnify themselves to the exclusion of all else.

There is no doubt that some localities are more healthful than others, yet appearances are not indicative, and we must look well into the conditions if we would be certain. I knew one man who was told by several doctors that he had consumption. He was advised to go to the mountains, but instead he went out on a farm a short distance west and lived largely in the open, exercising his lungs many times a day, dieting himself somewhat, and in a few years the doctors pronounced him free from any touch of the dread disease.

"Where the spirit of enterprise seeks wider fields for expansion."

Another man moved into our part of Kansas from a town some 300 miles away in Missouri. He was suffering from asthma and had to leave his old home on that account. He recovered at once and for years he never felt a touch of the disease. One fall he went back to spend a couple of weeks' vacation, but he was so bad again with the asthma in a week that he had to cut his visit short. Again he recovered at once. Two years later he was again called home and again he was attacked by asthma as soon as he arrived and relieved again when he returned to Kansas.

Now in this same community a prominent business man was compelled to sell his business and move away because his wife suffered so much with asthma each summer and fall. She had been obliged to go away every year for several months. One of these would have told their friends how healthful that country was for sufferers from asthma, while the other would have given warning against anyone suffering from asthma coming there. Both had good grounds for their advice, yet their advice would really be valueless.

You Know Best Yourself

Social and educational privileges are largely local and changeable, and have little bearing on the question of moving from one part to another.

I am the only one to judge whether it is expedient for me to seek a new home. No one else knows my needs or my longings so well. No promoter can tell me whether I will succeed in the new land. I must study the land and myself in connection with it and decide for myself. I must take all things into consideration and act as seems best to me, giving due thought to those who are affected by my decision. When I have weighed well all the advantages and disadvantages and conclude the advantages are predominant, I have done all there is for me to do, and I will go in answer to the lure of the distant, with every prospect of making good. I will not expect more than what is justified. I will bear up under unusual conditions until they become usual. I will seek to adapt myself to the methods and needs of the new home and let not prejudice or preconceived ideas stand between me and success, and I will not expect an easy victory.

—:o:—

To the Dairy Cow

E'en though thou art of man a servant; the taker from him of such treatment as in wisdom, or lack of it, he may accord thee; the yielder to him in thy maternity of that mystic life fluid that sustains him, gives to him his power and makes for his profit and pleasure; the glad recipient of his kindness or the meek object of his untaught abuse. All these art thou, yet, to the end of time, thou shalt still rule thy kingdom, and that of man's need, a Queen.—Iowa Agriculturist.

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

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Where musty, moldy or any sort of dirty or impure feedstuffs are given to the dairy cows there is sure to be some deterioration of the dairy products, while the damage to the animals' digestive organs is another most detrimental effect that must not be forgotten.

If we would be more conservative in loading the colt the first few times he is worked, see that his collar is the proper fit, and adjust his harness to his body snugly and comfortably, we would almost forget the term "balky horse." The first act of an ignorant driver when a horse balks is to attempt to force him to pull, when it ought to be that of ascertaining the cause of his refusing to move.

As the dairy cows become more and more confined to dry rations one will need to turn the cream screw in the separator considerably, as the consistency of the cream will be thicker than when the animals were running on green pasturage. The oil supply, also, will demand readjustment as the weather grows colder and the oil thicker and more sluggish of movement.

The application of manure during the winter months ought to be confined only to those fields which are covered with some sort of a stubble growth, or which are extremely level, to avoid the washing away of the fertilizing elements before they can enter the ground next spring. If such lands are not available a good place of storage for spring distribution should be provided.

Nebraska College of Agriculture

At the last election the people of Nebraska decided they wanted no consolidation of the university. They said by their vote that they wanted to maintain and enlarge the present downtown campus and to build up a college of agriculture on the farm campus.

We doubt if a very great per cent of our readers are cognizant of the fact that a student now taking the college of agriculture course must attend classes both downtown and at the farm. Each day he must travel back and forth to these two institutions for instruction.

We believe the farmers of Nebraska want matters so arranged that their boys and girls taking the college of agriculture course can take all their work at the farm. We don't believe it right that farm boys and girls should be compelled to waste this time and money.

Nebraska being absolutely a live stock and farming state, should not agriculture be placed in the front rank? Should not the Board of Regents proceed at once to establish at the farm campus a complete college of agriculture? If the farmers of Nebraska want this they can get it. Let your wants be known. Let the board know what you think about it.

We believe it was the intention of the men who framed the Morrill act that this money should be used almost entirely, if not entirely, for college of agriculture extension. A portion of this fund is now used at the downtown campus. Should not the college of agriculture have this money?

Every Nebraskan is interested in our college of agriculture. Now that it is to be a separate and distinct institution, should not every effort be made to make it second to none?

The Twentieth Century Farmer believes there are different ways by which this school can be expanded and made more useful. In future issues of this paper we shall have something to say about what we think may be done to place the school on a higher place than it now occupies.

Macaroni Wheat Demand

Macaroni wheat, as it is frequently called in this country, originally came from Russia and belongs to what is known in that country as the durum variety of wheat. It is now generally designated in our markets as durum wheat instead of macaroni. The word durum means hard and is, therefore, appropriate, and it is universally known by this name in the commercial trade. There are several names by which it is designated in the various districts where grown. In Canada it is called the "goose wheat," in Texas and southwest the "Nicaragua wheat." It was introduced into Nebraska in the latter '90s by Prof. T. L. Lyon of the University of Nebraska for the purpose of testing its adaptability to the western and northwestern parts of the state, where the rainfall corresponds to its native conditions.

The tests in western Nebraska proved all that could be desired in the matter of yield and general conditions of adaptability for producing a crop. The yield of the macaroni variety of wheat being anywhere from 40 to 50 per cent more than that of the common spring wheat, soon started an active cultivation of the new hardy variety, then designated "macaroni."

No sooner had the milling qualities of this wheat been tested than the local demand ceased and the only recourse for the producer was to feed it to his stock or hunt up a shipping demand where it was being ground for macaroni or spaghetti use. This demand was so light and so uncertain in its requirements and so much lower in price than the common wheat that the durum wheat industry of Nebraska, which promised so much in its inception, dropped down until its cultivation almost ceased except for feed.

North and South Dakota and Minnesota have in recent years been producing the great bulk of the durum wheat that has supplied the commercial and milling trade of this country. Nebraska, Kansas, Colorado, Wyoming and Montana have contributed lightly, though possessing excellent natural advantages for growing the crop. The durum varieties are spring wheats, though it has been possible to grow some of them as winter varieties in the more southern districts.

The present market demand for this variety of wheat places it in price in advance of the common flour wheats produced in this country. The European war, checking production in the foreign countries where it is most extensively produced, together with the increased use of the products that are manufactured from it in this country, is responsible for the increase in price in our markets. This situation points to renewed efforts next spring in the growing of durum wheat.

The district of country in the United States best adapted to the growing of this variety of wheat is defined by the Department of Agriculture as that represented by a strip 200 miles on each side of the 100th meridian. The western side of Nebraska and South Dakota are designated as the districts of country producing the highest quality of durum wheat. Climate and soil conditions are represented as being ideal for quality and yield.

Dishonesty

Without doubt the great mass of the American people is honest. It is equally indisputable that there are dishonest people in every line of business. There are, however, more dishonest people who have no business in particular, but await opportunities to rush in with fake schemes whenever any new money-making avenue is opened up.

When the use of serum for hog cholera became almost universal in this country and many laboratories for its manufacture were started, dishonest men found that here was a chance to give the public something of no value, and consequently of small cost to them, for the money received; so some serum manufacturers went into the business of selling impotent serum for a good price.

Co-operative creameries have been a source of profit to dishonest dealers, who have promoted such institutions in neighborhoods where there is little or practically no cream production and sold creamery machinery for a price far above its actual value. In this part of the country we believe these dishonest operators are now unable to work, but the southern states are suffering at the present time from this pest.

Since the discovery of the use of cement in healing injured or rotting trees and the practice of "tree surgery" certain of these men of devious ways have undertaken to travel about the country pretending to perform surgical operations on orchard and shade trees. Their services are expensive as to original cost and more so as to results, for on account of their ignorance and carelessness they do the trees more harm than good.

These and many more are methods by which dishonest men get in touch with honest men through the medium of new discoveries about which little is known by the general public.

The money taken away from these people directly and the suffering caused to individuals are, however, not the greatest harm done by such dishonest operators. The sort of work they do and the products put out by them are such that doubts are created in the public mind as to the value of the things they pretend to represent. The serum manufacturer who sells serum that is useless has set back the cause of scientific war on hog cholera. The man who owns the hogs that die and his neighbors and friends are almost certain never to believe in the efficiency of this method again.

The neighborhood in which farmers lose money through premature creamery promoton and high-priced machinery is apt to be bitter against co-operative enterprises and dairying for many years.

The orchardist whose trees die from inexpert tree surgery will probably never believe in the possibility of saving trees by this method again.

And so it goes. One dishonest man in any business not only injures the people who trust him, but the business itself, the honest dealers in his line and all those friends among whom his victim spreads his honest disbelief and who consequently lose opportunities to profit by patronizing honest firms in the same business.

Farm Raised Feeder Cattle

There has been a great deal said about the advisability of the farmer raising his own feeders. For two or three years the live stock papers and farm journals have been pouring forth this advice by the column, not knowing really but what the farmer was letting this in at one ear and out at the other. But owing to some sort of persuasive influence there have been hundreds of farmers, yes, thousands of them, doing that very thing, raising their steer calves and feeding them for slaughter. Some feed out at the yearling age, others at 2 years old.

Observe the stock yards gossip published in the stock yards journals at the various big central markets, and note the frequency with which the shipper boasts of raising his own cows, and how he emphasizes this as a reason for his ability to top the market or to stand high in the quality he is marketing. It is a fact that this is the tendency. The spirit of production, independent of any other influence, is abroad in the land. Especially is this true with the larger land owners, those who have room to run breeding herds and carry their produce forward to the finished steer.

The influence of such associations as the Iowa Beef Producers' association, whose text is, "Produce Your Own Beef-bred Calves,"' is a strong factor in moulding this sentiment, which is gaining headway, making converts each year as its representatives traverse the state of Iowa preaching the gospel of "Produce more beef-bred calves on the farm." This doctrine carried out has the ability to solve the cattle shortage question. The tendency to be beef-makers instead of cattle producers is all that is wrong with this country.

The same spirit prevailed a dozen or fifteen years ago on the range. As soon as a cattle grower or ranchman got in circumstances to quit raising calves he sold his cow herd and became a dealer in steers.

Promptness and Economy

One of the very important principles in saving, and the one which appeals to the farmer in possibly the most practical and common sense manner, is often alluded to by the old saying, "An ounce of prevention is worth a pound of cure." This is usually coupled with another old saying, "Penny wise and pound foolish." They are both used to illustrate the fallacy of unwise stinginess, which is often paraded before the people as meaning economy and thrift.

There is in demand on every farm and in all kinds of business a promptness in attending to all the details of the work at the proper time. A little neglect frequently causes great loss. It not infrequently happens that the neglect of properly feeding the young animals on the farm at the proper time and in proper quantity causes loss that cannot be regained. As an illustration, take the calves, the colts and the lambs. There is a weaning period with all these sucklings, and this period most generally comes in the autumn season. This is the season when vegetation of all kinds is on the decline; cold and stormy weather is commencing to exert a withering influence on the animal as well as the vegetable kingdom. What does the intelligent, prompt stockman read in the forecast that is plainly set forth? It means precautionary measures of such a character as will afford the weanlings immunity from all damaging influences that may arise from the changing conditions that may follow the period of weaning.

The changing from the mothers' milk to a strictly prepared feed, even with the addition of pasture grasses, is usually too abrupt to satisfy the demands of the youngsters. All weanlings should be taught to eat ground feed, oats, shelled corn, bran, etc., in troughs prepared and arranged for this purpose. These young animals should be started on a feed ration before weaning. In this way milk becomes a secondary matter with them in their feed supply. The secret of weaning and the good or bad results attending this period depend upon previous preparation for it.

It is a good plan to put the weanlings on feed of suitable kind and quality to carry them safely through the winter. It does not pay to stint the young animal at any period of its growth, especially during the cold season. The prevention theory properly carried out will be found invaluable as applied to the weanlings of the present season. The more flesh the young animal can be made to carry when entering the cold season, the better it is prepared to stand the rigors of our climate.

Corn a Profitable Crop

The raising of corn as a farm crop has from the beginning been a profitable business with the farmer in the corn belt. In seasons when prices were low for corn in the commercial markets of the country there was good money made in cribbing and holding the corn for higher prices. The farmer who makes a practice of holding his corn over and selling just before the new crop comes into market almost universally gains by so doing. This has been the history of corn-raising in the west.

The corn crop offers more opportunity for profit than any other crop the farmer can raise. It has become, in a measure, a speculative crop, even in the hands of the farmer. The corn grower years ago planted, cultivated and harvested his corn crop with but one purpose in view—to sell the grain to the shipping trade at the price offered. There was no other demand, and the cribbing of the crop was a business thought to belong exclusively to the shipping and elevator trade.

The development of later years has placed the corn grower in a position to choose how, where and when his product shall be marketed. He has in a measure become a speculator on his own production. If the shipping and elevator trade does not offer satisfactory inducements, then the neighborhood feed yard demand can be consulted; if neither of these furnish the price that meets the view of the corn raiser, he then figures on the value of the crop fed into his own stock, upon a basis of future fat stock prices, or the cribbing and holding for development in the export trade or other demand.

Remember that there is a great advantage in starting the live stock into winter in a good, healthy condition. It takes less feed, less care and less trouble all around to winter an animal that is up in condition to start with. Such animals will winter on hay, straw, fodder and such roughage as they can pick up, needing very little, if any, grain. It does not pay to winter the poor animal showing poverty symptoms in the fall.

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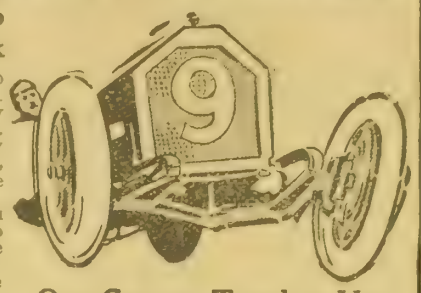

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Big Profits for Boys in Trapping

Den Trapping and the Handling and Marketing of Furs

GENERALLY speaking, we do not recommend den-trapping, although with proper discretion we have successfully practiced it to a certain extent.

The main objection to it is the capturing of animals around their places of abode is apt to alarm them, causing all to leave those immediate quarters.

Such animals as opossums and skunks, which are not so easily alarmed as many others, are not as apt to leave after one begins trapping around their dens, and often all of them can be captured in succession.

However, we always prefer to set a baited trap somewhere in the neighborhood of any dens we may locate, or trap in runways near such dens, carefully covering the traps with grass, leaves or fine dirt. This method does not arouse the animals' suspicions, and an entire den of them may be captured in a few nights.

Den-trapping of mink is an excellent method, but unless one thoroughly understands it it will seem a mystery why his success is so limited in this respect. Remember this: A mink has an "in" hole and an "out" hole in his den; that is, he will not enter by an "out" hole nor leave his den by an "in" hole. Keeping this in mind, together with the fact that the "in" hole is larger than an "out" hole, it is not such a difficult matter to nab Mr. Mink. It is, of course, much preferable to set the trap at an "out" hole, since the animal is not as apt to try to enter the den over a trap at the "in" hole as he is to try to crowd out after he is inside the den.

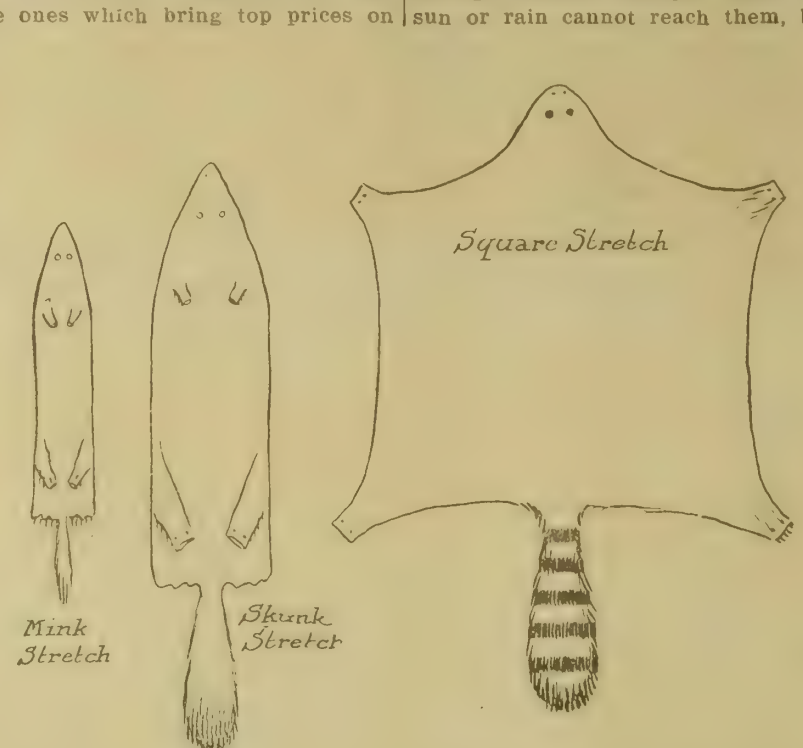
Handling Furs Properly

The properly handled furs are the ones which bring top prices on the market, and there are very few people who understand how to handle and care for them as they should be. Many trappers, even, handle them very inefficiently and thus receive much less for them than they would be worth if handled correctly.

All animals should be skinned as soon as possible after being killed, at which time they not only skin easier, but the fur soon begins to deteriorate if not removed from the body. Split the skin from the foot of each hind leg to the vent or roots of the tail; make sure that the bone is removed from the tail; slip the skin (flesh side out) over the body, toward the head; cut down well around the ears and eyes (so the holes will be very small) and slip the skin over the nose. This forms the "cased" fur.

The mink, muskrat, skunk, civet cat, fox and opossum are "cased" furs, while the raccoon, otter and such animals are uncased or "open" furs, they being removed in the same manner as the "cased," except that the "open" fur is split up the belly from a point exactly between the hind legs to the lower jaw of the animal. Slits in a fur, spots with the hair pulled out, or a fur that was wet at the time of stretching, all mean a lowering of the grade and a consequent cutting of the price for furs. All surplus meat and fat should be removed from the flesh side of a fur, to give the pelt a smooth appearance, permit of thorough stretching and to avoid damage to the fur by the meat becoming putrified.

"Cased" furs are drawn over thin, flat boards, made oval at the end where the head is attached. Tacks or small nails hold the head securely while the skin is stretched, other tacks being driven in the hind legs of the fur to hold it in shape while it cures. "Open" furs are tacked to the side of some building. Never cure a fur in the sun nor allow rain to fall on it. Do not attempt to whiten the flesh side of furs by salting, as you cannot clean it off so well but that a buyer can detect its effect, and he will be compelled to grade it down in quality and price. Hang curing furs in some spot where the sun or rain cannot reach them, but where there is fine circulation of air for gradual, uniform drying. An open shed is an excellent spot for curing furs. Do not remove furs from the boards till thoroughly dried, so they will hold their shape. Even after completely cured they should be hung up where there is a free circulation of air. Where there are a few warm days after beginning to cure furs all tails should be split open, to avoid putrefaction from inside, which causes the hair to slip out.



Selling Furs to Best Advantage

Next to the proper handling and curing of furs, the selling is easily of first consideration. When the writer was actively engaged in trapping (his furs being handled as here directed), he received the highest price for his furs of anyone in the entire country around. I sold mostly to one buyer, although not exclusively, as one must let these buyers know they have competition to meet.

Where one has a friend in the city who can look after his shipments it will prove highly profitable for the trapper to ship his furs directly to the city dealer. As in all other lines of business, there are "sharpers" in the fur business, and one must be very careful to whom he ships. After he has shipped enough to some dealer to know that he is trustworthy and reliable he can consign his furs to such a dealer regularly. Remember, too, that it is not always the dealer who quotes the highest prices that actually will pay those prices. Where prices quoted seem above the average the dealer is very apt to "grade" the furs in such a way that very few, if any, of them are classed as "No. 1," which, by lowering the "grade," also lowers the price of the furs. Have your furs cured and handled properly, packed securely and neatly when shipping, and you will realize from 25 to 50 per cent more for them than you would if handled in the ordinary manner.

BUSY DOCTOR

Sometimes Overlooks a Point

The physician is such a busy man that he sometimes overlooks a valuable point to which his attention may be called by an intelligent patient who is a thinker.

"About a year ago my attention was called to Grape-Nuts by one of my patients," an Ohio physician writes.

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Twentieth Century Farmer
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Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

Roses' Song

Softly sinking through the snow,
To our winter rest we go,
Underneath the snow to house
Till the birds be in the boughs,
And the boughs with leaves be fair,
And the sun shines everywhere.

Softly through the snow we settle,
Little snowdrops press each petal.
Oh, the snow is kind and white—
Soft it is, and very light:
Soon we shall be where no light is,
But where sleep is, and where night is—
Sleep of every wind unshaken,
Till our Summer bids us waken.

—Philip Bourke Marston.

Our Pets

There is never a week that some of you do not write stories about your pets. Many times these are published, but quite often very interesting stories are not printed, not because they are not interesting, but because we have not room for all and must pick out only those that are best. You farm children are very fortunate in this respect. When children live in town, especially large towns and cities, they cannot very often have pets, and even when they do, something is so likely to happen to them. Street cars and automobiles are dangerous for the dogs, and the neighbors' dogs kill the cats and the cats get the birds. There is no room for horses, cows and the larger animals.

Being so fortunate as most of you are in having pets to play with and animals that you may care for and sell for profit, you have a duty that you should never forget; that is, to treat kindly all the animals that look to you for care. They are dependent upon you just as you are dependent upon your father and mother, and you should treat them kindly, just as your father and mother treat you. Of course, their needs are different from yours, but whatever they need should be supplied them. They should have food and shelter and plenty of water to drink, and they should always be treated with consideration. Of course, they are sometimes provoking and you feel that it would be a relief to your feelings to strike them, but then, sometimes you are just as annoying to your parents and other relatives and you would not like to have them strike you and speak crossly to you. One of the best things about our pets is that we may practice on them until we have a great big stock of patience, that will come in very handy in later life. HOME EDITOR.

(Prize Story.)

A Young Turkey Herder

By Don Garrison, Aged 11, Huggins, Mo.

Once, near a large river, lived a family named Ross. On the other side of the river was a deep valley. In this valley was a large pile of rocks. This pile of rocks was almost ten feet high. This valley was named "Lone Valley."

One of Mr. Ross' little boys, Charlie, was a turkey herder, who always made his Christmas money during the preceding year by herding his bunch of turkeys. He always had about fifty in a bunch.

Charlie always spent one-half the day driving the turkeys toward Lone Valley and the evening in herding the turkeys toward home. But one day Charlie was in a deep study, for what was he going to buy his mother for a Christmas present? It was in November and the day was awfully cold, so Charlie just kept going until he crossed the river, and now it was growing dark and night was coming on. Charlie knew there were all kinds of wild beasts which roamed in and around Lone Valley, and this was one reson why the valley was called this. But he did not think and went right on and entered Lone Valley, and here he began to think of home, and warm tears began to roll out of his eyes, but he was now in the dark valley.

The turkeys flew up to roost on the pile of white rocks. Charlie looked all around and, seeing a brush pile, crawled into it. He went off to sleep, as he was very warm. He did not know that his papa and some of the neighbors were on the hunt for him. After a time Charlie was awakened by the screaming of a panther, that seemed to be coming toward him, but he thought panthers screamed all night, anyway. His father and the other hunters also heard the screaming of the wild beasts, but hoped to find Charlie and the turkeys safe.

Finally, Charlie was awakened the second time by his father's light and he was very much frightened. But his father saw the turkeys and called, "Charlie! Charlie! Where are you?" And Charley came running out, knowing that this was his papa. Soon he was led home by his father to a frightened mother, brothers and sister, but the turkeys were left until next morning and driven home by Charlie's brother. This did not end his turkey herding, but it taught him a lesson not to be careless.

(Honorable Mention.)

From Scotland to America

By Donald Mackenzie, Aged 12, Buford, Wyo.

Four years ago we lived in Scotland. Then we thought we would come to America. We rode from Edinburgh to Glasgow in the train; then we walked to a small steamer, which was waiting to take us out to the big one. The big steamer's name was California, and it was over a block long.

When all the passengers were aboard the ship started and we were soon out of sight of land. It did not

(CONTINUED ON PAGE SIXTEEN.)

Awards in Picture Contest No. 18

Don't forget that name, age and address are necessary in sending in answers to the contests. There were two good verses that were laid aside to be considered as prize winners, until it was noticed that the writers had not given their ages. This is quite important. We did not have quite as many answers to this contest as usual. Probably you are all giving your attention to the stories, as they are coming in nicely. There is no reason why you should not send in both stories and pictures, however.

(First Prize.)

By Marie McMahon, Aged 10, Davey, Neb.

I think these boys are playing war
And having fun, no doubt,
But should the real thing come along,
I'll bet they'd all back out.

(Second Prize.)

By Edna Carlisle, Aged 11, Tilden, Neb.

Beneath the hot midsummer sun,
These lads have marched all day,
And now they've stopped to rest their bones
Before they join the fray.

By Peter Baird, Aurora, Neb.

Eight little boys who stand in a line,
All playing soldier. Isn't that fine?
Then Peter says it's school time and Burr says it is nine.
"I'll race you to the school grounds; we must be there on time."

By Ralph Lake, New Market, Ia.

Eight boys went out one sunny day
To have some fun in a funny way;
These boys are standing just alike;
They're getting ready for a hike.

By Lillian Clements, Aged 9, Goldfield, Ia.

We are standing straight and tall,
With our backs against the wall;
We are soldiers, every one,
And we'll surely have some fun.

By Clarence H. Horn, Aged 12, Creighton, Neb.

Eight little soldiers
Standing very brave,
Marching toward the east and south;
They'll soon lie in a grave.

By Mabel Ruhl, Aged 14, Douglas, Wyo.

One, two, three, four, five, six, seven, eight
Dear little boys in a row so straight,
With guns and drums and banner, too,
Eight little soldiers brave and true.

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The Greatest Family Weekly—

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The whole field of Christmas giving offers no gift like THE YOUTH'S COMPANION with its 52 splendid issues in 1915. It delights both the receiver and the whole family—a Christmas gift in 52 packages. Note the possibilities of these two Special Offers for your Christmas plans and economy. The Companion comes weekly, and is crowded with the best there is in Adventure, Information, and Fun. 1915 will bring Ten Remarkable Serials, strong Story Groups, 250 Short Stories, Special Features in the Family Page, Boys' Page, Girls' Page, the Doctor's Advice, etc.

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a classic that every family who appreciates The Companion will surely want to own. These two Offers will settle many Christmas problems.

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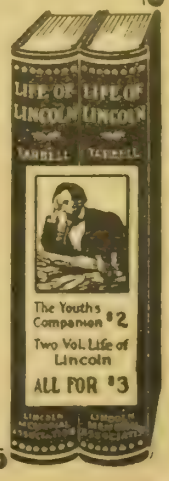

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Styles for Home Dressmaker

6989—Ladies' Overblouse. Two separate designs are offered in this pattern. In style the jacket effect is used, with tab extensions in front and back, open neck, flare collar and front closing. In style 2 the blouse is more of a waist, with deep open neck in front and high buttoned back. The pattern 6989 is cut in sizes small, medium and large.

6969—Ladies' Skirt. Made with the waistline a trifle raised, this skirt has a deep yoke closed in front, and to this the box-plaited lower portion is attached. This skirt may serve as a walking skirt, just as shown, or it may be shortened and used as a tunic. The pattern, 6969, is cut in sizes 22 to 32 inches waist measure.

6968—Ladies' Waist. This popular style has long or short sleeves, with the raglan extension at the top, gathered front and plain back. The closing is in front, the neck open, the collar low. There is a deep girdle worn below the waist and this may be used or omitted. The pattern, 6968, is cut in sizes 34 to 44 inches bust measure.

6982—Ladies' Apron. This is a kitchen or work apron and is cut in one piece, with a short dart under each arm to fit the garment to the figure. The neck is round and very low; the armholes are very open. The fastening is by a single button at the shoulder line in the back. There is also a patch pocket. The pattern 6982 is cut in sizes 36, 40 and 44 inches bust measure.

6973—Girls' Coat. This model offers the simplest form of the raglan. It has a double-breasted closing, which may be carried close to the throat or open a little, the edges trimmed with the usual small coat collar and revers. The sleeves are wide and plain, extending to the edge of the neck. The pattern, 6973, is cut in sizes 4, 6, 8, 10, 12 and 14 years.

6800—Boys' Russian Suit. A model giving us a new form of the Russian suit, slightly suggestive of the Norfolk style as well. There is a straight yoke front and back and below this the material is plaited at each side of front and back to form a central panel. The pattern, 6800, is cut in sizes 4, 6 and 8 years.

6980—Misses' College Coat. This coat is familiar on the college girl and also on other women bent upon shopping and other occupations. The wide, plain sleeves are inserted in the regular manner. Front and back are plain and at the neck there is a small collar and also revers. The pattern, 6980, is cut in sizes 14, 16, 18 and 20 years.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Of Interest to Our Women Readers

I Would

I would we grew more gentle day by day;
I would that smiles more often came to play
About our lips, to dwell within our eyes;
I would that we could see in God's fair skies
More oft the blue and not the somber gray;
I would we grew more flowers on life's way.

I would we grew less swift to chide and blame;
I would we used more oft love's other name.
And that our hearts grew daily yet more kind:
I would we were more oft a little blind;
And in our homes and on the crowded street
I would we heard the coming of His feet.

I would we grew more like a little child;
I would our spirits were as pure as mild,
And that the child-like faith might too be ours;
I would in all life's dark and lonely hours
We, too, might put our hand in His and say,
"I'm not afraid, my Father knows the way."

—Irene E. Angleman, in the Pacific.

Practical Home Training

"There isn't any use in my trying to teach Annette anything about housework," said Annette's mother to her old friend, Mrs. Jackson, who was spending the week with her.

"Why not?" asked Mrs. Jackson. "I had always thought Annette a particularly bright and capable girl."

"She does appear to be until it comes to learning things at home. Then she is positively stupid, and the worst of it is we generally end by both losing our tempers and being disagreeable. I feel ashamed of myself afterward, but it is the usual result of our cooking lessons."

"I wonder if you began early enough," said Mrs. Jackson. "Annette is nearly sixteen and knows less of cooking and sewing than many girls of 10 or 12. Perhaps if you had taught her some things earlier it would not be so hard to teach her the rest now."

"Well," said her mother, "it was always more work to teach her things than to do them myself. Then, too, I could not seem to make her understand. I don't know why it is that my children, who have the reputation of being particularly bright at school, are all so hard to teach at home."

Mrs. Jackson smiled. "I knew of a little boy once," she said, "who begged his mother to read him a certain story in which the pictures interested him. 'You are too young,' she told him. 'You would not understand it.' 'Oh, yes, I should, mother,' he answered, 'if you didn't explain it to me.' I can appreciate exactly how the little boy felt about it. The explanation is frequently harder to understand than the thing itself. Most people, in teaching anything, try to do it all in words. The best way is just to give one or two important directions and let the child learn the rest by his own experience."

"But they waste so much," said Annette's mother. "I have learned, in years of housekeeping, how to economize in labor, time and material. I want to have Annette get the benefit of my experience."

"I don't believe it can be done," said Mrs. Jackson. "We have to learn almost everything in life by our own experience. The schools are now recognizing this, and more and more attention is being given to manual training, domestic science, agriculture and other practical subjects in which the children actually use their hands. Less and less is taught from books and more from real experience. The children start to do things themselves from the kindergarten. I believe they are on the right track. A girl can learn more about cooking, for instance, by being turned loose in the kitchen one day than she can in a week of lectures, that in the home are apt to degenerate into scoldings. And we ought to be willing to pay such penalties as spoiled material and the eating of imperfect cooking for the sake of the daughter's education in the practical things of life."

"Perhaps you are right," said Annette's mother. "I dread to think of the results of turning Annette loose in the kitchen, as you suggest, but I don't know but what I'll try it."

HOME EDITOR.

Our Weekly Recipe

BREAD PUDDING—Soak one quart of milk and one pint of bread crumbs; add the yolks of four eggs; cream one cupful of sugar with a piece of butter the size of a walnut; add juice of half a lemon; stir these all together; bake in a slow oven and add merangue made from the whites of the four eggs. Add to these to make the merangue the juice of half a lemon and one-quarter cup of sugar.

Give Children a Chance

I'll never forget my first venture in eggs. I coaxed mother to let me pack some for winter market, thinking I could make something, and she said I could have all that weren't needed for home use. So I found me a good box and took a lot of coarse salt and began early to lay them by. I made a layer of the salt about two inches deep, then put the eggs little end down; then two inches of salt again.

By Christmas time I had several dozen—I don't remember now just how many—and I sold them for 25 cents a dozen. That seemed a good price to us then. With the money I bought a piece of [illegible] and [illegible] it into a pretty dress, and I wore it to a [illegible] ing match. If I see a scrap of that lavender dress now it brings all [illegible] back to me. Room No. 3, in the West Ward school visitors all sitting back by the teacher's desk, and the two matched sides on the floor spelling. And I won the prize, too; perhaps the dress helped. Anyhow, I didn't miss a word.

Another time a mother sow died and my cousin gave me the motherless little pigs to bring up. My mother helped me, and two of the little fellows pulled through. A good-natured carpenter was making a fence for our garden that spring

[illegible]

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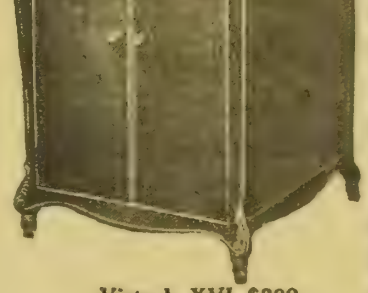

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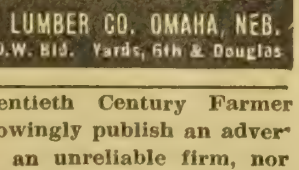

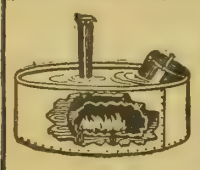

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AGENTS WANTED

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Strange Islands Opened by Panama Canal

By Frank G. Carpenter

VALPARAISO, Chile.—I dined the other night on lobsters caught on the shores of the island where Alexander Selkirk, the real Robinson Crusoe, was cast away. They were large, tender and juicy, and I doubt if better can be found in the world. Robinson Crusoe's island is becoming a great fishing grounds. It has fine cod in its waters, and it is noted for its lobsters and other shellfish. It has also a large Chilean fishing colony, and the Japanese, who are organizing a fishing industry in northern Chile, are considering the exploitation of that territory.

Ecuadorian Plantation in the Galapagos Islands

Robinson Crusoe's island is known on the maps as Juan Fernandez. It belongs to Chile, and it lies about 400 miles west of this port of Valparaiso and 2,600 milts south of the Panama canal. It is reached by government steamers, which go there to supply the colony at certain times of the year, and it is ruled by officers of the Chilean government. During my stay here I have met men who know the island well.

An Island Paradise

They describe it as a paradise. It has plenty of rain and is covered with a luxuriant vegetation. It is affected by the antarctic current, which keeps it perpetually cool, and the northern half on which the rains fall is covered with green.

The island is only twelve miles long by seven miles wide. It consists of a great mass of rocks rising out of the ocean to a height of more than four thousand feet. It is made up of hills and mountains, with many ravines and short valleys. The most of the shores are inaccessible, but at Cumberland Bay there is an excellent landing place. Behind this is a settlement of cottages and huts made of cane wattled with straw. The houses have gardens about them, and at one time there was an attempt to start a stock-raising industry. One settler is said to have had as many as 30,000 cattle and an equal number of sheep. In time, however, his business fell off and the cattle ran wild. The island now has wild sheep, wild goats and wild mules, and the animals thrive without human care. The grass is excellent and covers every open spot on the northern side of the island. There are wild oats on some of the hills and also wild vegetables. There are wild fruits which have reproduced themselves from the trees planted by Alexander Selkirk, and from the same source there are wild grapes as delicious as those which Robinson Crusoe dried for raisins.

Real Robinson Crusoe

Alexander Selkirk was the hero of Defoe's story and the real Robinson Crusoe. He was cast away on this island more than 200 years ago, and there is a monument to him, consisting of a marble tablet set in the rocks on one of the higher parts of the island. The place is known as Robinson Crusoe's Lookout, and it is where he is supposed to have kept watchfires burning to attract the attention of any ship that might pass. The monument was erected in 1868 by some English naval officers. I have a photograph of it. The inscription reads as follows:

IN MEMORY OF
ALEXANDER SELKIRK, MARINER.

A native of Largo, in the County of Fyfe, Scotland, who lived on this island, in complete solitude, four years and four months.

He was landed from the "Cinque Ports" galley, 96 tons, 18 guns, A. D. 1704, and was taken off in the "Duke" privateer 12th of February 1709.

He died Lieutenant of H. M. S. "Weymouth" A. D. 1723, aged 47 years.

This tablet is erected near Selkirk's Lookout by Commodore Powell and the officers of H. M. S. "Topaz" A. D. 1868.

Alexander Selkirk was rescued in 1709, just a little more than 200 years ago. He went to London and there met Defoe, who had many talks with him and therefrom got the idea and background of his story. The work "Robinson Crusoe" was published ten years later. It ran through four editions in as many months and was the big seller of its time. It is one of the biggest sellers of today, and it ranks with the Bible and John Bunyan's "Pilgrim's Progress" as the greatest sellers of history. "Robinson Crusoe" has been translated into nearly every known language. It has been printed in Spanish, German, Russian, Italian, Greek and Arabic. It is one of the boys' books of Japan, and a Chinese edition has been recently issued which is having an enormous sale.

Special Excursions Probable

Now that the Panama canal is completed there will probably be some special steamship excursions to Robinson Crusoe's Island. The round trip from Valparaiso can be made in three or four days, and it might include a look at the cave in which Alexander Selkirk lived, at the Lookout, where for four long years he scanned the sea for ships, and, I doubt not, at vestiges of Crusoe's man Friday, and perhaps a petrified footprint of that which the savage made upon the sand.

Selkirk was found by a ship that had seen the fire on the Lookout. According to the narrative of the captain who took him to England, he was clad in goatskins and was running about as though crazy. When he reached London his talk was the wonder of the coffee houses and his adventures were discussed by everyone . Sir Richard Steele told of them in one of his papers, and Selkirk published a little pamphlet of twelve pages describing his wanderings.

Crusoe's Cave

The Robinson Crusoe cave, where Selkirk lived, lies in a ridge of volcanic rock. It is easily identified. It is about thirty feet deep, and its roof is from ten to fifteen feet from the floor. The entrance is about fifteen feet high, and is almost hidden in ferns. The cave shows signs of having been lived in, and it is like the description of that in "Robinson Crusoe." There are holes and pockets scooped out of the walls and here and there is a rusty nail that had been driven in between the stones. The cave is said to have been the resort of the buccaneers, who once ravaged the west coast of South America. There are other caves upon the island, and there are also cave dungeons which were occupied when the island was used for criminals. Some of the cells were far underground, and the prisoners could not stand upright within them. History records that the convicts once mutinied and murdered their guards. They captured the boats in the harbor, and 300 of them made their way to Chile and landed there.

Within the last year or so the Chilean government has decided to make Juan Fernandez again a convict settlement. The officials have visited it, and they find it well fitted for the purpose. They have sent a number of convicts there, and are now erecting a model prison upon it.

Another group of islands that will be important, now that the canal is completed, is the Archipelago de Colon. The name on the maps is the Galapagos islands. These islands belong to Ecuador. They are situated about as far from Panama as New York is distant from Chicago, and in such a location that they might form an important coaling station for the ships on their way north and south between the two continents. They are about 500 miles from Ecuador and 2,000 miles north of Valparaiso.

Nesting Scene, Guano Islands

These islands were for a long time uninhabited, and not long ago they had a sort of a Robinson Crusoe, who lived there for years upon fruits and roots and upon the wild cattle and pigs which he

was able to kill. He caught the animals in traps and killed them with a spear made of a pocket knife tied to a stick. He had a hut with a roof of cowskins and pigskins. When found he was naked and was carrying a pig on his back. He had been on the islands for years, having been left there by some ship. He had almost lost the power of speech, and it took some time for him to grow accustomed to civilized ways.

At several times during our history the United States has considered the getting possession of the Galapagos islands. In 1851 preliminaries of transfer were arranged with Ecuador, and at that time $3,000,000 was offered for the right of collecting the guano on the islands. The sale fell through, however, and so far none of the subsequent negotiations has succeeded. Now that we have the canal the sale may again come up in connection with our Pacific coast trade.

Galapagos Islands Valuable

It is claimed that the islands are fertile. Some parts of them are now being settled. The Ecuadorians have established several plantations, and say that they have enough grazing grounds to feed thousands of cattle. The islands have excellent cod fisheries along the shore, and are also famous for turtles of enormous size, which are found nowhere else. These turtles when full grown measure about three feet thick and weigh as much as 600 pounds. They are valuable for their oil, which can be used in place of lard. An ordinary turtle will yield about six gallons of oil, and this will sell for 75 cents a gallon. The islands have also seals and wild dogs, as well as wild donkeys and cattle, all of which are the descendants of those brought by a colony from Ecuador, which once attempted to settle the island, but failed.

There are other islands lying off the west coast of South America that have yielded more money than any other spots upon earth of a similar size. I refer to the guano islands, which have produced more than $1,000,000,000 worth of fertilizer, and which, if the present movement for their renovation succeeds, will produce hundreds of millions of dollars more. This movement is backed by the Peruvian government, and is based upon scientific investigations. I will describe it further on in this letter.

The guano islands begin at the northern part of Peru, and they run here and there through the sea off the west coast of the South American desert far down into Chile. They are so situated that they have no rain, and they are absolutely barren except for the vast flocks of birds which use them for their breeding places.

I saw many of these islands on my way southward through the Pacific. At first they seemed to be rocks of white chalk. The white, however, was made by the droppings of birds, which come there by the tens of millions every year to nest and raise their young.

Birds Are Source of Wealth

The great value comes from the droppings or manure of these birds. At the time they were discovered the deposits were so large that the Peruvians were two generations in developing them. They shipped the guano to the United States and Europe, and a fleet of vessels was engaged in carrying it. The receipts paid a large part of the expenses of the government, and they kept the country rich.

Then Peru had its war with Chile and was conquered. The result was an enormous foreign debt in the settlement of which the best of the guano islands were given over to the foreign bondholders, and came under what is known as the Peruvian corporation, which corporation is still shipping from them thirty or more thousand tons every year.

The guano deposits are now almost exhausted. The most of the product had been consumed before the war with Chile, and a continual export has gone on since then. The output now amounts to only a few thousand tons a year, but through the plans now making by the Peruvian government the islands may be renovated, and a continual supply received from them for all time to come. These plans are based upon the work of Dr. H. O. Forbeg, a celebrated ornithologist, who has been sent by the president of Peru to report upon the islands and advise the government as to their future. Dr. Forbes has visited the whole coast in a motor boat, and has investigated all the islands and roosting rocks, studying the birds and their possibilities. He has caught some of the birds and kept them with a view to see how much guano each will produce. He finds that the amount of fish consumed by them is enormous. A single pelican will eat from eight to ten pounds a day and it deposits an enormous amount of guano in the course of a nesting season. A sea gull will drop from four to six ounces per day or something like twenty-eight pounds during the time it is breeding. Other birds produce more and the total amount is very great.

Guano Supply to Be Continuous

Dr. Forbes has divided the guano archipelago into zones and it is his idea that each zone will be worked only once in four years, during which times the other zones will be accumulating guano. In this way the supply will be continuous and the islands may again be enormously profitable.

During my trip off the guano islands we had millions of pelicans flying over our steamer. There were also sea gulls, wild ducks and divers of many kinds. In places the sea was covered with birds, and a great flock of cormorants or pelicans would drop out of the sky on to the water, covering an acre or so at one time. The birds feed in the sea. The pelicans have pouches or bags of yellow skin under their necks, and they scoop the fish into these. They often gorge themselves to such an extent that they cannot rise from the water, but remain there until they have digested sufficient of their catch to lighten the weight. They always hunt in flocks, and when they settle on some place where the fish are abundant, they form islands on the sea a mile or so in diameter. Dr. Forbes says that they sit so close together that those on the outside have to rise first before the birds in the interior are able to get enough air under their wings to enable them to rise from the sea.

Eight Species of Birds

Dr. Forbes has found that the most of the guano comes from eight species of birds. The chief of these is Bougainville's cormorant, whose chief nesting place is the Chincha islands. Last February Dr. Forbes found 10,000,000 of these birds nesting in the middle of one of these islands. The nests were close together, and the whole formed one of the most wonderful bird sights of the world. He watched them, and found that each nest had its male and female, and that one bird sat on the nest while the other was feeding, and that it, in turn, was relieved by its mate. The cormorants started for their fishing grounds at 5 or 6 in the morning, and flew in a broad stream perhaps 150 feet wide. This stream continued for hours.

The next bird in importance is the pelican. This also nests in great flocks and in the same neighborhood as the cormorants. When the pelicans are feeding 5,000 or 6,000 of them may be seen diving together. They fill the great pouches under their bills, and carry the fish away to eat them at their leisure.

Another bird is the gannet, whose young are beautiful little creatures covered with the purest white down. The gannets fly in flocks of from ten to twenty thousand, and they go down, like so many rockets, into the sea.

The guano of the Lobas islands is found in pockets covered with layers of sand from two to fifteen feet deep. These are old deposits. The sand is shoveled off, and the guano is dug out. The stuff looks like fine sand. As it is dug up a strong smell of ammonia raises and the workmen wear iron masks over their faces to keep the ammoneal dust out of their lungs. The guano is loaded upon trucks and carried on a tramway to the shore, where it is transferred to the ships for Europe or the United States. Such loading is now being done on the Chincha islands as well, and upon the smaller islands still in the hands of the Peruvian government.

(Copyright, 1914, by Frank G. Carpenter.)

Throughout the national forests the rangers are posting the roads with permanent guide signs which tell distances and directions, especially at forks and cross-roads. The signs are usually put up in the winter when other work tends to be light. On some forests the rangers go on snowshoes, dragging loaded sleds and nail the signboards to roadside trees.

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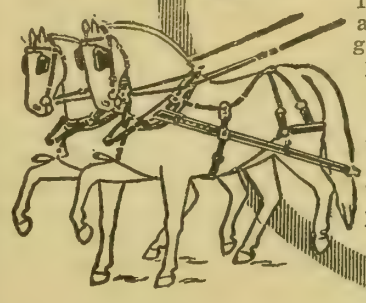

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UNLESS we have worked for vigor in our flocks the winter through up to now, and continue to do so from this on, our hens will come into the breeding season giving us eggs of low vitality to hatch and chicks as low in vitality. Too many of the chickens on our farms are bred, forced to egg-laying, fed just any way and with no regard to their vigor. One breeder of vigorous fowls selects his hens by their toe nails, so he claims. The hen with the worn-off toenails is the vigorous hen, he says, for she will scratch and forage far in spite of plenty of feed at home. In fact, she prefers scratching her toenails off in hunting food than securing that easily gotten at near the house. Feeding corn, wheat, oats and other grains and calling it a balanced ration too often results in the hens getting winter fat if they are not made to hunt for it, and feeding these alone too plentifully even on range without the extra balance of some good protein animal food will often result just the same in a flock showing low in vitality when spring comes.

* * *

The reason why the farmer or farmer's wife who increases the flock fails in making good and getting the profit out of the large flock that was made out of the smaller flock is because the accommodations were not increased with the flock. Too many do not recognize that a large flock takes more thought and care in feeding than a small flock, and that in feeding broadcast to a large flock many members do not get their regular share of feed. Crowding so many together in quarters just large enough for the old flock brings on lack of vigor and strange ailments you never saw in the old and smaller flock. Increase accommodations and care as you increase your flock, and in winter especially must you always be on the alert to keep the large flock happy, well fed and healthy.

* * *

Some good-balanced mash rations for laying hens run in these proportions: Five pounds wheat, four pounds cornmeal, five pounds barley, two pounds bran, same of alfalfa, one-half-pound blood meal. If alfalfa is not handy, use more oil cake or meat meal; or, ten pounds wheat, four pounds shorts, five pounds cornmeal two pounds cottage cheese and one pound blood meal. Where skim milk is plenty it is added in place of blood meal, but in large quantities. Except where skim milk is added, a great many poultry keepers prefer to feed this mash ration dry. Again, the majority prefer it made warm by adding hot water or milk. It must be salted to taste, and charcoal can be stirred in with it. Grit as well as sand must be kept handy to the laying hen. Vegetables are usually fed separate from the regular laying mash. Noon is the usual time to feed the mash. However, some prefer it as a morning feed if fed dry, and others declare it does best work if fed as a last full-up ration in the evening.

* * *

Post mortem examination is our only sure way of determining the greater majority of the diseases attacking our fowls. We may know the symptoms of a very few troubles. Even here we might be mistaken. Sickness and death will enter the best kept flocks, and the owner can only set about to find why the loss and improve the condition of his poultry. Oftentimes the seemingly vigorous flock will merely show up with soiled vent feathers, and the owner wonders the why of the stiff walk, the lassitude, the color of the droppings, often very dark and thin. While this condition might be due to eating too much vegetable matter, or again, eating too much corn, usually it is due to an invasion of worms, tapeworms especially. To make sure, open the intestines of a fowl that you kill because you know it must die soon, and let them float in warm water. If there are worms of any kind they will move and thus show themselves in the water. One experiment of this kind will save you great loss of other birds.

Random Philosophy

From the Pennsylvania Farmer we quote the following: "It is estimated that 95 per cent of the poultry products of the country are produced from small flocks on the farms. Poultry is produced at such low price on the farms as to make it impossible for most persons to put much money in a large poultry plant and compete against the farmers, the price of feed to be bought for such a plant making competition almost impossible unless the large poultry plant resort to various means to get high prices for their products, and, from the reports in poultry journals from month to month, fearful and wonderful are the ways the owners of these plants go about to get the profit necessary to compete with the farmer. In fact, how many of these great plants you hear of as started in a flourishing way have passed from advertising lists two years after? Many are kept up longer by pure guff and the fact that a fool is born every minute to believe all that is told him. Some years ago a certain star of the first magnitude appeared on the poultry horizon with his $5,000 and $10,000 hens, deceiving many into paying exorbitant prices for his stock. He wrote a book to show you how to make $15,000 a year in poultry on a city lot. It also tells how all the food a chicken eats goes down its windpipe. With this is other guff foisted upon a gullable public in the shape of a dollar poultry book made up of unscientific statements. And yet many invested in the book, the high-priced eggs, the stock, and made money for the man trying to compete with the farmer."

Nothing Cheap Which is Superflous

Nothing is cheap which is superfluous, for what one does not need is dear at a penny.—Plutarch.

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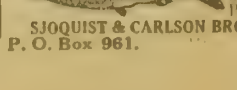

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The Twentieth Century Farmer will not knowingly publish an advertisement of an unreliable firm, nor one which does not do exactly as it advertises. Any subscriber who finds that an advertiser does not do as he promises in his advertisement will confer a favor by sending us his claim for adjustment or collection.

Douglas County Poultry Show

ONE of the most successful poultry exhibitions ever conducted in Douglas county was held at Benson, Neb., November 25 to 29. Since no poultry show has been held in Douglas county for several years, it was expected the entry list would be small, but the management was agreeably surprised to receive 886 birds exclusive of a big string of ducks, geese and turkeys. The untiring efforts of Secretary Boehr, Vice President Jacobs and Superintendent Knudsen were largely responsible for the success of the show. Guy E. Schreff of Lincoln judged the birds, to the complete satisfaction of every exhibitor.

The largest class was Barred Rocks, 142 birds being shown. Ahlquist Bros. of Florence, Neb., carried off the highest honors in having the best and largest display. Arthur Gillette of South Omaha had the best bird in the class.

Another large class was Rhode Island Reds. The first prize rose comb pullet of Cloverdale Poultry Yards, Benson, Neb., was a beauty and was awarded the prize for the best bird in the entire show.

Other big classes were White Leghorns and White Wyandottes.

The awards were as follows:

Barred Rocks

First Cock—Ahlquist Bros.
First Hen—Arthur Gillette.
First Pen—Arthur Gillette.
First Pullet—Ahlquist Bros.
First Pullet-bred Cockerel—Ahlquist Bros.
First Cockerel-bred Hen—Arthur Gillette.
First Cockerel-bred Pens—Ahlquist Bros.
First Cockerel-bred Pullets—Ahlquist Bros.
First Pullet-bred Cockerel—Ahlquist Bros.
First Cockerel—Ahlquist Bros.
First Pullet-bred Pen—Arthur Gillette.
Largest Display—Ahlquist Bros.
Best Bird in Class—Arthur Gillette.
Best Colored Male—Arthur Gillette.
Best Colored Female—Ahlquist Bros.
Best Shaped Male—S. S. Nevins.
Best Shaped Female—Arthur Gillette.

R. C. Rhode Island Reds

First Cock, First Hen, First Cockerel, First Pullet, First Young Pen—Cloverdale Poultry Yards.
First Old Pen—F. S. King.
All special prizes awarded to Cloverdale Poultry Yards.

S. C. Rhode Island Reds

First Cock—V. H. Nelson.
First Cockerel—Cloverdale Poultry Yds.
First Hen—A. N. Wickham.
First Pullet—Arthur Edson.
First Old Pen—Mary E. Snow.
First Young Pen—Cloverdale Poultry Yards.
Best Shaped and Best Colored Male—Cloverdale Poultry Yards.
Best Shaped and Best Colored Female—Arthur Edson.

White Wyandottes

First Cock—F. S. Walker.
First Cockerel—Dr. J. W. Parsons.
First Hen—F. S. Walker.
First Pullet—Dr. J. W. Parsons.
First Pen—Mrs. Crews.

Silver-Laced Wyandottes

First Cock; First, Hen—Omar J. Cotton.

White Rocks

First Cock; First, Hen—J. R. Bowman.
First Cockerel—F. H. Jacobs.
First Pullet—C. H. Chadwell.
First Pens—C. W. Martin.
Best Cockerel in Class—F. H. Jacobs.

R. C. Brown Leghorns

First Cockerel—W. F. Harms.

S. C. White Minorcas

First Pen—C. E. White.

S. C. Black Minorcas

First Cock—L. D. Motz.
First Hen—Omar J. Cotton.
First Cockerel—Omar J. Cotton.
First Pullet—Henry Knudsen.
First Pen—Harry Knudsen

S. C. Brown Leghorns

First Hen—Harry Knudsen.

R. C. Black Minorcas

First Pen—Harry Knudsen.

S. C. Brown Leghorns

First Cock; First, Hen; First, Cockerel; First Pullet—O. C. Gehrman.

S. C. White Leghorns

First Cock—C. H. Wendt.
First Hen—George Bollman.
First Cockerel—Crown Point Poultry Yards.
First Pullet—Mrs. A. D. Riegal.
First Pen—J. W. Welch.

R. C. White Leghorns

First Pen—Crown Point Poultry Yards.

S. C. Buff Leghorns

First Cock; First, Hen; First, Cockerel; First Pullet; First, Pen—Elmer Carson.

Buff Orpingtons

First Cock—Mrs. Henry Moseke.
First Hen—R. J. Strickler.
First Cockerel; First, Pullet—Mrs. Henry Moseke.
First Pen—Joe Styskal.

White Orpingtons

First Cock—William Culkin.
First Hen—R. C. Roe.
First Cockerel—H. A. Kinley.
First Pullet—H. A. Kinley.
First Pen—John Cox.

It is considered not unlikely by the association that the Nebraska State Poultry Show will be held in Omaha next year.

Give the Children a Chance

(CONTINUED FROM PAGE ELEVEN.)

and he made me a little trough for my stock and told me to call them Forty and Fifty; then if anyone asked me how many pigs I had I could say "Forty and Fifty." So I called them that, and fed them all the milk they could drink, and "they grew and they grew," till by and by I sold them for quite a sum of money.

I remember I bought sister and myself a pretty brown silk parasol and mother a pair of shoes, besides some other things, and I enjoyed the spending of it. It taught me self-reliance, too, for mother let me spend it as I wanted, and it gave me quite a business feeling.

Give the children a chance in little ways of their own, whether it be chickens, rabbits, pigs or whatever they most wish or can do, and let them learn how to handle money and to know the worth of it when young; it will pay. From one who knows, because it helped her.

From Scotland to America

(CONTINUED FROM PAGE NINE.)

take long to reach the coast of Ireland, which looked green as a lawn. The next morning when we woke up we were getting tossed all about. We tried to get up, but we were seasick and could not.

When we got well we went up on the deck and saw flying fish flying out of the water and in again. Then the dolphins were swimming around the ship, too. When we were near the end of the journey we had a race with another ship, the Baltic, to see which ship could get into New York harbor first. Our ship beat the race. When we got into the harbor we saw the Statue of Liberty and Long Island. The journey had taken nine days.

My Farm

By Merritt Cook, Aged 9, Arlington, Neb.

I live in the country and my father is a farmer. This is the first time I ever wrote a story for the Twentieth Century Farmer. I am hoping to get a prize and am writing about my farm. In our yard was a place where nothing was growing but weeds. I pulled the weeds and planted things. Every year I grow more things and know more about them.

This year papa let me grow some pumpkins in the cornfield. When they were ripe I sold them to him for $1.40. Mamma gave me some chickens for tending to her hens. I sold them for $1.50. Papa gave me a lamb for getting the cows and sheep out of the pasture at night. I am going to sell him when papa sells the rest. This is the way I get my money. Now I have $1.40.

If I do not get a prize this time I will try again.

My Vacation

By Ada Hutzel, Aged 10, Madrid, Ia.

I am a little girl 10 years old and go to school every day. I have a mile and a quarter to go and I have never been tardy or absent, only a few days when I was sick.

I spent my acation in Canada. My cousin and I went to the river fishing and saw where the beavers had been making a dam. While we were fishing I pulled out a fish which landed near the water, and I went over to get it so it wouldn't get back into the water again. In doing so I fell into the water. It was not very deep, but I was afraid, because it was awfully deep in some places. My cousin came running and pulled me out; then she pulled off my shoes and stockings and we went on fishing and caught eight more fish before going home.

We didn't get to go fishing all by ourselves any more.

Additional Stories

Mildred G. Peterson, Plainview, Neb.; Ruth M. Lundstedtt, Rock, Neb.; Carter R. Battershell, Stapleton, Neb.; Clarence Baldwin, Modale, Ia.; Agneta Carlson, Harlan, Ia.; Ila M. Watson, Spencer, Ia.; George Isaacs, Faucett, Mo.; Feo Howes, Alta Vista, Kan.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Homesteading in Wyoming

I would like to hear from some homesteaders in Wyoming if they will write letters to be printed in this paper or to be forwarded directly to me, telling of the country and how they like or dislike it, and whether there is room for more. There are many renters here who must go some place. Rents are getting higher and there are not lands enough to go around. I hope you will print some, or all, of this. -E. F., Nebraska.

Note—We will gladly print any letters from homesteaders in Wyoming. These letters from men who have gone out onto government lands and found out the truth about the country are always of great value to the many who want to leave the crowded sections. If you prefer not to have your letters printed we will gladly forward them to the writer of the above letter.

Farmers Losing Money

We have recently been reading some extracts from an address by Secretary of Agriculture Houston before the National Dairy Show held at Chicago October 26. In his address we find some very interesting and astonishing facts which we think should be read and studied by all of our farmers, and also all thinking men of our nation. It shows clearly the cause of present high prices of meat and other farm products. In the face of conditions as they now exist, with our population increasing at the rate of 23,000,000 in the last fifteen years, and the fact that less than 25 per cent were added to the producers of food, it is evident that we are rapidly facing a serious state of affairs.

While it is true we have raised one of the biggest all-round crops ever raised in this country, still in view of the prospect that the European war may continue for an indefinite time, it is plain to see that vast quantities of food supplies of all kinds will be called for and that prices will continue to advance. It becomes the duty not only of the individual, but also of the state and nation, to make every effort to conserve the available supply of farm products as much as possible, and we ask your permission to point out some of the methods where this waste can be avoided and a vast amount of useful and valuable feed can be turned into profit.

First, we venture the statement that 85 per cent of the corn raised in Saline county has lost 40 per cent of its feeding value by being left standing in the field, while the use of a silo would have more than trebled the value of the crop. One of my neighbors has a silo that holds 140 tons. He filled it this fall with the corn off of fourteen acres, ten tons per acre, worth at a low estimate $5 per ton. He said the corn would make about twenty-five bushels per acre; value of corn, $14; value of silage, $50. This same man sold a car of fat steers recently for better than $2,000. With corn that will make forty bushels per acre, the fodder is worth 40 per cent of the crop. With corn that will make ten bushels per acre the fodder represents 80 per cent of crop. By snapping the corn and putting the fodder into a silo any farmer can keep double the number of stock, and in far better condition.

The old saying, "Willful waste brings woeful want," is true, in the way that a very large part of the straw is wasted by threshing in the field. Not only a large part of the straw is wasted, but a big piece of land is worse than lost, and the waste of time in cultivating the next crop is considerable. The plan I have found good is to set eight twenty-foot poles in the center of the corrall, staple two strips of heavy hog fencing, one at the ground and the other six feet above, with a pole spiked on above the lower wire for stock to eat over, set the machine and blow the straw into this enclosure, and put a sheet iron roof on to settle with the straw. The chickens get all the waste, and the straw is made into fertilizer, which properly applied will nearly double the yield of corn.—A. H. B., Nebraska.

Note—On a great many farms the difference between profit and loss is measured by what is wasted through careless farming methods. The day has passed when the western farmer can get rich by raising enough to feed and clothe his family while he waits for his land to increase enough in value to make him a wealthy man. Two men of this kind have come to our attention this week. Both men have raised corn on the same ground for forty years without any kind of rotation. They are both complaining of a small corn crop.

Grapes from Cuttings

Some time ago I read something in your paper about grapevine cuttings, the way they should be cut and treatment for next spring's planting. Can the Twentieth Century Farmer give directions for propagating a vineyard in this way?—E. M. B., Iowa.

Answer—It is easier and safer to plant rooted vines in starting a vineyard. If the cutting method is used, cuttings should be made in the fall from the hard, well-ripened new wood. Length should vary from six to eight inches, depending on the distance apart of the buds on the canes. About three buds are usually left. Put these cuttings up in bundles of about 100 each; bury them in some well drained place with the tops down and cover them with about six inches of soil and a foot or two of mulch. Be sure to pack the soil

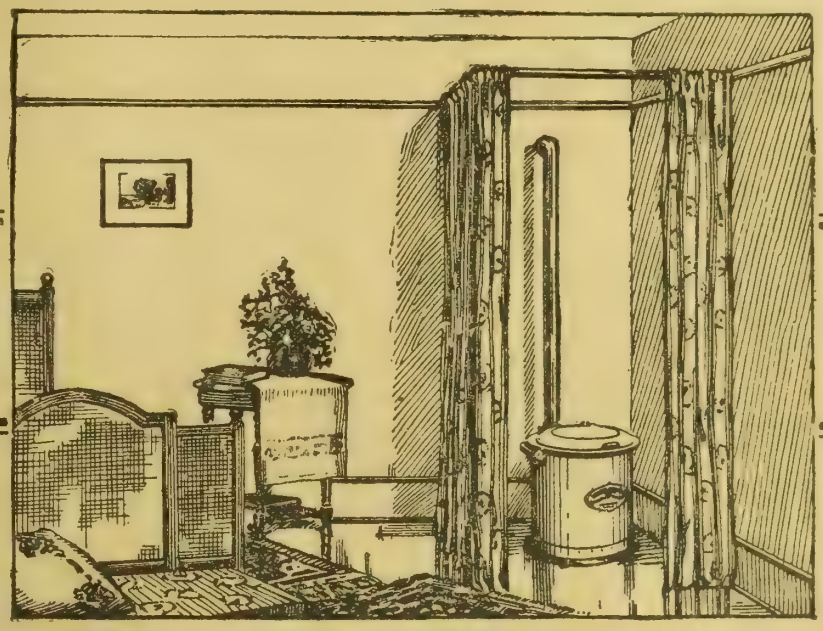
(CONTINUED ON PAGE EIGHTEEN)

You've Needed One For So Long

—an indoor closet—and now it is easy for you to have one. No longer need you suffer the inconvenience and discomfort of the outdoor closet. No longer need the health of your wife and children be in danger.

We have done away with the big cost of an indoor closet by perfecting a chemical system that requires no sewerage or cesspool connection.

Illustration shows how many folks install their "Waterburys" in their bedrooms.



The cut below shows the Waterbury with air-tight cover lifted.

Something you've always wanted — needed—and which now you can afford to buy.

THE WATERBURY SANITARY CLOSET
ALL METAL-CHEMICAL

is a complete system within itself, combining an artistic, nicely finished indoor closet with a safe, sanitary, odorless method of sewage disposal.

It makes no difference where you are located—in a small town which has no sewer connections, on the farm, or anywhere—you can install the Waterbury Sanitary Closet in a few minutes and enjoy the comforts and convenience of an indoor closet.

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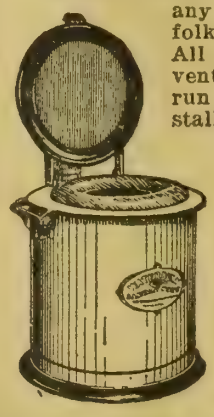
The Waterbury Sanitary Closet can be placed in any room, hallway or closet. Many folks put it right in their bedrooms. All you have to do is to connect the ventilating pipe with a chimney or run it through the roof and the installation work is done.



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The "Waterbury" is sold under a real guaranty, backed by a big responsible company. It assures you not only of the quality of materials and workmanship, but also of the odorless and sanitary features. Thousands of "Waterburys" have been sold and are giving entire satisfaction. We'll gladly refer you to any one who has bought one. You take no risk in buying a "Waterbury."

Write for Free Book

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The Heider Tractor is the pioneer light tractor. Sells at a price which every farmer can afford. Don't spend money on experiments. Let us prove that the Heider is the best. Write today.

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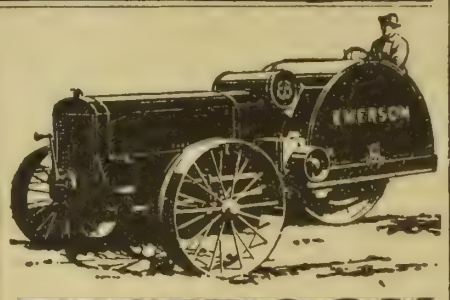

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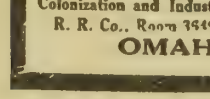

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Fresh Frozen Fish, per 100-lb. box.....$3.25
500 lbs. or more, $3.00 per 100-lb. box.
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A little cash and a determination to work will get it for you. We will help you start if you will write and tell us all about yourself and what you would like to do.

We have nothing to sell you, but we can furnish you with a folder giving the names of owners of 300 pieces of good land who recognize that the greatest need of this country is to have more farmers like you and who will sell you part of their land on easy terms.

Farm Development Bureau 22.
CHAMBER OF COMMERCE,
Spokane, Wash.
Contagious animal diseases are unknown.

Review of Live Stock Market

By A. C. Davenport

CATTLE suffered severely during the first half of last week, the trade at some points bordering on demoralization. The partial raising of the quarantine enabled cattlemen in the clean counties of the states recently quarantined to ship their stock to market. Instead of starting in cautiously and feeling out the market with moderate shipments, cattlemen did the very worst thing they possibly could have done—flooded the markets everywhere. Almost every big market was smothered under a load of half-fat and immature beeves that should have been held back in the country another thirty or sixty days to make them good killers. Chicago suffered the worst, receiving on some days more cattle than could be sold.

In normal times there is a good buying demand for half-fat beeves from feeder buyers who send them back to the country to be fed out and finished for beef. Owing to government quarantine regulations cattle from states recently under quarantine could be sold only for immediate slaughter, and could not be sent back to the country again. Not content with sending in their immature beeves a good many thin stock steers and calves were shipped from states recently under quarantine. These cattle could be sold only for immediate slaughter, and as they were not fat enough for beef they had to be sold as canners at canner prices, causing the owners a loss of $1.00@2.00 per hundred. That was a pretty big price to pay for not having read the government quarantine regulations.

When all the conditions governing the trade are studied it will be readily understood why prices slumped badly, and it will be easy to comprehend why they will continue to decline unless the country recovers its senses and cuts down shipments.

Just why the country should be so wild to dispose of half fat and immature cattle it is hard to say. All accounts agree that there are fewer cattle on feed than ever before. No one, so far, has been able to figure out how it will be possible to avoid a big shortage of beef the latter part of the winter and spring. It would seem as if there were the very best of reasons why the country should be very deliberate, and only allow cattle to come forward when the market is in a good, healthy condition and prices strong. A big effort is being made to induce the country to hold the cattle back, and lighter receipts at the close of last week caused a healthy reaction in the market. It remains to be seen whether receipts can be kept within reasonable bounds.

Break in Hog Market

That the partial raising of the quarantine brought in large receipts of hogs was not so surprising, as a good many of the hogs were already very heavy and should have been shipped some weeks ago. Other hog men had good reasons for being in a great hurry to ship on account of the presence in their neighborhood of cholera. Still others, who were well informed as to the probability of hogs going lower, hurried their stock to market to get in ahead of the break. As a matter of course, their haste helped to break the market down all the more rapidly, so that hogs are now selling at the lowest point touched in December since 1911.

The hog market all the fall and winter to date has behaved very much as anticipated in these columns. Wars and quarantines at times have served to hurry or postpone expected changes, but only temporarily. Early in July it was stated in these columns that hogs were occupying a very strong position, and that the bulls were expecting $9.00 hogs on the basis of Omaha before September 1. This was reiterated the middle of July, and the additional statement made that later on in the year, when the spring crop of pigs should appear on the market, prices would be likely to suffer a sharp reverse.

True to expectations hogs made a good advance in July. At the close of that month came the European war, which caused the market to break around $1 per hundred, wiping out in the first week of August all the July advance and 40 cents or 50 cents additional. The break lasted about a week and the market quickly sprang back to where it was before the breaking out of the war and values resumed their upward movement. On August 14, the average price paid for all the hogs on the Omaha market was $9.04, thus making good the prediction of the bulls that hogs on the basis of Omaha would touch $9 before September 1.

The first week in August the country was reminded that the packers seldom fail to break the market during October, so as to get prices down before the opening of the winter packing season, November 1. It was added that the bears had figured it out that the packers would take advantage of the lack of export demand, due to the war, to put the break into effect a month earlier than usual, that is, during September. This proved true, as the month of September closed with hogs around $1 lower than they were at the beginning of the month. During October the market declined an additional 75@90 cents, bearing out the prediction of the bears made at the beginning of the month that hogs would touch $7 at the Missouri river before November 1.

As early as the middle of October it had been pointed out that there was nothing in sight to stop the downward movement of prices, and that the bears would not be surprised to see hogs go on down until they would be selling as low as $6.50 at the Missouri river. Again in the first week of November it was said that the bears were still predicting that hogs would go to $6.50 at the Missouri river and that some of the more pessimistic were naming as low a figure as $6. Just as that appeared in print the foot and mouth disease broke out, with the result that several of the big hog producing states were placed under quarantine and prevented from shipping stock to market. The resulting decrease in receipts at some of the big market centers acted as a check upon the downward movement in prices. Thus during November, owing to abnormal conditions, prices advanced sharply, but later on declined so that at the close of the month values at most points were not much different from the close of October.

The partial raising of the quarantine last week served to restore normal conditions to some extent at least.

Sheep suffered a sharp decline last week owing to increased runs incident to raising the quarantine, but the break had been anticipated and did not come as a surprise. Prices are still high, on some kinds the highest on record for this season of the year, and the trade generally is in a good healthy condition.

Demand This Tag on Squares

Eagle squares, standard for ninety-six years, are good anywhere you buy them. But if they bear this tag you can get your money back without a question, if to your mind, you are not satisfied.

Wright & Wilhelmy Co.
Wholesale Hardware
Omaha, Neb.

Our Double Guarantee Protects You

Grapes from Cuttings

(CONTINUED FROM PAGE SEVENTEEN.)

firmly about the bundles so that they will not dry out. In the spring, when the ground is dry, take out the soil above the cuttings, all but about three inches, and replace with hot stable manure. This will cause the cuttings to callous, which is necessary before planting. When the soil is well warmed plant six inches apart in rows two or three feet apart, putting the cuttings down to the top bud.

Breeders' Notes

Wolf Bros.' Horses

Wolf Bros. of Albion Neb., the well known importers and breeders of draft horses, are in the game again this year as usual with a choice lot of stallions and young mares on hand. They have twenty-five or thirty head of Percherons and Belgians of the big, heavy boned, drafty kind, with quality and action. This firm will be in good shape to take care of their customers this year as usual and to solicit a share of your patronage. If you are going to need a stallion or a few mares, you can make no mistake by getting in touch with them. Watch these columns for further announcements and mention the Twentieth Century Farmer when writing.

Barnes' Duroc Offering

A. B. Barnes of Petersburg, Neb., is going to put up an offering of Duroc Jersey bred sows this year in his February 9 sale, that certainly ought to receive the attention of anyone in the market for some strictly high class bred sows. His offering will be largely composed of matured stuff. There will be thirty head of tried sows and eight fall yearlings, all good, big, useful, heavy boned, growthy stuff. Among the tried sows are many that would be a valuable asset in any breeder's herd, both in point of breeding and individual make-up. There will be six tried sows and six fall yearlings by Belle's Crimson Wonder. Here is something that sure ought to be an attraction. Besides these, there will be ten by B. & L's Wonder, ten by Colonel Chief, four by Uneeda Crimson Wonder and others. These sows are all immune and guaranteed to be so. They are mostly all bred for March farrow to Crimson Model, Riverview Wonder and Belle's Crimson Wonder. Watch these columns for further announcements and arrange to attend this sale.

Immune Duroc Offering

Fifteen tried sows, twenty fall gilts and fifteen spring gilts will be the lineup for the offering of Duroc-Jersey bred sows to be made by F. B. Nelson of Lindsay, Neb., on February 11. They are a lot of big, growthy, useful individuals and carry the very best of blood lines. They are in splendid breeding condition and are all immune. The tried sows represent such sires as Valley King, Red Chief Wonder, Wallace's Wonder, B. & L's Wonder, Moderow's Wonder and others. Fall gilts are by the grand old champion of two states, Valley King. The spring gilts are by Invincible Chief, Golden Model 4th, Chief Select 2d, Melina's Wonder, Colonel Boy, Sweet Rose's Wonder, Big Gano, Perfection Wonder and Crimson Gano. They are bred to Valley King Junior by Valley King and I Am a Critic by Critic B. The latter boar was a strong prize winner at Kansas, Nebraska and Missouri this year. About twenty-five head are bred to Crimson Gano, a son of Colonel Gano. In this connection we want to say that this boar, Crimson Gano, is sure some good breeder. Some of the very best gilts we have seen this season are sired by this boar. He is sure putting up the right type for size and bone, and if you don't get something bred to him you, yourself, are going to be the loser. Watch these columns for further announcement regarding this offering.

Durocs Worth While

C. E. Peterson of Genoa, Neb., will have forty-five head of bred sows for his bred sow sale. Of these there will be fifteen tried sows and fall gilts and thirty spring gilts. Right here and now we want to say that here is going to be an offering that it will pay any breeder to attend. When it comes to producing the goods, Mr. Peterson is right there and over. Unquestionably he has one of the biggest, smoothest, growthiest, best quality bunch of gilts that we have seen so far this season. The tried sows and fall yearlings he is putting in the sale are also absolutely right in every respect and among them are some of strictly show-yard character. The tried sows are mostly by Red Chief Wonder, and it will be conceded by anyone who knew this boar that he was one of the best sow sires that ever did service in Nebraska. This will be practically the last opportunity to get any sows sired by this great boar. Fall gilts are also all by Red Chief Wonder. Spring gilts are by Crimson Gano and Model Critic by Critic B. The offering will be bred to Long Crimson by B. & L.'s Wonder and Model Critic by Critic B., two as good boars as are in service in any man's herd. These sows are all immune. Get in touch with Mr. Peterson for catalogue and arrange to attend this sale. We will guarantee that this offering will substantiate everything we have said concerning them.

Lamb Has the Goods

We called on our old friend, Artie Lamb at Albion, Neb., last week at feeding time, and had a mighty good opportunity to see what he is going to have to offer in his sale of February 9. Artie has the best bunch of Durocs we have ever seen on this farm. He has ninety head of spring gilts and, taking them as a whole, number considered, they are just about as good as we have seen in a long time. They certainly have the size, bone, quality and smoothness that every breeder is looking for. He is going to select forty head of the top gilts from these ninety head to go in his bred sow sale and, believe me, they will be good ones. Besides these, he will offer twenty head of extra choice fall gilts and two tried sows. The fall gilts are sired mostly by Riverview Wonder, by Wallace's Wonder, and they are bred mostly to that grand old sire, Belle's Crimson Wonder, and a few to Lamb's Critic, a son of Golden Critic. Spring gilts are by Riverview Wonder, with the exeception of a few, which are by Belle's Crimson Wonder. They are bred to Belle's Crimson Wonder, Lamb's Critic and Model Wonder, a son of B. & L's. Wonder. This will be strictly a Crimson Wonder offering. In fact, there is not a single animal in this entire herd that does not trace directly or indirectly to Crimson Wonder. We will have more to say regarding this herd in an early issue. In the meantime, get your name on Mr. Lamb's list for catalogue, mentioning the Twentieth Century Farmer.

Shorthorn Bulls for Sale

With this issue of the Twentieth Century Farmer we are starting an advertisement of J. C. Hardman of Valley, Neb., who is offering some very choice Shorthorn bulls for sale. Mr. Hardman is an old-time breeder of Shorthorn cattle and has the reputation of producing the good ones. The bulls he is offering at this time are from 14 to 20 months old. They are good, big, strong, heavy-boned, rugged fellows, not in high flesh, but in just good breeding condition. They are sired by Broadhook's Chancellor, a Canadian bred bull and a strong prize winner in that country. These bulls are out of cows representing such families as Duchess of Glocester, Minnie Moss and the Victorias. If you are looking for a pure Scotch bull and one that will go out and do valuable service, we would advise you to write Mr. Hardman at once, mentioning the Twentieth Century Farmer.

Widle & Son's Offering

R. Widle & Son of Genoa, Neb., were among those we called on last week. We spent some time in looking over the animals that they are going to sell in their bred sow sale on February 8. Unconditionally, this is the best offering of bred sows that has ever been sold from this herd, and we realize that in making this statement we are putting it pretty strong, because they have made some mighty good ones in the past. Nevertheless the statement is absolutely true. The offering will consist of twenty-five tried sows, ten fall yearlings and ten spring gilts. Practically everything in this offering will be sired by or bred to the great show and breeding boar, Critic B. We believe we have never seen twenty-five sows go in any one sale possessing the scale of those to be offered here. Practically all of the sows and gilts in their last fall's show herd will be included in this offering. Take the offering as a whole, it is going to be one of the top ones of the season, east or west. Keep this in mind and watch these columns for further announcement.

Hinkle's Durocs

We called on S. M. Hinkle at Genoa, Neb., last week, and spent some time looking over his lineup for his Duroc-Jersey bred sow sale on February 15. He is going to sell about forty head, and they are an unusually good lot—in fact, the best he has ever sold. There will be five tried sows, fifteen fall gilts and twenty spring gilts. The tried sows are mostly by Crimson Wonder 10th, and the fall gilts are all by this boar. He has proven himself to be a remarkably strong breeder, and his stuff is in great demand. He is a state fair prize winner, and by all rights of breeding his get should find favor at the hands of any first class breeder. Mr. Hinkle will sell several young sows that were in his prize winning herd at Lincoln last year. The fall gilts are a very even, uniform, strong backed, good footed lot, and among them are several good show prospects for next year. The sows are bred to Hinkle's Colonel, the son of Crusader Colonel. Hinkle's Colonel was good enough to win second in class at Lincoln last year in one of the strongest shows ever held in the state. A part of the offering is bred to Woodville Gano, a splendid son of Long Gano, he by Colonel Gano. Get your name on Mr. Hinkle's list for catalogue and watch these columns for further announcements.

Sale Dates

Poland-China Hogs

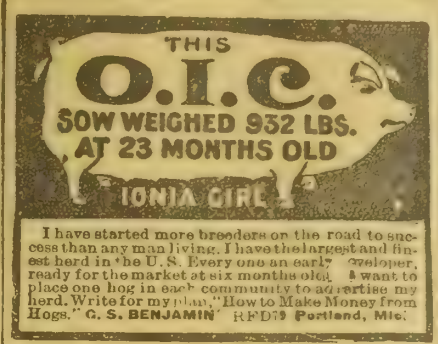
February 6—O. J. McCullough, Clarks, Neb., sale at Central City, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb

Duroc-Jersey Hogs

January 27—Willard Robbins, Lyons, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 22—John C. Tighe, Stanton, Neb.
January 23—William Morgan, Wayne,
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday, Rising City, Neb.
March 1—Harry Tidrick, Windside, Neb.
March 2—Edgar Taylor, Plainview, Neb.

Shorthorns

January 12—A. C. Shallenberger, Alma, Neb., sale at South Omaha.



I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." G. S. BENJAMIN RFD 9 Portland, Mich.

JERSEY CATTLE

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and yearly milk and butter records. HAL C. YOUNG, Lincoln, Neb.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

Near Big Bay, Mich., is a herd of thirteen purebred Holsteins. Last year the average yield per cow of this herd was 18,812 pounds of milk, and 638.57 of fat, or 3.39 per cent.

Do you realize the money there is in such cows? The average milk yield of all cows in this country is under 4,000 pounds. These thirteen cows produce as much milk as sixty-two cows of the 4,000-pound class. It would require twenty-eight cows giving 8,500 pounds to equal their output.

Why feed, milk and shelter scrubs.

Send for FREE Illustrated Descriptive Booklets.
The Holstein-Friesian Association of America, Box 179, Battleboro, Vt.

This little Ad

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Sold 33 head

of boars at an average of $38 each for Mr. Ed. M. Kern, Stanton, Neb.

Read his letter:

"Sales have been very good and results from the Twentieth Century Farmer have been much better than they have from the ———. Have sold 33 head of males at an average of $38 and have not had a kick or a comeback on a thing yet.

ED. M. KERN,
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Breeder of
Duroc-Jersey Hogs.

Another shining example of the result of advertising in Twentieth Century Farmer.

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Twentieth Century Farmer
OMAHA

RED POLLED CATTLE

RED POLLED CATTLE

Both sexes; good as any in America. Call or write me your wants. W. F. Schwab, Clay Center, Neb.

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.
A few good sons of King Segis Lyons are still left.
DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

SHORTHORN CATTLE

SHORTHORN BULLS

Several pure Scotch Shorthorn bulls for sale, sired by Broadhook's Chancellor. They are red in color and from 14 to 20 months old. They are priced to sell. J. C. HARDMAN, Valley, Neb.

DUROC-JERSEY HOGS

DUROC HERD BOARS.

I can furnish you with anything you want in the line of a Duroc Jersey herd boar. I have one of the strongest Crimson Wonder bred herds in the west. They are big, growthy, fellows, ready for service. Priced right.
A. W. LAMB, Albion, Neb.

Immuned Duroc Boars

55 head of Duroc-Jersey boars for sale, sired by King Gano, I Am Crimson, Dusty Crimson and others. They are of early farrow and the best lot I have ever raised. Prices reasonable.
F. E. MERRICK, OSCEOLA, NEB.

DUROC BOARS

50 cholera proof Duroc-Jersey boars, ready for service, $25 to $35. 100 cholera proof sows, bred to Buddy K 4th, Wide Awake, Cremo and others. Price $20 to $50 for immediate shipment.
GEO. W. SCHWAB, Clay Center, Neb.

MR. BOAR BUYER:

I can supply you with a herd boar, carrying the very best blood lines of the breed. They are the big, strong backed, heavy boned kind, and are being priced to sell.
J. N. FORBES, Plainview, Neb.

POLAND-CHINA HOGS

Poland-China Boars

Blue Ribbon boars with great length and bone; some weigh 325 lbs. Sired by Blue Ribbon Hastings, Big Iowa, Big King Nebraska Mouw and High Mogul. All immuned. W. J. Eavey, Geneva, Neb.

HENSLEY'S DUROCS

20 spring boars for sale; sired by Golden Model 36, Golden Model 4th, B. & R.'s Wonder, Col. Chief and others. The big, heavy boned kind. Write me your wants. J. E. HENSLY, Central City, Neb.

POLLED DURHAM CATTLE

IMMUNE DUROC BOARS

A corking good lot of big, smooth, heavy boned Duroc boars for sale, sired by Col. Wonder 1st and out of sows by Nebraska Proud Chief and Unitt's Choice Goods. Priced to sell. W. G. UNITT, Seward, Neb.

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BRILLIANT blood, jet blacks, rich greys. Registered Percheron studs—1, 2, 3 and 4 years old. I grow great big fellows with extraordinary bone and heavy quarters. I love a good horse. Come visit at my plain, old-fashioned Percheron farm that has the goods, and lots of them. Don't let anyone tell you that they have Percherons just like Fred Chandler's. Just east of Omaha.
FRED CHANDLER, Route 7, CHARITON, IOWA.

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WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb.

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Model 80 — **Overland** TRADE MARK REG. — *$1075*

Get a Big New Overland For the Big New Year

Nineteen fifteen is just a stone's throw away.

The most conservative estimates promise the biggest, best and most prosperous year you have ever had the pleasure and privilege of living through.

So now, as never before, you need a car.

And what is more—*you need an Overland.*

Here's why.

The Overland offers the greatest intrinsic value for the very least amount of actual money.

Regardless of price—it is one of the handsomest cars ever built. The beautiful full stream-line body is one of the most admired designs of the season.

Regardless of price—it is one of the most comfortable cars ever built. The long underslung rear springs make it ride with absolute ease and smoothness at all times. So do the large tonneau, deep and soft upholstery, and large tires.

Regardless of price—it is one of the most convenient cars ever built. It is electrically started and electrically lighted. All of the electric controls are conveniently located on the steering column. You can operate every button without changing your driving position.

Regardless of price—it is one of the most complete cars. There are demountable rims, with one extra, a high-tension magneto, built-in ventilating type windshield, mohair top and boot, magnetic speedometer and curtain box. In fact every modern improvement.

Then remember this—

The first cost is not only considerably less but so is the operating cost. In both directions you save money.

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So by all means get an Overland—*and get it now.*

Then, and only then, you'll make 1915 just that much bigger, better and more delightful for your whole family.

Act today.

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Motor 35 h. p.
New full stream-line body
Tonneau: longer and wider
Upholstery: deeper and softer
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21 DEC 1914

TWENTIETH CENTURY FARMER

A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, December 19, 1914 | Number 732

Christmas Number

Light Weight Cushman Engines For All Farm Work

"I have had lots of experience with different gasoline engines," writes Dave Linton, Ransom, Ill. "We have all makes in this neighborhood. Some do what their makers claim, but it takes a team of horses and a crowbar to get them on the job. A Cushman of the same horsepower will do the same work, and a 14-year-old boy will move it from one job to another.

"Light weight, full horsepower, least vibration and great range of speed, has made the Cushman not only the farmer's best chore boy, but his wife's as well."

4 H. P. Only 190 lbs.

Easy to Move Around

This is used for all regular light jobs, and can be attached to other machines, such as grain and corn binders, etc. 8 H. P. weighs only 320 lbs., for heavier work, as grinding, sawing, etc., and can be attached to hay balers, corn pickers, etc., to save a team. **Throttle Governor** gives steady power, with extra power quickly when needed, as in sawing and grinding. Schebler Carburetor. 4-Cycle. Not a cheap engine, but built to do work no other engine will do and run without trouble. Sizes 4 to **20 H. P.** On skid or truck. 40-page Book free.

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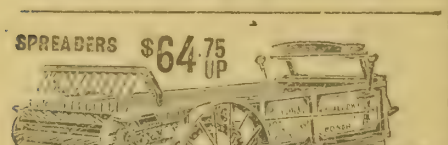

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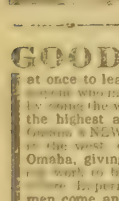
Doubl[e] [crop]s [in] 1 year. You know [it] yourself. Manure spreading [is] all the time. This new No. 8 Low-Down Manure Spreader is Galloway's greatest spreader.

Positively the best spreader on earth. Double chain drive, [illegible] front wheels cut under [illegible] All steel rear, complete with double trees and neck yoke. Electric reel. High speed beater pulverizes finely any [illegible] Steel wheels, gears coupled with chains [illegible] Box rests on rear axle. Has [illegible] Superior in every respect to new fangled freaks of [illegible] that eat you up for repairs, annoy you and kill your [illegible]

E. Forst, Athey, Ohio, writes: "Please find draft for [illegible] Assure you I am more than [illegible] It has given all you claim and more. By [illegible] of your company, I saved $21.85 and got just what I was looking after."



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AUTO College

$900 to $3,000 a YEAR, Salary or Bus. Profits in Repairshop or Garage, or as Salesmen, Factory Testers, Chauffeurs, Repairmen, Starter Experts or Garage Manager. [illegible] you are going to make a change to get into a higher paying and more pleasant line of work, DO IT NOW, the opportunities are the best now that they have ever been. Take our wonderful training course now until you are competent, and be ready for the automobile business from here. Positions now open needing capable men, and we want some good men at once to take up this work. [illegible] Increase in Elec. Starting & Lighting & Tractor engineering FREE with regular course. Learn here in 6 wks. or more. Tuition [illegible] Write today. Work easy and interesting. Many make expenses while learning. Free catalog at once.

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103 Market St. Des Moines, Iowa.

Automobiles and Engines

In this department A. J. P. Bertschy will answer questions from our readers. As this department appears on alternate weeks only, those desiring an immediate reply to questions should enclose postage.

"I LIKE to hold the reins over a spirited horse."

How often we have heard the remark—made it ourselves, in all probability. There is a different sensation in such a ride, as compared to one behind a horse that lacks spirit and needs frequent urging.

And the same condition prevails when one compares the sensation that comes from motoring in different types of cars. Though the automobile is insensate, different makes of cars have their characteristics of disposition to fully as great a degree as different horses. Certain cars have become known as "lively," "powerful" and "peppery," call the quality what you may. Others are just as notably sluggish, requiring frequent gear-changing and becoming mired or stalled in places where better cars readily pull through.

This quality of life in an automobile is but partly dependent on the design of the motor and the adjustment of the various mechanisms. A far more effective factor is the weight and its ratio to the power.

Racing men know this. They aim to place in a chassis as light as they are willing to trust, a motor so powerful that it will make easy work of its duty of rapid motion. Motors of 100 or more horse power have been successfully used in cars which, complete, have weighed less than 3,000 pounds.

One of the most important factors in the purchase of a car, whether large or small, is the weight per horse power and gear ratio. The light car will oftentimes make a better showing than the heavy car as far as operating expenses are concerned, for the reason that it does not always carry all the extra equipment necessary for touring purposes and which are usually included with the heavy car, which also commands a higher first cost.

It is, nevertheless, possible for a light car to be underpowered. In making a selection the automobile buyer will be wise to insist on a practical demonstration, so that the information will be at his own disposal.

The weight of a car is a simple matter when there are scales handy. Weigh the car and divide by the horse power. The comparison is always interesting and the scale weights do not always check with the figures given in the catalogues.

To find the power of the car requires little figuring. Get the bore of the cylinder, divide it by two, and square the quotient. Multiply this by 3.1416 and multiply the product by the stroke. The final result will be the piston displacement of one cylinder. Multiply by the number of cylinders and you will have the total piston displacement of the motor. Divide this by 7.5 and the result will very closely approximate the horse power.

This method is the one by which cars are classed for competition purposes.

In a well designed and correctly adjusted automobile one horse power for each 100 pounds of weight should insure a thoroughly capable car—one able to take care of itself on any road which can be negotiated by horse-drawn traffic, and to do so with its full complement of passengers.

There is also a very simple and easily made test of performance, requiring only a right-angled turn on an ordinary country road. Watch the car as it makes this turn. If its power and weight are correctly proportioned it will slow down merely enough for the comfort of its passengers and will straighten away on its new course without shifting of gears and without noticeable labor on the part of the motor, resuming within 100 yards a good, comfortable road speed of seventeen to twenty miles an hour.

Questions and Answers

I was much interested in your article on the use of the automobile for power. Would a Ford car develop power enough to run a portable farm elevator?—J. G. K., Nebraska.

Answer—A Ford car will develop enough power to run a portable farm elevator if used in connection with a power jack such as described in the Twentieth Century Farmer of December 5. It might be found necessary to put a bag of sand or any other heavy material on the back seat of the car, which would give better traction between the wheels and the pulleys.

I see from your articles in the December 5 issue that you are able to answer questions about automobiles. Now, what I would like to know is, what does S. A. E. stand for—for example, when it is used like this, S. A. E. horse power formula? I should like to have you explain this to me.

Answer—S. A. E. is the abbreviation for the name "Society of Automobile Engineers" and the S. A. E. horse power formula used by various manufacturers to determine the horse power of gasoline or internal combustion motors means the diameter of the bore of your engine squared, multiplied by the number of cylinders and divided by 2.5. This formula is based on a piston speed of 1,000 feet per minute and a mean effective pressure of approximately ninety pounds per square inch.

Castor oil is frequently used for cylinder oil during automobile races. It has very high viscosity and is peculiarly suited for lubricating the cylinder of an engine that is working very hard through a long period of time. It does not burn completely in the cylinder and gives rise to rather an unpleasant odor. The castor oil used for cylinder lubrication must be of very pure grade.—Gas Review.

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That's why this tractor has more power at the drawbar.

CATERPILLAR
Reg. U.S. Pat. Off.

That's why it doesn't slip—doesn't mire—doesn't pack the soil.

Cheap to maintain; horse power guaranteed; 2,000 in use. Get our Catalog A F 152 and learn about this tractor that's "different".

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the use of a Hercules Stump Puller. Bumper crops instead of stumps. Big money in place of taxes. $1,200 from 40 acres the first year—$750 in extra crops every year after. Get the catalog of the

Triple Power **Hercules** Genuine Steel **Stump Puller**

You can clear an acre of stumps a day. 30 days' free trial. Guaranteed 3 years. Special introductory price proposition. Write today for big free catalog.

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BOWSHER FEED MILLS

GROW HEALTHY STOCK

Crush ear corn (with or without shucks) and grind all kinds of small grain.

Handy to operate—lightest running. 10 sizes: 2 to 25 h. p. Capacity 6 to 200 bushels. Conical shape Grinders. Different from all others.

Write for Catalog

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APPLETON Corn Shellers

Guaranteed to do more and better work under equal conditions; and to be more durable than any. Clogless self-feed—simple trouble proof parts—separate, shell and clean big or little ears, wet or dry, without injuring kernels or breaking cobs. A size for every requirement. Get new catalog now.

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THE TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

What is the Matter With Our Rural Schools?

VI. There is Too Much Friction Among Patrons and Board Members

By Ben F. Robinson

SCHOOL gruonds, with the building and its equipment, such as text and reference books, charts, maps and globes; the teacher, her age, experience, qualifications and length of service, have all been more or less briefly considered in the articles which have already appeared. The reader is not to conclude that these are all the fctors which enter into the composition of a rural school. True, they are important in themselves, and it would be hard to eliminate any of them, as we have tried to show. But there are many other things to reckon before the real efficiency of a school can be determined. To deal at length with the thousand and one details that are constantly arising in every district is not within our province and would hardly prove justifiable. However, there are two factors whose influence often does a great deal to promote or hinder the good which may be accomplished by a teacher, whether she be an example of perfection or not.

These two factors are the district school board and the other residents, whom we shall designate as the patrons of the school. Now, readers, you are probably one or the other, or maybe both. For a board member is, of course, a patron, and the man who "patronizes" the school by sending the largest number of children is often made a board member. True, not all can be board members, but all men, women and children are and ought to be patrons of the school in whose district they make their homes.

All Should Be Interested

The fact that a man has no children of his own is no reason he should not take an interest in the school affairs of his community; in fact, it would seem that he would have all the more time and money to give to the education of his neighbors' children. Be that as it may, he has to come across with his share of the taxes anyway, so he might just as well fall in and be indeed a "patron" of the school.

Now these two factors—the board and the patrons—are the objects of our interest at present, and let us just forget other things while we attempt to give them our impartial consideration.

The board, as we know, is chosen at the annual meeting by the voters of the district, one member being elected each year and for a term of three years. They are usually the representative men of the community and usually have children of school age. There is no pay, or practically no pay, attached to the position, so the man who accepts a place upon the district board must be public-spirited enough to devote a portion of his time and energy to what he believes to be the best interests of those who choose him. And the men who have served, or are serving, terms as directors know that there is enough to do. The notices for the regular and special meetings must be posted, the teachers must be hired, the building must be repaired and the fuel and other supplies must be provided. Then there are other details which, in the language of the sale bills, are too numerous to mention.

Don't Have a One-Man Board

The treasurer, too, comes in for a share of it. He must give a bond of a certain amount and be responsible for a lot of money that does not belong to him and which is bound to cause him extra work and worry—even the moderator is called on occasionally and is often indispensable to the other two. But the director is the man of prime importance. He is the man who usually engineers things. When an applicant for the school chances to see the moderator or the treasurer first she is generally told to see Mr. So and So, as he is the director, and if he says she can have it it will be all right.

At one time I was told by a director that I could have a certain school and that it would not be necessary to see the other members, as they always left the matter of hiring the teacher to him. Well, I wanted the acquaintance and friendship of the other man, so I called upon them. They were all right, but it made the director sore and he knocked me out of the job. I was glad of it afterward, for I found out there was contention in that district, and plenty of it There always is, I tell you, when one man attempts to manipulate affairs for the whole district. He simply can't do it in a manner satisfactory to all, or even to a good majority.

Just now I think of two other specific cases which I could produce were it necessary to prove my statement. But it isn't. Think carefully and perhaps you can cite parallel cases. Notice this, there are too many one-man districts. No one man ought to want or consent to usurp all the duties of the board, and no two men ought to expect or permit him to do it. There are enough complaints made for each member to have a share and I should not want them all heaped upon me, which would be, and ought to be, the case did I assume all the prerogatives of the board. Then, too, if any compliments were passed out by the patrons one ought to be willing to divide the glory and to let the others share the joy that comes from work well done, be it great or small.

Schools No Place for Feuds

But too often petty jealousies, and even feuds of long standing, hinder any co-operation on the part of the board members. An Irishman and Englishman lived just across the road from each other in a certain district of a certain county in northeastrn Nebraska. Both were honest men, industrious and well-to-do; owned farms, had large families of children and, sad to tell, both were on the school board. One was director, the other treasurer. They did not neighbor together; they never swapped work. One was a Protestant, the other a Catholic. This may have accounted in part for the difference between them. If so, let it be to their discredit, for the public school must know no creed. But the strife continued until one was kicked by a horse and killed, and then it abated somewhat and things were pleasanter for the teacher. Too bad the change had to come this way. All differences between board officers must be lost sight of in the performance of their common duties. One or both must often sacrifice an opinion or hobby. And if this cannot be done it is better for one to surrender his place to another who things he can.

Service on Board Means Sacrifice

Some men seek a place upon the board. They may not make a campaign for it, but they are glad to get it. Such men may have selfish motives or they may be thinking of the popularity the place brings. In either case they are often disappointed. It is not best to yearn for a place on the board.

Other men accept a place because the representative people of the district wish them to. Many a man consents after a protest. He knows it means a sacrifice of time, a responsibility and often unjust criticism. He even stands a chance of making hard feelings with some of his neighbors. But if he is honest, fair and impartial; if he can overlook individual interests and serve

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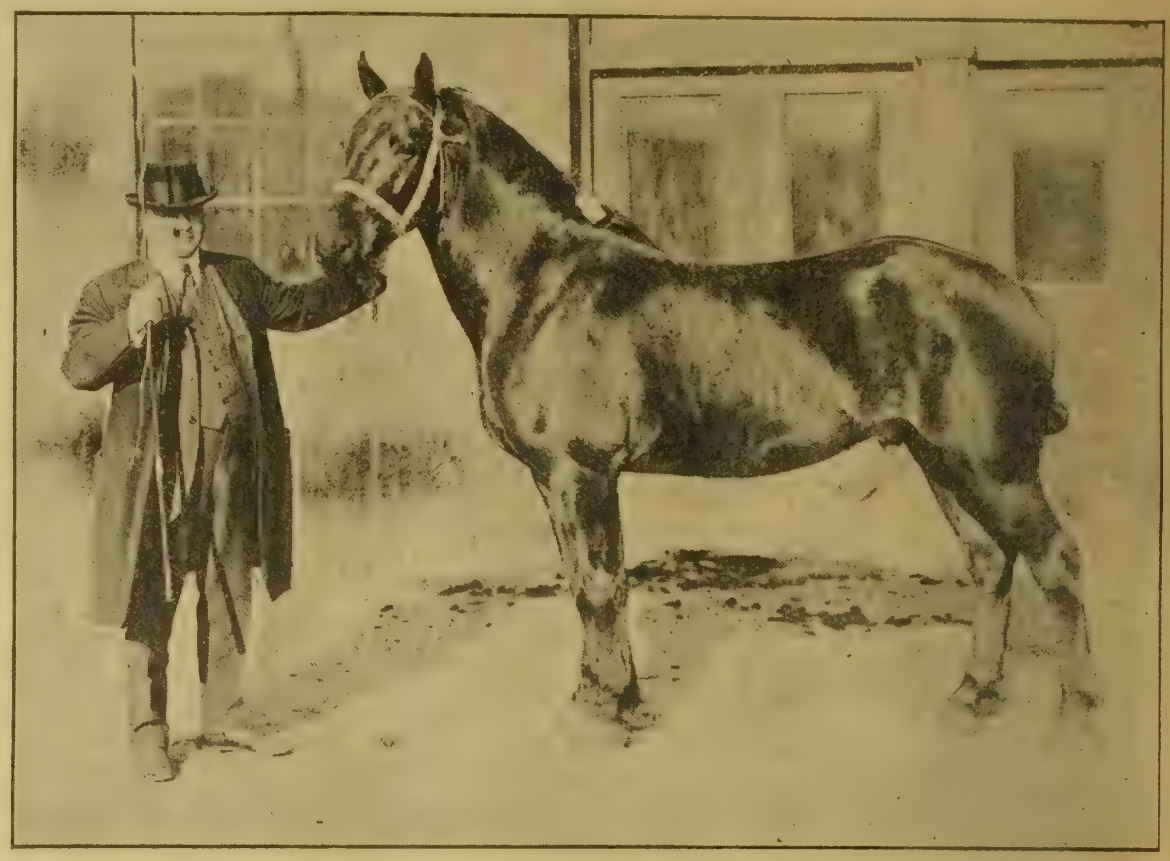
Foreign Horse Buyers in Our Markets

How Our Horses Are Being Sold for Military Purposes and Probable Effect on the Horse Industry



One of the Buyers and a Good Type of Horse Just Purchased

By H. J. Gramlich

SINCE the opening of the present European war there has been much discussion in America regarding its probable effect, both present and future, upon our horse industry. Representatives of the warring nations have searched the country for horses suited to military purposes. Likewise, enterprising Americans have laid plans for an active horse-exporting campaign to follow upon the heels of this most terrible exhibition of man's destructiveness.

Were it not for the war horse business there would be no horse market at the present time. Tight money and consequent business stagnation have caused most city firms to get along with their old horses and in many cases to even curtail the number of them. The tying up of the cotton crop in the south, which is, of course, a sequence of the war, has ruined the market for southern horses, which as a rule at this season are in large demand. Horse feeders are playing a waiting game. Their pens and sheds, which at this season in normal times are well filled with thin drafters, are virtually empty. Nobody seems to know just what to expect now, or for some time to come.

We Have All the Horses

As a result of all these conditions there is a stillness to the trade in most classes of horses which is almost without precedent. This in spite of the fact that there never was a brighter future in sight for the American horse industry than at the present time. If the Boer war put 500,000 horses out of existence, what has this war done already at this early date, let alone the fact that it may be many months before peace is finally declared? At the opening of the war the general understanding was that England requisitioned all farm horses save one team for each farm. Other countries have doubtless drafted equally heavily upon their stocks.

Poor Belgium has undoubtedly suffered even heavier losses, and it is doubtful if we shall hear of Belgian draft horses ever again coming to this country. The vast fields of Europe must be tilled to feed its multitudious population, and should the war cease tomorrow, an inventory of the horse stock within those nations now at war would doubtless surprise many by its smallness.

Already the nations realize their predicament, and without regard to future agricultural and commercial needs they have sent representatives to the States for unlimited numbers of army horses to supplant those which are being swept from beneath their riders on the battle front.

For several months war horse buyers have frequented market centers throughout the corn belt states. These men seem to understand their business and know exactly what they want. The privilege of seeing them make selections is one worthy of any horse fancier's time. For military reasons the shipping of these horses after purchasing is done in the dark, so to speak. In spite of all of the secrecy, rumor has it that one of these boats containing many hundred horses is at present among the fish and fossils in the bottom of the Atlantic.

Generally speaking, war horses are used for one of two purposes, namely, either cavalry or artillery. The former are to be used under the saddle and consequently must be adapted somewhat to that work. They range close to fifteen hands in height, weign around from 900 to 1,000 pounds and possess some hot blood; at least, blocky horses of draft breeding are objected to and generally not accepted. One hundred and fifty-five dollars flat has been paid at Omaha for all horses good enough to pass the tests for this class. The majority of the orders seem to be for the artillery horses, and these come under a somewhat different class. At this time over 2,000 artillery horses have been purchased at Omaha. They are for use in four-horse teams and otherwise hitched to transport heavy loads.

Group of Horses That Have Received the Stamp Showing That They Are Approved and Purchased

What the Buyers Want

The buyers are quite particular as to ages. Horses from 5 to 8 years are preferred. The corner nippers, which appear at approximately 4½ years of age, must be up in full wear else the horse is rejected for youthfulness. Many horses 10 years old have been taken providing their mouths were good and showed some trace of a corner cup. Artificial cups don't get by the buyers. Several sellers tried this scheme, but soon gave it up as folly.

In color there seems to be no discrimination among the solid colors, especially those of dark hue. Bay probably exceeds any other color among the accepted horses. Sorrels, browns and blacks are likewise very numerous. Quite a few red roans, blue roans, dark iron grays and other mixed colors may be seen among the selected lists. One would think a sorrel with light mane and tail would be undesirable for such purposes; however, quite a few of these have been purchased. White, light gray, spotted and such colors are seldom offered and always rejected when they do appear.

In height the artillery horses must range from fifteen hands one and one-half inches to sixteen hands. This would be between sixty-one and one-half inches and sixty-four inches. Horses a trifle under this are looked upon with much more favor than those a trifle above. While the casual observer would think the matter of height to be of secondary importance, yet the buyers measure every horse on a level, concrete floor and reject for any deviation of consequence from their requirements. Possibly this is essential in securing a uniform length of stride.

Gait Important Consideration

In gaits there is considerable importance attached to a clean, straightaway trot. A second look is never taken at a horse of mixed gait, or even an easy-going single-footer or pacer. It seems that there is much necessity of horses having uniform gait and stride for marching purposes. Horses with legs out under the corners of their bodies are looked upon with disfavor because of their swinging gait.

Eyes are of foremost importance in the examination for soundness. The veterinarian us-

ing a high power glass examines the eye closely and rejects those with the least flaw. No specks or other minor deviations are usable. Small wire cuts are not objected to very strenuously. Stocked legs have kept many a horse from enjoying a trip to Europe. For some reason this particular trouble is always rejected. A horse of this tendency would undoubtedly be in bad shape by the time the voyage were completed. Scratches likewise send a horse back to the barn. Any tendency toward skin trouble may prevent a deal. Only recently the writer observed a splendidly proportioned mare of good quality, age and other requirements. When about to receive the stamp of recognition it was noticed that the skin was rather uneven and scurfy along her back, and without further parleying she was sent back. A wire cut across the breast, which had left a gap in the muscle in that region, sent another equally good mare back out of the limelight.

Artillery Requirements Different

Artillery horses weigh from 1,100 to 1,300 pounds, the majority not missing 1,200 pounds very far. These horses are more or less on the blocky, thick-made order. Above all other requirements, they must have good action and ability to handle their limbs quickly. Sex seems to make no difference. These horses sell for the flat price of $165. The orders are apparently urgent, yet consistency marks the buying. Disappointed sellers are prone to show their rejects to the foreigners for a second examination. This game has not worked, however, as the animal is almost invariably recognized. Some have led out the same individual several times and the story is afloat that one horse which got loose during the day had been out so many times that he trotted up and down the path where he had been on display until captured by the attendant.

Possibly the method of examining the horses would be of interest. A light, open bridle is slipped on over the rope halter. An attendant leads out to the buyer; one quick glance and the horse is ordered to trot. If he is of acceptable build and trots away sound, a short, sharp blast is given on the buyer's whistle. If something is wrong with build or gait, a series of short blasts from the whistle sends the horse back to his stall. The approved horse is led inside the stable. Here the veterinarian examines the teeth, then the eyes, glances quickly at the limbs and then takes the height with his measuring cane. If he finds no cause for rejection the horse is passed and is ready for branding. Lot and individual numbers are burnt into the right forehoof. These numbers are about one inch in length and three-sixteenths inches deep. Then the horse is led into a single stall and a bar E U brand is burnt upon the left hip. This is done so quickly that the horse scarcely realizes what is going on. The holder places his hand over the horse's left eye, and aside from that no restraint is necessary.

Many Animals Rejected

Could horse buyers who collect these army horses in the country forecast exactly such individuals as would pass the test they could pay better prices for their horses. However, such a thing is impossible, and of the would-be army horses which appear at Omaha at least one-third, and often more, fail to find favor with the buyers. As these rejects are white elephants upon the present market, it is easy to see the risk the buyer takes in purchasing war horses. As the horses are not hitched, it is possible that a balky individual may go through, providing he is O. K. otherwise. It is doubtful how proficient such an individual would be on a heavy gun in a foot of mire. However, that is not for the seller to worry about. Horses a trifle windy might be sold, as no real test for wind is given. In the main, however, the prices paid are good enough to warrant reasonably good horses being brought in for examination. America is losing many of its small horses during this exodus. These individuals have been begging bids of recent years, and when the dove of peace again appears and the smoke of battle has arisen there should be ample opportunity for the man with real draft horses to come to the front by leaps and bounds.

What We Need in the Way of Road Laws

Not So Much More Money, But a Wiser Use of the Money We Have

By John N. Edy

I DON'T say that the question of your road laws is the most serious that confronts you. I know that the average county administration faces many problems, the solutions of which affect the taxpayers to a marked degree. But I believe I am well within the bounds of accuracy when I say that no question affects more people than this question of highway betterment, and I am inclined to add that the proper solution of the road problem means more than any other project under consideration.

A great deal has been said and written on this subject of good roads, and no doubt it will continue to be a live issue throughout the United States. The last few years have brought about a great change in the attitude of the traveling public as regards the use of the highways. We are demanding more service today than we demanded several years ago, and if the roads don't stand up under the increased traffic there's a howl raised that is likely to result in the loss of somebody's official head.

This increased interest in the matter has resulted in the building of thousands of miles of improved highway. Some of these pieces of road have proved satisfactory and some others have failed to give good service. In other words, of the many miles of roads built as the result of this so-called good roads movement some of them represent an actual waste of money. This is because there has been a certain amount of work performed in a haphazard or spasmodic manner; some projects have been built without any definite end in view—that is, without previously adopted plans for the improvement.

Indiscriminate Spending Means Waste

As I have intimated, road improvement is a very worthy undertaking when it is undertaken in the right way. Indiscriminate expenditures for so-called road betterment are quite often so much wasted money, simply because the work done represents nothing of a permanent nature. But we have passed through the first spasm and are now entering upon an era of saner road building tactics. By that I mean that we have reached a point where we shall "make haste slowly"—satisfying ourselves of the wisdom of the plan before authorizing large expenditures. We realize the value of better roads and at the same time we realize that they cost us real money. The next step, of course, is to demand and receive our money's worth in the good roads that we pay for.

What I wanted most to say in this brief discussion is in reference to the enactment and enforcement of reasonable highway legislation. In a short time the several state legislatures will be in session and will pass to a consideration of this important question. I do not hold that the laws make the road, but I am sure that the nature of the law and the degree of enforcement that it enjoys certainly determine the permanent value of the work done. That being true, you have every reason to expect your next legislature to enact laws that will encourage highway improvement; or, if you now have such laws, you have a right to demand that they be not repealed, but given a fair trial through county officers in sympathy with the spirit of the law.

Politicians Defeat Honest Measures

You know one of the smooth tricks of the politician is to pretend to give the people what they want and then fix it so they can't get it, after all. That quite often happens in regard to highway legislation. It is no uncommon thing for the lawmakers, in response to a popular demand, to enact a modern road law with state aid and other desirable provisions, and then kill the law by failing to appropriate money for carrying the provisions into effect. And then, if the politicians don't like the law—and the politicians never like a real, honest-to-goodness road law—they can proceed to point to the fact that but little was accomplished under it and advocate its repeal. Or (and this is what has happened in the state of Montana), the political boards of county commissioners may hold themselves above the law and simply refuse to carry out its provisions. In either event the road user, who profits most through the enforcement of a reasonable highway law, is holding the sack.

Haphazard road legislation is just as wasteful as haphazard road construction, and it's a lot harder to get rid of. The trouble with most of our middle-western states is that there is altogether too much road law. Such statutes are usually vague and uncertain as to meaning, and often are so contradictory as to be ineffective. I believe that in such a case the entire law should be wiped off the books and a more reasonable and more workable one substituted. It is my opinion that we would accomplish much good by starting our road building anew. We would certainly profit from the mistakes we have made.

Work Must Be Done Right

That last remark suggests a thought that I want to emphasize. Our personal experience and that of our neighbors certainly justifies the statement that the big feature of a real highway law is the provision for capable and efficient administration and supervision. It shouldn't be necessary to argue with your legislators that experienced road builders will actually do better work in the roads than butchers or bankers or farmers or storekeepers. That's just every-day common sense, but it's the one thing that politicians want left out of your highway legislation. As a matter of fact, you don't have to live a thousand years and enjoy all the experiences of a dozen lives in order to find out what kind of a road law will give you the best service. Your ancestors have been experimenting and your sister states have been experimenting for many generations past. And today one needs but to look around him and compare the results accomplished in the several states in order to determine for himself what sort of highway legislation is most fruitful.

It is not my intention to prolong this discussion; I simply wanted to call your attention to the fact that, as you value your road system, the law under which your roads are built and maintained is of first consideration. Perhaps you need a new law; perhaps the old one needs dressing up and amending; perhaps your law is entirely satisfactory and your efforts should be to prevent its repeal. In any event, remember that under the old system of highway administration millions of dollars have been wasted, it makes no difference whether the money was stolen or just honestly misspent. In either case the cash is just as useless today.

President Wilson has recently pointed out—

(CONTINUED ON PAGE FOURTEEN.)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

Branch Offices

New York City, 1106-286 Fifth Ave., S. C. Stevens, Manager
Chicago, 901 Hearst Bldg., H. W. King, Manager
Blomington, Ill., 302 Willard Ave., A. E. Hildebrand, Manager
Minneapolis, Minn., 3159 Park Ave., H. E. Dimond, Manager
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Subscription Rates

To all points in the United States and Mexico, per annum, in advance.....$1.00
To all points in Canada, per annum, in advance 2.50
To other foreign points, per annum, in advance 2.75
REMITTANCE FOR RENEWALS should be sent by postoffice or express money order, bank draft or 2-cent stamps.
CHANGE OF ADDRESS—Both old and new address must be given.
ADDRESS BUSINESS LETTERS to the "Twentieth Century Farmer," Omaha. Neb. Address letters for publication to "Editor Twentieth Century Farmer," Omaha, Neb.

Advertising Rates

DISPLAY ADVERTISING — Rates: 50 cents an agate line, or $7 an inch. Classified ads., in small type, 5 cents a word. Rates based on guaranteed circulation of 100,000. Actual average circulation in excess of 110,0000. Live stock rates on request.
COPY FOR ADVERTISING must be received not later than Friday of the week preceding date it is to be inserted.

A word of caution to the silo owner, particularly the man with the pit silo: Be careful about "damps." If your silo is not well ventilated, don't go into it without first knowing you are safe. Let down a lighted lantern, and if it continues to burn, all right; if it goes out, don't go down. You can generally get the necessary circulation of air into the silo, thereby removing the danger, by lowering and raising for a few minutes a bucket or litter carrier.

Some of the papers are publishing the names of men and concerns convicted by the government of using the mails for fraudulent purposes, and warning their readers against trusting such men. This is like locking the barn door after the horse is stolen, as there will be no business transacted under the names given in the future, but the men themselves will still continue to operate, in all probability, under different names. The best way is not to patronize any concerns unless they advertise in reputable publications.

Fur farming is receiving consideration by the government. Wild animals grow constantly fewer in all countries as civilization progresses and the forests and prairies become fertile farms. At the same time the demand for furs increases. To solve this problem of supply and demand Canadian farmers have gone quite extensively into silver fox breeding. Believing that there may be an avenue of profit in this kind of farming, our government is making investigations regarding the breeding of mink, marten, skunk, foxes and moles. The conclusions reached will be of great general interest.

What Does it Cost?

How many farmers and live stock growers can come anywhere near an accurate guess of what it costs to grow a calf into a yearling or a 2-year-old? If some system of accounts could be put into a practical form for the use of the producer of live stock so he could without too much trouble keep an approximate account with some of his animals of their cost per year it would no doubt disclose some very astonishing figures, according to estimates of cost got out by some of the investigators of the Department of Agriculture and experiment station estimates. These are the things that the farmer needs to know.

It has been stated that the cost of growing a calf to the yearling age on a Wisconsin farm was $39.52, and a 2-year-old heifer was $61.41. This looks like making dairy cows a pretty expensive kind of stock to produce, and that getting a profit above this cost would be a rather risky proposition. It is true, however, that very few farmers or growers of live stock make any close estimates of the cost of production of crops or live stock. They usually keep a general account of receipts and disbursements and figure from this the loss or gain.

In the growing of a calf on high-priced land on high-priced feeds for twelve months, with the added cost of labor for caring for this animal, one-half of this time handling prepared feeds for it, use of stable, interest on investments, etc., it does not take long for these items to run into dollars, as we observe when we hire the keeping of them outside of our own farms. This calf contributes nothing to help offset this expense except manure, which has been credited in the above illustration at $3. Some system of account should be adopted by every farmer and live stock owner in view of getting closer each year to accuracy in these accounts of the actual cost of production of everything on the farm.

Skilled Labor

There is some difference of opinion among farmers as to the customary farm wages for farm hands. There is possibly as much difference in farm hands in the matter of amount of labor performed and the quality of the work furnished as there is with any class of mechanical labor. The impression that any person can turn his attention to farm work and be able to do the same amount of work in a given time, and do it as well as the experienced farm hand, is erroneous and without reason or argument to sustain such assertion.

The farm hand must be a skilled laborer in order to be able properly to handle the farm machinery that is put into his care and keeping in the carrying on of the farm work.

The farm hand must be a man of judgment and experience in order to go forward with his work without having his boss always within advising distance for every little thing that may turn up. Some farm hands may be worth twice what others are. Then why have a uniform wage? The farmer gets the worst of the inefficiency of the farm hands, and he is paying too much for the unskilled ones.

There is beginning to be some difference made by some employers in the matter of skilled labor. Elasticity of wages to correspond with the ability of the hand to turn off work must be recognized throughout the farming districts in order to encourage young men in preparing themselves to be skilled workmen on the farm. The wage of a first-class farm hand, when boarding and washing are taken into account, is above common, unskilled labor in any other line of work. Besides, the opportunity and tendency to save the wages earned affords a much better prospect of a bank account at the end of the year.

Corn Demand Increasing

The expansion in corn demand in recent years has placed the corn raiser among the most favored and independent of producers. The diversity of manufacture in corn products has become so great that the uses of corn can scarcely be enumerated. This wonderful revolution in the utility feature of the cereal, which has taken place within the last few years, comparatively speaking, and which presents evidence of being multiplied in the years to come, has established corn-growing as the surest money-making branch of grain crops that the farmer can engage in.

The outlook for good, strong prices on corn for some years to come has never been better than now. The corn grower has an encouraging field before him. The export demand will be increasing year by year; our own home feeding demand is increasing and will steadily grow. The demand for manufacturing into food products is rapidly increasing, so also are the new values arising from mechanical uses pressing their claims for an interest in this cereal.

The growing of more corn and the growing of better corn is the inclination now among the corn growers of the corn belt country of America. The present agricultural standing of the corn-growing districts is due to the successful cultivation of corn and the profit in this crop under present corn-growing methods of seed selection, soil fertilization and improved crop management. This crop is an agricultural certainty under the present attention given it.

Farm Cold Storage

If you have not arranged for the ice supply for next summer, do so at once. The ice storage may be made very cheap or made more permanent and lasting, as circumstances may warrant. Every farm home should be provided with ice for summer use. It is practically a household necessity, and every housewife should have the advantages and conveniences it affords. The keeping of butter, milk, meats and food articles generally for the family use in nice, fresh condition is a comfort and satisfaction that, once experienced, can never be forgotten or abandoned without great inconvenience and discomfort to the housekeeper.

It requires water to make ice, and the quality should be just as good as the advantages can afford. This is a matter that should be considered, as the ice is quite frequently used to cool drinking water. Ponds made by damning up muddy, sluggish streams where the drainage collects from barns, stock lots and filth accumulation generally is not fit for the ice supply, unless for cooling purposes exclusively, and then under good refrigeration protection.

Some farmers have cement basins or reservoirs where the pumped and waste waters from wells are piped, and from this the ice house is filled. This form of water improvement is not expensive and will always add more to the selling value of the farm than many times its cost. Some of these basins are employed as fish ponds, and thus increase their value in a twofold way, furnishing the family with a very desirable quality of food and keeping the water clean and wholesome for any kind of use.

The ice proposition is a plain one, even if it is decided to get the ice from a stream several miles away. The important matter is the decision to prepare an ice house and fill it with a good quality of ice, and next summer enjoy the comforts of keeping cool when the temperature is up in the 90s and not a leaf stirring, except, perhaps, a little hot wind blowing up from the southwest.

MESMERIZED

A Poisonous Drug Still Freely Used.

Many people are brought up to believe that coffee is a necessity of life, and the strong hold that the drug, caffeine, in coffee has on the system makes it hard to loosen its grip even when one realizes its injurious effects.

A lady writes: "I had used coffee for years; it seemed one of the necessities of life. A few months ago my health, which had been slowly failing, became more impaired, and I knew that unless relief came from some source I would soon be a physical wreck.

"I was weak and nervous, had sick headaches, no ambition and felt tired of life. My husband was also losing his health. He was troubled so much with indigestion that at times he could eat only a few mouthfuls.

"Finally, we saw Postum advertised and bought a package. I followed directions for making carefully, and added cream, which turned it to the loveliest rich-looking and tasting drink I ever saw served at any table, and we have used Postum ever since.

"I gained five pounds in weight in as many weeks, and now feel well and strong in every respect. My headaches have gone and I am a new woman. My husband's indigestion has left him and he can now eat anything."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum comes in two forms:

Regular Postum—must be well boiled. 15c and 25c packages.

Instant Postum—is a soluble powder. A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage **instantly.** 30c and 50c tins.

The cost per cup of both kinds is about the same.

"There's a Reason" for Postum.

—Sold by Grocers.

Stories of Our Young People

On Christmas Eve

I know a jolly fellow who's
As chubby as can be.
He has hair as white as snowflakes;
Eyes that sparkle merrily.

And he owns a team of reindeer
And a pretty little sleigh;
But not one of you has seen him,
For he lives so far away.

When 'tis Christmas Eve, and children
Hang their stockings in a row,
He will drive upon the housetops
And will down the chimneys go.

He will fill the little stockings
With sweet candy, nuts and toys
Oh—he'll leave a host o. presents
For the little girls and boys.

He's a jolly, rougish fellow
And tonight he'll visit you,
Jump in bed—I think I hear him
Coming down the chimney f'ue.

—Faye Taylor.

About Santa Claus

All you children who are old enough to read have long ago ceased to believe that the jolly fat saint brings your Christmas gifts, and know that it is your parents and good friends who give you the things they think will make you happy. Really, it seems to me that this is a much nicer way to have it, anyhow, for then we can thank them for being so good to us and learn what a pleasant thing it is to give to others.

There is one thing, however, that you should never do, and that is to explain to the little ones that there is no Santa Claus. The only person who has a right to tell this to the little children is their mother.

"I am not believing in Santa Claus this year," a little girl said to me the other day.

"Why not?" I asked.

"Because my mother explained it all to me, and now I know who really gives me my presents," she said. "The children at school tried to tell me long ago that there wasn't any Santa Claus, but I wouldn't listen to them. I knew my mother understood better than they did, and so I just kept right on believing in him until she told me there wasn't any."

It isn't every little girl that has this splendid faith in her mother, and it is not at all a nice thing for you older children to do—to spoil the pretty fairy story that it gives the babies so much pleasure to believe at Christmas time. I hope none of you will do it this year.

HOME EDITOR.

(Prize Story.)

Visiting the Indians

By Nellie Barrans, Aged 14, Lenox, Ia.

When my grandparents were young there were many roving bands of Indians in this part of the country. The Indians would come up to the houses and want to trade the skins of small animals for flour and meat.

Once a band of Indians had a camp not far from the house. Grandpa went to visit the camp, taking wth him his youngest brother, Oscar. As he had never seen an Indian camp before Oscar was interested in all he saw.

One little Indian girl had something wrapped in a blanket, which she held very closely. Oscar thought it might be an Indian doll and wanted to see it, so he followed her around, looking curiously at the blanket. The girl saw she was being watched and ran and hid it beneath a brush pile. Oscar went and looked into the blanket, and what should he see but a skunk! How his brother laughed at him! They teased him for a long time afterward about trying to take the skunk away from the little Indian girl.

Additional Stories

Leona Wheeler, Ellsworth, Neb.; Bernice Mong, Hebron, Neb.; Minnie and Willis Lauterschelager, St. Paul, Neb.; Mary McKown, Seneca, Neb.; Mildred Stone, Belvidere, Neb.; Gladys Westadt, Belden, Neb.; Beth Getty, Waco, Neb.; Florence A. Glandt, Leigh, Neb.; Millard Getty, Waco, Neb.; Frederic Grau, Bennington, Neb.; Ellen Johnson, Ceresco, Neb.; Elsie Gustafson, Waverly, Neb.; Viola Wedell, Waverly, Neb.; Esther Glantz, Harvard, Neb.; Madeline Golligless, Fremont, Neb.; Minnie Rihanek, Monowi, Neb.; Lavone Elwood, Audubon, Ia.; Laura Sander, Arcadia, Ia.; Mabel Steward, Anselmo, Kan.; Ruby Darling, Maryland Valley, Kan.; Dorothy Smith, Urie, Wyo.; Lloyd Michael, Garland, Wyo.; Frances Valenzano, Rock Springs, Wyo.

Picture Contest No. 19

Write a verse of four lines about this girl and the colt. Tell us something interesting about them, and tell it in verse. To the two children writing the best verses books will be given for prizes. Verses are judged according to general merit, such things as quality of verse, subject matter, spelling, writing and neatness being taken into consideration. Verses should be addressed to Picture Contest Editor, Twentieth Century Farmer, and should reach this office not later than January 2, 1915.

Write For This Book

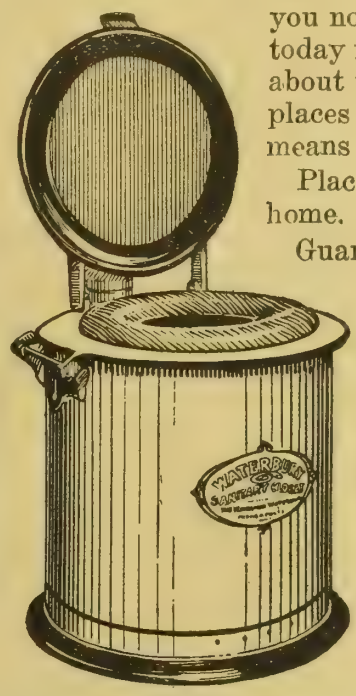
—if you haven't a modern, sanitary, indoor closet in your home. It tells how we have perfected an indoor closet with a chemical system which does not require sewerage or cesspool connections. Hundreds of thousands of families who have hoped and longed for an indoor closet can now afford one.

THE WATERBURY
SANITARY CLOSET
ALL METAL-CHEMICAL

—can be placed in any room, hallway or closet, because it is inoffensive, odorless, and sanitary. Many install it in their bedrooms. So simple a boy can set it up.

We absolutely **guarantee** it to be odorless and sanitary. Thousands have been sold and are giving entire satisfaction. We'll gladly refer you to any one who has bought one.

If you want to put an end to the inconvenience, discomfort, distress and suffering that you now have to put up with, write today for our free book and learn all about this wonderful invention that places the indoor closet within the means of every rural family.



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No sewer connections.

Perfect ventilating system and airtight cover.

The secret is in the chemical system of sewage disposal.

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STANTON CURTIS, Asst. Gen. Pass. Agt., Southern Railway, 54-56 W. Adams St., Chicago, Ill.

Of Interest to Our Women Readers

Christmas Carol

The earth has grown old with its burden of care,
But at Christmas it always is young,
The heart of the jewel burns lustrous and fair,
And its soul full of music bursts forth on the air,
When the song of the angels is sung.

It is coming, Old Earth, it is coming tonight!
On the snowflakes which cover thy sod
The feet of the Christ-child fall gentle and white,
And the voice of the Christ-child tells out with delight
That mankind are the children of God.

On the sad and the lonely, the wretched and poor,
The voice of the Christ-child shall fall;
And to every blind wanderer open the door
Of hope that he dared not to dream of before,
With a sunshine of welcome for all.

The feet of the humblest may walk in the field
Where the feet of the Holiest trod;
This, then, is the marvel to mortals revealed
When the silvery trumpets of Christmas have pealed,
That mankind are the children of God.

—Phillips Brooks.

The Real Christmas

"Christmas isn't a day; it's a feeling," says Mrs. Emma McChesney, who is probably the most human character of present-day fiction. And Christmas is a feeling. There are very few of us, no matter what our private and personal griefs and trials, to whom the Christmas feeling does not come as the day draws near—the kindly spirit that makes us hasten to offer aid to those in want or trouble; to spend our precious, hard-earned dollars in gifts for others; to speak the pleasant words that bring smiles to baby lips; to listen patiently and sympathetically to the old people's stories of bygone days, and finally to forget, if only for a few hours, the grievances and enmities that embitter our every-day lives.

"I don't feel as if it were Christmas at all this year," we sometimes say a week or two before the day arrives. But then, as we are drawn into whispered conferences, as the little children come to us with shining faces and hopeful suggestions regarding what they want Santa Claus to bring, as the holly is tied in the windows and the mistletoe hung above the doors, all our unkind and revengeful thoughts seem to slip magically away. We forget the slight from our next door neighbor that has rankled in our souls for weeks, and greet her with a hearty "Merry Christmas!" when we pass on the road, which she returns as heartily. We forget to complain when the men or the children come in with a muddy and snowy boots, but proceed serenely to clean up, and they help, with apologies for their carelessness. We forget to scold the children for their noisy play; we forget to criticize the family down the road for their shiftlessness and plan to send them warm clothing for the babies and some of our own bountiful store to add to their scanty harvest.

So peace comes to our hearts as good will toward all men envelops our souls, and the Christmas spirit steals over us. This is the real Christmas. May it come to all of us this year. May it be not only a merry Christmas, but a season of peace and good will that will remain with us through all the year to come.

HOME EDITOR.

OUR WEEKLY RECIPE

Christmas Candies

Instead of one recipe this week, we are giving some splendid candies that are just the thing for Christmas. For one's neighbors and friends to whom one wishes to give a little remembrance there is nothing more welcome than a box of delicious home-made candy in the dainty red and white wrappings of tissue and holly.

FONDANT—Two cups sugar, one-half cup hot water, one-quarter teaspoonful cream of tartar. Boil until it forms a soft ball in water; set aside to cool; beat, and finally kneed like bread; add flavoring. Placed between halves of dates or nuts, dipped in chocolate and used in many other ways, this forms the foundation for the popular French candies.

MAPLE FONDANT—Two cups sugar, one cup maple syrup, one-half cup hot water, one-third teaspoonful cream of tartar. Continue same as white fondant.

MARSHMALLOWS—Dissolve two tablespoonful gelatine in seven tablespoonsful cold water. To two cups granulated sugar add six tablespoonsful water. Boil together hard for three minutes; then add gelatine and beat hard for half an hour. Pour in pans covered with pulverized sugar. Cut in squares.

Government Cats

The United States government annually employs several cats and expends about $18.50 yearly for each pussy. This sum is used largely for purchasing meat and milk as food for the cats. The cats are used in all large commissary depots and by the Postoffice department. The latter department of the government keeps more than 400 cats. The New York postoffice alone expends more than $60 annually for cat meat and the postal authorities consider the money well spent.

Truth and Falsehood

According to an old myth, Truth was in swimming and Falsehood stole her clothes, whereupon she pursued Falsehood to recover her clothes, but has not yet caught up, hence Falsehood wears the garb of Truth. This fable gave origin to the phrase, "the naked truth," and to the saying that a lie runs faster than the truth.

Styles for the Home Dressmaker

6960—Ladies' Waist. This simple waist is gathered at the neck in both front and back and has a plain band collar with a frill at the top. The closing is in the front; the back is plain. Bishop sleeves end in a frill at the wrist and are inset at the shoulder. The style is suitable for plain and printed fabrics, chiffon, lace, net and lightweight woolens. The waist pattern, 6960, is cut in sizes 34 to 44 inches bust measure.

6975—Ladies' Skirt. A modern walking skirt is shown in this model. It may be made in round or even shorter length. It has two gores and a pleated section inserted at the lower half of each side. The waistline may be regulation or slightly raised. The model is excellent for serge, cheviot, tweed, broadcloth and other woolens of medium weight, also for corduroy and velveteen. The pattern, 6975, is cut in sizes 22 to 32 inches waist measure.

6990—Ladies' Dressing Sacque. In this practical model the closing is placed at one side of the front. There are two tucks at each shoulder, short in front and full length at the back. The round neck is trimmed with a small ornamental collar or may be left open and plain. The sleeves have a fancy puff and either a circular frill or a band. The pattern, 6990, is cut in sizes 34 to 44 inches bust measure.

6972—Ladies' Dress. This stylish gown has a separate guimpe to which the sleeves are attached. The outer tunic is in "chemise" form, straight from shoulder to hem and forming a panel in the center front, where the closing is placed. There is a three-gore foundation skirt and to this the lower skirt section is attached. The neck is open with a handsome military collar. The pattern, 6972, is cut in sizes 34 to 42 inches bust measure.

6993—Girls' and Misses' Apron. Intended for real service, this apron is cut in a single piece. It is adjusted to the figure by short darts taken up in the material under each arm. The openings for both neck and arms are large and are bound around with braid or with bias bands of contrasting material. There is a patch pocket at the side of the apron. The pattern, 6993, is cut in sizes 6, 8, 10, 12, 14 and 16 years.

6967—Girls' Dress. This smart little frock is adaptable for combinations of material as suggested. The blouse is a separate garment, with very deep armholes, front closing and wide collar at the neck. The tunic section overlaps the skirt, which is separate, pleated all around and with plain front panel. Sleeves and lower skirt may be of one material, the balance contrasting. The pattern, 6967, is cut in sizes 6, 8, 10, 12 and 14 years.

6991—Ladies' House Dress. This is essentially a serviceable frock. It has a side front closing with ornamental tab arrangement. There is a tuck at each shoulder in front, but the back is plain. The sleeves have a small puff at the wrist, but are plain at the shoulder. The skirt has seven gores, with reversed pleat in the center of the back. The closing is in front. The pattern, 6991, is cut in sizes 34 to 44 inches bust measure.

This Tag Protects You

Manufacturers' guarantees are restricted, but sewing machines made by the National Sewing Machine Co., and bearing our tag, must satisfy you or you get your money back without a question.

There's a "Tag Store" in your town.

Wright & Wilhelmy Co.
Wholesale Hardware
Omaha, Neb.

All Patterns on This Page 10 Cents

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

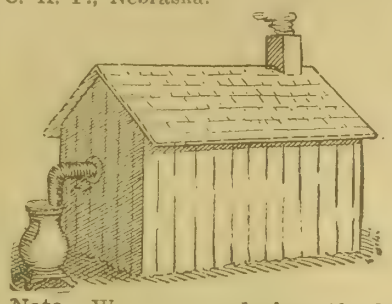
Water in Stock Yards

As a regular reader of your valuable paper, will you kindly inform me if you know any reason why fat lambs will not drink any water in the South Omaha stock yards? I was on the market on November 14 with two carloads of lambs that had been off feed and water twenty-four hours. I drove them around by the troughs and they just went by and sniffed at it. I would like to hear from other feeders.—P. N., Nebraska.

Answer—Observation shows that lambs usually drink the water at the stock yards. If you had trouble in this way we can only explain it by the fact that, owning to the prevalence of foot-and-mouth disease in other sections of the country it is quite possible that disinfectants had been used, which the lambs smelled and which were distasteful to them. This is not a condition that generally prevails, but the South Omaha stock yards people have been making a hard fight to keep out infection and protect their patrons, and so far have been successful in keeping the yards in a clean, healthful condition. Any replies to this letter from other patrons of the South Omaha stock yards we will be pleased to publish.

Suggestion for Smoke House

After reading your "Proper Handling of the Annual Meat Crop" I thought you should have built a smoke house, so here is a winner. Any old house will do, and any old stove. Set the stove outside the building, use two joints of stovepipe and an elbow. You don't get any smoke in your eyes and nose when you replenish the fire and the meat does not get hot, and there is no danger of fire. Be sure to have a vent for the smoke to get out. —C. H. P., Nebraska.



Note—We are wondering if this has been used by the writer and found practicable. It would seem to us that there would be a clear flame in the stove and consequently not enough smoke to cure the meat properly. Ordinarily the smoke enters at the bottom so that the entire room receives the benefit. In this case we should think it would be necessary to hang the meat all in the direct path of the smoke from entrance to vent.

Sudan Grass

I would like to get information through your paper about growing and harvesting Sudan grass and whether the experiment station has anything on the culture of Sudan grass.—J. W. P., Nebraska.

Note—The most complete and reliable information as to Sudan grass, the localities suited to its growth, methods of seeding, growing and harvesting is contained in government Bulletin No. 605. This is dated September, 1914, and may be obtained by addressing William A. Taylor, chief of the bureau of plant industry, Department of Agriculture, Washington, D. C. So far as we know neither the Nebraska station nor others in this vicinity have issued bulletins on this subject. The North Platte experiment station has done some experimenting and finds this grass adapted to western Nebraska.

Silag. North of Corn Belt

I get a good many valuable pointers from your department, but I may be asking something out of your line now. I don't see silos used with anything but corn. My farms are at Nanton, Alberta, Canada. I can't grow corn. Oats, barley and root crops are my crops. I think I could grow peas. Can you send me any literature on the use of oats, barley, turnips, beets, carrots or potatoes as silage, or tell me where I can get it, or of any farmers using these crops for silage? I'll appreciate anything you can do for me.—E. C. P., Illinois.

Answer—We have had no personal experience with using any of the crops you mention in the silo, but do know that some of the small grains have been used as silage. It is not an easy matter to make good silage from small grains, owing to the air space in the straw. It can be done, however, by giving particular attention to the packing when filling the silo. The writer has never been in the part of Canada in which your farms are located, but has seen good silage corn growing in Saskatchewan, some fifty or sixty miles south of Regina. This corn, of course, does not mature as it does in the states, but we have talked to parties living in that country that are using corn for silage and they claim it makes excellent feed. We wonder if it would not be possible to get some variety of corn that would mature sufficiently in your locality to make good silage.

What is the Matter with Our Schools?

(CONTINUED FROM PAGE THREE.)

his community, people will appreciate him. He is the sort we need, and if there is such a man in your community hunt him out, make sure that he will serve, elect him and stay by him.

Criticism is easy to give. It is not so easy to take. Some men who would not accept a place on a school board, a church board or a town board are ever ready to sit around a checkerboard and criticise their betters. We have to have school boards, so let us consult with them, co-operate with them and support them in anything worth while.

How About the Annual Meeting?

Now, you patrons, how about the annual meeting? Then is when the reports are read, the estimate of the running expenses submitted for your consideration and allowed or rejected. Then, too, the board members are elected and many things pertaining to the school discussed. Now it is your privilege and duty to attend this meeting and say what you want to. But many people who never attend have the most to say afterward about how things are run. In many states, even where equal suffrage is not allowed, women may attend school meetings, express their views and vote upon the propositions that come up, but what per cent of them do? I will wager that during the summer many an ardent suffragette forgot all about this meeting, or was not enough interested to attend it.

Some folks attend the annual meeting only when they know there is something of unusual interest to come up, or when there is to be some sort of excitement. Fear that the board will spend too much in repairs for the building will occasionally bring them out. It is claimed by some authorities that a rumor that the talk which has been "going around" about the teacher is likely to come up will induce a few of both sexes to make their first appearance at the annual meeting. Mind, I haven't said that this is actually true. I merely say it is reported by some authorities. Run back over your experience of twenty years or so and see if you can't recall a time when there was an exceptionally large crowd at the district meeting. What was the cause of it? Was there not something out of the ordinary that came up, or was expected to come up? We find no fault in this. The patrons should be there at such times, but they ought to be there at other times.

So if you have been absenting yourself for real or supposed causes, resolve that you will not do it again. Be there next June, or at any special meetings, and express your views with a conviction that will compel others to respect your opinions, if it does not induce them to agree with you in every detail. It is not fair to remain away and afterward ask Neighbor Jones what was done or said. He might get it mixed. So, again, let us attend the meetings.

Perhaps if patrons realized how much a teacher needs and appreciates co-operation there would be less of friction and more of harmony between them and her. Much trouble might be avoided by more careful consideration of her problems. She is at first a stranger; she is probably away from home. Nine times out of ten she is trying to make good. Nearly everything that goes wrong at school is blamed to her. Maybe she is not responsible for it all. No teacher can reform every bad boy in the community nor make an angel out of every spiteful girl. You can't take your little brood of three or four and make them perfect. They annoy you. Then it stands to reason that she can't take a dozen similar broods and keep them always serene and happy. If trouble arises, don't accuse her of unfairness. Your child might be to blame, you know. At any rate, he probably told only his side of the story, and if he received a punishment it was probably because he was entitled to it.

Finally, no teacher can take twenty or more children of various ages and sizes, arrange them into seven or eight distinct grades and teach them all the subjects of each grade. It never has been done, and it cannot be done under present conditions. So do not complain too quickly if your boy or girl does not seem to be advancing as you would have him do. The beginners have to be looked after and all the grades that follow. So the seventh or eighth grade boy may think he is neglected. He may get discouraged and want to quit. If so, don't blame him nor the teacher too much. It is the system. There needs to be a change. In the next article we are going to suggest it.

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Winter Fruits for Our Stomach

By Frank G. Carpenter

SANTIAGO, Chile—How would you like to have luscious peaches at Christmas, ripe plums, pears and cherries in the heart of mid-winter, and great white muskmelons when the ground is covered with snow? The vessels carrying our wares to Pacific South America will furnish cheap return freights, and the prospect is that in the near future many of them will come loaded with fruit. The seasons on this side of the equator are the opposite of ours. The fruit begins to ripen here late in our fall, and the Chileans have plums, peaches and pears ready for the market in the midst of our winter.

From now on Valparaiso will be within two weeks of New York, and the canal has placed a South American California, with its summer products, almost at our doors. The prospect of a great exportation of Chilean fruits to the United States is agitating the farmers. The government is investigating the subject, and schools for teaching fruit growing and the packing and exportation of fruits are being established. Chile has long been the chief fruit-growing country of the lower half of our hemisphere. It already has orchards of hundreds of acres and its vineyards are yielding about 50,000,000 gallons of wine every year. There is no land upon earth that has better fruit possibilities and its products are now to be dropped upon Uncle Sam's tables.

Threshing by Electric Power at Santa Ines

Breeding Special Plants

In order to give you some idea of what this great industry may do for the United States, I have spent a day with Don Salvador Izquierdo S. in going over his fruit and nursery plantations, situated near the town of Nos and about twelve miles from Santiago. Don Salvador is the fruit king of Chile, and I might almost call him the Luther Burbank of our sister continent. He has an irrigated hacienda of about 1,400 acres, covered with gardens and orchards, and plantations for the raising of flowers, plants and trees of almost every variety. He has now more than 13,000,000 individual plants in the estate and he ships plants by the tens of thousands to all parts of Chile, and also across the Andes to Argentina, Uruguay and Brazil. He is not only a grower of nursery stock, but is likewise a scientific breeder of new varieties. Altogether he has introduced into Chile more than 4,800 new varieties of fruits and plants, and he has himself originated by cross breeding hundreds of valuable trees and flowers. Some of his experiments have been along the line of creating trees not subject to certain blights and pests. He has already created fourteen new varieties of apples not affected by the insect known as the schizonera lanifera, that is now destroying our apples of many parts of the world. The new varieties are grafted onto the stalks of ordinary trees. The insect crawls up the stalk, but it stops where the grafts begin, and the trees and their fruit are found to be safe.

Training Roots of Trees

Among the other experiments of Senor Izquierdo S. is the elongating of the roots of the eucalyptus and other trees so that they can be grown upon the dry lands of the tops of the mountains. This is done by sprouting them in pots, where the young trees are fed with nitrate of soda and treated in such a way that their roots are about four times the usual size. Being planted, these long roots go far down into the soil and tap the underground layers of water, and are therefore able to resist the drouth. It was in recognition of this discovery that the Royal Agricultural society of London has just unanimously elected Don Salvador Lzquierdo S. a member of that body.

But I cannot give you a better idea of the possibilities of fruit raising in Chile than by taking you with Don Salvador over his great fruit estate. We start at the station in Santiago and within an hour have ridden out to the little station of Nos. Our way is through the central valley of Chile, and we see great farms and vineyards on both sides of the railroad. At Nos we leave the train and take the private car owned by Don Salvador for the hacienda, which is a distance of five miles away. The car is pulled by a horse, but the Chilean driver makes the animal go on the gallop. We go over a road lined with poplars a hundred feet high, by great fields in which fat cattle are grazing and within a short time are on Don Salvador's property. The estate is surrounded by magnificent scenery. It lies on a plain at the foot of the mountains, sloping toward them just enough to give the fall required for the irrigation ditches. These are fed by a branch of the Mapocho river, a rushing stream so large and swift that it not only irrigates the 1,000 acres of plants, but also furnishes the electric current that runs all the machinery. One of the canals turns a turbine that gives the estate 120 horsepower. This plant lights the hacienda and other buildings, it runs saw mills and threshes and moves the machines of a large fruit packing and canning establishment.

Use American Machinery

As we ride in we pass a threshing machine which is moved by this plant. It was imported from America and its noise carries us back to our farms at home. The grain is coming in from the fields in enormous oxcarts and it is fed directly from the carts to the thresher. As the barley pours forth it is caught in buckets made of skin holding a bushel or more and carried by men to a great pile on the ground.

We next walk to the sawmill nearby, where the men are making lumber out of some of the trees that Don Salvador has planted within the last twenty years. The soil and climate here are such that trees will grow twice as fast as in our own country. There are eucalyptus 100 feet high that are not over fifteen years of age, and palms as big around as a hogshead that have been planted within the last generation. The big trees on this estate are numbered by the hundreds of thousands and they have all been planted since 1884, which was the time when Don Salvador began to turn his ancestors' grain and dairy farm into a nursery. Some of these trees are raised solely for wood and there are little forests of eucalyptus containing thousands of individual trees that are being grown for

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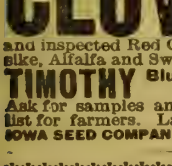

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this purpose. Some of these trees are only a year or so old while others are from seventy-five to 100 feet high.

Around the large fields making up the plantation are rows of Lombardy poplars 100 feet high. These are the fences of the estate, and they make walls of green of wonderful beauty. They often follow the irrigation ditches, making a double row of these trees, walling the orchard or pastures within. The rows of poplars are often 150 feet high, and that although they are only sixteen years old. The custom of using them for fences and to mark out the boundary lines is common throughout the central valley of Chile. This adds greatly to the beauty of the country. It changes the face of the landscape and makes it look greatly like the farming regions of France. It is safe to say that the country has tens of millions of these beautiful trees.

Trees Divide the Estate

This great estate is divided by such trees into sections. Some are devoted to grain, some to vegetables and fruit growing, and others to the raising of plants, flowers and trees like our large nurseries at home. Going onward, we are soon in the nursery part of the estate. We pass rapidly from one great tree-walled enclosure to another, riding on the railway. There are so many separate plantations, and the varieties are so different, that I cannot describe them. Don Salvador tells me that altogether he has 90,000 different species of trees on the farm. He sells a half-million eucalyptus trees every year, and receives single orders for as many as 40,000 trees at one time. He has one plantation of citurus trees in their various stages of cultivation, and here you may see oranges, lemons and grapefruit of every variety. He has long lines of poplars from stock that came from South Carolina, and in one of the nurseries there are 20,000 acacias. In another section we find 250,000 peach trees ready for sale, and as we pass this we come into acres of apple trees, ranging in size from mere sprouts to almost as high as our heads. There are 150,000 apple trees in this field, and they are twice as tall and as thrifty as trees of the same age in our American nurseries. I had a snapshot made of Don Salvador and myself as we stood in the nursery to show the height of the trees.

Our next visit is to a plot containing 150,000 cypress trees. These were planted out only a few days ago, and they are now about as long as my finger. I pick up a bunch out of the plot and count them. I have thirty-one trees in my hand, each of which is an evergreen that will soon be decorating some lawn of Argentina or Chile. These trees are raised under great tents of brush or arbors, with brush spread over them. They make me think of the tobacco tents in the states. A little further on is a plot of plum trees that contains 300,000. Farther still are oranges, lemons and figs, and other semi-tropical fruits.

Twelve Miles of Railroad

Taking the car, we ride to the floral part of the establishment. There are more than twelve miles of railroad on the estate, and we can go rapidly from one place to another. The flowers are a wonder. They are of almost every variety of the temperate and tropical zones. There are great hothouses containing thousands of orchids, and in one section are 20,000 rose trees, including more than 1,500 varieties. There are also vast beds of lotuses and water lilies, and near them are groves of persimmons, which Don Salvador is introducing into Chile. He has forty varieties of this fruit brought in from Japan, Korea and China, and he expects to make the Asiatic persimmon as popular in Chile as it is now in the states.

Don Salvador is also experimenting in creating dwarf varieties of plants and trees. He showed me a peach tree as high as my knee that had ripe fruit on it, and a fig tree in bearing that was of the same size. He is making the famous dwarf pines of Japan, and has some which are now a foot high and will remain so for years.

He is importing fruits and trees from everywhere, and that at great cost. As I walked through the plantation he showed me forty new varieties of vines that had just been unpacked. They came from Europe and were in excellent condition. But this was not so of some other flowers, an order costing $10,000 having all died on the way.

During my stay I visited the packing establishments where fruit and vegetables are put up I might almost say by the ton. The hacienda has great cement warehouses equipped with the most modern machinery for drying, preserving and canning. It has great buildings filled with tin plates made by the steel trust of the United States and brought here for the purpose. The cans are made in the factory by machines run by electricity and managed by Chileno men, women and children. The peaches are peeled by a machine that does the work of 150 women, and all of the fruit and vegetables are cooked by steam in the cans. The factory can make 10,000 cans in a day, and it ships its product away by the carload.

Breed Special Fruit Trees

In connection with the canning, I want to tell you about the vegetables and the fruit in the fields. I visited one section where ninety acres of vegetables were ready for the factory. There were great sections of ripe, red tomatoes, long rows of green beans and an enormous quantity of sweet corn. From there I went to the peach orchards, which now have 45,000 trees loaded with ripe fruit. The trees are 7 years old, and some of the peaches are as big as my fist, and of an exquisite flavor. Many of the varieties have been created by Don Salvador, and in some of these he has succeeded in reducing the size of the stones to half that of the common peach of our country.

The orchards I saw have now about 100 pounds of fruit to the tree, and at this average Don Salvador estimates that he has 4,500,000 pounds of fruit, or at least 2,200 wagon loads. All of this is ripe and ready for canning. At five peaches to the pound he has 22,500,000 peaches, and he believes that they could all be landed in good shape in New York if fast cold storage steamers were ready to take them there via the Panama canal. Don Salvador tells me that such peaches can easily be carried that distance in cold storage, and still have four or five days in which to be marketed. These peaches are ripe here in the midst of our winter and they would surely bring a high price.

As I looked at this great orchard I could see that even now Chile could already supply a vast deal of fruit for our winter markets. There are many big orchards. These people can do business in the large, and they understand all about scientific fruit growing. Don Salvador is perhaps the best among them, but there are many other fruit raisers who manage their plantations almost as well, and who, when the demand has been created, will devote themselves to raising fruit for us. Take the peach orchard of which I am writing. It is as clean and well kept as any I have ever seen in the United States. It is trimmed every year and the trees are cut low, so that the branches grow out from the ground. At the same time the limbs are thin, so that the sun gives a daily kiss to every peach on the tree, bringing a ripe, rosy blush to its cheeks. Around the trunk of each tree is a little ditch for irrigation, and sprinkled over this after watering is nitrate of soda, which is fed to the trees at the rate of 200 pounds to the acre. They have no San Jose scale here, but Don Salvador uses the lime and sulphur spray every winter to guard against insect pests of all kinds.

The same careful treatment is observed as to all kinds of trees. I am told that the ordinary native workmen are skilled in the handling of fruit and they learn easily to care for the trees. Don Salvador has about 400 employes on his hacienda. They are all native Chileans, and among them are men who can bud and graft and who understand almost every phase of fruit cultivation.

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Experiences with forest fires on the national forests this year show that automobiles, where they can be used, furnish the quickest and cheapest transportation for crews of fire-fighters. Motor rates are higher than those for teams for the actual time employed, but the total cost per distance traveled and in wages paid to men in getting to fires is much less. The time-saving is self-evident.

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Making the Farm Poultry Pay

Timely Little Talks on Practical Matters

Blue Chickens

How are blue chickens produced? What must I give chickens that I suspicion of having worms? The mating of some Houdan hens with a light rooster of some breed—I don't know just what kind, but I think not pure-bred—shows a lot of the offspring with light feathers, spotted in places, pencilled in others. Is this how pencilled fowls are started?—Querist, Nebraska.

Answer—The mating of pure black and pure white breeds will often give you blue chickens. These can be used as a first basis for establishing a blue breed or variety, I judge. A spotted fowl mated to another of solid color is quite likely to produce offspring showing pencilling about the feathers to greater or less degree, according to which of the sexes are used of the spotted breeds.

For worms, give a tablespoonful of turpentine in each pint of mash food. Follow with a dose of castor oil, or mix both, half and half, for first two feeds, after which merely give the turpentine, three times a week, until you are sure the fowls are clear, which should be soon. A teaspoonful of powdered pomegranate root fed to each forty or fifty fowls a week will keep off worms.

Old Pigeons

How can I tell when breeding pigeons are old? How much should squabs weigh to be profitable? How long do pigeons live, and is feeding hemp or millet injurious? Do pigeons have many diseases? How can I detect sickness in the flock? Anything you can tell me along this line of questions will be thankfully received.—L. M., Nebraska.

Answer—Pigeons sometimes live to be 8 or 9 years old. Don't buy pigeons for young stock that show rough feet, sunken eyes, wrinkles about the nostrils, for these are signs of age. Feed sparingly of both millet and hemp, especially hemp. You can detect sickness in the flock by the breathing and droppings. Next will come general symptoms. Pigeons are susceptible to several diseases. Eight ounces is profitable weight for a squab. You must feed the pigeons plenty. If you do not they will feed all to the young, leaving none for themselves, and this brings disaster. Keep the premises clean and well disinfected; also disinfect nests when the squabs are taken from them. The female chooses her mate, then the male makes choice of the nest and feeds the young. If he refuses to do this, or does it improperly, the birds are weak.

The Wyandotte

A question had been asked relative to the Wyandotte breed, and why the White Wyandotte will sometimes show a dark feather and even show a faint ruff of feathers on its legs? There are several varieties now of the Wyandotte, but the first to be admitted to the Standard was the Silver Wyandotte. From the first the Silver Wyandotte had the rose comb. The next variety of Wyandottes to be admitted was the White Wyandotte. The Towle and the Briggs Wyandottes were the first to be shown, each of these fanciers stating that the White Wyandottes kept by them came as sports from the Silver Wyandotte, and yet claim is made that no one can tell exactly where the first Wyandotte originated, as several breeders must have been breeding for this type of fowl at about the same time, and that all the early White Wyandottes were sports from the Silver variety is not likely to be true. It is thought that White Cochin blood was introduced in the making of the White Wyandotte at the beginning, as the size, shape, and color of the eggs not only denotes this, but that feathers appear at times on the legs makes this seem probable. Why dark feathers often appear in certain of these birds good enough to show is often a mystery to the breeder. These seldom appear in such numbers that they cannot handily be pulled out. The purest blood may show these. However, White Wyandottes are improving away from most of their early tendency to reversion.

Small Poultry Paragraphs

A certain poultryman in northern Missouri lives on a forty-acre farm, mostly woodland, and keeps 500 Brown Leghorn hens. He ships the eggs each week to Chicago in fillers placed in heavy cases. The eggs are carefully graded and sold on a special market. Over all expenses he makes from 10 to 15 cents a dozen above market price. It is paying him. Some farmers, with smaller flocks, co-operate and make as good profit by sending their eggs to these far-off special markets.

* * *

Save all the offal at butchering time for the fowls. Cracklings pay better fed to the hens than put in soap grease. Some poultry keepers catch the blood in vessels at this time. Mixed with cornmeal and fed in small quantities each day or two to the hens, it promotes egg-laying.

* * *

One poultry keeper we know of broke her flock of egg-eating by crushing eggshells and cayenne pepper together and feeding it to the flock. She picks out the good layers by the distance between the pelvic bones. She says the hen with pelvic bones set close together is nearly sure to be a poor layer. If these are spread apart to let in the width of two fingers the hen is laying, or has just completed laying.

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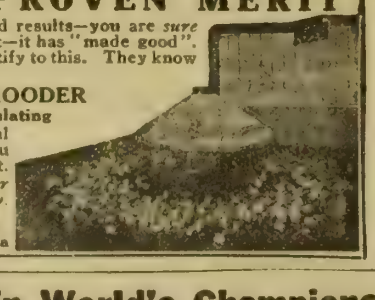

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PRIZE-WINNING BUFF ORPINGtons, reasonable. Mrs. Cook, Eddyville, Neb.

CHOICE COCKERELS, ROSE COMB Buff Orpingtons; prices reasonable. Fred Husmann, Leigh, Neb.

WHITE ORPINGTON COCKERELS, $1.50 each. William Langbehn, Avoca, Ia.

PRICE LIST FREE—SINGLE COMB Buff Orpington, Toulouse geese, Indian Runner ducks. Peter Brehm, Harvard, Neb.

Plymouth Rocks.

650 BARRED ROCKS, BRED BY IOWA King; won grand champion sweepstakes at Iowa State Show, 1914. A. D. Murphy & Son, Essex, Ia.

CHOICE BARRED ROCK COCKERels, ready to ship on approval. Arthur Gillette, South Omaha, Neb.

BARRED ROCK COCKERELS — Large, vigorous, from prize winning stock. Prices reasonable. Mrs. Frank Davis, Holbrook, Neb.

BARRED ROCK COCKERELS, PULlets, hens; customers nine states; satisfaction guaranteed. Mrs. George Schulz, Yutan, Neb.

QUALITY WHITE ROCK COCKERe's, large-boned, from heavy laying strain. Wesley J. Richards, Dorchester, Neb.

CHOICE BARRED ROCK COCKERels; will ship on approval. George Franklin, Axtell, Neb.

BARRED ROCK COCKERELS, Pekin ducks and Hampshire rams. Mrs. A. F. Hansen, North Platte, Neb.

BARRED ROCK COCKERELS, $1.50 and $2. Mrs. Owen Kaveney, Central City, Neb.

BARRED AND WHITE ROCK COCKerels, $1 and $1.50 each. Mrs. William Flynn, Waterloo, Neb.

BARRED COCKERELS, $1; TEN years' breeding. W. Spealman, Marysville, Kan.

BARRED PLYMOUTH ROCK COCKerels and pullets for sale; large, heavy bone, deep, narrow barred, good laying strain; guarantee satisfactory; show birds a specialty. G. W. Feuerstein, Fremont, Neb.

NICE, LARGE BARRED ROCK COCKerels, $1 to $2 each. B. F. Johnson, Fairfield, Neb.

BARRED ROCK COCKERELS—GOOD, big and well marked. Price reasonable; satisfaction or money back. M. S. McCollister, Beaver Crossing, Neb.

POULTRY—Plymouth Rocks

WHITE ROCKS—100 BIG SNOW White cockerels and pullets for sale; more firsts than all other breeders 1910 to 1914 Kansas State Show. Charles C. Fair, Originator of Ivory Strain, Sharon, Kan.

BUFF ROCKS. MRS. PENNY, VALleyview Farm, Sargent, Neb.

Rhode Island Reds

LARGE-BONED, DARK RED ROSE Comb Red cockerels, $2 each, guaranteed. Highland Farm, Hedrick, Ia.

FOR SALE CHEAP, SINGLE COMB Reds, scored stock. George Barkmeier, Exeter, Neb.

RHODE ISLAND REDS AND ALL other leading breeds, including ducks, geese and turkeys, $1.50 and up. Norfolk Breeders' Co-operative Association, Norfolk, Neb.

SINGLE AND ROSE COMB RED cockerels, $2 and up; Scranton & Watson stock direct; bred from state show winners. Lou R. Israel, Stromsburg, Neb.

Wyandottes.

SILVER-LACED AND BUFF WYANdotte cockerels for sale. H. Dasenbrock, Leigh, Neb.

GOLDEN AND WHITE WYANDOTTE cockerels for sale; best quality; prices right. William Schreiner, Exeter, Neb.

WHITE WYANDOTTES — 800 FOR sale; best strains in America. White Wyandotte Farm, Oscar L. Bock, Prop., Council Bluffs, Ia.

WHITE WYANDOTTE COCKERELS, pullets and hens from prize-winning stock for sale cheap. R. Petty, Martland, Neb.

LARGE SILVER-LACED WYANdotte cockerels; satisfaction guaranteed. H. Clabaugh, St. Edward, Neb.

Ducks

FOR SALE—ROYAL BLUE STRAIN Rouen ducks, $1.50 each. James Cassell, Fremont, Neb.

MUSCOVY AND RUNNER DUCKS—Leghorns, Orpingtons, Wyandottes, range-raised breeders. Book eggs and day-old chicken orders. Lone Tree Poultry and Egg Farm, Central City, Neb.

MAMMOTH PEKIN DUCKS AND drakes, $2 each, trio $5. Mrs. J. H. Wintermute, Blockton, Ia.

FAWN AND WHITE INDIAN RUNners, white egg strain, well marked; satisfaction guaranteed. Harry Johnson, Loomis, Neb.

Turkeys.

FOR SALE—HIGH-GRADE BOURBON Red turkeys, toms and hens; also Rhode Island Red cockerels and pullets. Write for particulars. F. M. Kern, Springville, Ind.

FOR SALE—A FEW PURE-BRED Mammoth Bronze turkey toms, $3 if taken by Christmas. Mrs. M. L. Blake, Litchfield, Neb.

NARRAGANSETT TURKEYS, EXTRA good; toms, $5; hens, $3. Mrs. H. C. Smith, Cleveland, Mo.

FOR SALE—MAMMOTH BRONZE turkeys, toms, $4; hens, $3. Mrs. W. A. Prater, Nemaha, Neb.

BOURBON RED TURKEYS FOR sale. Clinton Myers, R. 4, Fairbury, Neb.

Geese

TOULOUSE GEESE, $5 PAIR, $7 TRIO. C. W. Humes, Waterloo, Neb.

Miscellaneous Poultry

EGGS! EGGS! EGGS! THIRTY-three pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

TURKEYS, DUCKS, GEESE, CHICKens, rabbits, butter and eggs wanted. Ship direct to Perry & Co., Omaha, Neb. Estab. 1896. Reference, Merchants National bank. Prompt pay. Write for quotations.

BIG MAMMOTH BRONZE TURKEYS White Runner drakes. Light Brahma cockerels; Shetland ponies. Frank Healy, Bedford, Ia.

DARK CORNISH INDIAN COCKERels, Buff Cochins, Bantam trios and cockerels, and Indian Runner drakes, cheap. Hoefelman Bros., Platte Center, Neb.

100 CHOICE COCKERELS R. I. REDS Barred and White Rocks, Silver Campines and Buff Orpingtons; prices reasonable. Archdale Farm, Fremont, Neb.

POULTRY—Miscellaneous

BARGAIN ALL VARIETIES WYANdotts, Orpingtons, Rhode Island Reds, Minorcas, Rocks, Leghorns, Ducks, Geese, Turkey, Guineas. Progressive Poultry Farm, Hampton, Iowa. Box 222.

INCUBATORS

SAVE $10. NEW 300-EGG MANDY LEE Incubator, worth $35, for only $25; has never been used; also brooder, in good shape. M. Wohlner, 1615 Burt St., Omaha.

LANDS

FREE GOVERNMENT LANDS—MILlion acres now open to homestead entry in 25 states. Official 112-page book describes every acre in every county. How secured free; new laws, lists, etc. Price, 25c postpaid; also maps, soil guides, complete information. Webb Pub. Co., Dept. 36, St. Paul, Minn.

Australia

VICTORIA, AUSTRALIA, WANTS settlers. Special inducemnts; government land; railways; free schools; cheap irrigation; 31 years to pay for farms adapted to alfalfa, corn, grains, fruit, etc.; climate like California; ample markets; reduced passages; special excursion being arranged. Free particulars from F. T. A. Fricke, government representative from Victoria, 687 Market St., Box 57, San Francisco, Cal.

Arkansas

LITTLE RIVER VALLEY LANDS—Rich and cheap, on railroad. Sessions Co., Winthrop, Ark.

25,000 ACRES, GRAIN, STOCK LAND, cheap. Sure crops. Northern Colony. Free map. Tom Blodgett Land Co., Little Rock, Ark.

California

THINKING OF GOING TO CALIFORnia? We have a fine 20 acres, with a good stand of alfalfa, that means money now. No waiting for a crop. Very little cash required. Located near Sacramento. W. T. Smith Co., 1112 City National Bank, Omaha.

ON APPLICATION A BEAUTIFULLY illustrated book descriptive of the resources of Yuba and Sutter counties (in the fertile Sacramento valley) will be mailed free. Address M. N. Sheldon, Secretary Sutter County Commission to P. P. I. E., Marysville, Cal.

Farms Wanted

SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

FARMS WANTED FOR CASH BUYers, and farm bargains for sale. Write me if you want to buy or sell. Terms free. Established 1881. John B. Wright, successor to Frank P. Cleveland, Real Estate Expert, 1315 Adams Express Bldg., Chicago, Ill.

Missouri

$5 DOWN, $5 MONTHLY, BUYS 40 acres—grain, fruit, poultry land—near town; healthy location, good home. Special bargain. Price, $220. Box 425 W, Carthage, Mo.

Nebraska

160 ACRES GOOD, BLACK, SANDY land, six miles south of Elsie, Neb., for sale. Price, $1,200; worth double the amount. C. H. Metz, Owner, Spokane, Wash.

160 ACRES OF GOOD LAND IN HAMilton county; no better soil in Nebraska; good public road on two sides of quarter; no buildings; no better investment or place for good home anywhere; nearly all cultivation; price ridiculously low for such land as this and located as it is. Address Lock Box 697, Grand Island, Neb.

SACRIFICE SALE—320 ACRES SEVEN miles from Wallace, Perkins county, Neb.; all level, no sand; 50 acres good corn; 50 tons of hay on the land now. Price $17.50 per acre. Fred Blake, jr., Hastings, Neb.

IF ANY ROMEO OR JULIET WILL buy my Jones farm of 320 acres I promise they will live happily ever after, for while Romeo tills the soil and cares for the stock, Juliet can make the dairy and poultry pay for current needs, leaving the result of Romeo's work for profit, or, say, $2,000 per year, not counting the increase in value of the farm. That's success for you. Small cash payment and easy terms gets it. I am cutting the price to $40 away below its worth, for I need the money. See or write W. P. O'Brien, 410 Bee Bldg., Omaha, Neb.

LANDS—Real Estate Loans

FARMERS, DO YOU NEED MONEY? We negotiate for farm loans, 5 years at 6 per cent and ten years at 5 per cent; dealing direct with borrower; 2½ per cent straight commission. Correspondence solicited. Security Farm Loan Association, 30 North Dearborn St., Chicago, Ill.

Wisconsin

UPPER WISCONSIN—BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

FOR SALE—SPLENDID STOCK range, with mile frontage on lake; 340 acres natural blue grass and clover pasture in Polk county, Wisconsin; all fenced with 46-inch woven wire; new buildings; good soil, surface and location. A snap, only $25 per acre, on easy terms. Baker, G 67, Owner, St. Croix Falls, Wis.

FOR SALE—1,250-ACRE STOCK FARM in northern Wisconsin; half-mile from station. Write for particulars if interested. Other farm bargains. William C. Sargent, Farm Land Dealer, Duluth, Minn.

Wyoming

FOR SALE OR EXCHANGE—640-ACRE irrigated farm nineteen miles from Laramie, seven miles from Millbrook, Wyo. Have telephone and rural delivery. All good, level land; all under cultivation except 30 acres meadow land; seven-room house; barn for twelve horses; large hog shed, granary, cattle sheds, machinery sheds and other needed buildings; three miles woven wire fence; first-class perpetual water right; very low maintenance charges; splendid, healthful climate; fine winter weather; highest summer temperature about 85 degrees; grow splendid crops of winter wheat, barley, rye, oats, potatoes and root crops; also field peas and alfalfa; good hog country; cholera unknown. Pasture hogs in alfalfa in summer and in winter they harvest the field peas. On account of dry weather peas are left on the ground as they ripen and they do not damage; sheep and hogs will gather them without waste. No better cattle country anywhere. Forest reserve near by for cattle and sheep. Price, $70 per acre; incumbrance, $10,000. Will exchange equity for Iowa or eastern Nebraska land. Laramie Development Company, Laramie, Wyo.

ATTENTION GERMAN FARMERS! My four improved farms to rent on the crop-sharing plan, which will easily double your present income and more, with no additional labor or investment. These farms are situated about seven miles from Millbrook, twenty miles from Laramie, Wyo.; an up-to-the-moment city of 10,000 people, with the State university there and the experiment station on the way. Roads are fine and the rural free delivery stage goes by every day; school within a mile and telephone, too; good, comfortable houses, barns and other buildings. These farms have plenty of water to irrigate with and good, pure water in wells for other uses. They are partly in alfalfa and have been farmed for several years. Can farm a quarter here as easily as an eighty where you are; no diseases to attack stock; hog cholera unknown; climate particularly suited to growing children and those having asthma, throat or lung trouble. Here you can have plenty of cheap feed to fatten stock and have a money-making dairy. Butter-fat brings from 33 to 38 cents per pound; four to five cows will far more than support the family; plenty of cheap pasture. Applicants should have horses, implements and cows. For further particulars write A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

IF INTERESTED IN SECURING A fertile farm at a low price, in a well settled community, where climate, soil and water are good, write Federal Land Company, Cheyenne, Wyo.

LUMBER

FIR LUMBER! RED CEDAR SHINgles! Choice. Mill direct. Save money. Write Lansdown, Drawer H, Everett, Wash.

GOING TO BUILD? BUY YOUR FIR lumber, red cedar shingles, lath and pole work direct. We are located in the lumber center of today. We saw and sell to the consumer direct. We will save you money on what you need. Send us your lumber bill for estimate. Get our figures before you buy. The Keystone Lumber Co., Dept. R, Tacoma, Wash.

HIDES AND FURS

HIGHEST PRICES PAID FOR HIDES, wool, tallow, pelts and furs. Write for prices and tags. Beatrice Hide Co., Beatrice, Neb.

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and reduces your feed cost 25 per cent by enabling the hog to get full benefit of his feed. Hogs require lots of water to do best. Water is cheap. Encourage them to drink often by keeping before them a constant supply of pure, clean water with the chill off in cold weather. You can easily do it at little cost and save time, work and worry by using the

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Review of Live Stock Market

By A. C. Davenport

CATTLE have been acting in a highly interesting manner of late and the varied antics of the market have fixed the attention of stockmen throughout the whole western country. During the first week of the current month producers seemed to be in a panic of haste to unload their holdings. Almost all the big markets were flooded with half-fat and immature stock, and as a natural sequence prices were smashed without mercy.

In times past when prices were low packers were never noted for any great generosity in the matter of maintaining values when there happened to be more cattle than they needed. With prices as high as they have been the last three years they cannot be expected to do otherwise than buy stock at the very lowest figure possible. It follows that when the country loses its head and overloads the market as it did the first week of the month no one should be surprised if buyers trim prices according to their own ideas, and that is just what they did, taking off in many instances as much as 50c.

During the second week of the month there was a slight letup in the run; at the same time that the demand freshened and prices sprang back again. Christmas cattle putting in an appearance at the same time commanded fancy prices. The best yearlings touched $10.75 at South Omaha, the highest price ever paid at that point for a full carload lot. Other markets were correspondingly higher.

There is a feeling in the trade that the consuming demand must be limited by reason of the current high price of beef, and that panicky shipping on the part of producers could hardly fail to break the market down again. The experiences of past years have shown that in December the country is very apt to unload a lot of half-fat beeves, although that is unquestionably the worst month of the whole year for such cattle. Thus before this can appear in print the market may already have broken again. Operators are generally anticipating a very uneven market until the weak holders of cattle have shipped out.

While sharp breaks are to be expected as often as receipts become burdensome, cattle are unquestionably occupying a very strong position. Traders are almost without exception bullish in sentiment. This does not necessarily mean that they are anticipating any great advance beyond present values, as they believe that cattle prices are already about as high as consumers can afford to pay. They do believe, however, that cattle after the holidays will continue very strong sellers through the winter and spring, barring occasional breaks. They are basing their opinion on the assumption that available supplies of corn-fed beeves will prove much smaller this year than last. Already there is a falling off in the number of cattle marketed this year at the six leading points of over 800,000 head as compared with the same period last year. All available information at hand would seem to point to a continuance of this shortage in receipts throughout the season.

Under existing conditions it is hard to understand why any cattle feeder should be in a hurry to unload before his beef is fully matured and ripe for market, unless forced to do so by holders of loans against the stock. If every feeder will keep a level head and ship only as fast as his stock is ready, holding back temporarily when the market shows signs of breaking, it is difficult to figure out how he would be making a mistake.

It is a safe prediction that unless producers do keep level heads in the matter of marketing their beeves there will be some heavy losses. Feeders cost more than ever before, and all kinds of feed are high. It follows that this is no time to get panicky and rush stock onto an overloaded market.

There is not much to be said regarding the hog situation as conditions remain very much the same as outlined a week ago. The price pendulum has swung back and forth with no very great change in final results. The outlook for the future remains the same as it has for the last four or five months. The bears continue to predict lower prices, while the bulls are hoping that the inclination of the country to withhold supplies on breaks will prevent the market from going any lower than it now is. As a matter of course only time will tell.

For the year to date there has been a falling off in the receipts at eleven market points, as compared with the same period last year, of 1,700,000 head. As compared with two years ago the decrease at the same points is 1,630,000 head. This would seem to point to the market being in a strong position, but the bears declare that the country is full of hogs and that they are getting heavier, that is, making more pounds of pork, every day that they are held back.

Sheepmen have been in the saddle all the fall, and have had things pretty much their own way. Prices all the fall have been higher than ever before known for that season of the year. To be sure the market received a hard knock the first week of the current month, and the second week of the month started out with a sharp break. Some of that loss has since been recovered and the market is still very high for December.

Operators on the market are as a rule very positive that the supply of sheep and lambs on feed is smaller than usual, and they are almost without exception predicting high prices for the future. As a rule they do not expect much change for December, when poultry cuts down the demand for other kinds of meat, but they do expect a very strong market for the late winter and spring.

Aberdeen-Angus Meeting

An unexpected number of members of the Aberdeen-Angus Breeders' association attended the annual meeting at Chicago December 1. Naturally, a small attendance was looked for on account of the International being declared off.

The reports of the officers showed a very healthy state of affairs. As compared with last year, there was an increase of 25 per cent in registrations, 50 per cent in transfers and 67 per cent in membership. The total resources of this association as shown by the balance sheet is $68,224.90.

The officers for the following year are: E. F. Caldwell, Junction, Mo., president; H. W. Brown, Hillsboro, O., vice president; Charles Gray, Chicago, Ill., secretary; C. F. Morten, Jefferson, Ia., treasurer. Directors elected for a three-year term: E. F. Caldwell, H. W. Brown and Stanley R. Pierce of Creston, Ill.

New Year of St. Nicholas

Easily the most important and interesting of the features planned for the new year of St. Nicholas is the new serial by Frances Hodgson Burnett, "The Lost Prince," which begins in the November number and will run through twelve months of the magazine.

Mrs. Burnett has based her new story on a legend in a certain European country that, 500 years ago, while a ruthless and unpopular king was in power, his son, a youth of noble qualities and much beloved by his people, mysteriously disappeared. And, upon the death of his father, a new dynasty came to the throne, though the story of the lost prince has been handed down through the centuries.

"The Lost Prince" of Mrs. Burnett's story is the descendant in our own time of the lost prince of 500 years ago, and his story is that of "a boy who is a prince, but does not know he is one, making his way through Europe in the guise of a stalwart little tramp, but secretly carrying a message and a sign to stray men in crowded streets, at palace gates, in forests and on mountainsides—he himself ignorant of all but that he must obey and pass on in silence.

Other serial features of the new volume of St. Nicholas include "Peg o' the Ring, or a Maid of Denewood," by Emilie Benson Knipe and Alden Arthur Knipe; "The Boarded-up House," by Augusta Huiell Seaman, author of "Little Manselle of the Wilderness;" "Silverheels," a story for younger boys and girls, by Gabrielle A. Jackson, author of "Denise and Ned Toodles;" and an adventure yarn specially for older boys, telling the adventures (real adventures, too) of two American lads in Mexico. The title is "Chained Lightning," and the author is Ralph Graham Taber, who himself has had many of the experiences he pictures.

The publishers, The Century Company, Union Square, New York, are offering to new subscribers the October, November and December numbers free, and the year of 1915 complete for the usual subscription price of $3.

Shorthorn Breeders Meet

The annual meeting of the Shorthorn Breders' association at Chicago December 2 brought out a much larger number of members than was expected, considering the fact that the International show was off.

Reports show slendid progress made during the last year, the reds, whites and roans being placed in much new territory, particularly the south. This is only another straw that shows the southern farmer is getting away from cotton alone and turning his attention to diversified farming and live stock raising.

Three directors were elected—Reid Carpenter of Mansfield, O., and Daniel Combs of Hickory Valley, Tenn., succeeding themselves. N. H. Gentry of Sedalia, Mo., was elected to succeed J. W. M. S. Dermott of Kahoka, Mo.

The question of reducing the age limit at which cows may be recorded from 3 years to 1 year was brought up and created quite a discussion. Final action was left to the board of directors.

What We Need in Way of Road Laws

(CONTINUED FROM PAGE FIVE.)

as others have pointed out before—that the crying need of today is not the appropriation of more money for road purposes, but the conservation of the money already available. Analyzing that statement forces the conclusion that the real need, so far as road improvement is concerned, is favorable legislation that provides for economical supervision.

If you have any ideas on this subject you might write to the representative from your county. It's a good plan to keep in touch with him on general principles, anyway.

How is This for Wheat?

The Nebraska farmer, indeed, the farmers throughout the middle west wheat belt, is once more wearing the smile that won't come off because of this made-to-order winter wheat weather.

Go find the chronic trouble-borrower, who was bemoaning the fear that wheat might go into the winter under ground dry-frozen and ask him what he thinks of himself now.

A week or so ago we had several days of queer little rains that brought lots of moisture, and then followed abundant snows. The result is the ground is well covered before the hard freeze, which makes just about an ideal condition for winter wheat. Even those sections further west that suffered slightly from the continued dry period subsequent to the sowing will derive their share of this benefit sufficient, it is said, to counteract any injury done by the previous condition.

From now on there need be no apprehension about not getting snow enough, so that so far as wheat is concerned we of this section ought to rest very easy until spring, though, of course, no one can tell exactly what is in store for us in the next few months. Experience proves, however, that the wheat grower generally has little cause for complaint if his grain goes into the winter well.

Because of the war English manufacturers and consumers of wood pulp have been caused considerable uneasiness. Production is at a standstill in the countries at war, and in Norway and Sweden, principal sources of supply, mills have been greatly hampered because of a lack of coal and of chemicals. England has practically no domestic sources of pulp.

Duroc-Jersey Men Meet

The annual meeting of the National Duroc-Jersey Record association was held at Chicago Tuesday evening, December 1.

For some time prior to this meeting an effort was made by some members of this association to make a change in the personnel of the officials. When the final roundup was made at the meeting the people behind this movement found they had but little suport from the membership.

The last year has been by far the most successful in the existence of this association, which has been for some time the largest swine record of the world. During the last year 540 shares of stock were sold. The treasurer's report showed $50,103 on hand, $46,100 of this amount being invested in first mortgage farm loans. The net profit above all expenses during the last year amounted to a little over $7,600. For the first time in the history of the national association its stock is worth 100 cents on the dollar.

The following officers were elected:

G. W. Hockett, Manning, Ia., president.
J. J. McLain, Anna, Tex., first vice president.
C. F. Burke, Rocky Ford, Colo., second vice president.
J. R. Pfander, Peoria, Ill., secretary.
E. Z. Russell, Benson, Neb., treasurer.

The new directors for the three-year term are George Klusmire, Holton, Kan., and C. S. Vanderhyde, New Concord, Minn.

Two years ago a change in the laws were made whereby the directors were elected for the term of three years instead of one. It was deemed advisable to make this change so that these officials, by serving a three-year term, might become more acquainted with the work and consequently be better officials. It was deemed that equal advancement in the efficiency of the officials would be obtained by making the term of the secretary and treasurer three years instead of one, which was done.

Swine Breeders Organize

The movement of the organization of the National Swine Breeders' association started at Chicago December 3. About 200 men interested in the swine industry from various parts of the United States met at a banquet and perfected an organization by the election of the following officers:

A. C. Halliwill, Chicago, Ill., president.
J. L. Thacker, Davenport, Ia., vice president
L. E. Troeger, Chicago, Ill., secretary.
George M. Cantral, Chicago, treasurer.
Directors—W. S. Corsa, White Hall, Ill.; J. Young Caldwell, Williamsville, Ill.; F. H. Moore, Rochester, Ind.; J. E. Meharry, Toulona, Ill.; Thomas Canfield, Lake Park, Minn.; John Dunlap, Williamsport, O.; L. E. Frost, Springfield, Ill.; E. C. Stone, Peoria, Ill.; Frank Thornburg, Carthage, Ill.

Naturally, an organization covering the whole country will take some time for thorough organization. The organization will be for the mutual advancement of the swine industry in all sections of the country. There is an untold amount of good such an association can do and we shall look forward with interest to the growth and development of the National Swine Breeders' association.

Breeders' Notes

This department is under the direct charge of G. E. Hall. His years of service in field work have given him a large acquaintance with the breeders of the central west and also a thorough knowledge of the breeding and personnel of their herds. His services are free to readers of this paper in the matter of selection of breeding stock, both at public and private sales. All communications should be addressed to G. E. Hall, care of the Twentieth Century Farmer.

Boesinger Sells January 29

Dave Boesinger, the well known breeder of Duroc-Jersey hogs at Cortland, Neb., will hold his annual sale of bred sows at his farm near that place on Friday, January 29. We called on Mr. Boesinger a few days ago and were greatly impressed by the splendid growth he has on his young sows and also the character of those he is going to put in the sale. There will be about ten tried sows and thirty spring gilts, making a total of forty head. The thirty spring gilts will be selected from a bunch of over eighty head, and we want to say that, taking them as a whole, they are sure mighty hard to beat. These sows are just simply good enough to go into anybody's herd. They have not been overcrowded, but they are big and smooth, with all the bone that one could ask for. The tried sows are a strong, useful lot and are sired mostly by Widle's Wonder, a splendid show and breeding son of Crimson Wonder 4th. The spring gilts are by Widle's Wonder, Lincoln Lad by Lincoln Wonder, and others. They are bred to Jumbo, a good son of Cleatham's Pride, some to Lincoln Lad and some to Good E. Nuff Defender by Good E. Nuff Model 2d by Good E. Nuff Model by Good E. Nuff Again. He is out of the dam Lady Defender by Defender. Here is one of the really good yearling boars we have seen this year—big, long, smooth and stands on as good feet and bone as we have ever seen on a boar of his age. It certainly looks to us like a sow bred to this boar would be a valuable asset in any man's herd. Get in touch with Mr. Boesinger for catalogue, mentioning the Twentieth Century Farmer.

Carpenter's Durocs

We called on E. H. Carpenter of Fontanelle a few days ago and spent some time in looking over his herd of Duroc Jerseys and incidentally those he is going to sell in his bred sow sale on February 1. Mr. Carpenter has one of the really good herds of Durocs in northern Nebraska and is going to have an offering this year that, without question, is the best he has ever made. He has a lot of big, roomy sows and gilts, both spring and fall, that certainly ought to appeal to a breeder or farmer who is looking for size in Durocs. He is going to sell forty-five head in his sale, consisting of five tried sows, seventeen fall yearlings and twenty-three spring gilts. They represent such sires as Prince Critic, Echo Crimson Wonder, Wallace's Sensation, Carpenter's Golden Model, Blue Ribbon Model, Jr., A Professor Golden Model 4th, Crimson Wonder Select, Model's Dream, Tony's Red Wonder and others. They are principally all bred for late February and March farrow to Prince Critic, Carpenter's Golden Model Critic B. B., by the champion, Critic B. Get your name on Mr. Carpenter's list for catalogue and write for further particulars. Kindly mention the Twentieth Century Farmer when writing.

Kuper Makes Good Sale

The sale of Shorthorn cattle held at Humboldt, Neb., on December 8 by H. H. Kuper of that place brought out a splendid crowd of representative breeders from a distance, and also a large local crowd. The offering was composed of a highly useful lot of splendidly-bred Scotch cattle, not in high flesh, but in just ordinary breeding condition. Had they been in high flesh they would undoubtedly have brought more money, but it is questionable if they would have gone out and done the good they will do for their purchasers in their present condition. The top of the females was $400, paid by S. A. Nelson & Son of Malcolm, Neb., for lot No. 18, a splendid young cow sired by Secret Champion and out of Imp. Sobriety 2d. This firm purchased several other good ones, as usual. Black Bros. & Kleen of Franklin, Neb., were also strong bidders and took home a number of good ones. The top bull went to T. J. Dawes of Troy, Kan., for $260. This was lot No. 9, a splendid young roan yearling bull by Collynie Goods. This bull was consigned by Reuben Harshbarger of Stella, Neb. Colonel H. S. Duncan officiated on the block in his usual pleasing and effective manner. Below will be found a list of those selling for $100 and over:

25 females brought $4,650, average.....$186
11 bulls brought $1,765, average..... 160
40 head brought $6,115, average..... 152

Lot.	Price.
1—Ben Muhen, Humboldt, Neb.	$...
2—L. A. Brou, Talmage, Neb.	100
5—John Holman, Humboldt, Neb.	100
7—J. L. Harms, Fairbury, Neb.	1...
9—T. J. Dawes, Troy, Kan.	260
10—T. J. Dawes	150
12—A. B. Cornelius, Humboldt, Neb.	100
13—S. A. Nelson & Son, Malcolm, Neb.	180
14—T. J. Dawes	150
15—G. W. Shayne, Fairbury, Neb.	145
16—L. H. Howe, Humbolut, Neb.	105
17—Blank Bros. & Kleen, Franklin, Neb.	150
18—S. A. Nelson & Son, Malcolm, Neb.	400
19—T. J. Dawes	130
20—Edgar Shoebothem, Fairbury, Neb.	150
21—Blank Bros. & Kleen	120
24—Blank Bros. & Kleen	175
25—S. A. Nelson & Son	140
26—L. H. Howe	125
27—L. H. Howe	165
28—Edgar Shoebotham	135
29—S. A. Nelson & Son	305
30—T. J. Dawes	170
31—Blank Bros. & Kleen	210
32—Retzloff Bros., Bennett, Neb.	150
33—Blank Bros. & Kleen	245
34—Retzlaff Bros.	205
35—Fred Linty, Graff, Neb.	125
36—Fred Linty	125
37—A. H. Andrews, Gerard, Kan.	105
38—Sample Bros., Belgrade, Neb.	145
42—Edgar Shoebotham	125
B—W. H. Walter, Wakefield, Neb.	255

Smith's Mammoth Jacks

With this issue of the Twentieth Century Farmer we are starting the advertisement of Al E. Smith of Lawrence, Kan., one of the leading jack breeders of the country. Mr. Smith has a reputation that extends far beyond the confines of his own state. He has acquired this through the high character of the jacks he has been producing and also by the fair manner in which he treats his patrons. At this time he has over fifty head of mammoth jacks from fifteen to over seventeeen hands in height for sale. Mr. Smith considers this to be the best lot of jacks that he has ever had on his farm at any one time. They have the quality and breeding of long lines of great sires, which insures the high-class mule. They are all raised out in the open, with abundant exercise to give them strength and muscle, thus making them more satisfactory breeders than if they had been pampered and were in high flesh to make them sell. They are the big-boned kind, mammoth black fellows, with plenty of style, and will certainly appeal to the most exacting buyer. If you are going to be in the market for a jack you can make no mistake in getting in touch with Mr. Smith. Kindly mention the Twentieth Century Farmer when writing.

Stnandard Poland-China Men to Meet

The annual meeting of the Standard Poland-China Record Association will be held at Marysville, Mo., January 6, 1915. At this meeting the proposition will be voted upon of having a branch office at Kansas City for the transaction of the general business of the association. This will be an important meeting of the Standard and a good attendance of the members is looked for.

Sale Dates

Poland-China Hogs

February 6—O. J. McCullough, Clarks, Neb., sale at Central City, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb

Duroc-Jersey Hogs

January 27—Willard Robbins, Lyons, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelhmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petersburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—P. P. Cedar, Genoa, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 22—John C. Tighe, Stanton, Neb.
January 23—William Morgan, Wayne,
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday; Rising City, Neb.
March 1—Harry Tidrick, Windside, Neb.
March 2—Edgar Taylor, Plainview, Neb.

Shorthorns

January 12—A. C. Shallenberger, Alma, Neb., sale at South Omaha.

JACKS AND JENNETS

MAMMOTH JACKS

Over 50 head of the big kind, 15 to over 16 hands, standard, for sale at my farm. Reference—the banks of Lawrence. 40 miles west of Kansas City, on U. P. and Santa Fe.
AL. E. SMITH,
Lawrence, Kan.

O. I. C. HOGS

THIS
O.I.C.
SOW WEIGHED 932 LBS. AT 23 MONTHS OLD
IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN** RFD 79 Portland, Mich.

JERSEY CATTLE

The Jersey

comes into maturity early, is long-lived and is often found making records even to advanced age. She stands above all other breeds for *economic production.* Shall we mail you free a good book on the Jersey?
THE AMERICAN JERSEY CATTLE CLUB,
324 W. 23d St., New York City.

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the west. Write for full description, pedigrees and prices, and yearly milk and butter records. HAL C. YOUNG, Lincoln, Neb.

RED POLLED CATTLE

RED POLLED CATTLE

Both sexes; good as any in America. Call or write me your wants. W. F. Schwab, Clay Center, Neb.

HOLSTEIN CATTLE

Purebred Registered
HOLSTEIN CATTLE

Here's growth. In 1871 the pioneers of this association held a meeting attended by six people. This year 389 members were present, and 2,864 were represented by proxies. The total membership to May 1, 1914, was 6,500—an increase of 1,107 members (or 17 per cent) during the year. Since 1909 the registration of Holstein cattle has almost tripled, their average value as shown by average prices at auction has increased nearly $100 per head. This remarkable showing has been made on the absolute demonstrated merit of the breed.

Send for **FREE** Illustrated Descriptive Booklet.
The Holstein-Friesian Association of America, Box 179, Battleboro, Vt.

DUROC-JERSEY HOGS

DUROC BOARS

50 cholera proof Duroc-Jersey boars, ready for service, $25 to $35. 100 cholera proof sows, bred to Buddy K 4th, Wide Awake, Cremo and others. Price $30 to $50 for immediate shipment.
GEO. W. SCHWAB, Clay Center, Neb.

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.
A few good sons of King Segis Lyons are still left.
DR. B. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

SHORTHORN CATTLE

SHORTHORN BULLS

Several pure Scotch Shorthorn bulls for sale, sired by Broadhook's Chancellor. They are red in color and from 14 to 20 months old. They are priced to sell. **J. C. HARDMAN, Valley, Neb.**

POLLED DURHAM CATTLE

IMMUNE DUROC BOARS

A corking good lot of big, smooth, heavy boned Duroc boars for sale, sired by Col. Wonder 1st and out of sows by Nebraska Proud Chief and Unitt's Choice Goods. Priced to sell. **W. G. UNITT, Seward, Neb.**

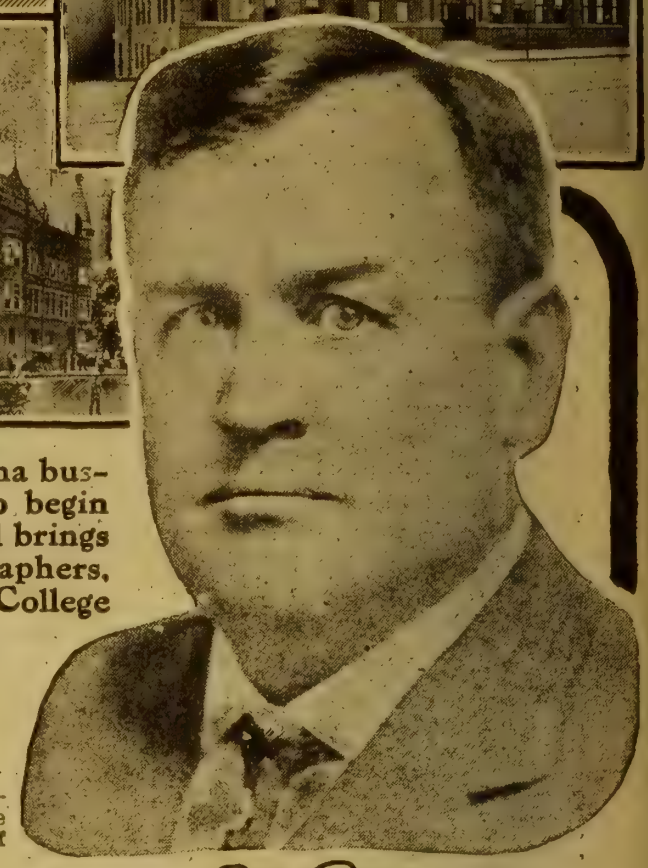
PERCHERON HORSES

BRILLIANT blood, jet blacks, rich greys. Registered Percheron studs—1, 2, 3 and 4 years old. I grow great big fellows with extraordinary bone and heavy quarters—I love a good horse. Come visit at my plain, old-fashioned Percheron farm that has the goods, and lots of them. Don't let anyone tell you that they have Percherons just like Fred Chandler's. Just east of Omaha.
FRED CHANDLER, Route 7, CHARITON, IOWA.

AYRSHIRES

WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. **LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb.**

"I Guarantee You A Good Paying Position"



RIGHT NOW—this minute—as you read this ad—25 Omaha business men are clamoring for a Boyles College graduate to begin work in their office Monday morning. Nearly every mail brings me letters asking for trained stenographers, bookkeepers, telegraphers, etc. I really can't supply all the demands received for Boyles College graduates. During the 16 years

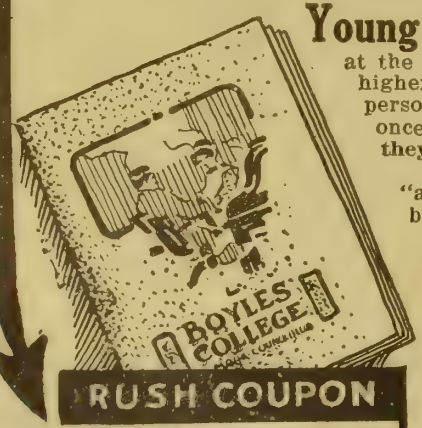
BOYLES COLLEGE

has been established in Omaha, I have placed 10,000 young men and women in paying positions. I have guaranteed a position for every graduate and not once have I failed to make good. On the other hand, I have had many positions I could not fill because my supply of graduates (10,000) was not large enough.

Here is the guarantee on which I have made good 10,000 times:

> **I will absolutely guarantee a good paying position for every graduate of my big business schools. More than that, I will guarantee you a place to work for your board while attending (if you and your parents wish).**

Parents! Your children's future is so important to you that you should help them decide just what part in life they shall take. What will they be doing when they are your age? Will they be trained, efficient, high-salaried men and women, or simply one of the mass of people who just "manage to get along?" What do you want them to be? It depends a lot on how you advise them. They will probably remain where they are if you say so—but is it best—for their future? Is it? You are proud of that boy or girl now—you will have reason to be far prouder after I have trained them for one of the good paying positions that waits for them. Isn't it due your family name to let your children make the most of themselves, and won't they have a far greater opportunity if they are specially trained for business?



Young Men and Women! Your future is all ahead of you. What are you going to do with it? Will you forever stay down at the bottom, or by a little self-assertion, will you train yourself for a better and higher place in life? Most everybody would like to hold the position some "lucky" person occupies—but—were they lucky? Haven't you the same opportunities they once had? And now are you going to take advantage of the same opportunities they had or will you put it off until it is too late?

"Nothing attempted — nothing done" is truer now than ever before and the "attempting" in your case must be done quickly. Time flies and you will be beyond "training-age" in a few years.

Don't let another day go by until you

Send for My 114-Page Free Book

which tells all about my schools, the opportunities offered you, the thousands of positions we have already filled, our different courses, etc. The book is handsomely illustrated and you can get a very complete mental view of our school and how our training will gain you a secure foothold in the great business world, just as it has for 10,000 others. Mailing the coupon does not obligate you in any way. It simply brings the big free book which will show you how best to develop your natural ability.

I have learned that boys and girls from the farm almost always are the ones who best qualify themselves for the better positions. Sixty per cent of my students come to me from the farm and they now are employed by the big business houses, banks and railroads of Omaha and other cities.

Don't "put it off" this time. Determine to be plucky—not "lucky"—and train yourself for a better position. Check, clip and mail the coupon even if you don't do another thing today. Do it right now!

H. B. BOYLES, President.

BOYLES COLLEGE
600 Boyles Bldg., Omaha, Neb.

RUSH COUPON

Boyles College,
Omaha, Nebraska.

Please send me, without obligation on my part, your big free book and special information on the courses checked below:

Stenography	
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Bookkeeping	
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Farm Bookkeeping	
Penmanship	
Commercial Law	
Civil Service	

Name .....

Town .....

State .....

Mr. H. B. Boyles,
President Boyles College,
Dear Sir:—

Replying to your recent letter making inquiry as to how I have succeeded since graduating from your College, will say that while I have done very well, I believe my career has been quite similar to a large number of your graduates. Through your efforts I secured a position as stenographer for the Nebraska Bridge and Supply Company. At that time the company was a partnership, but later was incorporated and represents an investment of over a quarter of a million dollars. I have been steadily advanced, until I now hold the position of Secretary and Treasurer, besides being a stockholder and Director in the company.

As an evidence of the confidence we have in your college will say that three of our present officers are Boyles Graduates. In fact, we always call your office when needing any new help as we consider your graduates have had the fundamental training for a business career.

I still appreciate the favors you have shown me and never miss an opportunity to speak a good word for your college.

Wishing you continued success I am,

Very sincerely,
GATES H. RHEAM.

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OF

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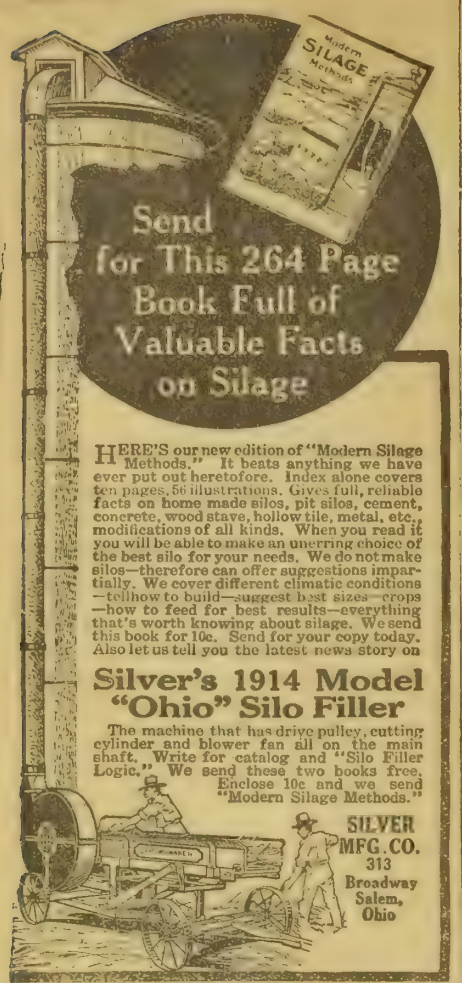
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM.

Five Cents the Copy | Omaha, December 26, 1914 | Number 733



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Silver's 1914 Model "Ohio" Silo Filler

The machine that has drive pulley, cutting cylinder and blower fan all on the main shaft. Write for catalog and "Silo Filler Logic." We send these two books free. Enclose 10c and we send "Modern Silage Methods."

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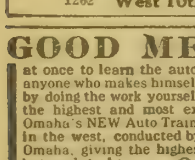

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Keeps all the heat under water. Has been known to hold fire 24 hours without attention. Burns any fuel, Used with or without grate.

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at once to learn the auto business Big future for you or anyone who makes himself an auto expert You learn here by doing the work yourself. Lifetime opportunity to learn the highest and most expensive auto work ever given Omaha's NEW Auto Training College, the largest of its kind in the west, conducted by experienced Automobile men of Omaha, giving the highest and finest practica lauto training work to be found anywhere Experienced repairmen come and take exactly same course to become experts We teach expert work. You get higher training here than you can at any regular auto repair shop, we have equipment that they don't have, and intructors who teach you principles that they don't even know

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$900 to $3,000 a YEAR, Salary or Bus. Profits in Repairshop or Garage, or as Salesmen. Factory Testers, Chauffeurs, Repairmen, Starter Experts or Garage Manager If ever you are going to make a change to get into a higher paying and more pleasant line of work. DO IT NOW, the opportunities are the best now that they have ever been Take our wonderful training course now until you are competent, and then go right into the automobile business from here. Positions now open needing capable men, and we want some good men at once to take up this work

Special $50 course in Elec Starting & Tractioneering FREE with regular course Learn here in 6 wks. or more Tuition small Life scholarship. Work easy and interesting Many make expenses while learning. Free catalog at once.

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They burn gas—created by gasoline and air. Cost of operation quarter of a cent per hour. Give 300 to 600 candle power light. Made of solid brass heavily nickel plated. Sold at a price anyone can afford. Throw away your lamps and lanterns. Get a Swaine lamp or lantern. No wicks to trim, no smoke or soot. Can't explode even if turned over.

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Greatest lamp and lantern ever invented. To prove it we will ship either or both on trial. If not entirely satisfactory you pay nothing. Send for illustrated literature, prices and particulars.

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Bright and Breezy

At the Bottom

"Now, my boy, you'll have to start at the bottom and work up."

"All right, dad."

"The best I can do is to make you fourth vice president of our corporation."

Cow Was Hasty

A former one-cow dairyman was notified by the Board of Health that hs license had expired. He sat down and answered:

"Dear Sir: The cow beat you to it; she expired first."

Forward Mary

"Mary followed Edward," mumbled the high school girl, who was trying to fix the sovereigns of England in her mind.

"What's that?" spoke up grandma, who had been dozing.

"Mary followed Edward."

"Then you keep away from Mary. I don't want you to go with them kind. Girls is getting too bold."

The Centi-Pig

A young wife recently went into a provision shop and addressed the shopman thus:

"I bought three or four hams here a month or so ago, and they were fine. Have you any more of them?"

"Yes, ma'am," replied the man. "There are ten of those hams hanging up there now."

"Well, if you are sure they're off the same pig I'll take three of them," replied the young wife meekly.

Vanity!

"I wouldn't o' had no trouble wif de constable ner nobody," said Mr. Erastus Qinkey, "if it hadn't been for woman's love o' dress."

"What has dress got to do with it?" asked the jailer.

"My women folks warn't satisfied to eat de mos' of de chicken. Dey had to put de feathers in their hats an' parade 'em as circumstantial evidence."

Hardly

An English colonel, at kit inspection, said to Private Flanigan:

"Ha! Yes, shirts, socks, flannels, all very good. Now, can you assure me that all the articles of your kit have buttons on them?"

"No, sir," said Private Flanigan, hesitating.

"How's that, sir?"

"Ain't no buttons on the towels, sir."

Satan's Way

Mrs. Kilgore was the pretty young wife of the elderly village pastor. One day she went into the city with a friend, and among other things bought a new frock.

"Another frock, my dear?" said her husband. "Did you need another?"

"Yes," said the wife, hesitatingly, "I do need it; and, besides, it was so pretty that the devil tempted me."

"But you should have said, 'Get thee behind me, Satan.' Have you forgotten that?"

"Oh, no; but that was what made the trouble, hubby, dear. I said, 'Get thee behind me, Satan,' and he did, but he whispered over my shoulder, 'It just fits you beautifully in the back!' And I just had to take it then."—Harper's Magazine.

Prattle of the Youngsters

Thoughtful

"Have you said your prayers?" asked the mother.

"Of course," replied the child.

"And did you ask to be made a better litlte girl?"

"Yes, and I put in a word for you and father, too."

Giving Cheerfully

The father of a Germantown lad had given him a 10-cent piece and quarter of a dollar, telling him that he might put one or the other on the church's contribution plate. At dinner the father asked the boy which coin he had given.

"Well, father," exclaimed the youngster, "at first it seemed to me that I ought to put the quarter on the plate, but just in time I remembered the saying, 'The Lord loveth a cheerful giver,' and I knew I could give the 10-cent piece a great deal more cheerfully, so I put that in."

Defined

The word "orphan" occurred in the Sunday school lesson. The teacher asked if any of the boys in the class knew what an orphan was. There was no response. Thinking to help the little fellows, the teacher said:

"Why, children, I'm an orphan; now can't you tell me what an orphan is?"

Up went the hand of a little boy.

"That's a good boy, Johnnie," said the teacher. "You can tell us what an orphan is."

"An orphan," replied the lad, without the slightest hint of a smile and with deep earnestness, "an orphan is a young lady who wants to get married and can't!"

In the Sleeper

A little girl traveling in a sleeping car with her parents greatly objected to being put in an upper berth. She was assured that papa, mamma and God would watch over her. She was settled in the berth at last and the passengers were quiet for the night, when a small voice piped:

"Mamma!"

"Yes, dear."

"You there?"

"Yes, I'm here. Now go to sleep."

"Papa, you there?"

"Yes, I'm here. Go to sleep, like a good girl."

This continued at intervals for some time, until a fellow passenger lost patience and called:

"We're all here! Your father, and mother, and brothers, and sisters, and uncles, and aunts, and first cousins! All here! Now go to sleep!"

There was a brief pause after this explosion. Then the ti- - voice piped up again, but very softly:

"Mamma!"

"Well?"

"Was that God?"

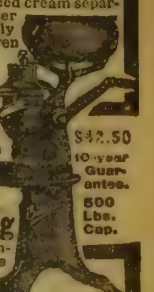
You Can't Beat Galloway Prices and Quality

My New Low Down No. 8 Spreader with cut under front wheels and trussed channel steel frame is positively the best spreader in the world. Light draft, endless apron, positive force feed, double chain drive. Just ask for my book, **"A Streak of Gold," FREE,** and I will tell you the truth about manure spreaders and how to get the greatest profit out of your manure products.

Spreaders $64.75 up.

New Sanitary Cream Separator

I will send it anywhere in the United States without an expert to set it up to any inexperienced cream separator user for a 90-day free trial, to test thoroughly against any make of separator that even sells for twice as much and will let you be the judge. Built up to a high standard and **not down to a price.** 20,000 miles of travel would prove it the most modern, the most sanitary, the most scientific, the cleanest skimmer, the most beautiful in design of any cream separator made today and I have seen them all. A postal gets our big free **Separator Catalog and Cow book.**



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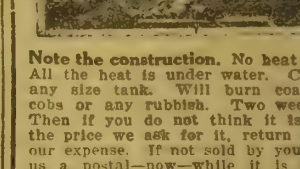

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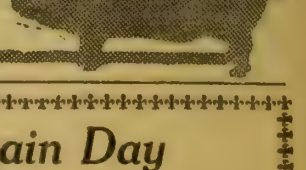

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Omaha, Neb.

The TWENTIETH CENTURY FARMER
A MAGAZINE FOR THE MEN AND WOMEN OF THE FARM

Uniform Live Stock Shipping Regulations

Paper Read by E. Z. Russell of the Twentieth Century Farmer Before the Nebraska Farmers' Congress

OF GREAT importance to farmers and stockmen is the question of uniform shipping and inspection rules and regulations for live stock. This particularly applies to the breeder and shipper of pure-bred live stock, for it is he who more frequently ships live stock interstate, thereby coming into contact with the rules and regulations of some other states than his own. There are numerous reasons why these rules and regulations should be more uniform than they now are.

If a uniform set of rules were adopted, a man shipping live stock would know just what he had to do in the way of an inspection or obtaining a certificate to accompany the bill of lading, while as it now is there is such a mixture of regulations in the different states that one cannot possibly remember what is necessary for all of them.

The present method is troublesome to the transportation companies. They may notify their agents what rules are necessary, but in dealing with the vast number of people they have to deal with one can at once see that the agent may not give the shipper the proper information. In consequence the shipment is frequently held up at some state line. Not all veterinarians who make inspections and issue certificates for this purpose are posted on the regulation necessary for some state to which the shipment is to be made.

Just recently an instance of this kind came to our notice. A breeder of pure-bred hogs was in the office and said he had just returned $35 to a party in Iowa who ordered a pig from him. Knowing that some sort of certificate or inspection was necessary, he called up his veterinarian, who told him the rules of Iowa required treatment of the hog simultaneously, and that the animal be held thirty days after the treatment. The facts are that the Iowa rules require treatment either simultaneously or the single method. If by the single method, it must be less than thirty days prior to the date of shipment. This party was a man who did not want to treat his hogs simultaneously, and consequently he returned the money and the sale was not made, yet it should have been had the veterinarian known the requirements for Iowa. During the last state fair this matter was brought forcibly to our attention on account of the large number of breeders on the grounds, selling their hogs for shipment into other states, coming to us for information as to what was necessary in the way of inspection, vaccination and certificate, to get their hogs into such state.

State Lines Should Be Imaginary

It is our opinion that state lines as far as inspection of animals and certificate required for their movement is concerned should be nothing but imaginary. For instance, why should the Dorset-Niles-McBride treatment be necessary for the shipment of a hog from Nebraska to Iowa, when nothing but a health certificate is required for the same hog to be shipped from Nebraska to Minnesota or South Dakota. In cattle shipments we find that Colorado requires a health certificate and a tuberculin test for bulls for breeding purposes and for all female cattle over 6 months old for dairying purposes. Illinois requires no certificate except for Texas fever. Iowa requires a health certificate, including tuberculin test, for both dairy and breeding animals. In Missouri the health certificate, including tuberculin test, for dairy and breeding cattle is required, and if such animal comes from a herd in which tuberculosis is found the certificate must contain the words, "Exposed to tuberculosis on day of inspection." So you can see there is practically nothing in the way of uniformity in these rules and regulations.

In taking up the matter of uniformity of these rules and regulations great care should be taken by the officials having these matters in charge not to require such certificates as may be a source of considerable expense to the man shipping the animal. We mean this: If a hog breeder in Nebraska sells an animal to go into Minnesota today, possibly this same man will receive another order to go into the same state three or four days later, and the regulations in Minnesota should not be such as to require this shipper going to the expense of having the veterinarian to make a trip to his farm the second time to inspect his herd in order that the proper certificate may be made out. The regulation requiring such certificates as this would certainly be a fat thing for the veterinarians, and many of them would undoubtedly take advantage of it to the full extent.

Oath of Shipper Should Be Enough

We are of the opinion that in hog shipments the states into which the animals are sent could be fully protected by something in the line of an affidavit from the man making the shipment that his hogs on the day of the shipment were all in good health, and that for thirty days past there had not been any sickness of any kind in his herd, and to the best of his knowledge in any herds adjoining his farm. Anyone making this kind of an affidavit is subject to prosecution under the laws for perjury. It is possible, of course, that some of them would take the risk of perjuring themselves in order to make a sale, but we believe this per cent would be very small indeed. Would not a certificate of this kind accompanying the shipment better protect the community in which this shipment goes than would the statement of the veterinarian that he had visited the herd and found everything in good condition? We want to make this statement, that we do not believe a visit of one-half-hour or an hour to a herd of hogs by any veterinarian is sufficient for him to know that the herd is in good health.

We want every community protected into which a shipment is made. At the same time it is an absolute injustice to the shipper, and detrimental to the pure-bred live stock interest in general, to make some regulation by which the shipper may be held for extortionate charges for these services. Do not let it be understood that we are for a minute advocating the idea of throwing down the bars and letting the animals be shipped promiscuously over the country without any regulation.

Proposed Meeting Was Postponed

The Nebraska Live Stock Sanitary board some time ago issued an invitation to the various authorities having these inspection and shipment laws in their charge to meet at Omaha and go over the matter of the possibility of adopting, for possibly eight or ten states in the Missouri and Mississippi valleys, more uniform rules. Dr Kigin informed us that a very general reply was received to this invitation, but that a large number of officials believed the meeting could be more sucessfully held at Chicago at the time of the International, at which time the United States Live Stock Sanitary association would hold its annual meeting. But on account of the foot-and-mouth disease, prevalent over the country, as we all know, the International was postponed, as was also the meeting of the sanitary officials. It is now contemplated that this

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...ow Your Serum is Clean, Pure, Potent

You Should Know Where It Comes From and Under What Conditions It Is Manufactured

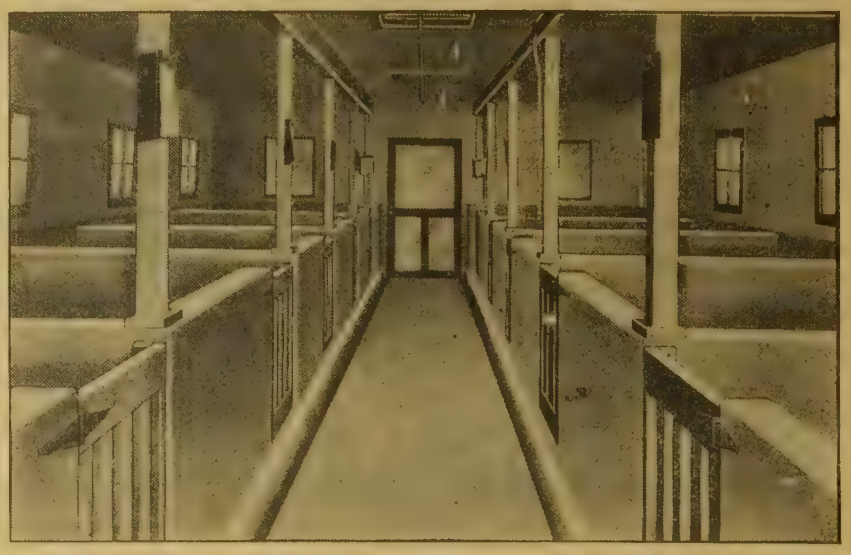
SCATTERED throughout different sections of the United States are many plants manufacturing anti-hog cholera serum. There are plants having the latest up-to-date equipment, employing men who have had years of experience in hog cholera work in general. There are other plants with but a very limited equipment and a much more limited amount of floor space, and some plants running with men in charge who have had practically no experience in the work.

In this article we want to call attention to some of the essentials of an up-to-date serum plant. First of all is the man or men who own and manage the plant. They must be men of standing and integrity, having first in view the putting out of the best product possible, saying to themselves as well as to others that they will never knowingly sell to anyone any serum that has not been thoroughly tested and found to stand up absolutely.

The next most important man is the one who has direct charge of the work in the plant. He must be a veterinarian of learning and moral standing. He should be a man of years of experience in hog cholera work in general. A man big enough to know that his success depends on the quality of the product produced by the plant and not the quantity sent out.

After these requisites must come the location of the plant, its buildings and the necessary equipment within the buildings. Sanitation is the first thing to think of. Good drainage is essential. Care must be taken that none of the hogs used in any of the different departments of the plant can be infected with any disease of any kind. The building and pen arrangements should be such that the hogs may be kept as comfortable as possible both winter and summer. We believe for efficient work there should be separate buildings for the test pigs, the virus pigs and the hypers. All possible danger of carrying the germs of cholera from the test pens or the virus room into the hyper room must be carefully guarded.

The Twentieth Century Farmer has, in previous issues, said that we did not believe it good practice to use what is known as "stock yards" virus. By the term "stock yards" virus we mean virus used for hypers and tests that is obtained from hogs showing cholera lesions killed in the packing plants. We are firmly of the opinion that better virus—virus that is clean and pure and free from other diseases—can be made by the manufacturer making his own virus by injection, using perfectly healthy pigs that have first been tested for other complications.



No. 1—Pens for Virus Pigs

No. 2—Summer Location of Pens for Test Pigs

Let us say here that all plants using "stock yards" serum are not located at stock yards points, nor do all plants located at stock yards use "stock yards" serum.

It is well known that many serum plants in the United States have been closed down by order of the government. This order was prompted by the fact that foot-and-mouth disease was discovered in some serum or virus sent out from one or two serum plants located at the Union Stock Yards at Chicago, getting their virus at a packing plant. It was found that some of the hogs from which the virus was taken were affected with the foot-and-mouth disease; hence the trouble and the closing down of these plants.

Most of the plants closed by this order were ordered closed simply as a precaution and not that any trace of foot-and-mouth disease was discovered in any of their hogs or the product of the plant. However, the closing of these plants has been a serious matter to many hog growers wanting to buy serum, as well as a big loss to the plant closed. It has borne out our contention that the use of stock yards virus can be the means of transmitting other diseases to swine.

Let us emphasize the necessity of the farmer and hog grower posting himself in advance about the plant from which he contemplates buying. Find out about the owners, look into their standing in general, find out whether or not they are in the business to stay and are making every effort to produce a good product. Don't wait to do this until you want to buy; do it at once, and then when you make up your mind you want serum from a certain plant, tell the man whom you employ to vaccinate your hogs to get this serum, and see to it that he does get it and that the bottles come to you with the seal unbroken.

The pictures accompanying this article were taken in one of the most up-to-date plants in the country and show practically ideal conditions for the production of good serum.

Cleanliness Main Thing

Extreme care should always be taken that the germs of hog cholera cannot be taken from the virus pens into the serum department.

No. 3—Pens and Sheds for Hypers

No. 4—Bleeding Room of Glass, Enamel and Concrete

No. 5—Hog Arranged for Final Bleeding

No. 6—Bacteriologist at Work

Cleanliness is one of the best precautions to avoid this trouble. Cut No. 1 shows the pens for virus pigs. Note the arrangement of these pens, the floor being higher than the floor of the alleyway. The floors in these pens all slope slightly to the center of the house, making them easily cleaned. The floors and partitions are all made of cement, trowelled smooth, that every particle of dirt and dust may be easily removed. Just outside the door at the end of the alleyway shown in the cut is placed a pan containing a strong disinfectant. Every person going through this door steps into this pan of disinfectant, thereby minimizing the chance of carrying disease germs from this room. The pigs used for testing purposes should be kept at as even a temperature as possible that the best test possible may be made. Arrangements of the plant should be made so that weather conditions will affect the pigs as little as possible during the test. It is very desirable that in the winter time these pigs be kept in a building furnished with artificial heat.

Cut No. 2 shows a very good location for the pens for these test pigs in the summer time. It will be noted the pens ars under good shade and have perfect ventilation. Serum tested under these conditions should show exactly what it is.

Cut No. 3 shows a splendid arrangement of pens and sheds for hypers. The floors in all these pens are covered with cement, as are the walks and roadways between the pens. These pens are located on ground that is well drained, so by the use of a hose ideal sanitary conditions can be obtained.

In visiting different serum plants in different states we have found most any condition possible in the bleeding room. The conditions shown in cut No. 4 are the best we have seen anywhere. The floor of this room is so arranged that it can easily be thoroughly cleaned. All the furniture is either enameled or glass, making it practically impossible for dust to stick to any part of it should it by any chance get into the room. Note the complete covering of the crates into which the hypers are placed for bleeding. This arrangement makes it impossible for any dirt of any kind that might possibly be left on the hog to come into contact with the serum through the bleeding operation.

Cut No. 5 shows how the hog is arranged for final bleeding. Note the complete covering of the hog with a shroud, excepting the small place in the neck, from which the blood is taken in the killing operation. As in other departments of this plant, absolute cleanliness is maintained, as may be judged by conditions shown in this cut.

We believe one of the very important departments of an up-to-date serum plant is one that is not maintained in very many of them, a bacteriologist. We show in cut No. 6 the bacteriologist at his work at this plant. All the serum and virus manufactured here come under his supervision. He goes from time to time into the bleeding room, taking smears from the different operators while at their work at such times as he thinks best, giving the operator no chance to know just when he will be checked up. We are informed that it has been definitely ascertained that a large number of bacteria in a certain bleeding have been traced to dirty fingernails of the party doing the bleeding. All virus used is likewise treated in the bacteriological department.

If for any reason the bacteriologist is not satisfied, the serum is not what it should be, he at once orders a test of this serum to be made by subjecting a guinea pig to the test. We show in cut No. 7 the operation of testing a batch of serum by injecting into one of these guinea pigs. It is well known to everyone that there is so little vitality in the guinea pig that anything at all wrong with the serum would show fatal results. This is but one of the precautions that we believe manufacturers should take in the manufacture of this product, thereby raising the standard of their own product and guaranteeing to their customers more satisfactory results from its application.

No. 7—Testing Serum on Guinea Pig

What Nebraska Farmers' Congress Did

THE farmers of Nebraska, through the Farmers' Congress, which met in Omaha, have gone on record as to some of the important things that they want the law-makers to do when the legislature meets in January. This congress in the largest measure possible reflects all shades of opinion. It is made up of representatives from the different farmers' organizations of the states. It is a mighty good thing for the agricultural interests of the state when representatives from the Farmers' Union, Society of Equity, the Grange, Fruit Growers' association and breeders meet in a congress of this kind and after sharp conflicts in debate can agree on so many important matters of legislation. Others having a financial interest in legislative matters get together, so why shouldn't the farmer? Herewith we print the resolutions adopted by the Farmers' Congress. These resolutions will be discussed editorially in future issues of this paper.

Following are the newly elected officers of the Nebraska Farmers' Congress: George Coupland, Elgin, president; J. B. Grinnell, Sarpy county, secretary; George Junkin, Smithfield, treasurer; Frank Tannehill, Norfolk, first vice president; Homer McKelvey, Clay county, second vice president; R. D. Smith, Colfax county, third vice president.

Resolutions Adopted

Agricultural Development—Resolved, That we approve the action of congress in passing the Smith-Lever bill for agricultural development purposes in the several states of the union, and we ask the coming session of the legislature to take such steps as shall secure for Nebraska the largest possible share of such appropriation.

Torrens' Title Law—We reaffirm the action of the last session of this congress endorsing the demand for passage of the Torrens' title registration law.

Constitutional Convention—We call upon the legislature to submit to the people a proposition for holding a constitutional convention for the revision of the state constitution.

Blue Sky Law—We ask that co-operative enterprises for mutual benefit be exempted from the operation of the Blue Sky law.

Conservation and Public Welfare—We recommend the valuable work of the State Con-

(CONTINUED ON PAGE FOURTEEN)

TWENTIETH CENTURY FARMER

Published Weekly by The Bee Publishing Company at Omaha, Neb. Entered as Second-Class Matter.

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Changes of address and complaints should be addressed to the Twentieth Century Farmer, Omaha, Neb. When changing address give last postoffice as well as the new.

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Just as we draw on heavier clothing and stir up a better fire, so we must increase the heat-producing rations for the live stock as the severely cold weather comes on.

How about the fight against lice in your hog herds? On account of cold weather have you relaxed your vigilance? If so, just remember it will cost you good money to let the lice prosper. Keep after them all the time.

Cold weather brings its water troubles for the stockman. No one thing in the proper and profitable caring for stock of all kinds is of more importance than water, and plenty of it, when the stock want it. Don't overlook it.

Corn fodder ought to be fed out the first thing during the winter months, as it soon becomes unfit for feed if it has been allowed to become damp in the fall. Second grade hay, too, should be made use of at the very earliest opportunity.

W. R. Mellor, secretary of the Nebraska State fair board, was recently elected president of the American Association of Fairs and Expositions for the year 1915. This is a splendid recognition of Mr. Mellor's ability and efficiency as a state fair man.

Don't let the brood sows lie around the sheds too much these cold days. Exercise is one of the important necessities for the production of a good, strong litter next spring. If they do not get around voluntarily, get after them and see that they do get around.

To Get Good Serum

The Twentieth Century Farmer for a considerable time has insisted that the sure safeguard for farmers and hog men against poor serum was the testing of this product by either government or state authority.

The Nebraska Farmers' Congress recently held in Omaha passed a resolution asking that regulations of this kind be passed. The question of added expense was brought up in this connection, but the farmers present at the congress were of the unanimous opinion that there would be no kick at this expense being incurred.

Talking with a considerable number of farmers attending this meeting, we were impressed with the fact that every man we talked to on this subject was plain in the statement that with him it was not so much a question of how much the serum cost as it was of the quality. Farmers don't want to be held up on the price, but at the same time they are willing to pay the amount necessary if they can be assured they are getting what they buy—a good product.

If our farmers' and stockmen's organizations will take this up and let the authorities having these matters in charge know what they want in this connection, and then as individuals write these officials, something will be accomplished.

The swine industry of this country is of such importance that all that can be done to provide good, clean, potent serum must be done, and it will be done if the men who buy serum get after the proposition and keep after it.

The Calf Stanchion

The calf stanchion is one of the most valuable devices connected with the cattle-raising business on the farm. It is practically impossible to raise a bunch of calves as hand-fed or bucket-fed calves and secure anything near like satisfactory results without the stanchion. Calves are possibly the greediest little youngsters on the farm; they are always hungry when they are doing well, but they seem to have no key to the regulation of how much to drink or when they have had enough; therefore, the necessity of regulating them in this respect if you want to get the best results in their growth.

Some people talk about the buttermilk calf or the pot-bellied calf as though it was some particular breed of calf or a condition that is a necessity. Every careless calf feeder has this type of calf because he makes it possible for the calf to develop after this style. You can set it down as a fact that irregular feeding, stinting, then overfeeding, is the cause for this condition of unthrifty appearance among hand-fed or bucket-fed calves. Calves fed in this way become robbers, just as their disposition and physical ability prompts them to crowd their associates away from the feed.

The calf stanchion was invented to correct the robbing habit among calves, to protect the smaller and weaker ones from the larger and more energetic feeders. It also corrects the idle habit of ear-sucking among calves, which is an injurious habit, getting nothing but a stomach full of air, which aids in discomfort and injury to the calf. The stanchion can be built under a shed or in the calf stable, which is the best place. The calves will soon learn to go into their own stalls or stanchion, and when fastened they stand there quietly until fed, and they forget to bother each other after released. Each calf gets its own pail of milk or feed that is given it and there is no robbing and no excuse for raising the pot-bellied calf. The work of raising calves by this method is made easy, clean and satisfactory and the expense is very trifling, considering the labor saved and the calf advantage secured. Any farmer can make his calf stanchion complete without assistance or much expense if he determines to be on an equality with his neighbors in cattle improvement.

Silos and Cornstalk Disease

One traveling over the country at this season of the year notices thousands of cattle and horses running in the stalk fields. When we look at these animals trying to pick something to eat we cannot help but think of the vast waste of feed there is in these fields.

We go past farm after farm and see these valuable animals in the fields and on very few of these farms do we see silos. We wonder how many dollars could be turned into the bank account of the owner of these animals above what is turned in if a sufficient amount of the standing stalks were converted into silage. In this way these animals could be fed with a far better feed, and in far more comfortable quarters.

We are fully aware of the fact that this is not the season of the year to build silos or make silage, but it is the time of year when farmers may well think something about what they are losing by not having silos. This is especially true of the man who is losing some of his most valuable animals in the cornstalks.

Without doubt there are hundreds of farmers who have already lost more money on account of animals dying in the stalk fields than it would have cost them to build silos. Wouldn't it be a good idea just to figure on this a little at this time, and then next summer carry into effect what you now think best to do? If you have silage to feed you cut out the loss from cornstalk disease.

Contagious Diseases

Considering the great loss of farm stock every year, it seems absolutely imperative to do something to prevent contagious diseases. In hogs alone there is a money loss of several millions of dollars annually, a large part of which is attributed to worms. Veterinarians are beginning to call attention to the danger of these parasites.

Thousands of lambs are lost every year through stomach worms. Horses and cattle are subject to peculiar contagious diseases that carry off hundreds; they are also subject to worms, and there is no doubt that many deadly contagious diseases find their first victims among stock that are badly worm-infested and in a run-down condition. Healthy animals are very often exempt, or, if attacked, recover.

Corn Crop Measures

The feeding operations of the country are largely measured by the corn crop. So positive and pronounced a regulator has this crop become that the great majority of feeders hold off in laying in their feeder supply of stock until the corn crop is sufficiently advanced to indicate what its yield will be. The great variety and combination of feeds adapted to the growth and development of live stock are not urged by practical feeders as a substitute for corn in the fattening and finishing of the meat animals.

Helps and partial substitutes for corn as a fattening feed are gaining favor with many live stock feeders, but they are introduced more as relishes, appetizers to encourage the consumption of corn and the general invigoration of the digestive organs. Cattle feeders generally decline to enter into the feeding of cattle unless they have their supply of corn as the basis of feed. Some feeders prefer to rely entirely on corn, with the usual roughness—hay. Others, in addition to corn as the main feed, want to add a little oil meal, or cottonseed meal, silage, with a variety of roughage, hay, straw, corn fodder, sorghum, etc.

The cattle-feeding proposition on a large scale will continue to demand corn, alfalfa, hay and silage, measured in importance as named. Cattle feeding differs as to methods and importance of feeds according to the district of country where carried on. In the sugar beet sections the refuse from the beet fields and factories will always form the main feature of feed supply. In the south the winter wheat pastures and the cottonseed cake are the main feeds in winter beef-making. But as a mainstay in meat production corn will always be the recognized basis to build upon.

Wheat Growing in the South

Winter wheat growing in many of the southern states is receiving considerable encouragement because of the yield and also the great crops of fall and winter pasture it produces, which are being turned to big profit by cattle and sheep grazing. Pasturing becomes a necessity in order to protect the crop from the big autumn growth that must come off in order to give the plant an opportunity to stool and send up its spring growth that forms the straw which yields the grain.

The increased acreage of winter wheat over the southern wheat-growing lands, especially in the southwest, calls for more grazing animals, and in connection with cottonseed and its feed products, is introducing a feature of cheap winter cattle-feeding that has no comparison in profit. Like all other general or special enterprises associated with agricultural dependence, it is subject to the favorable or unfavorable conditions of weather. This, however, has usually been on the side of the wheat raiser. There is an active demand over these southern wheat-growing districts now for cattle for winter wheat grazing.

Did you ever hear of 10-cent novels helping to make a good farmer of a boy?

Our Young People : A Department Devoted to the Interests of the Boys and Girls of the Farm

What the Winter Brings

What does the winter bring?
Berries red on the holly spray,
Gems of ice in the clear, cold day,
That gleam on the tall fir trees;
Over the world with its leaden skies,
Dainty snow like a blessing lies,
But it bringeth more than these.
Time for the busy hands to rest,
For the cozy seats in the dear home nest,
With blazing logs piled high.
Happy hearts for the Christmas cheer
And no regrets for the parting year
As you bid its hours good-bye.
—Mary R. Corley.

The Editor's Corner

This is the last week you will have a chance to get your verses in for the picture contest, as they must reach us before January 2. The verses and stories are coming in nicely now and you all seem to be interested in them. The stories the last few weeks have been very good. Occasionally we have good "made-up" stories. In fact, we have given several prizes for stories of this kind lately, but as a general thing the true stories about things that have actually happened to you are more interesting.

That is the way the really great authors, most of them, write their stories. They just tell in plain, simple language of things that have happened either to them or to their friends. Of course, they use other names and sometimes change the surroundings, but the greatest books ever written are practically all of them just the stories of things that have really happened, and often they are the history of the author's life, only told in story form.

Of course, most of us don't expect to be great authors, but it is a good thing to know how to express well whatever we want to say. Writing these little stories is a great help if it is done as well as we know how. While we may never win prizes, or even see our stories in print, yet the practice is excellent. You should be careful about your grammer, for that is very important in writing. Those rules that you have to learn in school do sound very foolish when you get up and say them off to the teacher, but if you learn just what they mean and apply them in writing the stories there will be a great difference in the quality of the stories. We nearly always have to correct such errors before we can use the stories, and are always particularly glad when we find one in which the singulars and plurals and the tenses are not mixed. HOME EDITOR.

Story Contest Rules

Book will be given for best story.

Stories must be original and not over 200 words.

Write with ink, on one side of paper only.

No one over 16 years of age may contribute.

Send stories to Story Department, Twentieth Century Farmer, Omaha, Neb.

(Prize Story.)

Playing Doctor

By Anna Shumann, Aged 14, Newell, Ia.

My two cousins, my one sister and myself have been operated on for appendicitis since July. My cousin Esther had been home two weeks when I went. I was in the hospital twelve days and have been back three weeks.

My little nephew and brother played doctor. My little brother, aged 6, was the doctor, and my nephew, aged 4, lived behind the stove. He called up the doctor and said he should come out; his baby was sick. His baby was a doll.

When the doctor got there he looked at the doll and said, "She's got appendicitis and has to have an operation." Then they both went upstairs and cut the doll open and took something out of the inside of her and seewd her up again.

This is a true story.

(Honorable Mention.)

American Ways

By Madeline Cates, Aged 13, Marble Rock, Ia.

Once there was a little girl whose name was Ruth. Her home was far across the sea. Her father and brother had been called to war and her mother was an invalid. Ruth was only 8 years old, but she did all the housework and nursed her mother.

One evening just at dusk she was sitting on the doorstep, when she fell asleep. She dreamed a fairy came to her and told her she had been a very good little girl and asked her what she wanted for Christmas. Ruth said she would be very happy if she could only have a doll. As the fairy vanished Ruth awoke and ran into the house. Her mother was awake and Ruth ran to get her a drink.

Days passed, and at last the night before Christmas came. Ruth was wishing (Oh, so hard!) that she might get a doll. She hung up her stocking and was up next morning just at dawn. Sure enough, there was the doll, all dressed prettily for Ruth! She ran out of doors and called the fairy to thank her, but no fairy came. Ruth still believes that the good fairy gave it to her, but it was the good American children that sent it to her.

A Snake Story

By Eliza Hansen, Aged 10, Ceresco, Neb.

One day last summer my brother-in-law told my sister to come and get fourteen eggs which were in the barn. She said she would. When she went to get the eggs she saw something in the nest. What do you think it was? In the nest there lay a big bull snake and the eggs were on the ground. The snake had put them there. My sister called my brother-in-law to come and kill the snake. It was three feet long. When my sister went to pick up the eggs there was just one egg broken. This is a true story.

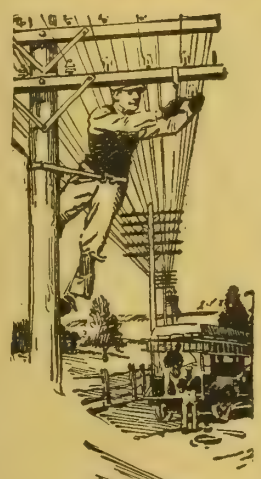
Additional Stories

Bartlameus Baker, Schuyler, Neb.; Mildred Choat, Glenville, Neb.; John Brandt, Chase, Neb.; Marie Cullen, Beatrice, Neb.; Amanda Rieck, Primrose, Neb.; Joe Hladovcak, Brunswick, Neb.; Anna Texa, Howells, Neb.; Jesse Jeske, York, Neb.; Willie Eckerman, Elk Point, S. D.; Opal Davis, Monett, Mo.; Lottie Fike, Rydal, Kan.; Lloyd Michael, Garland, Wyo.

Picture Contest No. 19

Write a verse of four lines about this girl and the colt. Tell us something interesting about them, and tell it in verse. To the two children writing the best verses books will be given for prizes. Verses are judged according to general merit, such things as quality of verse, subject matter, spelling, writing and neatness being taken into consideration. Verses should be addressed to Picture Contest Editor, Twentieth Century Farmer, and should reach this office not later than January 2, 1915.

The Cost of a Telephone Call



DID you ever think how much it costs to give you the telephone right-of-way anywhere, at all times?

Your telephone instrument, which consists of 130 different parts, is only the entrance way to your share of the vast equipment necessary in making a call.

Your line is connected with the great Bell highways, reaching every state in the union—with its poles, copper wire, cross arms and insulators in the country; its underground conduits, manholes, cable vaults and cables in the cities.

You have the use of switchboards costing upwards of $100,000,000. You enjoy the benefits of countless inventions which make possible universal telephone talk.

Your service is safeguarded by large forces of men building, testing and repairing lines. You command at all times the prompt attention of one or more operators.

How can such a costly service be provided at rates so low that all can afford it?

Only by its use upon a share-and-share-alike basis by millions of subscribers, and by the most careful economy in construction and operation. A plant so vast gives opportunity for ruinous extravagance; and judicious economy is as essential to its success as is the co-operative use of the facilities provided.

That the Bell System combines the maximum of usefulness and economy is proved by the fact that in no other land and under no other management has the telephone become such a servant of the masses.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy *One System* *Universal Service*

Every Call means a Pair of Wires from Subscriber to Subscriber - however many Calls may be made or however far apart Subscribers may be.

Of Interest to Our Women Readers

Not the Words, But the Tone

"Come here!" I sharply said,
And the baby cowered and wept.
"Come here," I cooed, and he looked and smiled,
And straight to my lap he crept.

The words may be mild and fair,
And the tones may pierce like a dart;
The words may be soft as the summer air,
And the tones may break the heart.

For words come forth from the mind,
And grow by study and art;
But the tones leap forth from the inner self,
And tell what is felt in the heart.
—Selected.

Our Weekly Recipe

POP-OVERS—Two cups sweet milk, two cups flour, two eggs, two teaspoonfuls sugar, pinch of salt. Have pans and oven very hot. It will take about twenty minutes to bake them. They are as light as feathers and delicious eaten with plenty of butter.

The Real Farm Woman

Friends, did you know you had been investigated? Uncle Sam has been looking into the lives of farm women with a view to finding out what the woman on the farm has and needs and how she lives. There were 55,000 letters sent out to women living on R. F. D. routes in all parts of the country; besides which, the man who gathers statistics for the reclamation bureau added the results of his inquiries among the wives of pioneers on new lands.

From these sources an immense mass of interesting information has been gathered, which is not as yet in shape, but which the government intends later to tabulate and issue in book form, four volumes being the probable result.

To this great mass of information a representative of Printer's' Ink was given access, and in the latest issue of this little magazine he has an article telling a number of interesting facts gleaned therefrom.

Among the things that seem to be most astonishing to the government people is the discovery that the women on one farm are not vastly different from their city sisters—that they want running water in their houses, non-heating cooking stoves for summer, fireless cookers, vacuum cleaners, victrolas, player pianos, kitchen cabinets, fly traps, water filters and the best of building material for their homes and machinery with which to carry on their work.

One discovery that must have nearly taken away the breath of many people who seem to consider that the women living on the farms are only about half civilized was that the step-saver wagon, or wheeled tea cart, is in quite common use for transferring dishes from kitchen to dining room. Other things specially noted were the use of the automatic revolver and the electric torch for protection.

Sanitation and hygiene are subjects that seem, from this information, to be receiving a surprising amount of consideration. As a close second come the schools and the things needed for them. Most surprising of all, clothes are found to receive a large amount of care and thought, and dressmaking appliances are in great demand.

This investigation was undertaken with the idea of finding out the needs of farm women that the government could give them assistance by sending out skilled professional cooks and homemakers to instruct them in the care of their homes and the value of labor-saving devices. It is not unreasonable to suppose that it will be a distinct shock to many people when the contents of these letters are made public, showing that the farm woman is far more advanced in scientific home management and practical domestic science than was supposed, and that she either has these valuable labor-saving devices or has learned their value and is looking forward toward owning them as soon as she is financially able to do so.

Without doubt there are many farm women who lack books, music, system, comforts and even the real necessities of life. But there are also city women who lack these things, and probably an even larger proportion of them than of the farmers' wives. There are two classes of people who do not have necessities and comforts—the very poor and the miserly. These two classes of people are found in city and country alike and both are to be deeply pitied, but neither poverty nor stinginess are special properties of the farm, nor are they confined to rural communities, nor typical there.

Probably one of the best things that will be accomplished by this government survey will be that it will bring to the attention of the public the progressiveness of the women on the farm.

HOME EDITOR.

Ideals for Children

Youth is imaginative, and often its dreams come true, "after many days." Little can we tell which experience, story, friend or book may set up in your child's mind an ideal or goal for which to be striven. Set before them the best available in child literature. Many parents when asked what their children read have told me they "read the daily newspaper" or some cheap romance publication. Many children care only for "the funny paper," with its color and superficia. The good youth's publications, holding up high moral standards, with healthy mind stimulus, are often considered too expensive.

For over fifteen years one of these good publications was a weekly visitor in our home, and was read aloud by us children by turns in the evening, while those not reading might do fancy work.

Vividly do I recall an ideal set up

(CONTINUED ON PAGE NINE.)

Styles for the Home Dressmaker

6895—Ladies' Dressing Sacque and Cap. This dainty dressing sacque is cut from a single piece of material. It has a surplice closing and a bow marks the position of the sleeve. The lower edge may be shaped according to one's liking. The cap is made in the same manner from a single piece of material and gathered at each side above the ear. The pattern, 6895, is cut in one size.

6964—Ladies' Skirt. This smart circular skirt has a two-gore foundation and the lower section is joined to this. The two-piece tunic is fitted at the top, but flares at the lower edge. This has a square extension in front reaching the hem of the skirt, while the sides are somewhat shorter. The pattern, 6964, is cut in sizes 22 to 32 inches waist measurre.

6906—Ladies' Waist. Any of the striped materials can be used to make this waist. The front and sash ends of the waist are in one piece. Collar and cuffs are of contrasting or plain material. The pattern, 6906, is cut in sizes 34 to 44 inches bust measure.

6988—Misses' Dress. This model is practical and also strictly up to date in every particular. The waist is plain, closing in front, with open neck and small, roll collar. The sleeves are shaped to the arm and may be long or short. The three-gore skirt is attached to a deep yoke. The pattern, 6988, is cut in sizes 14, 16, 18 and 20 years.

6971—Childs' Dress. This smart little frock has a diagonal closing in front, with open neck edged with a wide ornamental collar and filled in by a small shield. The sleeves, joined to a drop shoulder, may be long or short and are in bishop style. The skirt is pleated all around and attached to the blouse beneath a straight belt of contrasting fabric. The pattern, 6971, is cut in sizes 4, 6 and 8 years.

6953—Fancy Doll Set. This set comprises dress, cape and cap. The dress has a long bodice with bretelle trimming at the shoulders, square neck and short sleeves. The skirt has two ruffles and a sash. The cape is circular, with neck band extended to form straps crossing in front and fastening under the cape in the back. The pattern, 6953, is cut in sizes 11 to 26 inches length measure from crown to sole.

6986—Ladies' Apron. One of the pretty bungalow styles of apron is shown in this model. It has small sleeves, hardly more than a ruffle, but they extend as a yoke up the shoulder to the neck edge. Front and back are plain, the closing being in the back and a patch pocket on the front. There is a section of belt across back and sides. The pattern, 6986, is cut in sizes 36, 40 and 44 inches bust measure.

All Patterns on This Page 10 Cents

When ordering be very sure to write your name and address in full and to give the number and size of each pattern you want. When ordering for children give number and age. Address Pattern Department, Twentieth Century Farmer.

Our Readers' Exchange

This department is for the use of our readers. Give us your experience, ask questions, say what you think, whether or not you agree with the editor. Let us hear from you.

Farmers' Society of Equity

I would like to have space in your paper to tell you what we did at the national meeting of the Farmers' Society of Equity held at Omaha.

Mr. Everett, the founder of the society, and its president for the last five years, was not a candidate for re-election. The election resulted in the selection of G. B. Lozier of the gulf coast section. Mr. Lozier's present address is Lauterdale, Fla., where he is getting ready to begin shipping the tomato crop of the state. D. H. Holmgren of Tremonto, Utah, was elected vice president. He is local manager of a large co-operative business at that place. The directors are C. M. Parr, Hamilton, Mont.; L. H. Brockman, Parkers Prairie, Minn.; R. M. Tyson, Tobias, Neb.; W. Grienthawaite of Oregon, R. W. Storrs, De Funiak, Fla.; A. Y. Satterfield, Pocatello, Idaho, and H. G. Morris of Idaho. These men are actively engaged in business for the society in their states. They chose C. Hayes Taylor of Indianapolis, Ind., for secretary-treasurer. He has been associate editor of Up-to-Date Farming, the official paper of the society since its organization. The last six months he has also filled his present office. No action was taken by the board at this time for an official organ.

The board of directors was in session all day Friday and considered every phase of the society's affairs. An earnest effort will be made the coming year to bring the business of the different sections into closer relation with the view of establishing one central manager for all.

All parties interested in organizing a local for marketing crops should write E. M. Tyson, Tobias, Neb., if in that state. If not in Nebraska, write C. Hayes Taylor, Indianapolis, Ind.

R. M. TYSON.

School Patrons to Blame

I have been reading with much interest Mr. Robinson's articles, "What is the Matter with Our Rural Schools?" I agree with him quite heartily on most of his views, but I really think he is "rubbing it in" just a little hard, and in most cases undeservedly, in article IV, on the rural teacher. I think the real success of our district schools lies more in the hands of the school board and the patrons of the district, for as a general rule you will find they are constantly criticising the teacher, oftentimes, too, on mere one-sided reports brought home by a biased pupil. Seldom will you find over two or three persons in the district really interested enough to go and see for themselves how the school is conducted. They not only criticize to friends and neighbors, but before the children themselves. They, as parents, should take more interest in the work of their children. I have had pupils tell me, who were trying to do some studying at home in order to make a grade, that their parents did not have time or refused to help them with their work, and many a pupil falls behind and, becoming discouraged, quits school, just because of the attitude of parents. They are also sometimes very careless about seeing that their children attend regularly and are on time.

Another reason the public schools are not what they should be is the lack of equipment. In my own school, for instance, both the county superintendent and I have asked for maps, charts and globes; and although this is my second year here, none are forthcoming as yet, and if a teacher asks for simple inexpensive things that are very necessary in teaching the child practically, as, for example, when I asked for a yardstick by which to teach linear measure, the school board thought it a huge joke and treated it accordingly. And as for taking the country school merely as a stepping stone to something better, how many schools are there in your county that pay enough so that a teacher can afford to stay in public school? It is not always choice, but dire necessity, that leads most teachers from the district schools to town.

It is not that we do not like the country, for I for one love the country and its wholesome girls and boys, and am really and truly interested in seeing them growing into better men and women, morally, physically and mentally.

To be brief, the reasons teachers do not stay in the public schools are: Insufficient pay, lack of apparatus, no janitors, poor school houses, no, or poor, water; and poor desks. Last, and to my mind the greatest reason, is the lack of sympathy and co-operation between the parents and the teacher of their children. —A Rural Teacher, Kansas.

Note—We are glad to give this rural teacher space in which to express her views. Mr. Robinson, in some of his other articles, has said practically the same things that this teacher says regarding the part of the patrons and the school board should take in improving our rural schools. The teachers are not at fault in all instances. In some, however, they are to some degree. No progress is made in any line until we are willing to see and admit the faults in ourselves and those associated with us, as well as the faults and shortcomings of others. Self-improvement is the first and easiest step for any of us to take in improving conditions of any kind.

Bad Brand Sore

You have been so kind about answering inquiries and "dealing out" information to us in the past that I come to you for another favor. We have a cow with a large sore on her. She was branded over a year ago—on top of the hip. She found a place to scratch just right to keep the scab torn off from the brand sore all winter. When spring came she was put into a pasture. The flies got at it and maggots got into it a good many times; in fact, she was rather neglected as far as having the sore cared for, but gave a large mess of very rich milk all summer. We bought her about three months ago for half price, thinking we could properly care for her and heal the sore. We cleaned it thoroughly, taking out lots of maggots and cutting off a large piece of a sort of raw wart-looking growth that stuck up in the sore. This growth is still in the sore, but is much smaller. The stockmen here use strong vitriol water on brand sores that "go bad," so we started to do this. A large, thick scab formed on the sore, but we kept pouring the vitriol water on it every day. It smelled so badly that we took this scab off from it, found maggots under it and found it all rotten and putrid underneath. It bleeds pretty badly when the scab is taken off, but the flesh underneath does not look good, but seems rotten and crumbly-looking on part of it. It was neglected for two weeks in October and spread to within four inches of the root of the tail and over the backbone behind the hip joints. We wash it every day and put powdered blue virtiol on it. It has stopped spreading and is healed right up to the edge of the sore, but we cannot get the sore healed. Should we wash it thoroughly every day, taking off this new formed scab? It smells just awfully bad all the time except when it is first cleaned. Two lumps formed on the edge of the scab six weeks ago; they broke and had pus and were filled with putrid stuff. These holes are three-fourth inches deep now, and fill up every day with corruption. I think the balance of that wart-looking sore should be cut out of it. I did cut it off since yesterday and found it a tough, white growth. The blood spurted out of the wound for a few minutes, but we stopped it with a handful of flour and put vitriol water over the whole sore. Am doing the same today. It looks white when it is being cut and seems attached to the main flesh by threads of ligaments, and streams of blood when cut into deep. However, we use alum, etc., to stop the blood. The cow has all she can eat, but lately (last two months) has gotten very poor. She feeds at the haystack and gets two pails of spuds a day, as well as goes out on the field and eats. She feels good and her milk has no peculiar taste, and when boiled does not curdle. She will be fresh in January. She is bred to a registered Holstein of milking fame stock and is a No. 1 cow herself. We hate to lose her, but some say this sore is a cancer and cannot be healed; it is ten inches across now.

This cow only gives a quart of milk a day now. Is it safe to use the milk? She is 8 years old. We gave our baby this cow's milk all summer. It seemed the only milk we could get or buy that agreed with him. He was a "bottle baby." The cow is a little stiff when she first gets up in the morning. The sore seems hot all the time.—Mrs. J. B. I., Idaho.

Answer—This sore has reached a point where it needs the attention of a skilled veterinarian. It is a mistake to use continuously anything as irritating as vitriol. This is like a hot iron, useful in its place, but must be used with considerable judgment. It is evident that the puss has burrowed downward until there are pockets that do not drain. If the services of a veterinarian are not to be had, spend some time every day irrigating this with a solution of permanganate of potash—a heaping teaspoonful to two gallons of water. It is evident that there is need of surgery before this will start to improve. Would advise against giving this milk to the baby any longer.

Weevil in Beans and Peas

Will you kindly tell me how to keep weevil out of seed beans and peas?—J. W. G., Arkansas.

Answer—Never plant beans and peas in a place where weevil has been found the previous year. If you have vines which have been infested with weevil, destroy them by burning. To treat seed, place it in a tight box and on top of the seed place a small saucer of carbon dioxide. Be careful not to breathe the fumes and do not do this work in a room where there is an open flame. The fumes from this carbon dioxide destroy all animal life in the seed.

Ideals for Children

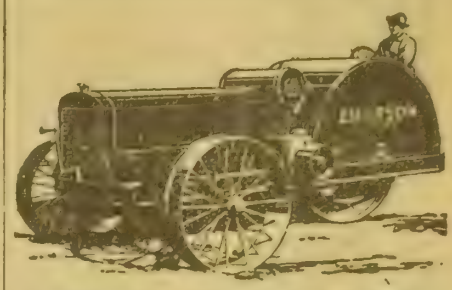
(CONTINUED FROM PAGE EIGHT.)

in my mind by one of these stories. We were living in western Kansas, with scarcely any school privileges. I may have been 10 or 11 years old. A girl named Lela graduated from high school with honor. Her picture, in white dress, illustrated the story. I then decided to graduate thus some day. And it came to pass.

The child mind resembles in one way the stomach of an oyster, viz., it feeds upon that with which it is surrounded. Be familiar with your child's playmates. Encourage open confidences concerning schoolmates. Examine the books your child reads.

We are often deceived by believing we have set up proper ideals through talking to our children, when in reality the opposite has been done by low class literature, pictures and associates; and, depend upon it, ideals are set up even if never mentioned or discovered for years.

MRS. W. K.



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References, First State Bank, Two Harbors, Minn.

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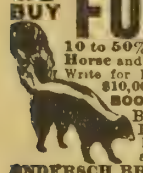

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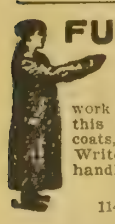

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We have secured the services of an experienced automobile man, who will be pleased to answer any questions asked by our readers as to troubles with or management of any make of car.

Our Readers' Exchange:

Inquiries regarding crops or stock, veterinary or mechanical matters will receive our prompt attention. Tell us what is perplexing you. If we do not know the answer we will submit your questions to someone who does.

In writing for information always enclose a 2c stamp to insure a prompt reply by mail.

Twentieth Century Farmer

How the Republic of Chile is Developing

By Frank G. Carpenter

VALDIVIA.—The Chilean government has new plans for colonizing and developing the Territory of the Magellans. It has sold at auction several million acres and has leased large tracts for cattle breeding and sheep raising. It is putting in public improvements at Punta Arenas, the capital of the straits, and elsewhere; and there are now something like 1,000 miles of road in the territory. Some lands have been given over to two private colonization companies, and special inducements are offered to native Chileans who will go there to settle.

The Territory of the Magellans is one of the least known parts of South America. It consists of the southern end of the range of the Andes, including a long strip of country that runs from a little below Valdivia to the Strait of Magellan. It has also the islands at the western end of the strait, and the most of Tierra del Fuego. It comprises more than one-fifth of all Chile, and it has a land area almost as great as the state of Missouri. About one-half of it is on the mainland of the continent and the rest is made up of islands.

This region has a fairly good climate. The northern part is temperate, and in the summer season, or from November till May, one can travel almost anywhere through it in a two-wheeled cart. There are now about a thousand miles of wagon roads in the territory, and these are being improved.

Punta Arenas, the Southernmost Town in the World

Huge Live Stock Concerns

Until within the last few years the Territory of the Magellans was supposed to be worth nothing. It was so near the south pole that many thought it was all ice and snow, and its mountainous character was such that no one imagined the lands could ever be of great value. Today this territory has developed a live-stock-raising industry that bulks large in the assets of Chile. It has one sheep-growing company, capitalized at more than $7,000,000, which is now producing 9,000,000 or 10,000,000 pounds of wool every year. This company owns 2,000,000 acres of land, and its sheep number more than 1,200,000. It has also 25,000 cattle, and more than 9,000 horses. It sheared more than 1,000,000 sheep last year, and the average fleece weighed almost eight pounds. It had more than 500,000 lambs, and it shipped vast quantities of frozen mutton to England.

La Sociedad Explotadora de Tierra del Fuego or the Tierra del Fuego Exploration society, owns 1,600,000 sheep and also cattle and horses. It has its own meat canning factory and a plant for producing tallow by boiling down sheep. A freezing establishment has recently been installed there, and another freezer exists at the Rio Seco, to which 150,000 sheep are annually shipped. The annual output of these two freezing establishments is almost 400,000 carcasses, and the tallow works connected with them have marketed more than three-quarters of a million pounds of that article.

During my stay at the Strait of Magellan in 1898 the era of sheep raising was at its beginning. The value of the lands had just become known and stock farmers were coming in from Australia and Europe. The first sheep brought in came from the Falkland Islands, which lie in the same latitude about 200 miles eastward. The Falklands are and have long been famous for their fine sheep. The first exportations to the Strait of Magellan occurred in 1878. Seven years later the flocks had increased to 40,000, and when I first visited Tierra del Fuego they were considerably over a million. At that time one of the largest sheep owners was the American consul, a Russian by birth, who had spent most of his life in the Magellans. He had 340,000 acres of land in Tierra del Fuego, and his house at Punta Arenas was one of the finest in Chile. It is of red brick covered with stucco, and is so finished that it looks like a light brown stone. Every part of the building was brought in from abroad, and all the laborers who worked on it were imported from Buenos Aires or Santiago. The house cost something like $100,000, and is still the wonder of this part of the world.

The grazing farms of the Strait of Magellan are not only on the mainland, but also on Tierra del Fuego. They number millions of acres, and some of the best are on Tierra del Fuego, the great island which belongs partly to Chile and partly to Argentina.

Rats Are a Menace

Tierra del Fuego is half as big as the state of Ohio, and the greater part of it is made up of plains and wide stretches of moorland covered with grass, which is green in the summer and reddish brown when winter comes on. This grass furnishes good grazing all the year round. In the winter the sheep sometimes dig down through the snow and as a rule the snows melt soon after falling. The grasses of the Strait are noted for their richness and sweetness. They are excellent for the production of both mutton and wool, and they would feed far more stock than they do were it not for the rats. As it is, this pest is so great that it now takes three or more acres to supply one sheep. The rats not only eat the grass, but they burrow through the earth to such an extent that it is impossible to drive over the plains with a wagon, and on horseback one has to ride very carefully. Cattle are used as rat exterminators. They are driven over the ground and the rats in their burrows are trampled to death by them.

The sheep farms of Tierra del Fuego are much like those of Australia. They are fenced with wire, and the sheep are kept in large paddocks some of which are as big as an average American township. The ordinary flock contains about 2,000 head, and each flock has its own shepherd, aided by dogs. The dogs are Scotch collies, so intelligent that they seem almost human. They will pick any sheep from a flock at the command of their master, who directs them by a motion of his hand, which way to go. If he waves to the front, they know they are to go ahead. If he throws his hand to the rear they come back, and the holding up of his hand in the air brings them to a standstill.

The most of the shepherds are Scotchmen, who came to the Strait of Magellan on five-year contracts. They receive about $30 to $40 a month, and have in addition house rent, fuel and meat. Their houses are two or three-room shacks scattered over the farm. The fuel comes from the woods, and their meat is mutton from the flocks they herd. On the whole, the farms are almost self-supporting.

Shearing Most Important Job

The most important part of the year at the Strait of Magellan, is when the shearing is done. This season begins in January, and on the big ranches it may last for two months. Much of the work is done by professional shearers, although the shepherd comes in to help handle the animals. On some of the farms this work is paid for by the fleece. The present scale of wages fixes the rate at $4.13 per 100, or a little more than 4 cents per fleece. When a man begins to shear he is given a booklet, in which is recorded the number of animals he shears during the week and the amount of his credit. If any dispute arises it is to be settled by a committee composed equally of the owners and employes. The company furnishes the shears, and every man gets three pairs of shears at the start and an additional pair for each 1,000 animals. At 4 cents a sheep the man can make very good wages.

The average fleece of wool now produced in Tierra del Fuego is much larger than the average fleece of the United States. It runs at seven and a half pounds and upward. The wool is of good quality, having a staple length of three or four inches and selling at the same price as the wool of New Zealand. The sheep are not washed, and the wool is exported in its greasy state. The most of it goes to Great Britain, and the remainder to Germany, Belgium and France. It is shipped in bales of 450 pounds net.

Metropolis of Region

The capital of the Chilean territory of the Magellans is Punta Arenas. This place has now 20,000 inhabitants and it is the metropolis of the strait. It is situated on the mainland, facing the great island of Tierra del Fuego, just about half way between the Atlantic and the Pacific oceans. It is more than 100 miles north of Cape Horn, and it has the whole length of the continent between it and Panama.

Punta Arenas is the southernmost city of the world. South America extends more than 1,000 miles nearer the south pole than Africa, and Punta Arenas is 1,200 miles further south than Cape Town. There is no city of any size within 1,000 miles of it, and it is now reached only by the steamers that pass through the Strait of Magellan. In the far future it may have railway connections with the rest of Chile.

Nevertheless, Punta Arenas is an up-to-date municipality. Fifteen years ago the greater part of it was still in the woods. Stumps still stood in the principal streets, and in the rainy season the roads were rivers of mud. Today the town is well paved and it has a plaza surrounded by good houses and stores. The streets are lighted by electricity, and there are churches and schools. The government has recently erected a wireless station, and the navigation of the straits is being greatly improved. The value of the city property is now estimated at more than $10,000,000.

The people of Punta Arenas are of a dozen different nations, and they come from all parts of the world. There are English and Germans, and also many Danes, Norwegians and Swedes, who

have a large share in the navigation of the straits. There are Australians and Italians, and also Chileans and Indians. Some of the most successful business men are Scotchmen, and the Scotch have large interests in the sheep industry.

Indians Dying Out

The Indians of the Strait of Magellan are fast dying out. I doubt whether there are now, all told, more than 1,000, although they numbered three times as many a decade ago. As it is, the Onas and Yaghans, the largest tribes, have almost disappeared, and the canoe Indians, or Alacalufes, are fewer than ever.

I have seen all of these various Indian tribes. The Alacalufes I met when I traveled through Smythes Channel some years ago. These Indians are seldom seen by the traveler. They live in the islands about Smythes Channel and in the western parts of the Tierra del Fuegan archipelago. They go about in canoes and subsist on what they can get from the sea and on the roots that they dig up on land. They sleep sometimes in their canoes and sometimes on land. In the latter case they build wigwams about a yard high, made by bending over the branches of low trees and tying them together. The wigwams are used only for sleeping. They are so low that the Indians have to crawl in on their hands and knees, and the cooking must be done on a fire built in the canoe or on the ground outside of the wigwam.

The Alacalufe canoes that I saw were well constructed, and some of them were fifteen feet long, a yard wide and about two feet in depth. They were made of strips of bark sewn together with sinews and fastened to ribs which ran across the canoe. Each boat had its fire, which was built on some earth in the center. The Indians who were not paddling or steering the boat sat around these fires, and some cooked the while over the coals.

The Alacalufes are perhaps the lowest of all the human race. They are more like beasts than men. Those I saw were almost naked, although there was snow on the ground and the winds were bitter cold. A few of them had on guanaco skins, which half covered their bodies, and others had shreds of rags that only accentuated their nakedness. I remember one man who wore a rag apron as big as a woman's handkerchief tied to a string about his waist, and excepting this, only a short vest open at the front and a hat. This man paddled the boat, and his wife sat at the stern and steered. The woman was naked to the waist, and she was suckling a baby clad in little more than a string of beads and a breech cloth. She held the naked baby to her breast with one hand and steered the boat with the other. Another wife near the prow aided in paddling. She had a guanaco skin tied around her waist, but the upper part of her body was bare. She bent back and forth as the oar rose and fell in the water.

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Uniform Live Stock Shipping Regulations

(CONTINUED FROM PAGE THREE.)

meeting will be held the first week in January.

When this invitation was sent out for the meeting in Omaha we wrote to the officials of practically every organized live stock breeders' association in some six or eight different states calling attention to the meeting, its object, and also to the importance of the live stock men expressing their ideas in this matter and letting these officials know what they want. We were pleased to receive a very large number of letters from officials of these different organizations all voicing the opinion that a more uniform set of rules would be of very great importance and convenience to them.

There is one thing that must be borne in mind, and that is that a law or regulation once made is absolutely worthless if it cannot be or is not enforced. The officials having these regulations in charge must bear in mind that if effective enforcement is to be had the co-operation of the live stock officials and shippers in general is necessary. We sincerely hope that when this meeting does take place live stock organizations may be represented, that they may talk with officials and that when these rules and regulations are finally adopted they will nearly as possible meet with the approval of both the officials and the shippers. If such a condition can prevail the enforcement of the rules will be much easier than if these officials should take it upon themselves to make these rules and regulations without the assistance or co-operation of the shippers.

Tuberculosis Causes Trouble

One of the animal diseases that is attracting a considerable amount of attention throughout the country at this time is tuberculosis in cattle. Suppose a breeder of pure-bred cattle should have his herd tested and find all animals free from the disease. Suppose this same man should within two, three or four weeks receive an order for an animal to be shipped into some other state. Does it look reasonable that he should again have this animal tested? We are not sufficiently posted on veterinary science to know what is exactly right in a case of this kind, but in our ignorance it appeals to us that a test once in six months ought to be sufficient, and the community or state into which this animal is shipped would be fully protected if the shipment was made any time within six months after the animals were tested.

If this were done the shipper could not be held up by the veterinarian's charge for inspection and certificate every time a shipment is made. If in any herd when tested reactions occurred, probably sufficient protection could not be had to the community to which shipment was made by not making a re-test for this length of time. There should be as nearly as possible a happy medium whereby the community in which the animal has to go is protected and the man making the shipment is also protected in the way of a charge for a veterinarian's service for a test and certificate.

Another matter to be taken into consideration by these authorities and the stockmen is, whose certificate should be recognized? It seems to us that there should be an official list made by the state veterinarian in each state of competent and reliable men, covering as nearly as possible the various communities throughout the state, whom he would recommend as being reliable and competent to make these examinations and issue these certificates. These lists should be official and in the hands of the state entering into the agreement.

Under our existing laws and form of government it is probably impossible to get away from state affairs, state rights and regulations, yet it appears to us that the right regulation of these rules would be to have them under government charge. Would it be more dangerous to the live stock interests of the country to ship an animal from Blair, Neb., to Missouri Valley, Ia., than to ship this same animal from Blair to McCook, Neb.? Yet the facts are that in the shipment from Blair to Missouri Valley the hog must be treated with the Dorset-Niles-McBride serum treatment, either simultaneously or single method, while in the shipment from Blair to McCook no regulation is necessary; hence comes in the state line.

Therefore, our conclusion that if the state laws were done away with in the shipping rules and regulations of live stock, and the government should say for these different localities what is necessary in the way of regulations, we would be taking a long step forward, and we believe that in the end a uniformity of rules and regulations could be adopted and enforced that could not be put through in any other way.

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The Government this year is asking farmers to put increased acreage into grain. Military service is not compulsory in Canada but there is a great demand for farm labor to replace the many young men who have volunteered for service. The climate is healthful and agreeable, railway facilities excellent, good schools and churches convenient. Write for literature and particulars as to reduced railway rates to Superintendent Immigration, Ottawa, Canada, or to

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Dodge County Poultry Show

Poultry breeders of eastern Nebraska were out in full force with their best fowls at the Dodge county poultry show at Fremont last week. One hundred and three exhibitors displayed 1,210 thoroughbred birds, making this year's show the greatest in numbers ever held in eastern Nebraska, with the exception of some of the big Omaha shows. The Barred Rock breeders proved the popularity of their breed by making theirs the largest class in the show—310 birds, or more than a fourth of the total entry list.

Other big classes were White Wyandottes, Buff Orpingtons and Rhode Island Reds.

We give first and second awards herewith:

S. C. R. I. REDS.
First cock, J. Eastwood, Waverly.
Second cock, J. W. DeVore, Valley.
First hen, J. W. DeVore.
Second hen. J. Eastwood.
First cockerel, J. Eastwood.
Second cockerel, R. A. Harrison, David City.
First pullet, R. A. Harrison.
Second pullet, J. Eastwood.
First pen, J. J. Landenburger, Cedar Bluffs.
Second pen, J. W. DeVore.
WHITE WYANDOTTES.
First cock, Mrs. H. G. Hansen, Fremont.
Second cock, Mrs. H. G. Hansen.
First hen, Robert Frahm, Snyder.
Second hen, L. Franklin, Monroe.
First cockerel, Mrs. H. G. Hansen.
Second cockerel, W. R. Petty, Martland.
First pullet, W. R. Petty.
Second pullet, W. R. Petty.
First pen, Robert Frahm.
Second pen, Mrs. H. G. Hansen.
S. C. WHITE ORPINGTONS.
First cock, Ernest Champney, Fremont.
Second cock, C. M. Mathewson, Walthill.
First hen, C. Welch, Columbus.
Second hen, Everet Champney.
First cockerel, C. M. Mathewson.
Second cockerel, Archdale Farm, Fremont.
First pullet, Archdale Farm.
Second pullet, C. M. Mathewson.
First pen, C. C. Johnson, Fremont.
Second pen, C. M. Mathewson.
SILVER CAMPINES.
All prizes to Archdale Farm, Fremont, except second cockerel and second pullet, R. A. Harrison, David City.
S. C. BUFF ORPINGTONS.
First cock, George Ronin, Fremont.
Second cock, Joe Skinner, Blair.
First hen, R. W. Laing, Geneva.
Second hen, Joe Skinner.
First cockerel, George Ronin.
Second cockerel, J. Churney, North Bend.
First pullet, George Ronin.
Second pullet, R. W. Laing.
First pen Lloyd Haven, Fremont.
Second pen Mrs. H. Moeseke, Lindsay.
PARTRIDGE ROCKS.
All to Mrs. F. Davis, Fremont.
BARRED ROCKS.
First cock, George Feuerstein, Fremont.
Second cock, Archdale Farm, Fremont.
First hen, Perry Strandberg, Davey.
Second hen, George Feuerstein.
First cockerel, O. R. Hill North Loup.
Second cockerel, O. R. Hill.
First pullet, O. R. Hill.
Second pullet, Perry Strandberg.
First pen, Perry Strandberg.
Second pen, George Feuerstein.
WHITE ROCKS.
First cock, C. S. Williams. Cedar Bluffs
Second cock, W. J. Anderson, David City.
First hen, W. J. Anderson.
Second hen, C. S. Williams.
First cockerel, W. B. Anderson.
Second cockerel, Chas. Gabelman, Tilden, Neb.
First pullet, W. J. Anderson.
Second pullet, Archdale farm, Fremont.
First pen, W. J. Anderson.
Second pen, C. S. Williams.
S. C. BLACK MINORCAS.
First cock, J. F. Porter, Fremont.
Second cock, J. F. Porter.
First hen, J. F. Porter.
Second hen, Otto Cotton, Omaha.
First cockerel, H. C. Orr, College View.
Second cockerel, H. C. Orr.
First pullet, J. F. Porter.
Second pullet, H. Knudsen, Benson.
First pen, H. C. Orr.
Second pen, J. F. Porter.
R. C. BLACK MINORCAS.
First cockerel, first hen, first pullet, H. Knudsen, Benson.
R. C. R. I. REDS.
First cock, Mrs. G. Ainsworth, Fremont.
First hen, Mrs. G. Ainsworth.
First cockerel Mrs. G. Ainsworth.
Second cockerel, Otto Langhorst, Fontenelle.
First pullet, P. C. Goldsmith, Utica.
Second pullet, Otto Langhorst.
First pen, P. C. Goldsmith.
Second pen, Mrs. G. Ainsworth.
BLACK LANGSHANS.
All to J. H. Furry, Hastings.
PARTRIDGE COCHINS.
All to Joe Montford, Fremont.
DARK BRAHMAS.
All to C. W. Mulloy, Fremont, Neb.
BLACK ORPINGTONS.
First cock, O. E. Henning, Mead.
First hen, O. E. Henning.
First cockerel, George Ronin, Fremont.
Second cockerel, Archdale Farm, Fremont.
First pullet, George Ronin.
Second pullet, J. Churney, North Bend.
ANCONAS
All to Charles Hurlbert, Utica, except second cock and first pullet to J. C. Miller, Lincoln.
S. L. WYANDOTTES
First cock, Otto Cotton, Omaha.
Second cock, F. C. Pfeiffer, Fontenelle.
First cockerel, E. B. Mehl & Son, Fremont.
Second cockerel, E. B. Mehl & Son.
First hen, F. C. Pfeiffer.
Second hen, F. C. Pfeiffer.
First pullet, Otto Cotton.
Second pullet, F. C. Pfeiffer.
G. L. WYANDOTTES.
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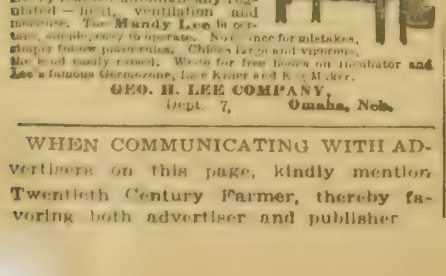
All to August Barkmier, Exeter.
S. C. BUFF LEGHORNS.
First cock, L. P. Harris, College View.
Second cock, W. F. Gerloch, Waverly.
First hen, L. P. Harris.
Second hen, W. F. Gerloch.
First cockerel, L. P. Harris.
Second cockerel, W. F. Gerloch.
First pullet, W. F. Gerloch.
Second pullet, L. P. Harris.
First pen, L. A. Moffet
S. C. BROWN LEGHORNS.
First cock, L. P. Harris, College View.
Second cock, J. C. Schnell, Lincoln.
First hen, L. P. Harris.
Second hen, J. C. Schnell.
First cockerel, L. P. Harris.
Second cockerel, L. P. Harris.
First pullet, L. P. Harris
Second pullet, J. C. Schnell.
First pen, L. P. Harris.
Second pen, J. C. Windsor, Fremont.
S. C. WHITE LEGHORNS
First cock, J. C. Fraser, College View.
Second cock, C. C. Johnson, Fremont.
First hen, J. C. Fraser.
Second hen, White Feather Poultry Farm, Omaha.
First cockerel, J. C. Fraser.
Second cockerel, J. C. Fraser.
First pullet, C. C. Johnson.
Second pullet, Iver Johnson, Fremont.
First pen, J. C. Fraser.
Second pen, C. C. Johnson.
BOURBON RED TURKEYS.
All to Mrs. Moeseke, Lindsay.



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BARRED ROCKS. LOOK UP WINnings at Fremont; 300 cockerels, $3 up O. R. Hill, North Loup, Neb.

BARRED AND WHITE ROCK COCKerels, $1 and $1.50 each. Mrs. William Flynn, Waterloo, Neb.

BARRED COCKERELS, $1; TEN years' breeding. W. Spealman, Marysville, Kan.

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Size of the Incubator

This is a question often asked the editors of poultry pages or poultry journals: "What size incubator must I buy?" The answer depends upon the size of the flock kept. For the farmer's flock one would not advise a small incubator at all—at least not so small as a sixty-egg incubator, though you might advise three of this size, all to be set at same date. It takes as much time and trouble to look after a sixty-egg incubator as one holding 300 eggs, and with the smaller size it requires more hens or brooders, and you have so many small bunches of chicks of different ages coming on. For ordinary use a machine of something like 150-egg capacity is best. Many owners of reasonably large flocks prefer even greater capacity machines, believing it is best to get large flocks of uniform size and get them off as quickly as possible, so that the hatching, or the bulk of it, may be over early. This is a good idea. Large machines cost less in proportion than small. However, for special purposes, though the farm flock be large, a small machine has its varied uses, one of which is to test for hatchable eggs before filling the larger machines. Always test the early eggs for the early hatches. Too often the winter or very early laid eggs are highly infertile, especially if you have allowed the flock to be housed up together. If you are not provided with a small incubator, then set enough eggs under the clucking hens to make sure. If clucking hens are scarce at this time of year, the small incubator is right at hand and ready. If the eggs test out, say but one in four showing fertility, then hold back your high-priced eggs from that large incubator, though it hold no more than 100, for it means money thrown to the crows. Before trusting dear eggs to many hens or the incubators, be sure that your testing eggs are showing three fertile in every four; then is it time to trust the eggs, never before. After the chickens get out on grass and range, fertility then is bound to increase, but fighting male birds housed in cold, stormy times with the whole flock simply means only eggs for market, not the incubator. The best plan, if you want early hatches, is to select breeding pens of so many good hens. And in these pens alternate each day two good breeding males. Place from seven to ten hens in each breeding pen.

RATE—Five cents the word per issue. Cash must be sent with all orders. Count every word, initial and numeral, including address. Copy must be received by Friday of the week preceding date of issue in which it is to appear. One hundred ten thousand farmers are regular paid-in-advance subscribers to TWENTIETH CENTURY FARMER. If you have any wants, or if you have anything to sell, insert an ad. in this department.

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BARRED ROCK COCKERELS—GOOD, big and well marked. Price reasonable; satisfaction or money back. M. S. McCollister, Beaver Crossing, Neb.

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BUFF ROCKS—SHOW OR UTILITY birds, sired by Southwest District Show winner. Mrs. James Christopher, Carleton, Neb.

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FOR SALE—ROSE COMB RHODE ISland Reds; large, dark red cockerels, $1.50 each. E. A. Luers, Wahoo, Neb.

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FREMONT SHOW FIRST PULLET and second cockerel for sale (S. C. Reds); also sister and brother birds, scored up to 94. "The Redman," R. A. Harrison, David City, Neb.

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FOR SALE—HIGH-GRADE BOURBON Red turkeys, toms and hens; also Rhode Island Red cockerels and pullets. Write for particulars. F. M. Kern, Springville, Ind.

BOURBON RED TURKEYS FOR sale. Clinton Myers, R. 4, Fairbury, Neb.

MAMMOTH TOULOUSE GANDERS, $2.50 each. Sweepstakes at County fair. George Drinnin, Columbus, Neb.

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POULTRY—Turkeys-Ducks-Geese

100 PEKIN, FAWN AND WHITE INdian Runner ducks. Aye Bros., Box 3, Blair, Neb.

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MUSCOVY AND RUNNER DUCKS—Leghorns, Orpingtons, Wyandottes, range-raised breeders. Book eggs and day-old chicken orders. Lone Tree Poultry and Egg Farm, Central City, Neb.

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EGGS! EGGS! EGGS! THIRTYthree pure-bred varieties. Send stamp for catalogue. Sunny Slope Poultry Farms, Shenandoah, Ia.

TURKEYS, DUCKS, GEESE, CHICKens, rabbits, butter and eggs wanted. Ship direct to Perry & Co., Omaha, Neb. Estab. 1896. Reference, Merchants National bank. Prompt pay. Write for quotations.

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WRITE J. E. WARRICK FOR FETerita seed, Hastings, Neb.

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TYPEWRITERS AT PRICES ANYone can afford. Send us $17 for Smith Premier, $19.50 for Remington, $23.50 for Oliver. Central Typewriter Exchange, Omaha, largest stock in the west.

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PURE-BRED SCOTCH COLLIE PUPS, $5. J. A. Huff, Laurel, Neb.

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PATENT YOUR IDEAS; THEY MAY bring you wealth; 61-page Patent Book free. Fitzgerald & Co., 808 F St., Washington, D. C. Established 1880.

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FIR LUMBER! RED CEDAR SHINgles! Choice. Mill direct. Save money. Write Lansdown, Drawer H, Everett, Wash.

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HIGHEST PRICES PAID FOR HIDES, wool, tallow, pelts and furs. Write for prices and tags. Beatrice Hide Co., Beatrice, Neb.

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25,000 ACRES, GRAIN, STOCK LAND, cheap. Sure crops. Northern Colony. Free map. Tom Blodgett Land Co., Little Rock, Ark.

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THINKING OF GOING TO CALIFORnia? We have a fine 20 acres, with a good stand of alfalfa, that means money now. No waiting for a crop. Very little cash required. Located near Sacramento. W. T. Smith Co., 1112 City National Bank, Omaha.

ON APPLICATION A BEAUTIFULLY illustrated book descriptive of the resources of Yuba and Sutter counties (in the fertile Sacramento valley) will be mailed free. Address M. N. Sheldon, Secretary Sutter County Commission to P. P. I. E., Marysville, Cal.

Florida

BARTOW, FLA., WHERE LIFE'S worth living; unsurpassed health and climate; modern conveniences, Carnegie library, paved streets; no saloons. For booklet address Board of Trade, Box B-265.

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SELL YOUR PROPERTY QUICKLY for cash. No matter where located. Particulars free. Real Estate Salesman Co., Dept. 87, Lincoln, Neb.

FARMS WANTED—WE HAVE DIrect buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 69 Palace Bldg., Minneapolis, Minn.

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$5 DOWN, $5 MONTHLY, BUYS 40 acres—grain, fruit, poultry land—near town; healthy location, good home. Special bargain. Price, $220. Box 425 W, Carthage, Mo.

Nebraska

DO YOU KNOW THAT ATKINSON ships more cattle than any other station in the state, and is one of the very largest hay-shipping points in the world? Potato-growing and root crops excel in both quantity and quality. Corn, grain and alfalfa yield wonderfully well; water, all you can desire. With plenty of the finest stock feed, fattening stock is enormously profitable; stock diseases very rare; dairying yields $120 per cow per year, so that five cows will readily support the family and leave a profit. My Smith farm will measure up to this or do better. Only $40 per acre, very easy terms. See or write owner, W. P. O'Brien, 410 Bee Bldg., Omaha, Neb.

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FARMERS, DO YOU NEED MONEY? We negotiate for farm loans, 5 years at 6 per cent and ten years at 5 per cent; dealing direct with borrower; 2½ per cent straight commission. Correspondence solicited. Security Farm Loan Association, 30 North Dearborn St., Chicago, Ill.

Wyoming

ATTENTION GERMAN FARMERS! My four improved farms to rent on the crop-sharing plan, which will easily double your present income and more, with no additional labor or investment. These farms are situated about seven miles from Millbrook, twenty miles from Laramie, Wyo.; an up-to-the-moment city of 10,000 people, with the State university there and the experiment station on the way. Roads are fine and the rural free delivery stage goes by every day; school within a mile and telephone, too; good, comfortable houses, barns and other buildings. These farms have plenty of water to irrigate with and good, pure water in wells for other uses. They are partly in alfalfa and have been farmed for several years. Can farm a quarter here as easily as an eighty where you are; no diseases to attack stock; hog cholera unknown; climate particularly suited to growing children and those having asthma, throat or lung trouble. Here you can have plenty of cheap feed to fatten stock and have a money-making dairy. Butter-fat brings from 33 to 38 cents per pound; four to five cows will far more than support the family; plenty of cheap pasture. Applicants should have horses, implements and cows. For further particulars write A. W. Augspurger, 548 Bee Bldg., Omaha, Neb.

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FOR SALE OR EXCHANGE—640-ACRE irrigated farm nineteen miles from Laramie, seven miles from Millbrook, Wyo. Have telephone and rural delivery. All good, level land; all under cultivation except 30 acres meadow land; seven-room house; barn for twelve horses; large hog shed, granary, cattle sheds, machinery sheds and other needed buildings; three miles woven wire fence; first-class perpetual water right; very low maintenance charges; splendid, healthful climate; fine winter weather; highest summer temperature about 85 degrees; grow splendid crops of winter wheat, barley, rye, oats, potatoes and root crops; also field peas and alfalfa; good hog country; cholera unknown. Pasture hogs in alfalfa in summer and in winter they harvest the field peas. On account of dry weather peas are left on the ground as they ripen and they do not damage; sheep and hogs will gather them without waste. No better cattle country anywhere. Forest reserve near by for cattle and sheep. Price, $70 per acre; incumbrance, $10,000. Will exchange equity for Iowa or eastern Nebraska land. Laramie Development Company, Laramie, Wyo.

IF INTERESTED IN SECURING A fertile farm at a low price, in a well settled community, where climate, soil and water are good, write Federal Land Company, Cheyenne, Wyo.

Wisconsin

UPPER WISCONSIN—BEST DAIRY and general crop state in the union; settlers wanted; lands for sale at low prices on easy terms. Ask for Booklet 35 on Wisconsin Central Land Grant. State acres wanted. Write about our grazing lands. If interested in fruit lands, ask for booklet on Apple Orchards in Wisconsin. Address Land Dept., Soo Line Ry., Minneapolis, Minn.

FOR SALE—SPLENDID STOCK range, with mile frontage on lake; 340 acres natural blue grass and clover pasture in Polk county, Wisconsin; all fenced with 46-inch woven wire; new buildings; good soil, surface and location. A snap, only $25 per acre, on easy terms. Baker, G 67, Owner, St. Croix Falls, Wis.

HELP WANTED

Agents—Solicitors—Salesmen

WANTED—LADY SOLICITORS IN every county for the Twentieth Century Farmer and other magazines. Be independent; earn big money. Write at once for agency. Twentieth Century Farmer, Omaha, Neb.

MEN AND WOMEN WANTED—$65 TO $150 month; government life jobs; common education sufficient; thousands vacancies yearly. Write immediately for list of positions and examination schedule. Franklin Institute, Dept. O 94, Rochester, N. Y.

WANTED—YOUNG AUCTIONEER with $2,000 as partner in pure-bred live stock business. Address Box 319, Norfolk, Neb.

Trades

WANTED—MEN TO LEARN THE barber trade. We have originated a plan to teach it quickly and earn some money while learning. Tools included; board if desired; open to everyone. Write today. Moler Barber College, 110 South 14th St., Omaha.

Help Wanted—Miscellaneous

GOVERNMENT FARMERS WANTED, age 21 to 50; make $125 monthly. Write Ozment, 39 F, St. Louis.

MOTORMEN, CONDUCTORS; INTERurban; earn $80 monthly; experience unnecessary; qualify now; state age; details free. Address Y 309, Twentieth Century Farmer, Omaha.

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SEVERAL NEW SAFES, GOOD FOR home or office, below cost. Write Dr. Bradbury, Dentist, 1506 Farnam, Omaha.

MISCELLANEOUS

FREE, A SILVER-PLATED TEAspoon with a 50c box of Germikil, the greatest remedy in the world for most chicken ailments. Aye Bros., Box 3, Blair, Neb.

ROSENBLUM SELLS YOU GROCERies at wholesale prices; 5-lb. can Best Baking Powder, 45c. Write for Catalogue 81. Rosenblum, 308 North 16th St., Omaha, Neb.

ROSES, ALL COLORS. AYE BROS., Box 3, Blair, Neb.

CARPENTERS FURNISHED; WILL send experienced men to any point. Write stating requirements. Theo. Jenson, 3110 South 19th St., Omaha, Neb.

FREE—A 31-PIECE SET OF DISHES. Write Aye Bros., Box 3, Blair, Neb.

I AM COMPELLED TO SELL MY complete scholarship in Omaha's best business college before using it; must sell quick and; therefore, at a good discount. I refer you to the editor of this paper. R. R. Foster, 1334 South 30th Ave., Omaha.

FOR SALE—NON-FREEZABLE HOGWaterers. Wm. Menefee, Atlantic, Ia.

Review of Live Stock Market

By A. C. Davenport

IT has been many a long day since cattle have experienced such a disastrous slump as took place last week. The trouble started at Chicago, where the market at the beginning of the week was covered up by a deluge of cattle that nothing could stop. Prices were demoralized, but still the cattle poured in. Most other markets showed similar conditions on a somewhat smaller scale. Values on killing cattle depreciated all the way from 75c to as much as $1.50 per hundred, in extreme cases, at some points.

It goes without saying that the country suffered a most severe loss. Thousands of cattle sold at prices that did not leave sufficient margin over and above their cost price as feeders to pay for the corn consumed. Hundreds of cattle actually sold for less than they cost on the market as feeders, thus entailing a loss of all the feed consumed, shipping charges and other incidental expenses. Such losses are a severe blow to any industry, and the thought that they were entirely unnecessary makes them doubly hard to bear.

It is impossible for the country shipper always to foresee impending breaks in the market. Breaks due to a sudden increase in receipts are liable to come at most any time, and no one is to blame for them. In the case of last week's break, however, there was very little excuse for the overloading of the market, and shippers have only their own folly to blame for their losses.

In the first place the country has been cautioned for years to beware of December. It is the month of holidays and is pre-eminently a poultry and not a beef month. To be sure there is always a demand for some fancy Christmas beef cattle, but the demand is limited even on them and is invariably poor for the common and half-fat grades. It is generally conceded that December is the worst month of the whole year in which to unload unfinished and immature beef cattle. So much has been said and written on the subject that it is hard to believe that there is a cattle feeder in the country who has not heard or read it. Still about as ofte as December rolls around there comes a flood of unfinished cattle that breaks the market, although such a severe slump as that of last week does not often occur.

Two weeks ago attention was called to the severe break that took place the first week of the month due to heavy shipments. It was to be presumed that the country would take warning and not commit the same mistake a week later. Possibly the record-breaking prices paid for a few fancy Christmas beef started the movement.

Some old-timers say that December breaks are due to a weakness in human nature. There are, according to their theory, many people in every industry that take a great and active interest in some certain enterprise up to a certain point, and then comes a loss of interest and an overpowering desire to get rid of the enterprise The cattle business has a liberal sprinkling of the quitter type of men. They buy their feeder cattle and get the feed all prepared, and then, after a heavy investment of money, instead of getting down to business and feeding the stock, they suddenly tire of the whole proposition and ship their cattle regardless of time or market conditions.

Until all the weak and tired holders have unloaded their cattle the market is liable to sudden fluctuations. There can, however, be no question but what prices will spring back again as soon as the run lets up. It is also a safe prediction that all the cattle on feed in the country will be needed at good strong prices before the arrival of grass cattle, if only they can be kept coming forward no faster than they are ready for market.

Hogs showed more strength last week than the week before, to the great delight of the bulls. The expectation that hogs would break down to $6.50 on the basis of Omaha has not been realized up to present writing. The nearest approach to that figure was $6.66, the average of all the hogs sold at Omaha on December 7. That, however, for all practical purposes, was near enough so that the bears have really won out on their prediction made a number of weeks ago.

Still the bears have not given up. They point to increased stocks of provisions and encouraging reports regarding supplies of hogs in the country. They still refuse to believe that the market has touched bottom and contend that the coming of the New Year will prove their assertion. The bulls were greatly encouraged by the activity and strength shown by the market last week, and some of them are fully convinced that the low point has been touched, though they do not expect any permanent advance of consequence for the near future.

Sheep and lambs have been bouncing up and down like a rubber ball. Market changes have occurred so rapidly that it has been a difficult matter to keep track. Buyers have taken off and put back big chunks of money on alternate days, as receipts happen to be large or small, or the demand brisk or slack The behavior of the market may be explained by the fact that it is December, when the demand though very fair is not equal to the absorption of overly large receipts. While operators regard the position of sheep and lambs as strong the country is advised to ship conservatively until after the holidays.

Sage Brush as Fuel

In parts of the west where trees are scarce sage brush is used for fuel. In Nevada the large main stems are trimmed by Indians at $3 a cord and delivered to the user at about $6.50. Sage brush burns rapidly and is rather dirty, but produces good heat.

Mistletoe Injures Trees

Those familiar with the eastern mistletoe only, have no idea of the great losses due to this parasite in the forests of the west, where it counts next to fire and insects in the amount of damage done.

What Nebraska Farmers' Congress Did

(CONTINUED FROM PAGE FIVE.)

servation and Public Welfare commission and recommend that a liberal appropriation be made for continuing its work.

Conservation and Soil Survey—We ask that the Conservation and Soil Survey of the state be continued with adequate support.

Public Warehouse Law—We are opposed to the enactment by the legislature of any so-called "public warehouse law" whatever.

Water Power Monopoly—We believe that the state should be in absolute ownership and control of the water power of the state; that rights should not be sold, or leased in perpetuity, and that the next legislature should take measures looking to the immediate development of the water power of the state, by the state, for the people of the state. We demand the cancelation of such water power franchises now outstanding as are not developed or in process of real bona fide development as contemplated by the law of the state.

Rural School Commission—The Rural School commission created by the Nebraska Farmers' Congress should be continued in the service of school legislation, to work in conjunction with the state superintendent along the lines discussed at this session, and those now in operation in other states of the union.

Bounty on Crows—We recommend to the next session of the legislature that a reasonable bounty be placed on crows, leading to their extermination as carriers of hog cholera infection.

Closed Season Game Birds—We ask the legislature to establish a closed season of ten years on grouse, prairie chickens and quail.

Appropriation for Serum Plant—We recommend a sufficient appropriation for the production of anti-hog cholera serum by the Nebraska Experiment station to meet the demands for serum made upon said station by the swine growers of Nebraska.

Testing of Anti-Hog Cholera Serum—We favor the enactment of a law preventing the manufacture or sale of any hog cholera serum to the swine growers of Nebraska (whether said serum is manufactured in the state or out of it), unless said serum has been tested and approved by the United States Department of Agriculture or the Nebraska State Experiment station. We favor the state selling said serum to the farmers at actual cost.

Appropriation for Swine Barn—This congress recognizes the value of the swine industry as being one of its greatest industries. We believe that this industry is materially benefited by the annual swine exhibit at our state fair. It is apparent to any visitor at this state fair that the present location of the swine barn on the Nebraska State fair grounds is overcrowded, the sheds in which the swine are housed are old and inadequate, and no location for swine be no longer [illegible] what it should be. This congress respectfully asks for an appropriation by the next legislature of a sufficient amount of money to erect a swine barn in which this exhibit may be housed, and that such building be located at a more convenient and sanitary location on the State fair grounds than at the present sheds.

Appointment of State Veterinarians—We believe that the best interests of the live stock men and the farmers will be conserved by keeping in office as long as their services are satisfactory, men having to do with live stock sanitary work. The last legislature created the Live Stock Sanitary board, and in doing so intended that work in this department should be taken out of politics as nearly as possible, and the governor relieved of this responsibility imposed upon him by the statute. We believe our present deputy state veterinarian, Dr. L. C. Kigin, is honestly and conscientiously doing all he can to protect the live stock men of Nebraska in the controlling and eliminating of animal diseases. This congress would suggest to the Live Stock Sanitary board that the best interests of the live stock men of Nebraska would be conserved in the office of the state veterinarian by their recommending to the governor Dr. Kigin's retention in office, and we would respectfully ask of Governor Morehead that Dr. Kigin be retained in his present official capacity. The secretary of the congress is directed to transmit a copy of this resolution to the governor of Nebraska and to the president of the State Live Stock Sanitary board.

Union Pacific Right-of-Way—We are in hearty sympathy with the efforts being made by Hon. George W. Norris in the United States senate to confirm farmers along the Union Pacific railroad right-of-way in the possession of certain lands which have been in controversy between these farmers and the railroad company for years. We ask him to continue the fight until he has fully accomplished his purpose. We also respectfully ask Senator Gilbert M. Hitchcock, and all the Nebraska members of the lower house of congress, to lend him all the assistance in their power.

Co-operative Warehouses—We express our belief that the loss to the producer and cost of the consumer, due to congestion of markets and monopolistic control, require fundamental changes in the system of marketing grain and food products. To this end we favor, First, federal inspection of grain at all terminal grain markets; second, we favor warehouses licensed and controlled by the state in the interest of producer and consumer, with the provision that farmers' co-operative associations shall be entitled to lease, build and operate such warehouses upon the same terms as any other person or corporation. This resolution is presented with request to the legislative committee of the congress.

Dispersion Sale

Write C. M. Lewelling, Beaver City, Nebraska, for Catalogue giving the breeding of his 10 Registered Percheron brood mares and colts.

Brood mares have been doing the work on the farm and average over a ton each. Sale to take place at

CAMBRIDGE, NEBRASKA, December 31, 1914.

JACKS AND JENNETS

MAMMOTH JACKS

Over 50 head of the big kind, 15 to over 16 hands, standard, for sale at my farm. Reference—the banks of Lawrence. 40 miles west of Kansas City, on U. P. and Santa Fe.

AL. E. SMITH, Lawrence, Kan.

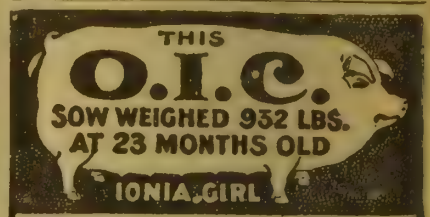
DUROC-JERSEY HOGS

DUROC BOARS

50 cholera proof Duroc-Jersey boars, ready for service, $25 to $35. 100 cholera proof sows, bred to Buddy K 4th, Wide Awake, Cremo and others. Price $30 to $50 for immediate shipment.

GEO. W. SCHWAB, Clay Center, Neb.

O. I. C. HOGS



I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN** RFD79 **Portland, Mich.**

JERSEY CATTLE

WINELAND FARM JERSEYS

Registered bulls, cows and heifers from the best dairy herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." **C. S. BENJAMIN** RFD79 **Portland, Mich.**

RED POLLED CATTLE

RED POLLED CATTLE

Both sexes; good as any in America. Call or write me your wants. **W. F. Schwab, Clay Center, Neb**

HOLSTEIN CATTLE

Purebred Registered

HOLSTEIN CATTLE

In a bulletin published by the Minnesota Experiment Station, Professor Thomas P. Cooper estimates that a cow that produces only 4,000 pounds of milk per year will cause her owner a loss of $116 during her lifetime.

He figures that a 5,000-pound cow is worth $25; a 6,000-pound cow is worth $67; an 8,000-pound cow is worth $150, and a 10,000-pound cow is worth $230.

Find out what your cows are worth. Find out what purebred registered Holsteins are doing.

Send for **FREE** Illustrated Descriptive Booklets.

The Holstein-Friesian Association of America, Box 179, Battleboro, Vt.

FRIESLAND FARM HOLSTEINS

My barns are crowded and I must sell 20 choice pure-bred cows and heifers to make room.

A few good sons of King Segis Lyons are still left.

DR. E. B. DAVIS, 200 BEE BLDG., OMAHA, NEB.

SHORTHORN CATTLE

SHORTHORN BULLS

Several pure Scotch Shorthorn bulls for sale, sired by Broadhook's Chancellor. They are red in color and from 14 to 20 months old. They are priced to sell.

J. C. HARDMAN, Valley, Neb.

POLLED DURHAM CATTLE

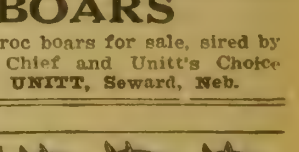
IMMUNE DUROC BOARS

A corking good lot of big, smooth, heavy boned Duroc boars for sale, sired by Col. Wonder 1st and out of sows by Nebraska Proud Chief and Unitt's Choice Goods. Priced to sell.

W. G. UNITT, Seward, Neb.

PERCHERON HORSES

BRILLIANT blood, jet blacks, rich greys. Registered Percheron studs—1, 2, 3 and 4 years old. I grow great big fellows with extraordinary bone and heavy quarters. I love a good horse. Come visit at my plain, old-fashioned Percheron farm that has the goods, and lots of them. Don't let anyone tell you that they have Percherons like Fred Chandlee's. Just east of Omaha.



FRED CHANDLEE, Route 7, CHARITON, IOWA.

AYRSHIRES

WE HAVE THE LARGEST HERD OF THOROUGHBRED AYRSHIRE CATTLE IN THE WEST, headed by the great Ayrshire bull, Garland's Success." Choice young bulls for sale. The Ayrshire is the perfect dairy cow. You are cordially invited to visit our model dairy farm when you are in Omaha. **LOVELAND FARMS COMPANY. Office 324 Omaha National Bank Building, Omaha, Neb**

THIS VERY BEAUTIFUL, HORSE PICTURE IN EIGHT COLORS

MAILED TO YOU POSTAGE PREPAID

FREE

ENAMELED STOCK LARGE SIZE 16 by 22

Here is My New, Large and Beautiful Horse Picture, in 8 Colors that will Strongly Appeal to Every Horse Lover in the World. The Original Picture was made from Life and is as True as if My World Famous, Champion Stallions Dan Patch 1:55,—Minor Heir 1:58½,—and George Gano 2:02,—stood Right Before You in Actual life.

This Splendid, COLOR PICTURE is on Extra Heavy, Superfine, Enamel Stock and is Worthy to Hang in Any Home or Office, because it is one of the Finest, and Most Attractive Horse Pictures in the World.

I mail them in Extra Heavy, Double X Mailing Tubes so as to insure Safe delivery.

IF YOU ANSWER 3 QUESTIONS.

All you have to do to receive this Beautiful Horse Picture is to Answer the following THREE QUESTIONS **PROVIDING You Are a Farmer or Stock Owner or Horseman - Over 21 Years of Age.**

FIRST - In what Paper did you read this offer?
SECOND - How Many Horses, Cattle, Sheep or Hogs do you own?
THIRD - Have You EVER used International Stock Food Tonic?

Mail Answer to,—M. W. SAVAGE, Minneapolis, Minn.

Such Splendid, Quality Pictures in Colors and Extra Fine Stock,—usually Retail at $2.00 to $3.00 at Art Stores but You can have One Absolutely Free.

You will Enjoy this Horse Picture all Your Life and it is entirely Free of Advertising, so that it is really an Art Picture of Great Merit and a Picture of Three Great World Champion Stallions.

Dan Patch 1:55 is the Fastest Harness Horse of all Champions. Minor Heir and George Gano are the Fastest Team, in the World, with a Wagon Record of 2.02.

Write Me Today and Secure one of these Beautiful Horse Pictures,-in Eight Colors,-Absolutely Free,—Postage Prepaid.

You Intended to send for this Large and Beautifully Colored, World Champion Stallion Picture,-the last time you read My offer,-but you put it off. Why not Write Me Today and Be Sure of Receiving Yours before it will be too late?

INDISPUTABLE FACTS FROM THE PRACTICAL SCHOOL OF EVERY-DAY EXPERIENCE OF OVER THREE MILLION FARMERS, STOCKMEN AND HORSEMEN.

The Mere Fact that International Stock Food Tonic has Successfully stood the Practical, Every-Day Test of Farmers and Stockmen All Over the World for Over a Quarter of a Century, is Absolute, Indisputable Proof to any Fair-Minded, Intelligent Man that it Must possess Very Superior Merits. An Increasing Sale for over 26 Years can be explained on no other basis. The Largest Seller in the World can be built up only on merit. Any other claim would be childish nonsense or proof of a vindictive, prejudiced mind. During the past 26 Years, Hundreds of Preparations have been offered for sale–had a limited sale, but have entirely disappeared—but **International Stock Food Tonic has constantly increased** (during these 26 Years) until it is sold and used All Over the World. What does this prove to your own, practical, fair mind? It is Guaranteed to save 70 bushels of Oats per year, for Every Work Team, at a using expense of Only $7.50 per year and also — to keep Horses Healthful and Stronger. It makes Colts grow and develop very rapidly. **International Stock Food Tonic was Originated by** one of the Largest Harness Horse Breeders of the World (M. W. Savage) owning the 700 acre **International 1:55 Horse Breeding Farm** with its 250 Stallions, Brood Mares and Colts. He carefully experimented on both his Horses and Other Stock for many years before placing it on the market. It is Guaranteed to make Your Cows give from One to Three MORE Quarts of Milk, Every Day, and to make Calves quick growers, even on skim milk. It is a common-sense, every-day Tonic, Blood Purifier, general System Strengthener and a Great Aid to Better Digestion and Assimilation, so that Horses, Cattle, Sheep and Hogs will gain More Pounds for Every Bushel of grain eaten. It has also Always had the Largest Sale in the World for Preventing Disease in Hogs and for helping make Pigs, Shoats or Hogs Grow Amazingly. It is not to take the place of grain, but is to mix With grain for Better Health, Larger Profit, by improving Digestion and Assimilation of All Animals. **International Stock Food Tonic** helps keep Every Animal up to **Full Normal Strength and Health**, and is a **REMARKABLE PREVENTATIVE** of Disease. You eat several kinds of medicinal ingredients With Your Own Food Every Day. Don't you think it is Just As Sensible to think Your Animals should have certain Vegetable Medicinal Ingredients, which they eat freely when running wild? 150,000 Dealers in the United States, Canada, England, Scotland, Ireland, South America, Mexico, Australia, New Zealand, Honolulu, South Africa, Philippines, Cuba, China, Japan, etc., — Sell it on a **Spot Cash Guarantee** to Refund Your Money in full if it ever Fails to keep Your Stock in Better Health and to Make You a **Big Extra Profit**, over its low using cost. All Wide-Awake, Fair Minded Farmers admit this is a Square Deal. There's an International DEALER in YOUR City. Over THREE MILLION FARMERS **Use it Regularly because it Makes them EXTRA Money in Growing, Fattening or for Preventing Disease.**

Below is the Most Popular, of over 200 Color Show Cards, Designed and Used by M.W. Savage.

Whenever you Think of International Stock Food Tonic,-Be Sure and Think of the HUNDREDS of Valuable Free Premiums that are Given Away,-Absolutely Free,-and the Extra Money Making Results Guaranteed You.

Did International Stock Food Tonic, Help Make Dan Patch 1:55,—World Famous or Did Dan Patch 1:55, Help Make International Stock Food Tonic,—World Famous?

DAN PATCH 1:55,—$2500. COLTS,—ABSOLUTELY FREE, ARE MY EXTRA, FREE PREMIUM OFFERS.

THESE FREE COLT OFFERS are Fully Explained in SAVAGE'S BIG FREE PREMIUM BOOK. HUNDREDS of VALUABLE ARTICLES for Personal and Household use,—Given Away, Absolutely Free, with International Preparations,-WHEN BOUGHT OF MY DEALERS. These HUNDREDS of VALUABLE ARTICLES are Described and Beautifully Illustrated in this BIG FREE PREMIUM BOOK. **Ask Your Dealer for Book.** If he cannot supply you,—Write Direct to me and I will send you one,—Absolutely Free. **Buy Any of the 49 Different International Guaranteed Preparations of Your Dealer and Secure Free Premiums.**

THE GREATEST HORSE RACE IN THE WORLD,

was at Indiana State Fair, Sept. 12—1910, when M. W. Savage started Minor Heir 1:58½, Lady Maud C 2:00½, Hedgewood Boy 2:01 and George Gano 2:02. Minor Heir won in 1:59, out in front ALL the way and All Four Horses finished in 2:00 or better and this Wonderful, 4 Horse Event will be UNEQUALLED for Many Years. They all were Regular Users of, International Stock Food Tonic and had been for a long time. ☞ It Gave Them More Speed.

INTERNATIONAL STOCK FOOD COMPANY

M. W. SAVAGE'S BIG, 26 YEARS SUCCESS. **MINNEAPOLIS, MINN.**

Would You Like a $50,000. Dan Patch Stallion Free? My Illustrated, Horse Catalog, Mailed on request.

of immune Duroc-Jersey bred sows to offer on February 2 that are good enough to receive the support of any pure-bred breeder or farmer who is looking for the right kind. His offering will consist of twenty-five tried sows, five fall gilts and twenty-five spring gilts. The tried sows are by Golden Model 4th, Invincible Chief, Model Boy, Critic B., King Pritchard and others. The fall gilts are all by King Pritchard. The spring gilts are by Colonel 2d, Van's Chief and Colonel Chief. Also four or five by Invincible Chief. These sows are the big, smooth kind, with plenty of size and bone and are certainly bred along the right lines.

Wallace's Great Offering

One of the most interesting sights we have seen in a long time was afforded us one day last week, when we called on Clarence Wallace of Wisner, Neb., and looked over the magnificent lot of sows and gilts he is going to put in his bred sow sale on February 4. If we were to tell the exact truth about what we actually saw here we presume our readers would think that we were going pretty strong, and no doubt it would sound that way, but we want to say this much, that this is one of the best offerings, taken as a whole, that we have seen go into any sale for many a long day. The redeeming feature of the whole thing is that the sows and gilts to be sold here, to a large degree, are the absolute product of Mr. Wallace's own mating and breeding. No better object lesson could be afforded the farmer and breeder than is evidenced here of what may be accomplished in the science of breeding if one but applies himself to the business in an intelligent manner and gives the hogs the proper care and treatment. The offering will consist of five tried sows, thirty fall yearlings and twenty spring gilts. Two of the tried sows are by Wallace's Wonder and three are by Golden Model 4th. Fall yearlings are by Golden Model 4th, Fancy Wonder and Sensation Wonder 2d. There are thirty head of these fall gilts, and if you have ever seen a better bunch of this size in any one herd you have us bested. They are big, smooth, deep, good bone and right up on their feet. Size is what the Duroc man must breed for, and Mr. Wallace certainly has it here. Spring gilts are by Colonel Chief, Golden Model 4th, Wallace's Sensation, Long Wonder, Golden Model 31st, Wonder Colonel and Golden Model 34th. The offering is bred to Golden Wonder, Fancy Model, Prince Muncie and Pride's Wonder. We will have more to say regarding this offering in an early issue. In the meantime, better get your name on Mr. Wallace's list for catalogue.

Ayrshire Breeders' Meeting

The fortieth annual meeting of the Ayrshire Breeders' association will be held on Thursday, January 14, 1914, at Hotel Manhatan, New York, at 2 o'clock p. m., to hear the report of the secretary-treasurer, the Advanced Registry report and the report of the executive committee.

All persons interested in the breeding of Ayrshire cattle are invited to attend this meeting. The association cordially invites all its members to a banquet to be given by the association in the evening after the meeting.

JOHN A. NESS,
President.

C. M. WINSLOW, Secretary.
Brandon, Vt., December 12, 1914.

Organized Agriculture

The meetings held during the week of Organized Agriculture at Lincoln, Neb., are always interesting to farmers and stockmen. This year the meeting to be held during the week of January 18-23 will be of particular interest.

A splendid array of talent has been secured. Men who know what they are talking about will discuss topics at the different meetings. Practically every division of farming and live stock raising will be discussed.

During the meetings of the Improved Live Stock Breeders' association the matter of more uniform shipping rules and regulations for interstate shipments will be discussed. This will be of particular interest to live stock men. You should be there to take part and push this good work along.

All these meetings are not for the men alone. The woman's section will be full of interest and valuable information to the housewife.

We don't know where the farmer and his family could go to get more for his time and money than by attending these meetings.

TAKE THE CHILL OFF
the water outside instead of inside your livestock. It's cheaper. It means less feed, more milk, healthier stock.
The "BEST" Tank Heater
will save you 20 times the cost in feed. Solid cast shell, grate and ashpan; double asbestos filled lid. No seams to leak. Takes in big chunks. Fire starts easily and holds. Extra heavy and strong. Write for circular and price.
STERLING F'DY CO., Sterling, Ill.

Krueger's Duroc Offering

We called on Gus Krueger of Beemer, Neb., a few days ago and found him with a very nice line-up of Duroc-Jersey sows for his bred sow sale on February 3. His offering this year will consist of fifteen tried sows, ten fall yearlings and twenty spring gilts. The tried sows are by Blue Ribbon Model, Colonel Chief, Proud Colonel, Bader's Golden Model, Red Chief Wonder, Melina's Wonder, Krueger Model, Gold Dust Chief, Sioux Wonder, Fancy Wonder and Sensation Wonder. Fall yearlings are all by Prince Muncie Colonel. Two of these are out of Bessie Wonder, champion sow at Nebraska this year. Spring gilts are by Colonel Chief, Silver Model, I Am Golden Model 2d, Crimson Wonder 10th, Chief Invincible, Wallace's Sensation, Sweet Rose's Wonder and others. The larger part of the offering will be bred to Royal Colonel and a few to Professor. This offering is one that is certainly worthy of the consideration of any breeder. There are sows in here of show yard character and they are bred to boars as good as those at the head of any man's herd. Watch these columns for further information regarding this offering.

McGaughey's Immune Durocs

Joseph McGaughey of Wisner, Neb., will have an offering of forty-five head

Sale Dates

Poland-China Hogs

February 6—O. J. McCullough, Clarks, Neb., sale at Central City, Neb.
February 13—Thomas F. Walker, Alexandria, Neb. Sale at Fairbury, Neb.
March 1—Harry Tidrick, Windside, Neb.

Duroc-Jersey Hogs

January 21—John Boder, Scribner, Neb.
January 23—Will Morgan, Wayne, Neb.
January 29—Dave Boesiger, Cortland, Neb.
January 27—Willard Robbins, Lons, Neb.
February 1—E. H. Carpenter, Fontanelle, Neb.
February 2—Joseph McGaughey, Wisner, Neb.
February 3—Gus Krueger, Beemer, Neb.
February 4—Clarence Wallace, Wisner, Neb.
February 5—Henry Stuthman, Pilger, Neb.
February 6—Henry Koelbmoos, Pilger, Neb.
February 8—R. Widle & Sons, Genoa, Neb.
February 9—A. W. Lamb, Albion, Neb.
February 10—A. R. Barnes, Petrsburg, Neb.
February 11—F. B. Nelson, Lindsay, Neb.
February 12—Robert Leisey, Wisner, Neb.
February 15—S. M. Hinkle, Genoa, Neb.
February 16—G. P. Cedar, Genoa, Neb.
February 16—G. A. Limmerman, Creston, Neb.
February 17—C. E. Peterson, Genoa, Neb.
February 18—J. E. Hensley, Central City, Neb.
February 19—J. T. Armstrong & Son, Clarks, Neb.
February 22—John C. Tighe, Stanton, Neb.
January 23—William Morgan, Wayne, Neb.
February 23—F. A. Lemmerman, Creston, Neb.
February 24—L. J. Kuzel, Howells, Neb.
February 26—C. A. Freiday, Rising City, Neb.
March 1—Harry Tidrick, Winside, Neb.
March 2—Edgar Taylor, Plainview, Neb.

Shortnorns

January 12—A. C. Shalenberger, Alma, Neb., sale at South Omaha

Hereford Cattle

January 26 Monsel Bros., Cambridge, Neb.
February 18 19—Nebraska Hereford Breeders' association, sale at Grand Island Neb. Robert Monsel, Cambridge.

South Omaha
Great Live Stock Market of the West

SOUTH OMAHA is the most convenient and centrally located large market for the Nebraska shipper, where his stock can be sold in unlimited quantities with the *least shrinkage* and *Risk; lowest freight* and *best transportation,* and be assured of net returns *unequalled elsewhere.*

Nebraska's Home Market

THE SHIPPERS of Live Stock desire *service* when their stock has arrived at the market. The management of the *South Omaha Market* has anticipated this fact and has expended during the past four years *over one million dollars* for permanent and up-to-date improvements to provide the live stock shipping public with

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